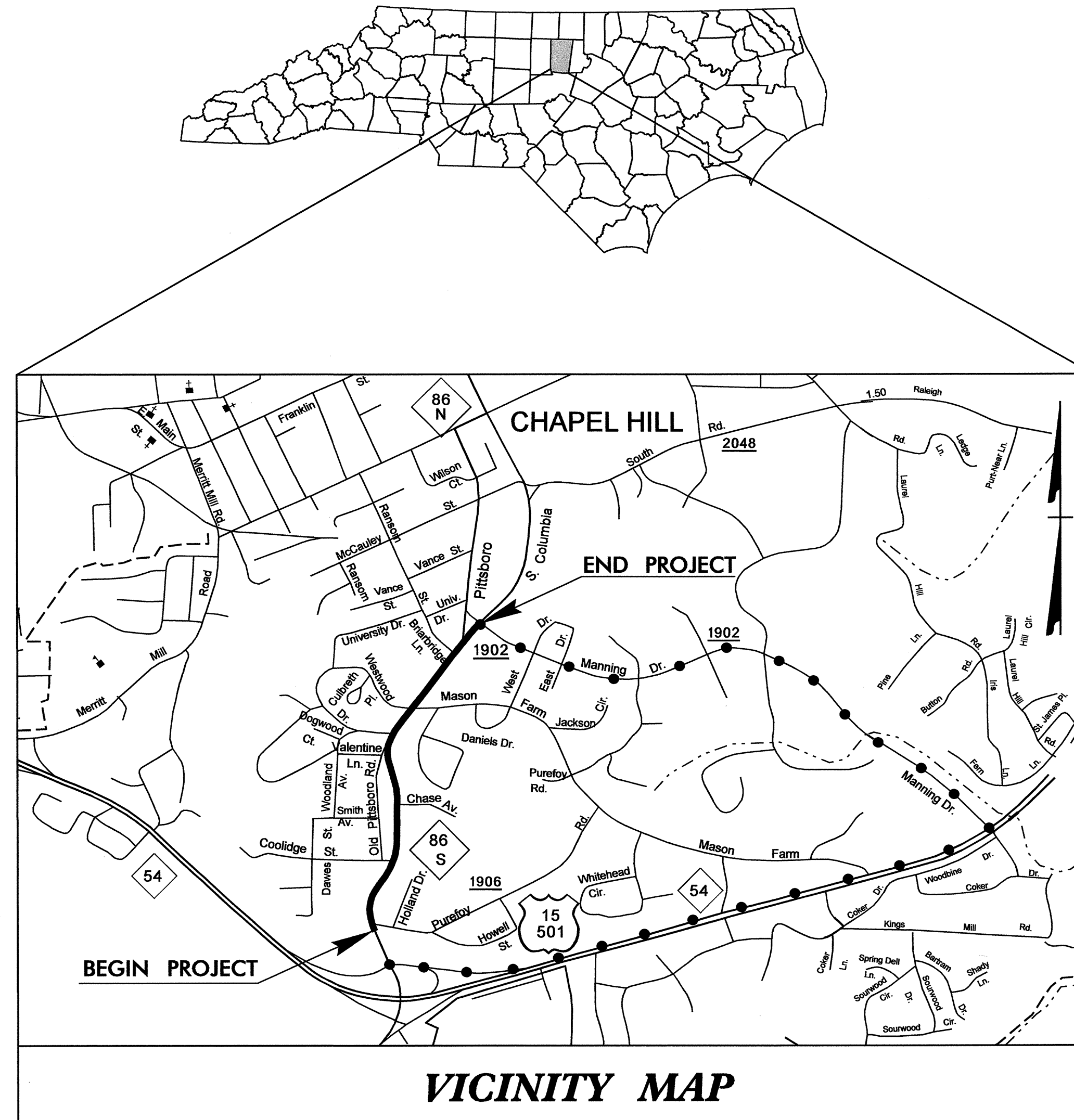


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN
AND FINAL PAVEMENT MARKING PLAN**

ORANGE COUNTY

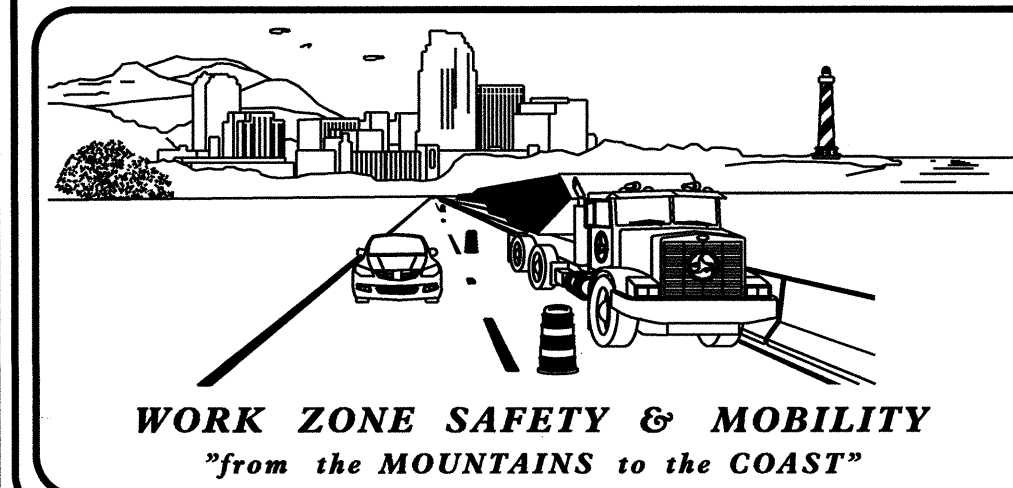


SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND TEMPORARY PAVEMENT MARKING
TMP-1B	TRANSPORTATION OPERATIONS PLAN: MANAGEMENT STRATEGIES AND PROJECT NOTES
TMP-2	RSD 1101.01, SHEET 3 OF 3
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4	PHASE I OVERVIEW - STEPS 2 THRU 6
TMP-5	PHASE I - STEPS 3 THRU 6 - TYPICAL SECTION
TMP-6	DETAIL 1 - PHASE I, SOUTH NC 86 (S. COLUMBIA ST) OFF-SITE ONE-WAY DETOUR ROUTE
TMP-7 THRU TMP-9	DETAILS 2 THRU 4 - PHASE I TRAFFIC PATTERN STEPS 3 THRU 6
TMP-10	PHASE I OVERVIEW - STEPS 7 & 8
TMP-11	PHASE I - STEPS 7 & 8 - TYPICAL SECTION
TMP-12 THRU TMP-14	DETAILS 5 THRU 7 - PHASE I TRAFFIC PATTERN STEPS 7 & 8
TMP-15	PHASE II OVERVIEW
TMP-16	PHASE II TYPICAL SECTION
TMP-17 THRU TMP-19	DETAILS 8 THRU 10 - PHASE II TRAFFIC PATTERN
SD - 1	SPECIAL SIGN DESIGN
PM-1 THRU PM-4	FINAL PAVEMENT MARKING PLAN

SHEET NO.
TMP-1

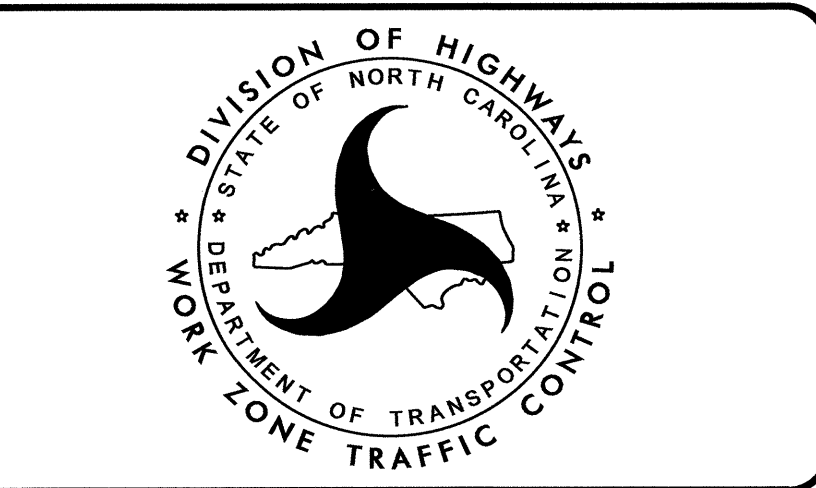
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N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
JOSEPH ISHAK, P.E. TRAFFIC CONTROL PROJECT ENGINEER
MICHELLE WARD, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
ALLA LYUDMIRSKAYA TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: _____
DATE: 6/28/2012

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 JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1261.01	GUARDRAIL & BARRIER DELINEATORS- INSTALLATION SPACING
1261.02	GUARDRAIL & BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- NORTH ARROW
- PROPOSED PVMT. EXIST. PVMT.
- WORK AREA
- WEDGING
- REMOVAL OF EXISTING PAVEMENT

TRAFFIC CONTROL DEVICES

- TYPE I BARRICADE
- TYPE II BARRICADE
- TYPE III BARRICADE
- CONE
- DRUM SKINNY DRUM
- FLASHING ARROW BOARD
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- TEMPORARY CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED ATTENUATOR (TMA)
- LAW ENFORCEMENT
- FLAGGER
- CHAIN LINK FENCE

PAVEMENT MARKINGS

- CRYSTAL/CRYSTAL PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- CRYSTAL/RED PAVEMENT MARKER
- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKINGS

PAVEMENT MARKING LINES

- PAINT (4"):
- PA WHITE EDGELINE
 - PB YELLOW EDGE LINE
 - PC 10 FT WHITE SKIP
 - PD 2 FT WHITE MINISKIP
 - PE WHITE SOLID LANE LINE
 - PF 10 FT YELLOW SKIP
 - PG 2 FT YELLOW MINISKIP
 - PH YELLOW SINGLE CENTER LINE
 - PI YELLOW DOUBLE CENTER LINE

PAINT (8"):

- PR WHITE GORELINE
- PS WHITE DIAGONAL
- PV YELLOW DIAGONAL
- PX WHITE CROSSWALK LINE

PAINT (24"):

- P4 WHITE STOP BAR
- P5 WHITE CROSSWALK LINE

PAVEMENT MARKING SYMBOLS & CHARACTERS

PAINT SYMBOL:

- QA LEFT TURN ARROW
- QB RIGHT TURN ARROW
- QC STRAIGHT ARROW
- QD COMBO STRAIGHT & LEFT TURN ARROW
- QE COMBO STRAIGHT & RIGHT TURN ARROW
- QK BICYCLE LANE STRAIGHT ARROW SYMBOL
- QL BICYCLE W/ RIDER SYMBOL
- QN 24" YIELD LINE TRIANGLE

PAINT CHARACTER:

- QI ALPHANUMERIC CHARACTER

NOTE: FOR EACH PAINT PAVEMENT MARKING ITEM, REFER TO GENERAL NOTE (DD) FOR NUMBER OF APPLICATIONS.

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APPROVED: _____ DATE: _____ 		ROADWAY STANDARD DRAWINGS, LEGEND AND TEMPORARY PAVEMENT MARKING
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MANAGEMENT STRATEGIES

THIS PROJECT AREA IS IN THE TOWN OF CHAPEL HILL AND S. COLUMBIA STREET (NC 86) IS A MAIN ROUTE TO AND FROM THE UNIVERSITY OF CHAPEL HILL AND HOSPITAL. THERE IS A HIGH VOLUME OF PEDESTRIAN TRAFFIC IN THE AREA AS WELL AS CHAPEL HILL TRANSIT BUSES THAT ARE MAINTAINED ALONG THIS ROUTE. IT IS IMPORTANT TO MINIMIZE IMPACT TO ALL MODES OF TRANSPORTATION. THE TRANSPORTATION MANAGEMENT PLAN MAINTAINS AT LEAST A 4' PEDESTRIAN WALKWAY ALONG THE PROJECT CORRIDOR AS WELL AS RELOCATES THE BUS STOPS AT PUREFOY ROAD AND THE DAY CARE CENTER TO ONE LOCATION IN FRONT OF MERRITT'S STORE.

IN PHASE I, TRAFFIC WILL BE MAINTAINED USING A ONE-WAY PATTERN WHILE CONSTRUCTION TAKES PLACE ON THE RIGHT SIDE OF S. COLUMBIA STREET FROM PUREFOY ROAD TO MASON FARM ROAD. NORTHBOUND TRAFFIC WILL REMAIN ON S. COLUMBIA STREET WHILE SOUTHBOUND TRAFFIC WILL BE DETOURED OFF-SITE VIA MANNING DRIVE AND US 15-501. PEDESTRIANS WILL BE MAINTAINED USING A 4' PEDESTRIAN WALKWAY ALONG THE RIGHT SIDE OF THE ROAD. THIS ONE-WAY PATTERN WILL REMAIN IN PLACE NO LONGER THAN 6 MONTHS. (SEE SPECIAL PROVISIONS AND LIQUIDATED DAMAGES FOR PHASE I, STEPS 3-9)

ONCE THE WORK HAS BEEN COMPLETED IN PHASE I, TRAFFIC WILL BE PLACED IN A TWO-LANE/ TWO-WAY PATTERN ON THE NEW CONSTRUCTION ON THE RIGHT SIDE OF S. COLUMBIA STREET. CONSTRUCTION WILL THEN TAKE PLACE ON THE LEFT SIDE OF S. COLUMBIA STREET FROM PUREFOY ROAD TO MASON FARM ROAD, AS WELL AS BOTH THE LEFT SIDE AND RIGHT SIDE OF S. COLUMBIA STREET FROM MASON FARM ROAD TO MANNING DRIVE.

IN THE AREA FROM MASON FARM ROAD TO MANNING DRIVE, CONSTRUCTION WILL TAKE PLACE ON THE LEFT SIDE OF S. COLUMBIA STREET FIRST, WHILE MAINTAINING PEDESTRIAN ACCESS ALONG THE NEW SIDEWALK ON THE RIGHT SIDE OF THE ROAD. ONCE THE CONSTRUCTION IS COMPLETE ON THE LEFT SIDE (INCLUDING SIDEWALK), WORK MAY BEGIN ON THE RIGHT SIDE OF THE ROAD WHILE MAINTAINING PEDESTRIANS ON THE NEW SIDEWALK ON THE LEFT SIDE.

PROJECT NOTES

GENERAL NOTES

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

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

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
1. -L- (NC 86) & ALL -Y- LINES	MONDAY-SUNDAY: 7:00AM-9:00AM 4:00PM-6:00PM

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

ROAD NAME
1. -L- (NC 86) & ALL -Y- LINES

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31ST TO 6:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN UNTIL 6:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 6:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 6:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- FOR UNC-CHAPEL HILL FOOTBALL AND BASKETBALL GAMES OCCURRING AT UNC-CHAPEL HILL CAMPUS BETWEEN TWO (2) HOURS BEFORE THE START AND TWO (2) HOURS AFTER THE END OF THE UNC-CHAPEL HILL FOOTBALL AND BASKETBALL GAMES.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
ANY ROADS	MONDAY-SUNDAY: 7:00AM-9:00AM 4:00PM-6:00PM	15 MINUTES FOR INSTALLING DRAINAGE STRUCTURES AND PIPES ACROSS THE ROAD & INSTALLATION OF SIGNALS

NOTE C IS ONLY APPLICABLE ON -L- (NC 86) WHEN TRAFFIC IS IN A TWO-LANE/ TWO-WAY PATTERN; TRAFFIC STOPPAGE WILL NOT BE ALLOWED ON -L- (NC 86) FROM STA. 11+50 +/- TO STA. 40+00 +/- WHEN TRAFFIC IS IN A ONE-LANE/ONE-WAY PATTERN.

D) DO NOT CONDUCT SINGLE VEHICLE HAULING AS FOLLOWS; INGRESS AND EGRESS FROM RAMPS WILL BE ALLOWED:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. -L- (NC 86), US 15-501 (FORDHAM BLVD.), & ALL -Y- LINES	MONDAY-SUNDAY: 7:00AM-9:00AM 4:00PM-6:00PM

E) DO NOT CONDUCT MULTI-VEHICLE HAULING AS FOLLOWS; INGRESS AND EGRESS FROM RAMPS WILL BE ALLOWED:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. -L- (NC 86), US 15-501 (FORDHAM BLVD.), & ALL -Y- LINES	MONDAY-SUNDAY: 7:00AM-9:00AM 4:00PM-6:00PM

F) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE 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.
- 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.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- DO NOT INSTALL MORE THAN 1/2 MILE OF LANE CLOSURE ON NC 86 (S. COLUMBIA ST.), MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- DO NOT INSTALL MORE THAN 600 FT. OF LANE CLOSURE ON ALL -Y- LINES, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON NC 86 (S. COLUMBIA ST.).
- PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

DO NOT INSTALL MORE THAN 600 FT. OF LANE CLOSURE ON ALL -Y- LINES, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

M) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON NC 86 (S. COLUMBIA ST.).

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

PAVEMENT EDGE DROP OFF REQUIREMENTS

- BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 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.
- DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 FT. IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- 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.
- PROVIDE PERMANENT SIGNING.
- 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.
- 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.
- ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

X) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW, BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

TRAFFIC CONTROL DEVICES

- WHEN LANE CLOSURES ARE NOT IN EFFECT, SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADIUS, AND 3 FT OFF THE EDGE OF AN OPENED TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS/SKINNY DRUMS) PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

- 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
1. NC 86 (S. COLUMBIA ST.)	PAINT (4")	NONE
-Y7- (MASON FARM RD.)		
-Y8- (PITTSBORO RD.)		
-Y9- (MANNING DR.)		

DD) 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.

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

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

GG) 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.

MISCELLANEOUS

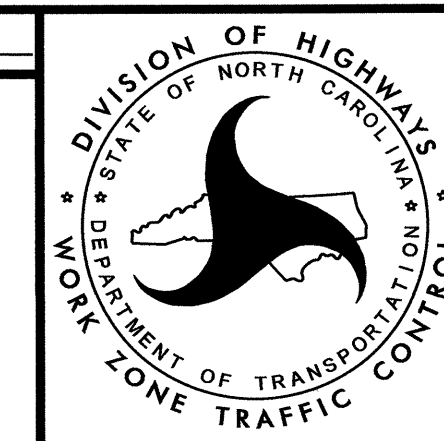
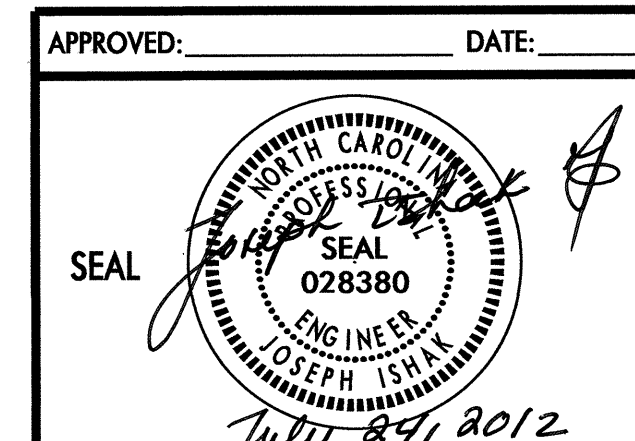
HH) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER. NCDOT WILL PROVIDE LAW ENFORCEMENT AT NO ADDITIONAL COST TO THE CONTRACTOR.

II) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

GG) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.)

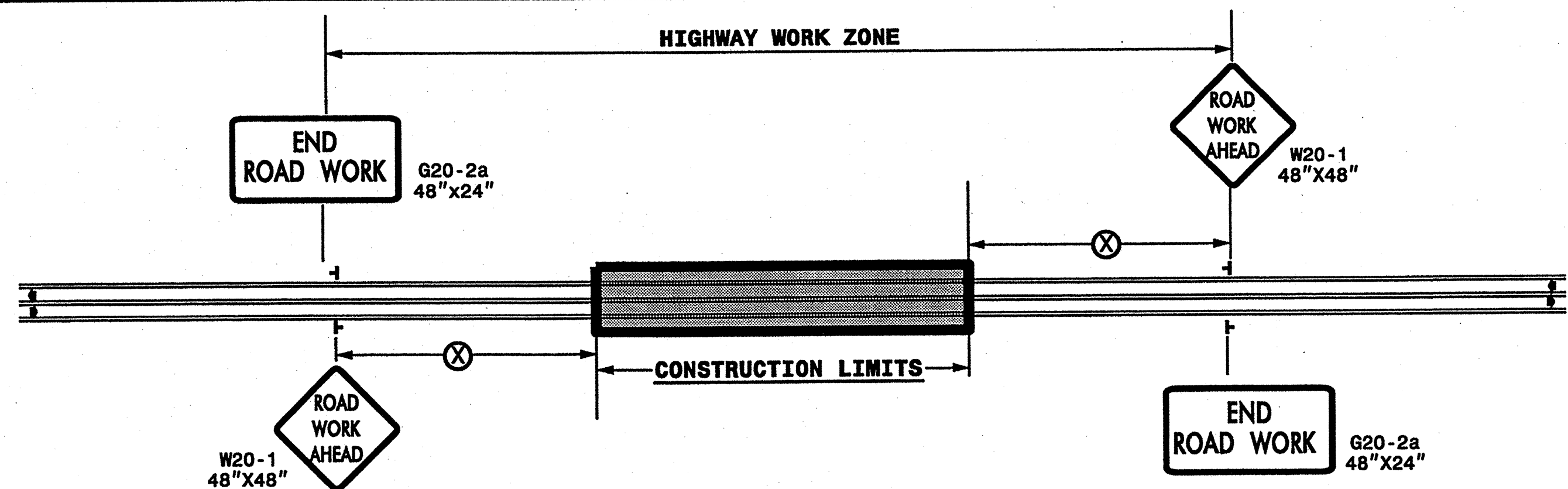
LOCAL NOTE

- TEMPORARILY PLUG AND BLOCK PIPES AND STRUCTURES UNTIL REMAINDER OF DOWNSTREAM DRAINAGE SYSTEM IS IN PLACE.
- INSTALLATION OF WATERLINE UNDER MANNING DR. AT -Y9- STA. 12+50 +/- WILL BE ALLOWED TO BE COMPLETED USING NIGHT WORK ONLY. ALL OTHER WORK SHALL BE ACCOMPLISHED ACCORDING TO THE TIME RESTRICTIONS STATED IN THE CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A PERMIT FOR NIGHT WORK FROM THE TOWN OF CHAPEL HILL TO COMPLETE THE WATERLINE INSTALLATION WORK.



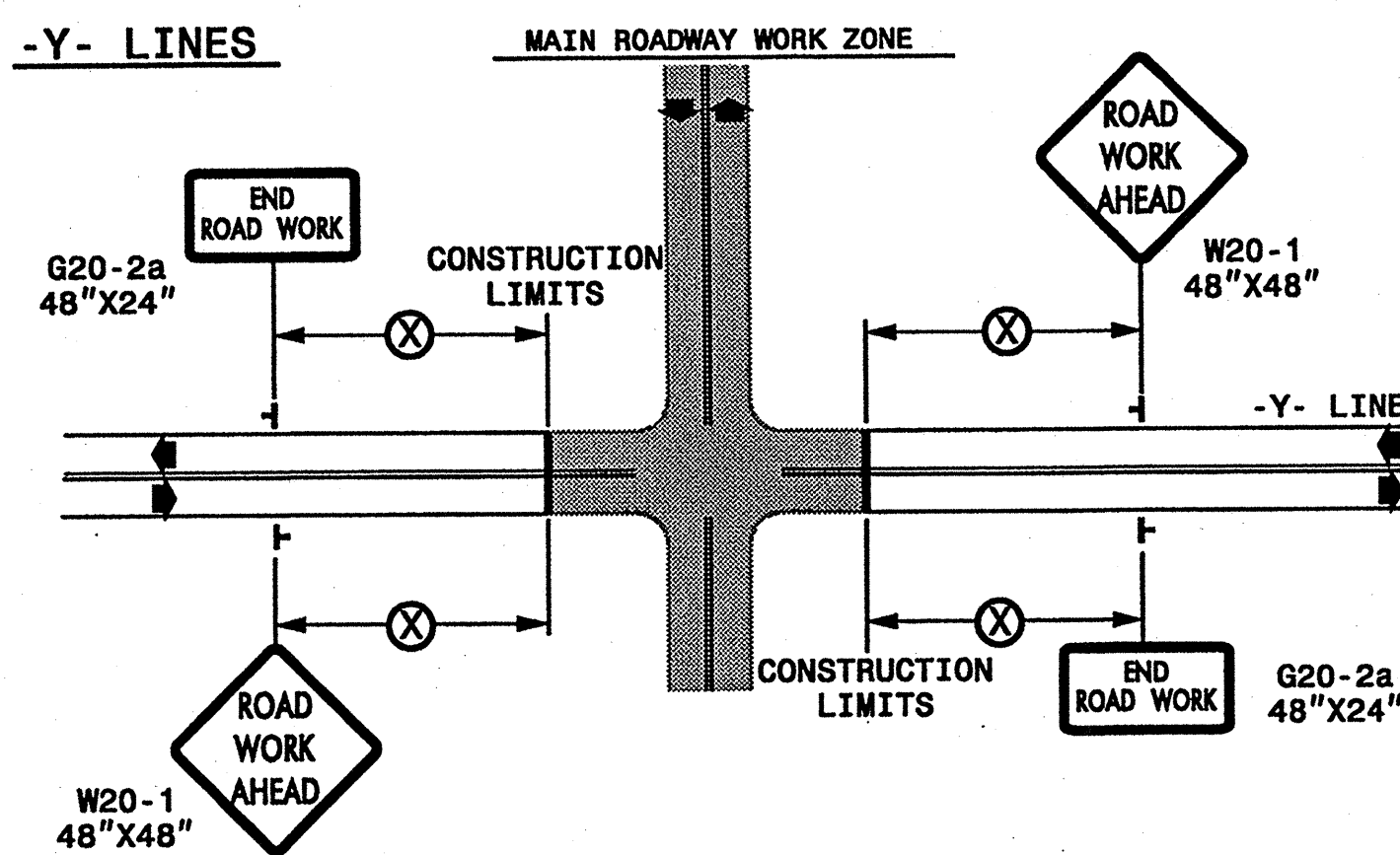
TRANSPORTATION OPERATIONS PLAN

TWO-WAY UNDIVIDED ** (L-LINES)



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

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



GENERAL NOTES

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

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

1-12

ENGLISH STANDARD DRAWING FOR
**DETAIL DRAWING FOR TWO-WAY UNDIVIDED
AND URBAN FREEWAYS
WORK ZONE WARNING SIGNS**

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

1-12

ENGLISH STANDARD DRAWING FOR
**DETAIL DRAWING FOR TWO-WAY UNDIVIDED
AND URBAN FREEWAYS
WORK ZONE WARNING SIGNS**

PHASING

NOTES:
REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES AND BUSINESSES DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

COMPLETE ANY PROPOSED WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE.

PROVIDE FLAGGERS FOR PEDESTRIANS CROSSING THE ROADWAYS IN DESIGNATED AREAS WITHIN THE PROJECT LIMITS DURING CLEARING OPERATIONS BEFORE TRAFFIC IS PLACED IN THE ONE-WAY PATTERN AS SHOWN IN THE PHASE I OVERVIEWS AND DETAILS. PROVIDE SIGNING TO GUIDE PEDESTRIANS TO THESE DESIGNATED PEDESTRIAN CROSSINGS.

DURING LANE CLOSURE OPERATIONS PRIOR TO THE ONE-WAY DETOUR PATTERN IN PHASE I, PROVIDE DRUMS FOR THE LANE CLOSURE A MIN. OF 1' FROM THE TRAVEL WAY, A 4' CLEAR SPACE, THEN A SECOND ROW OF DRUMS TO ALLOW A PROTECTED AREA FOR PEDESTRIAN TRAFFIC. WHEN LANE CLOSURES ARE NOT IN EFFECT, STORE DRUMS A MINIMUM OF 5' FROM THE RIGHT EDGE OF TRAVEL LANE TO PROVIDE AN AREA FOR PEDESTRIAN TRAVEL.

COORDINATE WITH THE ENGINEER 21 DAYS PRIOR TO THE ONE-WAY DETOUR PATTERN TO ALLOW STATE FORCES TO ADJUST SIGNAL TIMING ON THE SURROUNDING ROAD NETWORK IF NECESSARY.

PHASE I - (SEE PHASE I OVERVIEWS, SHEETS TMP-4 AND TMP-10)

STEP 1:
INSTALL ADVANCED WORK ZONE WARNING SIGNS ON S. COLUMBIA STREET, ALL -Y- LINES, AND US 15-501 RAMPS AS SHOWN ON SHEET TMP-2.

STEP 2:
AWAY FROM TRAFFIC, BEGIN CONSTRUCTION FROM PUREFOY RD TO MASON FARM RD, INCLUDING WATERLINE INSTALLATION. NOTE: WHILE WORKING AWAY FROM TRAFFIC PRIOR TO PHASE I, STEP 3, PROVIDE WORK AREA PROTECTION BY PLACING DRUMS A MINIMUM OF 5' FROM THE EDGE OF THE TRAVEL LANE.)

USING NIGHT WORK BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM, AND USING RSD 1101.02, SHEET 1 OF 15, COMPLETE INSTALLATION OF WATERLINE AROUND -Y9- STA.12+50 +/- AS SHOWN ON DETAIL 4, SHEET TMP-9.

USING RSD 1101.02, SHEET 1 OF 15, CONSTRUCT THE LEFT SIDE OF -L- FROM STA. 11+50 +/- TO STA. 17+00 +/-, INCLUDING C&G, DRAINAGE STR. NO. 0409, APPROXIMATELY 19 FT. OF PIPE FROM STR. NO. 0409 TO 0408, AND REMOVAL OF 3' OF ASPHALT ON LT EDGE OF EX. EOT FROM -L- STA. 14+05 +/- TO STA. 17+00 +/- (SEE LOCAL NOTE 1)

INSTALL AND COVER DETOUR SIGNS FOR ONE-WAY DETOUR ROUTE IN PHASE I, STEP 3. (SEE DETAIL 1, SHEET TMP-6)

INSTALL AND COVER TEMPORARY SIGNAL #07-0573 (TEMP 1) AT -L- (S. COLUMBIA ST.)/-Y7- (MASON FARM RD.) INTERSECTION TO ACCOMMODATE THE ONE-WAY TRAFFIC PATTERN IN PHASE I, STEP 3. (SEE DETAIL 4, SHEET TMP-9 FOR TRAFFIC PATTERN)

THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED OF PHASE I, STEPS 3-9 AS SHOWN ON SHEETS TMP-5 THRU TMP-14 FROM APRIL 1, 2013 TO SEPTEMBER 30, 2013. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 3:
USING RSD 1101.02, SHEET 1 OF 15, AS NECESSARY, SIMULTANEOUSLY COMPLETE THE FOLLOWING: (SEE PHASE I, STEPS 3-6 TYPICAL SECTION (SHEET TMP-5), AND DETAILS 2-4 (SHEETS TMP-7 THRU TMP-9))

- A.) INSTALL TEMPORARY PAINT MARKING AS SHOWN
- B.) INSTALL WATER-FILLED BARRIER, CHAIN-LINK FENCE AND OTHER DEVICES AS SHOWN
- C.) ADJUST DRIVEWAY ENTRANCE TO MERRITT'S STORE AS SHOWN ON DETAIL 2, SHEET TMP-7
- D.) UNCOVER AND ACTIVATE TEMPORARY SIGNAL #07-0573 (TEMP 1) AT THE -L- (S. COLUMBIA ST.)/-Y7- (MASON FARM RD.) INTERSECTION
- E.) UNCOVER DETOUR SIGNS PLACED IN PH. I, STEP 2
- F.) SHIFT TRAFFIC TO THE ONE LANE DETOUR PATTERN, AND,
- G.) RELOCATE BUS STOPS AS SHOWN ON PLAN

STEP 4:
BEHIND BARRIER, BEGIN CONSTRUCTION OF RIGHT SIDE WIDENING OF -L- FROM STA. 15+13 +/- TO STA. 38+70 +/- INCLUDING C&G, DRAINAGE STRUCTURES AND PIPES (TEMPORARY AND PROPOSED AS SHOWN ON PLANS), REMOVAL OF 3' OF ASPHALT ON THE RIGHT EDGE OF EXISTING -L- EDGE OF TRAVEL LANE FROM STA. 15+13 +/- TO STA. 35+30 +/-, AND REMOVAL OF CONCRETE FROM -L- STA. 15+13 +/- TO STA. 15+50 +/- RIGHT OF EXISTING CENTERLINE, AS SHOWN ON DETAILS 2-4, SHEETS TMP-7 THRU TMP-9. (SEE LOCAL NOTE 1)

CONTINUE INSTALLATION OF WATERLINE USING RSD 1101.02, SHEET 1 OF 15, AS NECESSARY ON -Y- LINES TO COMPLETE INSTALLATION OF CROSS LINES.

USING RSD 1101.02, SHEET 1 OF 15, CONSTRUCT C&G AND WEDGING CONCURRENTLY ALONG -Y3- (CHASE AVE.), NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, FROM -Y3- STA. 10+50 +/- TO STA. 11+87 +/-, INCLUDING DRAINAGE SYSTEM UNDER -Y3-. CONDUCT REMOVAL OF 3' OF ASPHALT ON THE RIGHT EDGE OF EXISTING -L- EDGE OF TRAVEL LANE IN THE -Y3- INTERSECTION DURING THE WEDGING OPERATION FOR -Y3-. (SEE LOCAL NOTE 1)

USING RSD 1101.02, SHEET 1 OF 15, CONSTRUCT C&G (RT SIDE ONLY) AND WEDGING CONCURRENTLY ALONG -Y7- (MASON FARM ROAD), NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, FROM -Y7- STA. 13+00 +/- TO STA. 13+75 +/-, INCLUDING DRAINAGE SYSTEM UNDER -Y7- (MASON FARM ROAD). (SEE LOCAL NOTE 1)

THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED OF PHASE I, STEP 5 AS SHOWN ON SHEETS TMP-8 AND TMP-9 IN 14 CONSECUTIVE HOURS ON SUNDAY FROM 7:00AM TO 9:00PM. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 5:
USING RSD 1101.02, SHEET 1 OF 15, CONSTRUCT WEDGING OVER EXISTING PAVEMENT, NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, ON -L- (S. COLUMBIA ST.) FROM -L- STA. 34+50 +/- TO STA. 39+80 +/- (TRANSITION FROM PROPOSED GRADE TO EXISTING GRADE FROM -L- STA. 38+50 +/- TO 39+80 +/- TO ACCOMMODATE THE LATER PHASE I AND PHASE II PATTERNS. (PRIOR TO THE WEDGING OPERATION IN THIS STEP, COMPLETE INSTALLATION OF CROSS PIPES UNDER -L- FROM STR. NO. 0613 TO 0612 & STR. NO. 0617 TO 0616.) (SEE DETAILS 3 & 4, SHEETS TMP-8 & TMP-9) (SEE LOCAL NOTE 1)

STEP 6:
COMPLETE CONSTRUCTION FROM -L- STA. 15+13 +/- TO STA. 16+60 +/- (INCLUDING DRIVEWAY ENTRANCE AT -L- STA. 15+90 +/- RT TO MERRITT'S STORE), THEN USING RSD 1101.02, SHEET 1 OF 15, CONSTRUCT -L- FROM STA. 14+07 +/- TO STA. 15+13 +/- AND -Y1- FROM STA. 9+45 +/- TO STA. 11+45 +/-, INCLUDING C&G, DRAINAGE STRUCTURES, REMOVAL OF 3' OF ASPHALT ON THE RIGHT EDGE OF EXISTING -L- EDGE OF TRAVEL LANE FROM STA. 14+05 +/- TO STA. 15+13 +/-, AND REMOVAL OF CONCRETE FROM -L- STA. 14+05 +/- TO STA. 14+70 LEFT AND RIGHT OF EXISTING CENTERLINE AND STA. 14+93 +/- TO STA. 15+13 +/- RIGHT OF EXISTING CENTERLINE AS SHOWN ON DETAIL 2, SHEET TMP-7, DETAILED AREA (STEP 6). (SEE LOCAL NOTE 1)

COMPLETE ALL CONSTRUCTION BEGUN PREVIOUSLY, INCLUDING WATERLINE INSTALLATION.

THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED OF PHASE I, STEP 7 AS SHOWN ON DETAIL 5, SHEET TMP-12 IN 14 CONSECUTIVE HOURS ON SUNDAY FROM 7:00AM TO 9:00PM. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 7:
ONCE ALL CONSTRUCTION IN STEP 6 HAS BEEN COMPLETED, USING RSD 1101.02, SHEET 1 OF 15, WEDGE ALL OF EXISTING ROADWAY FROM -L- STA. 14+07 +/- TO STA. 17+40 +/-, THEN RESET BARRIER, PLACE TEMPORARY MARKING AND SHIFT TRAFFIC IN A ONE LANE PATTERN ON THE RIGHT SIDE OF -L- (S. COLUMBIA ST.) AS SHOWN IN PHASE I OVERVIEW, STEPS 7 AND 8 ON SHEET TMP-10, PHASE I TYPICALS, SHEET TMP-11, AND DETAILS 5 THRU 7, SHEETS TMP-12 THRU 14.

STEP 8:
BEHIND BARRIER, WEDGE EXISTING ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE ALONG -L- (S. COLUMBIA ST.) FROM -L- STA. 17+40 +/- TO STA. 29+75 +/- (FULL WIDTH OF EX. PAVEMENT) AND FROM -L- STA. 29+75 +/- TO STA. 34+50 +/- (RIGHT OF EX. CENTERLINE ONLY) AS SHOWN ON DETAILS 5 & 6, SHEETS TMP-12 & 13. (DURING WEDGING OPERATION IN STEP 8, COMPLETE INSTALLATION OF REMAINDER OF ALL CROSS PIPES AND INSTALL DRAINAGE STRUCTURES THAT THESE PIPES TIE TO ON THE WEST SIDE OF -L- UP TO STA. 34+50 +/-.)

INSTALL AND COVER TEMPORARY SIGNAL #07-0573 (TEMP 2) AT -L- (S. COLUMBIA ST.)/-Y7- (MASON FARM ROAD) INTERSECTION AND TEMPORARY SIGNAL #07-0520 (TEMP 2) AT THE -L- (S. COLUMBIA ST.)/-Y9- (MANNING DR.) INTERSECTION FOR THE PHASE II PATTERN. (SEE DETAILS 9 & 10, SHEETS TMP-18 & TMP-19 FOR TRAFFIC PATTERN)

STEP 9:
USING RSD 1101.02, SHEET 1 OF 15, SIMULTANEOUSLY COMPLETE THE FOLLOWING: (SEE PHASE II OVERVIEW, SHEET TMP-15, PHASE II TYPICAL, SHEET TMP-16, AND DETAILS 8-10, SHEETS TMP-17-19 FOR PHASE II TRAFFIC PATTERN.)

- A.) RESET WATER-FILLED BARRIER AND OTHER DEVICES AS SHOWN
- B.) INSTALL TEMPORARY PAINT MARKING IN THE TWO-LANE PATTERN AS SHOWN
- C.) UNCOVER AND ACTIVATE TEMPORARY SIGNAL #07-0573 (TEMP 2) AT THE -L- (S. COLUMBIA ST.)/-Y7- (MASON FARM RD.) INTERSECTION
- D.) SHIFT TRAFFIC TO THE PHASE II TRAFFIC PATTERN
- E.) REMOVE TEMPORARY DETOUR SIGNS FOR SB -L- (S. COLUMBIA ST.) PLACED IN PHASE I, STEP 2

PHASE II - (SEE PHASE II OVERVIEW, SHEET TMP-15)

STEP 1:
UNCOVER AND ACTIVATE TEMPORARY SIGNAL #07-0573 (TEMP 2) AND TEMPORARY SIGNAL #07-0520 (TEMP 2), THEN BEHIND BARRIER, BEGIN CONSTRUCTION OF LEFT SIDE WIDENING OF -L- FROM STA. 17+00 +/- TO STA. 38+31 +/- INCLUDING C&G, DRAINAGE STRUCTURES AND PIPES NOT INSTALLED IN PHASE I, REMOVAL OF 3' OF ASPHALT ON THE LEFT EDGE OF EXISTING -L- EDGE OF TRAVEL LANE UP TO STA. 35+30 +/-, AND REMOVAL OF CONCRETE FROM -L- STA. 17+40 +/- TO STA. 29+75 +/- LEFT OF EXISTING CENTERLINE, AS SHOWN ON DETAILS 8-10, SHEETS TMP-17 THRU TMP-19. (SEE LOCAL NOTE 1)

INSTALL PEDESTRIAN CROSSING SIGNS AS SHOWN IN INSET B, C AND E ON DETAIL 10, SHEET TMP-19 FOR CONSTRUCTION ON LT SIDE OF -L-, THEN, USING RSD 1101.02, SHEET 1 OF 15, CONSTRUCT WIDENING ALONG LT SIDE OF -L- (S. COLUMBIA ST.) FROM STA. 38+80 +/- TO STA. 50+15 +/-, INCLUDING C&G AND DRAINAGE NOT INSTALLED IN PHASE I WHILE MAINTAINING PEDESTRIANS ON THE EAST SIDE OF -L- (S. COLUMBIA STREET). (SEE DETAIL 10, SHEET TMP-19)

USING RSD 1101.02, SHEET 1 & 7 OF 15, CONSTRUCT C&G, DRAINAGE, AND WEDGE THE FOLLOWING -Y- LINES, UP TO ELEVATION OF -L- (S. COLUMBIA STREET): (SEE LOCAL NOTE 2)

- Y2- (COOLIDGE ST.)
- Y5- (VALENTINE LANE)
- Y6- (WESTWOOD DR.)
- Y7- (WESTWOOD DR.)
- Y8- (PITTSBORO RD.) (MAINTAIN MINIMUM 12' LANE DURING CONSTRUCTION)
- Y9- (MANNING DR.) ON THE WEST SIDE OF -L-

(CONDUCT 3' OF ASPHALT REMOVAL ALONG -L- AT THE -Y2-, -Y5-, & -Y6- INTERSECTIONS DURING THE WEDGING OPERATIONS FOR THESE -Y- LINES.)

INSTALL ROAD CLOSURE SIGNS AS SHOWN ON DETAILS 8 AND 9, SHEETS TMP-17 & 18 FOR -Y4- CLOSURE, THEN, MAINTAINING LOCAL TRAFFIC ONLY, CONSTRUCT -Y4- (OLD PITTSBORO RD.), INCLUDING C&G AND DRAINAGE.

STEP 2:
INSTALL AND COVER FINAL SIGNAL #07-0573 AT THE -L- (S. COLUMBIA ST.)/-Y7- (MASON FARM RD.) INTERSECTION AND FINAL SIGNAL #07-0520 AT THE -L- (S. COLUMBIA ST.)/-Y9- (MANNING DRIVE) INTERSECTION.

ONCE WIDENING ON LEFT SIDE OF -L- IS COMPLETE FROM -L- STA. 38+80 +/- TO STA. 50+15 +/- (INCLUDING SIDEWALK), INSTALL PEDESTRIAN CROSSING SIGNS AS SHOWN IN INSET D ON DETAIL 10, SHEET TMP-19 FOR CONSTRUCTION ON RT SIDE OF -L-, THEN, USING RSD 1101.02, SHEET 1 OF 9, CONSTRUCT WIDENING ALONG RIGHT SIDE OF -L- FROM STA. 39+51 +/- TO STA. 50+15 +/- AND ALONG RIGHT SIDE OF -Y9- (MANNING DRIVE) ON THE EAST SIDE OF -L- USING RSD 1101.02, SHEET 4 OF 9. (SEE DETAIL 10, SHEET TMP-19)

USING RSD 1101.02, SHEET 1 OF 15, WEDGE -L- FROM STA. 39+80 +/- TO STA. 50+15 +/- (SEE DETAIL 10, SHEET TMP-19)

STEP 3:
USING RSD 1101.02, SHEET 1 OF 15, REMOVE BARRIER AND REPLACE WITH SKINNY DRUMS.

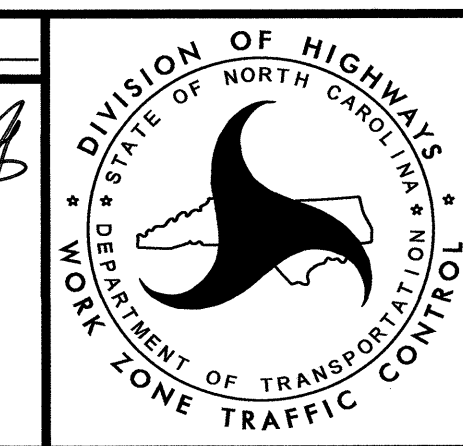
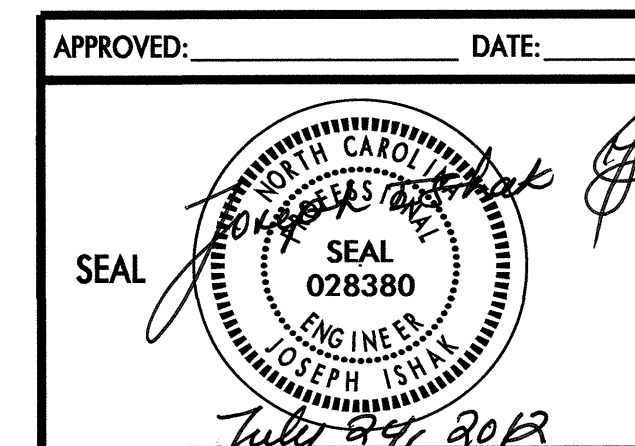
USING RSD 1101.02, SHEETS 1 & 7 OF 15, COMPLETE ANY WEDGING AND OVERLAY ON -L- (S. COLUMBIA ST.) AND ALL -Y- LINES, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

STEP 4:
USING RSD 1101.02, SHEET 1 & 7 OF 15, PLACE THE FINAL LAYER OF SURFACE COURSE AND TEMPORARY MARKINGS (PAINT) IN THE FINAL PATTERN (SEE FINAL PAVEMENT MARKING PLANS, SHEETS PM-1 THROUGH PM-4), UNCOVER AND ACTIVATE THE FINAL SIGNALS (#07-0573 & #07-0520) INSTALLED IN PHASE II, STEP 2, AND OPEN ALL LANES TO TRAFFIC.

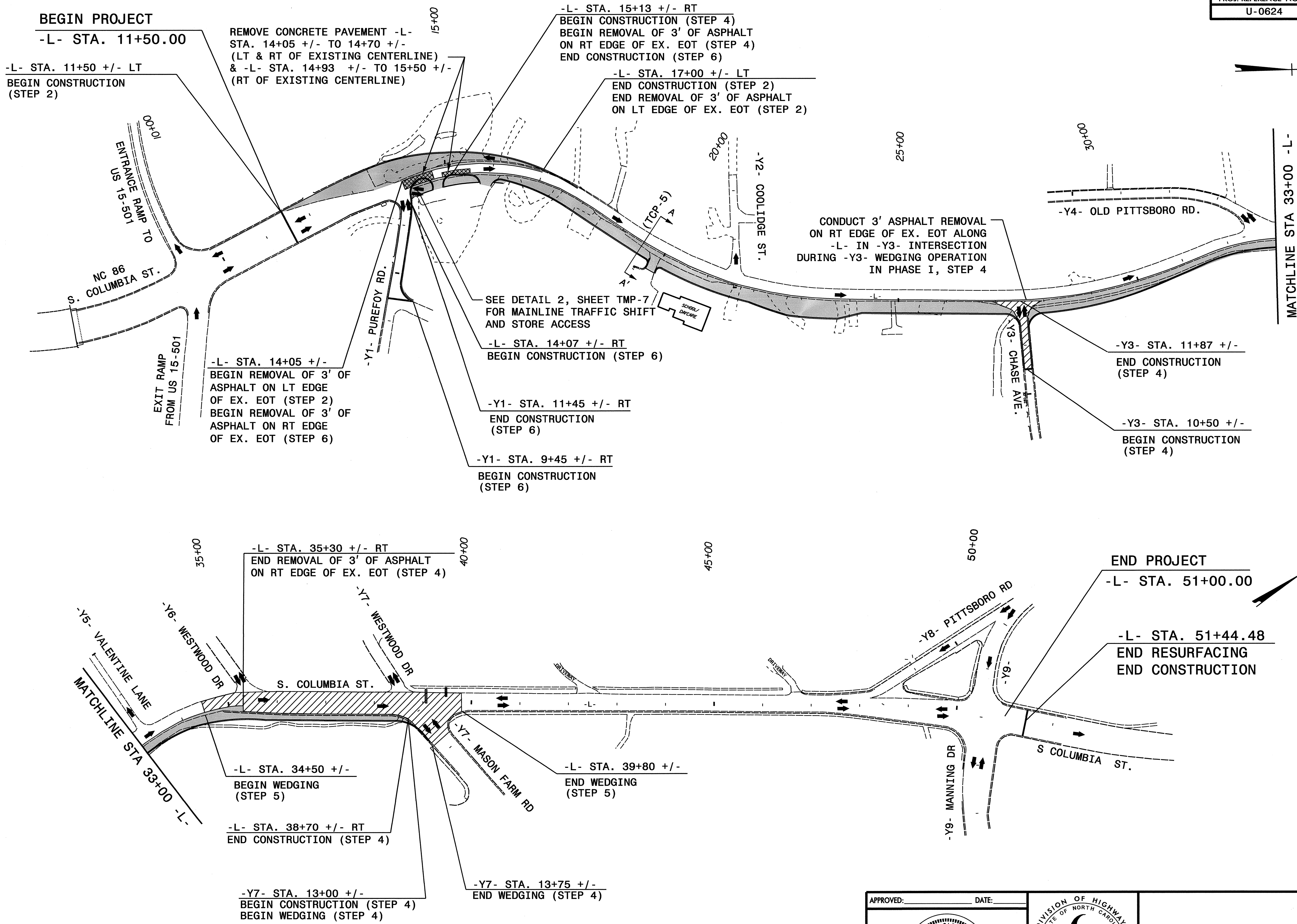
USING RSD 1101.02, SHEETS 1 & 2 OF 15, CONSTRUCT MONOLITHIC ISLAND ON -L- FROM STA. 13+25.64 TO STA. 13+81.83.

STEP 5:
USING RSD 1101.02, SHEET 1, 2 & 7 OF 15, PLACE FINAL MARKINGS IN THE FINAL PATTERN AND OPEN TO TRAFFIC. (SEE FINAL PAVEMENT MARKING PLANS, SHEETS PM-1 THROUGH PM-4)

STEP 6:
REMOVE ALL REMAINING TRAFFIC CONTROL DEVICES.



TEMPORARY TRAFFIC CONTROL PHASING

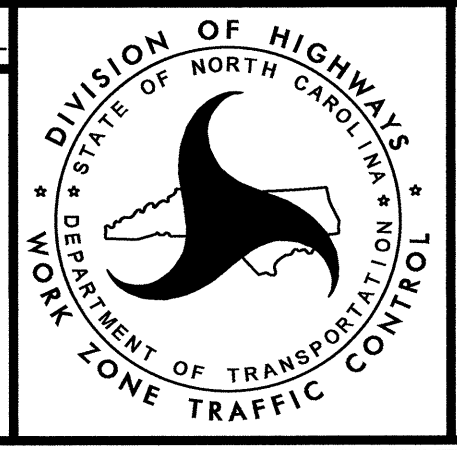


26-JUN-2012 16:45
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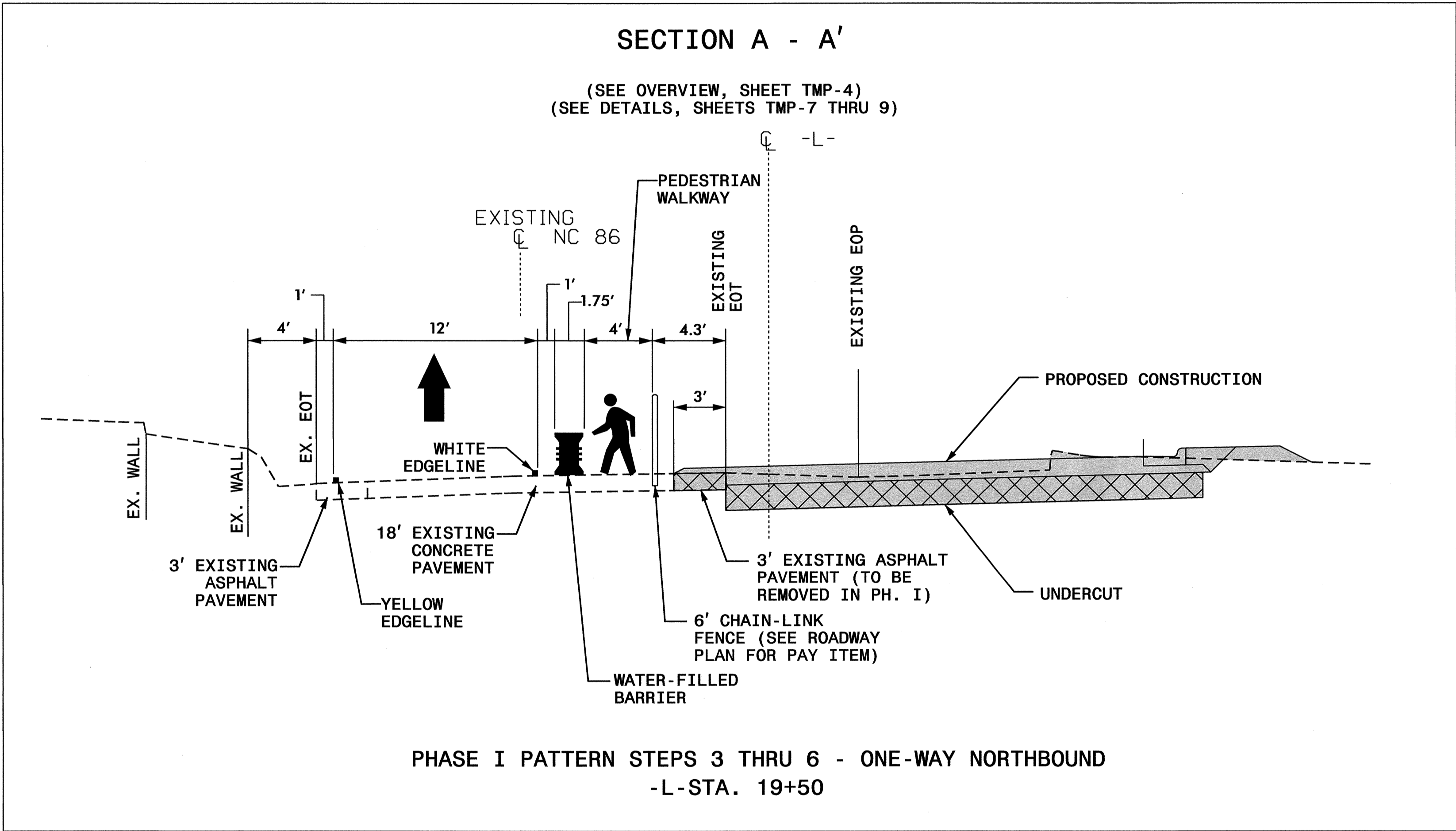
APPROVED: _____ DATE: _____

SEAL

JOSEPH I. SMITH
 ENGINEER
 028380
 6/28/2012



PHASE I OVERVIEW
STEPS 2 THRU 6



27-JUN-2012 12:15
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 glyudmi AT TE24741

APPROVED: _____ DATE: _____

SEAL *Joseph Ishak*
 6/28/2012



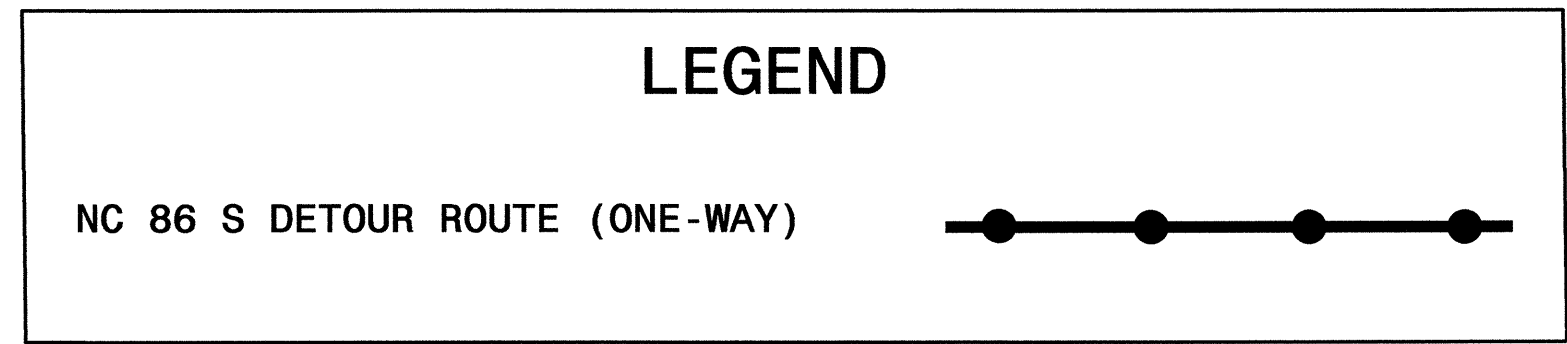
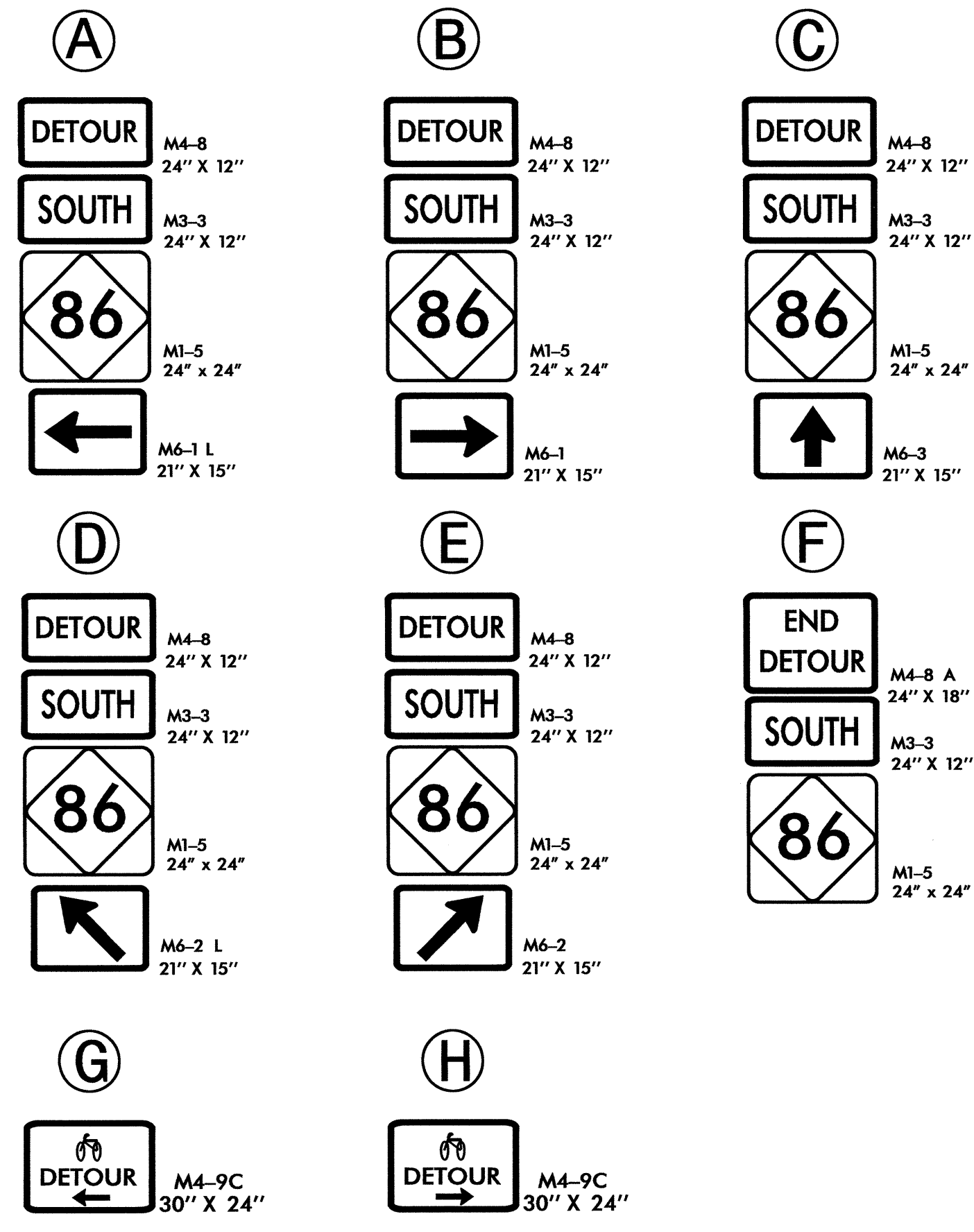
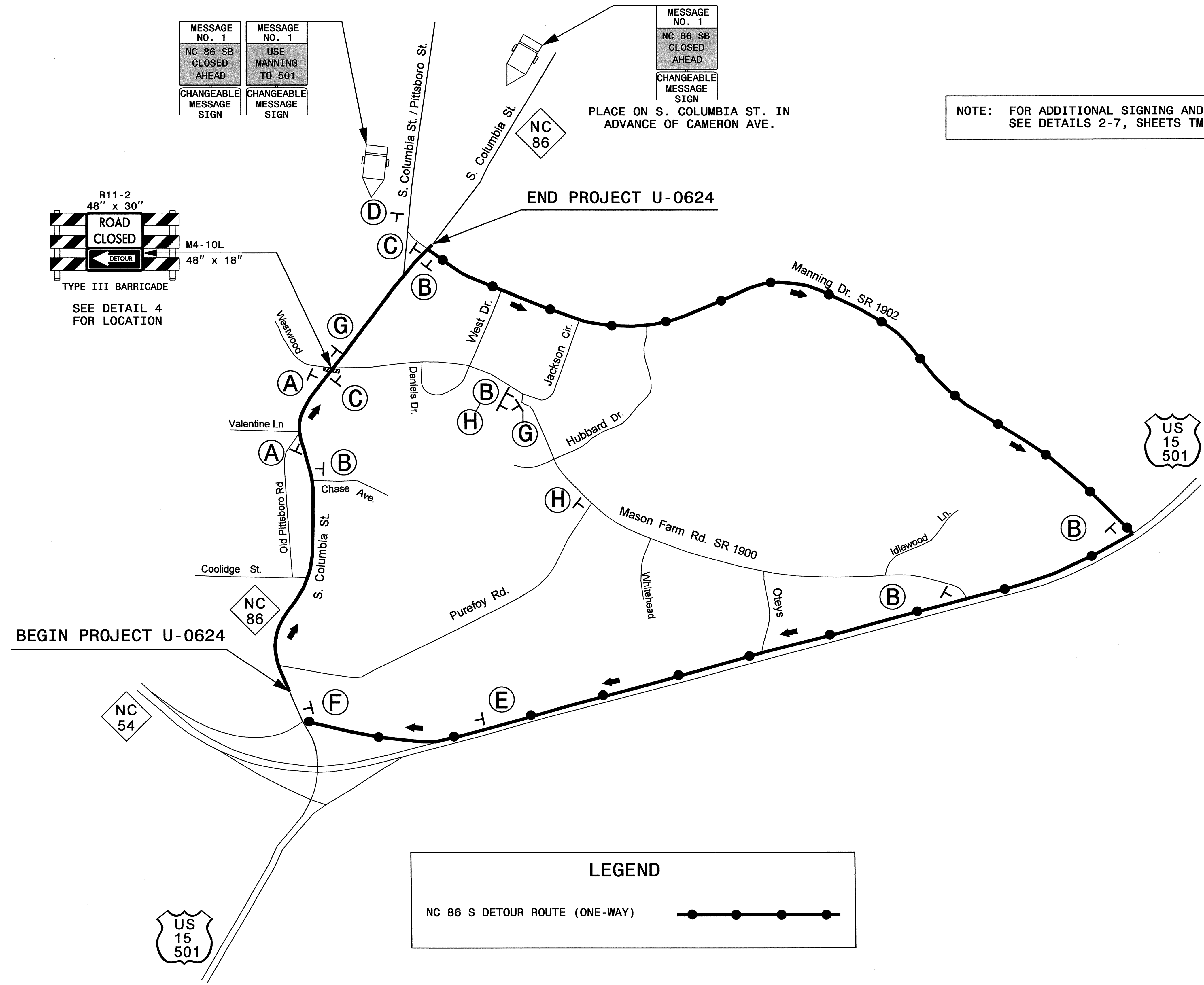
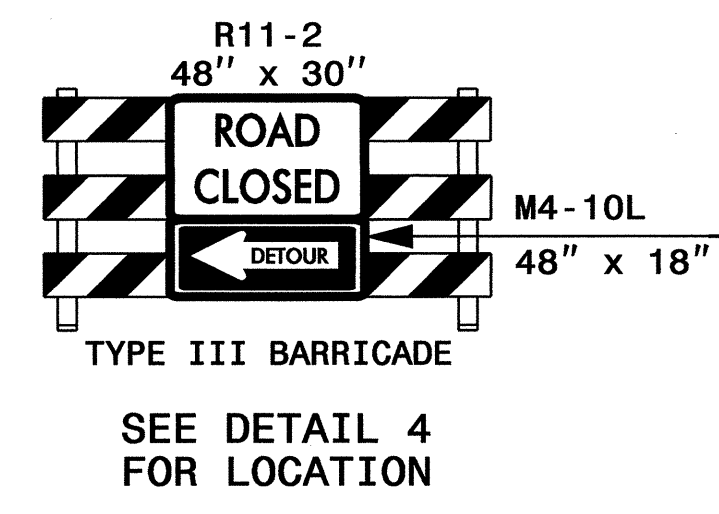
PHASE I - STEPS 3 THRU 6
TYPICAL SECTION

MESSAGE NO. 1 NC 86 SB CLOSED AHEAD	CHANGEABLE MESSAGE SIGN
MESSAGE NO. 1 USE MANNING TO 501	CHANGEABLE MESSAGE SIGN

MESSAGE NO. 1 NC 86 SB CLOSED AHEAD
CHANGEABLE MESSAGE SIGN

PLACE ON S. COLUMBIA ST. IN
ADVANCE OF CAMERON AVE.

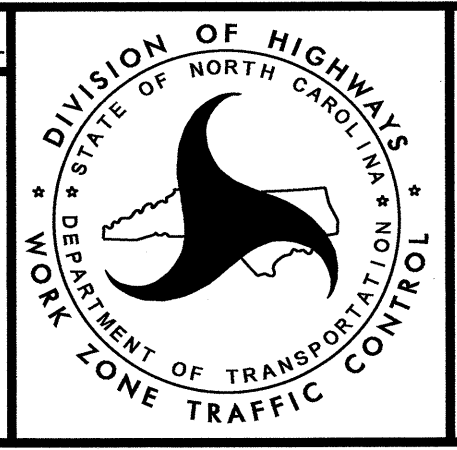
NOTE: FOR ADDITIONAL SIGNING AND MESSAGES,
SEE DETAILS 2-7, SHEETS TMP-7-9 & 12-14.



APPROVED: _____ DATE: _____

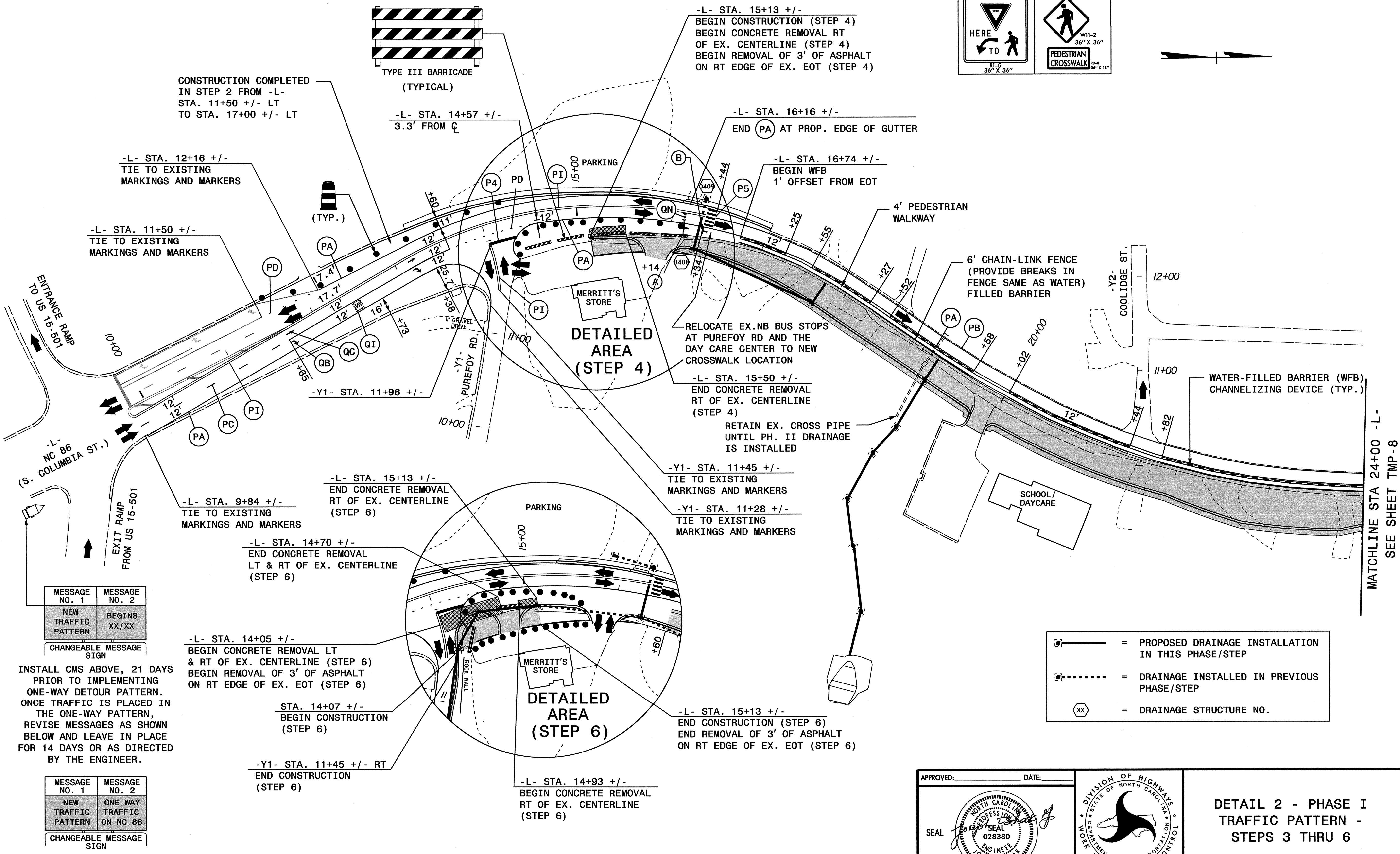
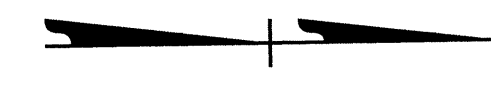
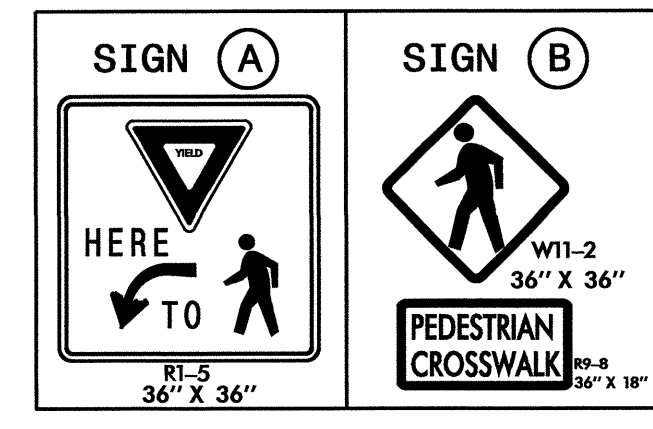
SEAL

01/28/2012



DETAIL 1- PHASE I
SOUTH NC 86
(S. COLUMBIA ST.)
OFF-SITE ONE-WAY
DETOUR ROUTE

27-JUN-2012 12:37
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MESSAGE NO. 1	MESSAGE NO. 2
NEW TRAFFIC PATTERN	BEGINS XX/XX
CHANGEABLE MESSAGE SIGN	




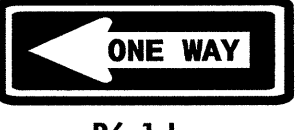

INSTALL CMS ABOVE, 21 DAYS PRIOR TO IMPLEMENTING ONE-WAY DETOUR PATTERN. ONCE TRAFFIC IS PLACED IN THE ONE-WAY PATTERN, REVISE MESSAGES AS SHOWN BELOW AND LEAVE IN PLACE FOR 14 DAYS OR AS DIRECTED BY THE ENGINEER.

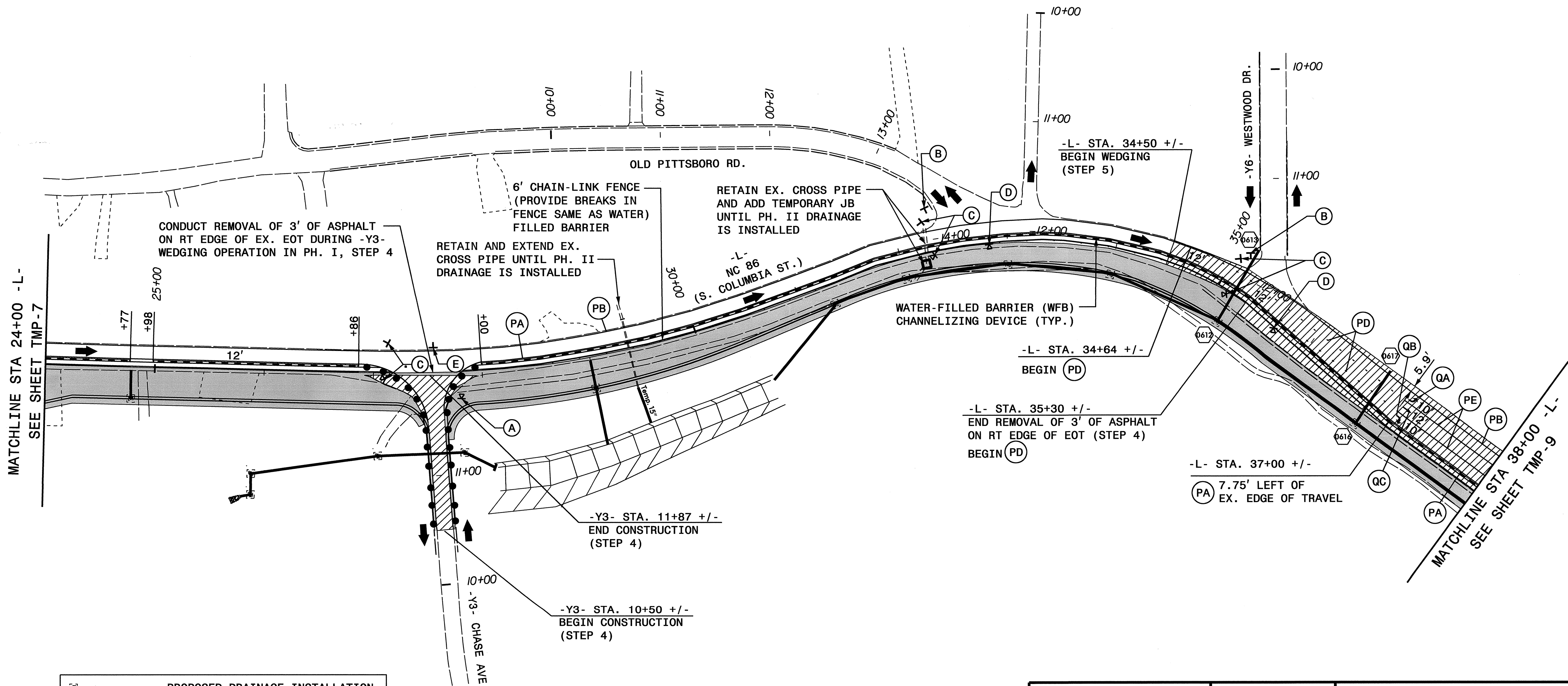
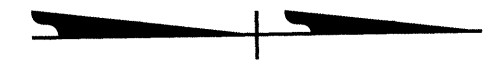
MESSAGE NO. 1	MESSAGE NO. 2
NEW TRAFFIC PATTERN	ONE-WAY TRAFFIC ON NC 86
CHANGEABLE MESSAGE SIGN	

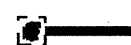
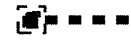
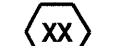
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DETAIL 2 - PHASE I
TRAFFIC PATTERN -
STEPS 3 THRU 6


27-JUN-2012 16:54 \\dot\dfs\00\NNSP\Proj\TIP\Projects-U\0624\TrafficControl\TCP-U-0624_TC_TCP_07_PHL-DETAIL2.dgn aludmi AT TE24741

SIGN (A)  R3-2 24" X 24"	SIGN (B)  R3-1 24" X 24"	SIGN (C)  R5-1 30" X 30"	SIGN (D)  R6-1 L 36" X 12"	SIGN (E)  R6-1 R 36" X 12"
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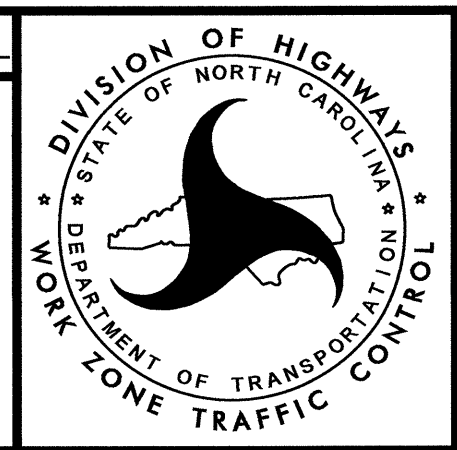


	= PROPOSED DRAINAGE INSTALLATION IN THIS PHASE/STEP
	= DRAINAGE INSTALLED IN PREVIOUS PHASE/STEP
	= DRAINAGE STRUCTURE NO.

APPROVED: _____ DATE: _____

SEAL 

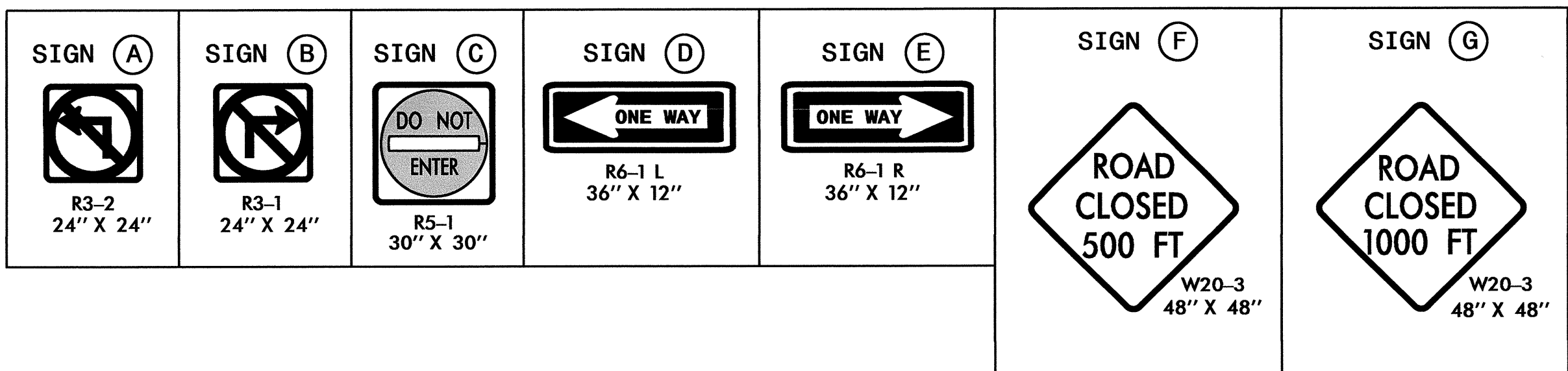
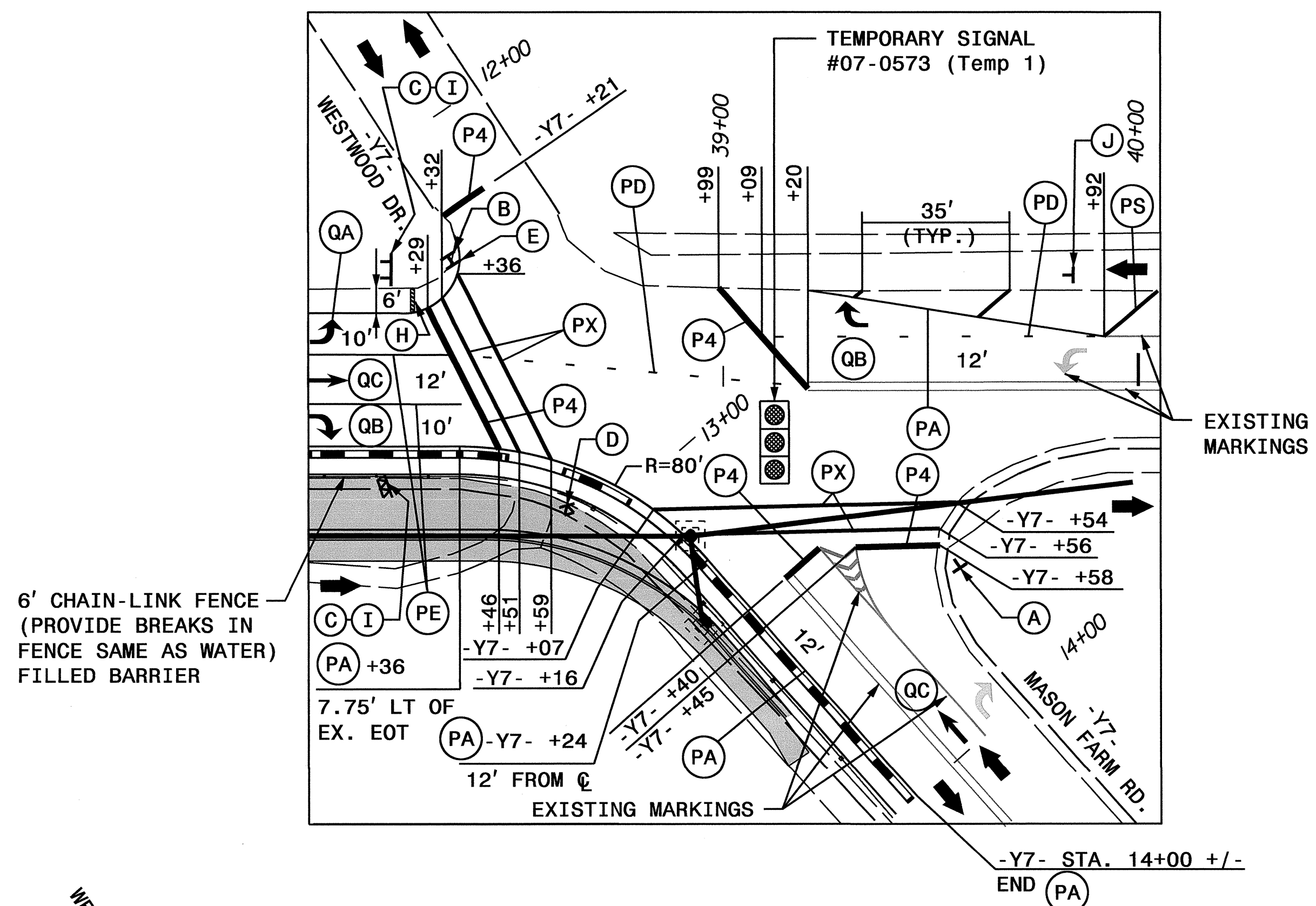
07/28/2012



**DETAIL 3 - PHASE I
TRAFFIC PATTERN -
STEPS 3 THRU 6**

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 dlyudmi AT 1E24741

INSET A

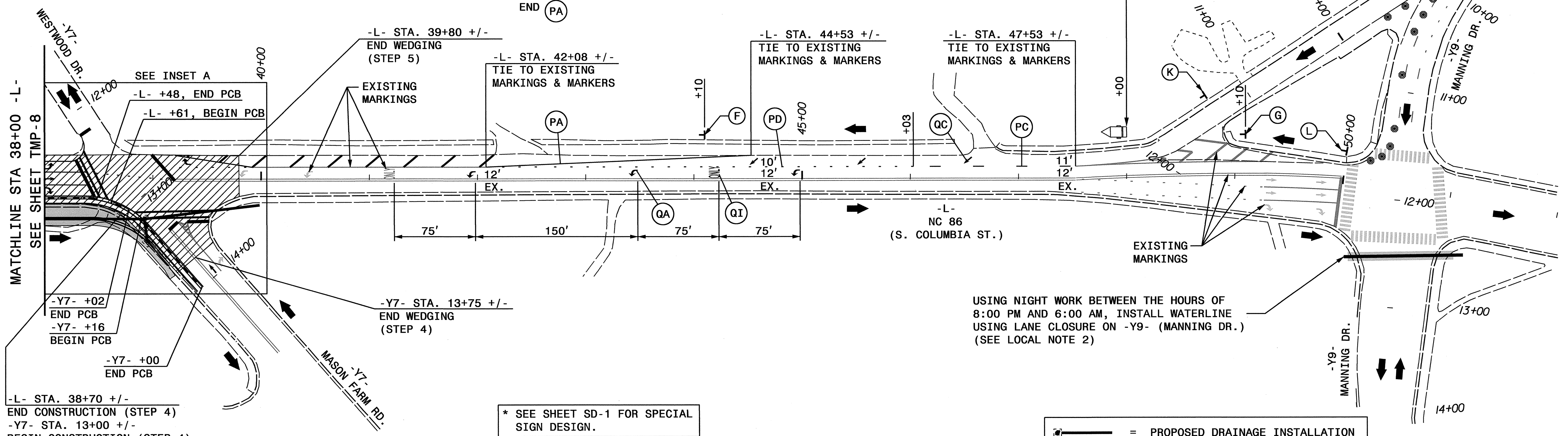


MESSAGE NO. 1 NEW TRAFFIC PATTERN	MESSAGE NO. 2 BEGINS XX/XX
CHANGEABLE MESSAGE SIGN	

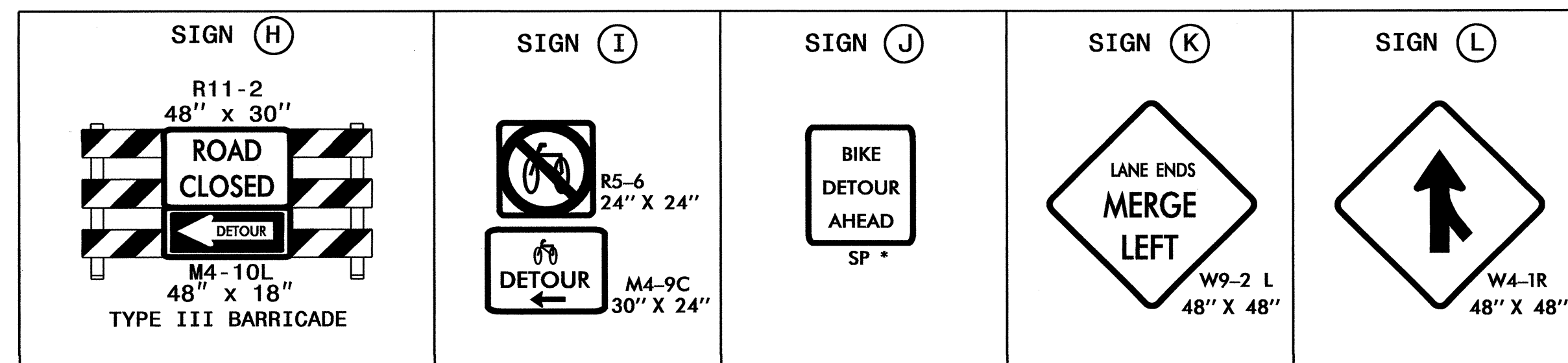
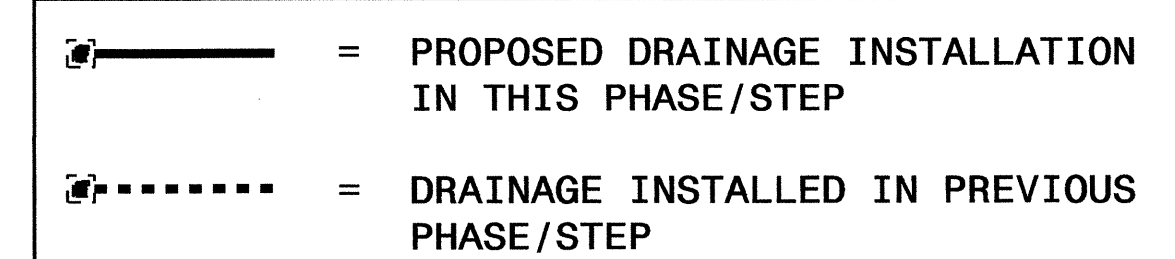
INSTALL CMS ABOVE, 21 DAYS PRIOR TO IMPLEMENTING ONE-WAY DETOUR PATTERN. ONCE TRAFFIC IS PLACED IN THE ONE-WAY PATTERN, REVISE MESSAGES AS SHOWN BELOW AND LEAVE IN PLACE FOR 14 DAYS OR AS DIRECTED BY THE ENGINEER.

MESSAGE NO. 1 NEW TRAFFIC PATTERN	MESSAGE NO. 2 NC 86 SB CLOSED AT MASON
CHANGEABLE MESSAGE SIGN	

CLOSE RIGHT LANE IN ADVANCE OF -Y8- (PITTSBORO RD) USING RSD 1101.02, SHEET 3 OF 15, FOR INSTALLATION OF WATERLINE NOT INSTALLED BY TRENCHLESS METHOD ON -Y9- (MANNING DR), STA. 12+50 +/- RT.



USING NIGHT WORK BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM, INSTALL WATERLINE USING LANE CLOSURE ON -Y9- (MANNING DR.) (SEE LOCAL NOTE 2)

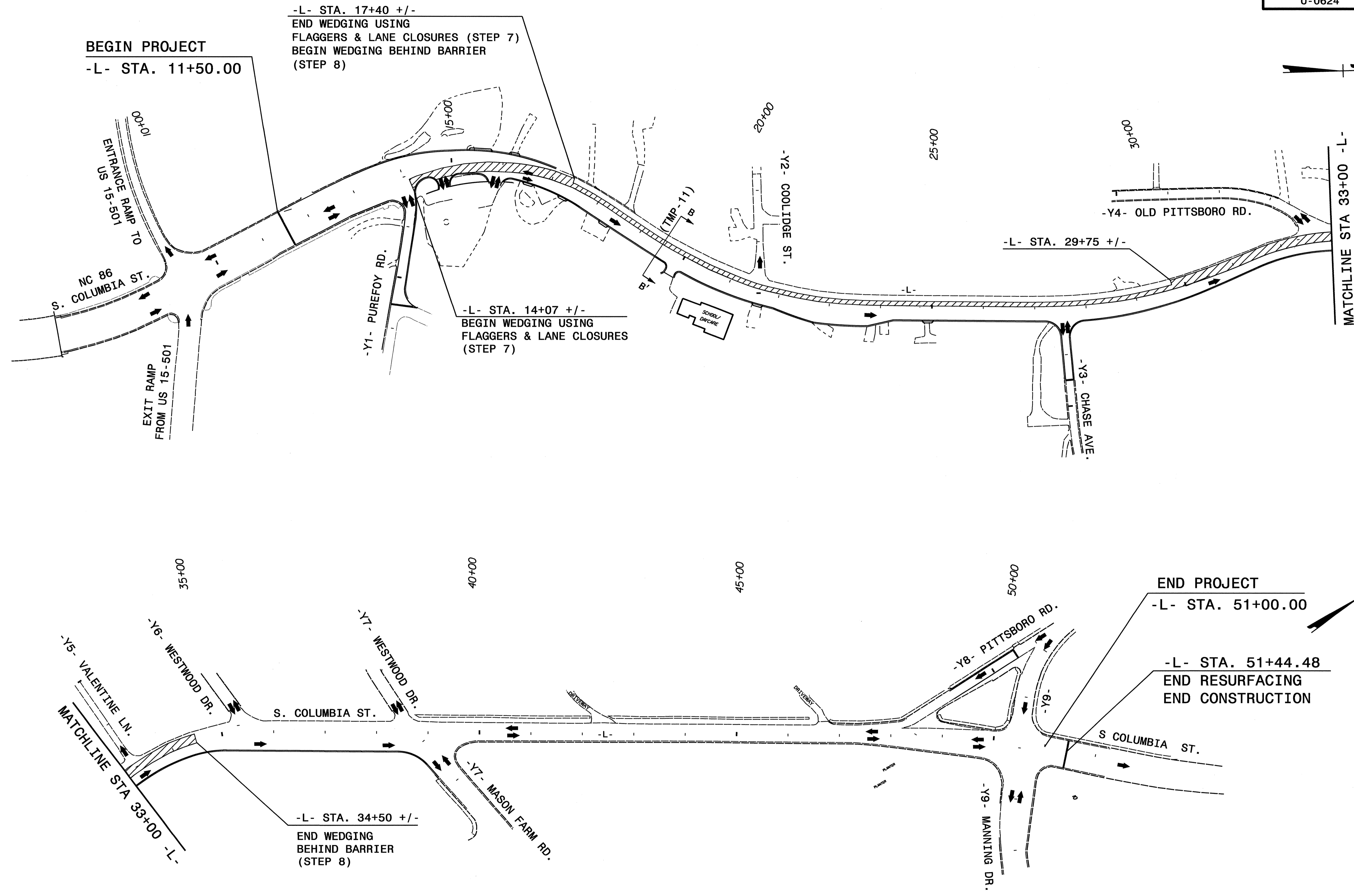


APPROVED: _____ DATE: _____

SEAL

DETAIL 4 - PHASE I
TRAFFIC PATTERN -
STEPS 3 THRU 6

24-JUL-2012 11:42
 \\dot\dfs\p070\NSP\proj\TIP\Projects-U\U0624\TrafficControl\TCP\U-0624-TC-CP_09_PHL_DETAIL4.dgn
 c:\y\dmr AT 12244741

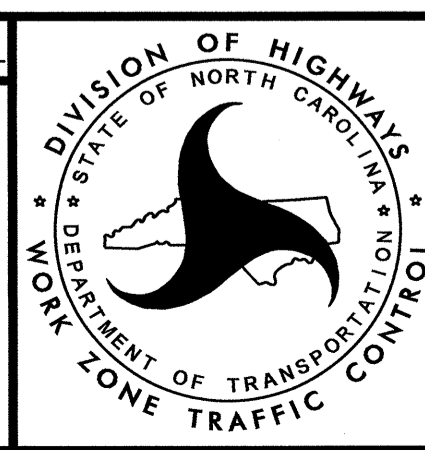


09-JUL-2012 09:28
 \\dot\dfs\of\NSProj\TIPProjects-U\0624\Traffic\TrafficControl\TCP\U-0624_TC-TCP_ID.PH 10VRW6-7.dgn
 dnyudml AT 1E24741

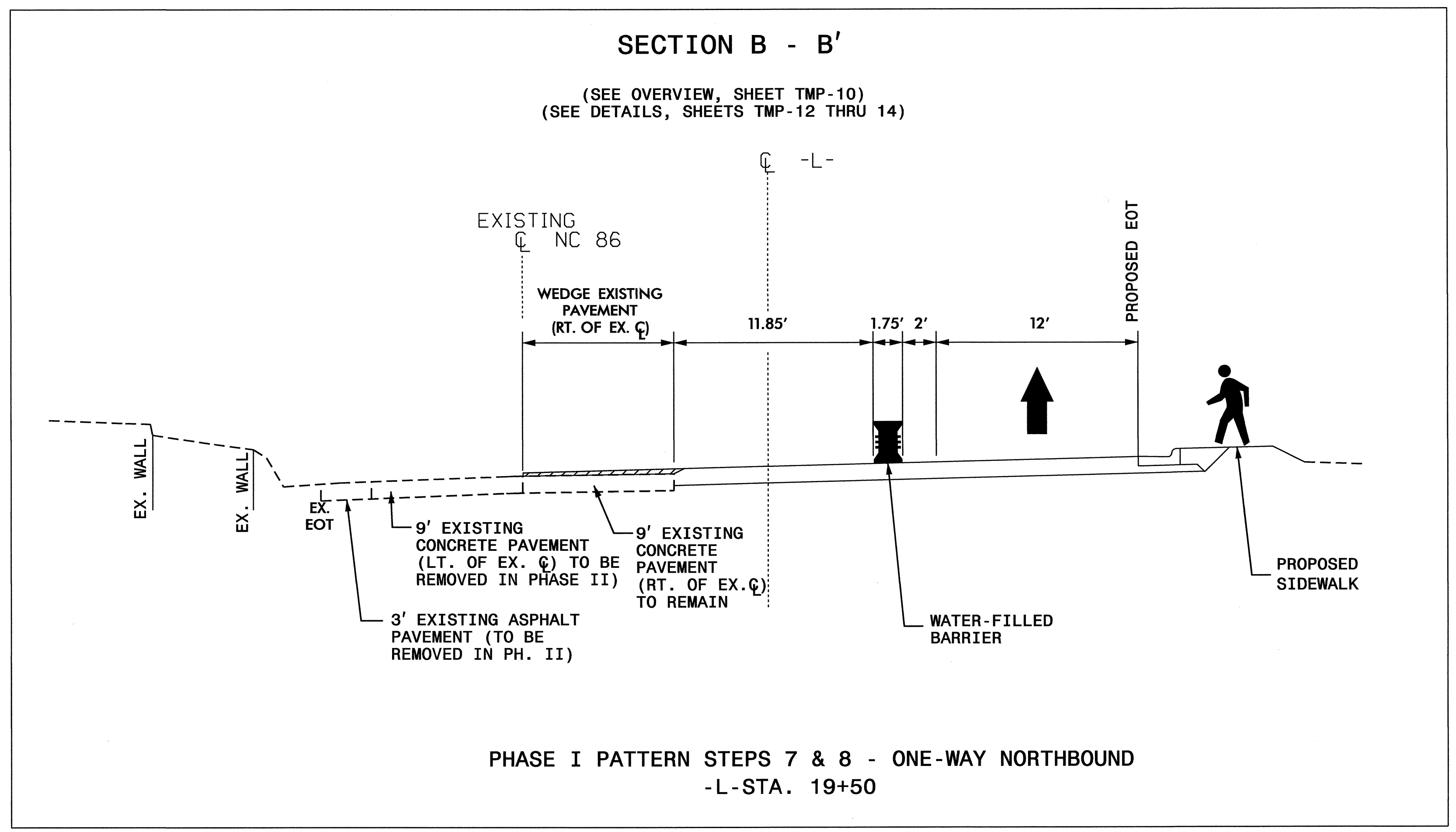
APPROVED: _____ DATE: _____

SEAL

7/17/2012



PHASE I OVERVIEW
STEPS 7 AND 8

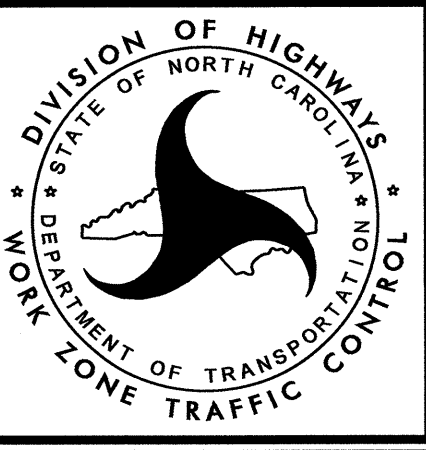


27-JUN-2012 12:25
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 ayudml AT TE24741

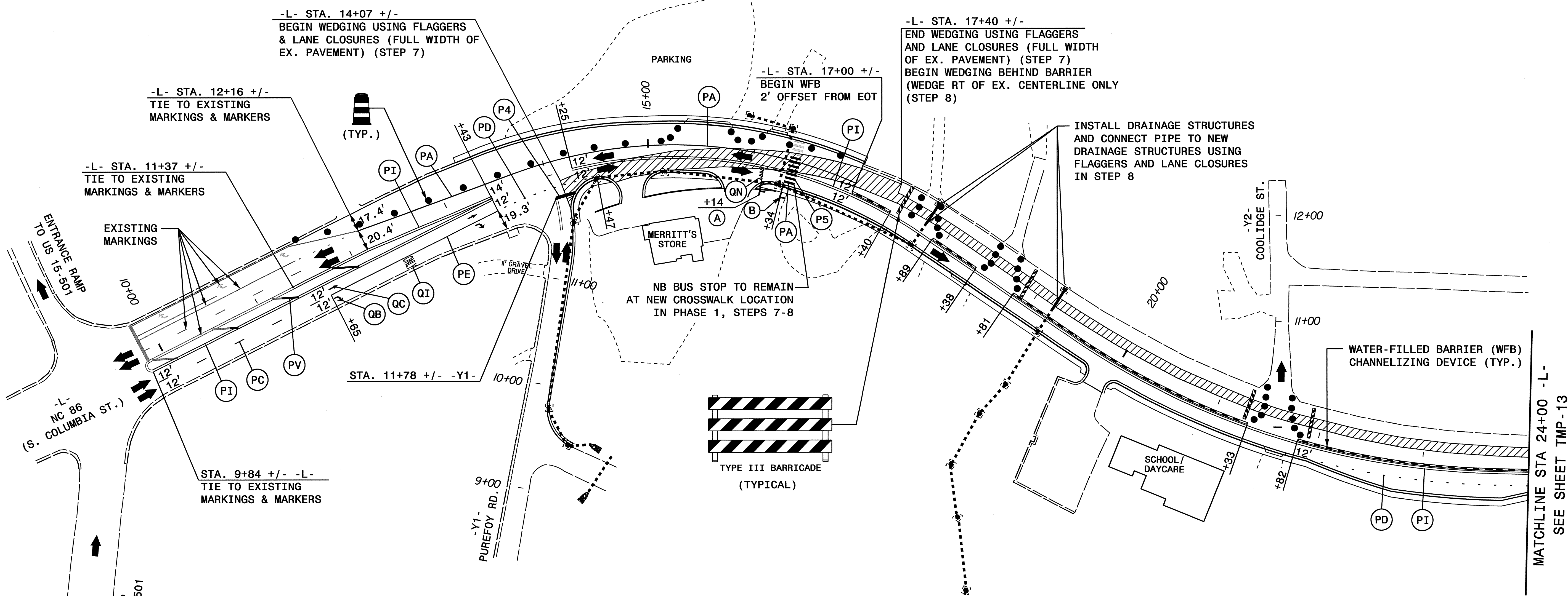
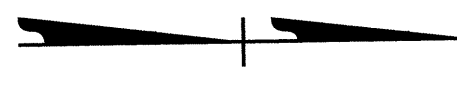
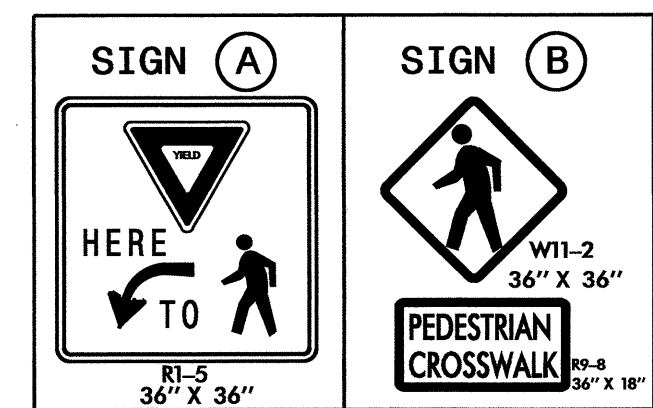
APPROVED: _____ DATE: _____

SEAL

12/12/12



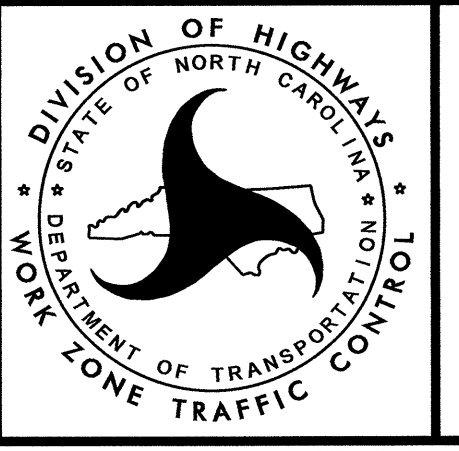
PHASE I - STEPS 7 & 8
TYPICAL SECTION



= PROPOSED DRAINAGE INSTALLATION IN THIS PHASE/STEP
 = DRAINAGE INSTALLED IN PREVIOUS PHASE/STEP

27-JUN-2012 12:26
 \\dot\dfsroot\NSP\proj\IP\Projects-U\0624\Traffic\TrafficControl\TCP-U-0624-TC-TCP-12-PHI-DET-AIL5.dgn
 aludmi AT TE244741

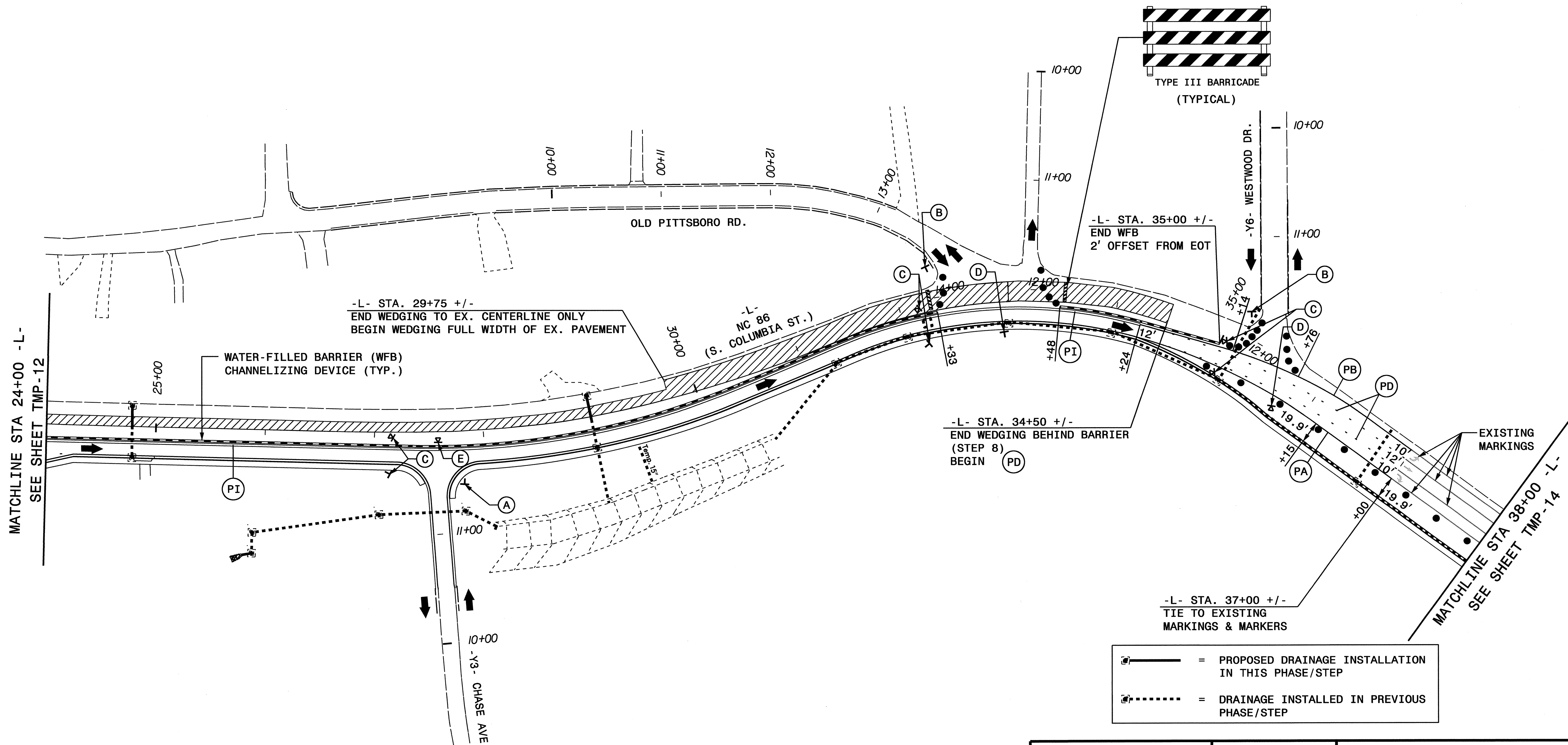
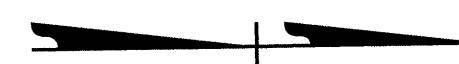
APPROVED: _____ DATE: _____



**DETAIL 5 - PHASE I
TRAFFIC PATTERN -
STEPS 7 & 8**

MATCHLINE STA 24+00 -L-
SEE SHEET TMP-13

SIGN (A) R3-2 24" X 24"	SIGN (B) R3-1 24" X 24"	SIGN (C) DO NOT ENTER R5-1 30" X 30"	SIGN (D) ONE WAY R6-1 L 36" X 12"	SIGN (E) ONE WAY R6-1 R 36" X 12"
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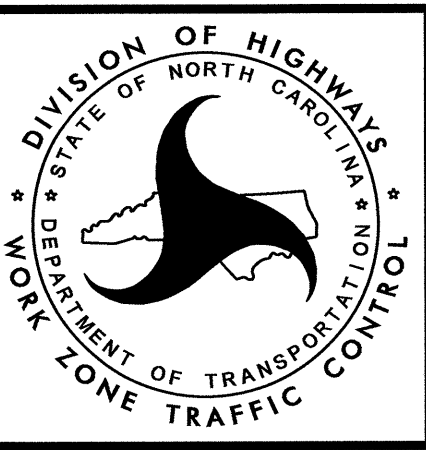


27-JUN-2012 12:38
 \\dot\dfs\proj\01\NSPProj\TIPProjects\U0624\TrafficControl\TCP\U-0624_TC_TCP_13_Phl_DETAIL6.dgn
 givudmi AT TE24741

APPROVED: _____ DATE: _____

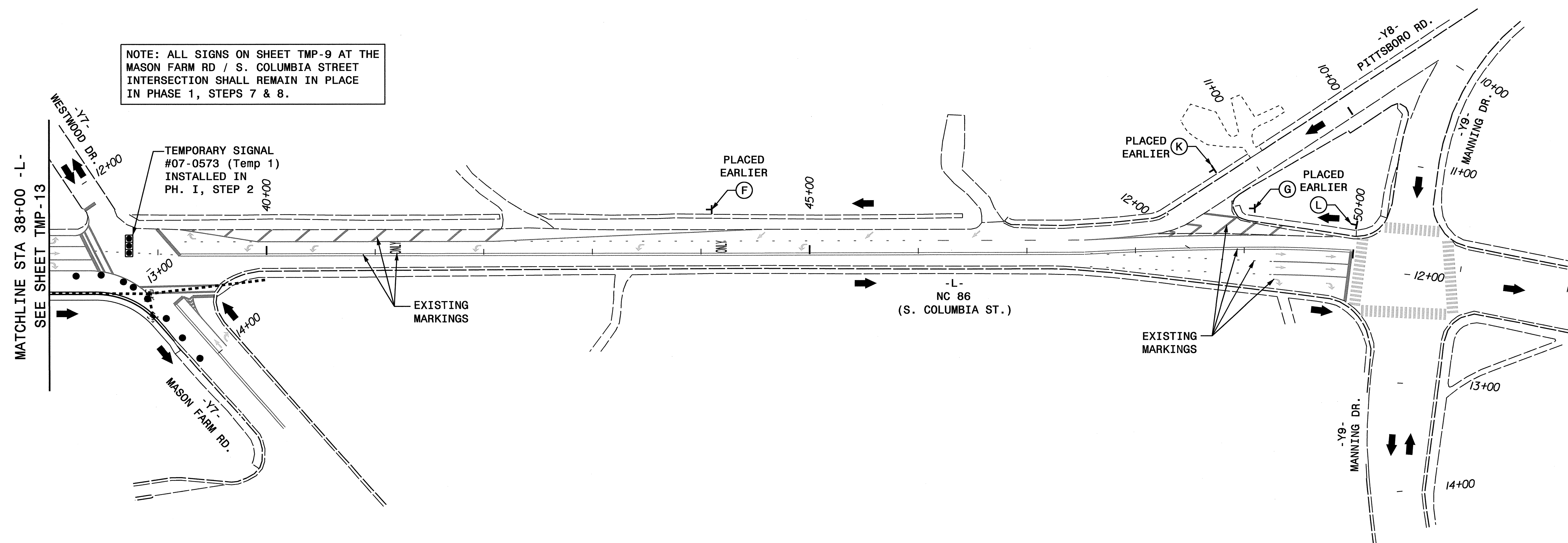
SEAL

01/28/2012



**DETAIL 6 - PHASE I
TRAFFIC PATTERN -
STEPS 7 & 8**

NOTE: ALL SIGNS ON SHEET TMP-9 AT THE MASON FARM RD / S. COLUMBIA STREET INTERSECTION SHALL REMAIN IN PLACE IN PHASE 1, STEPS 7 & 8.



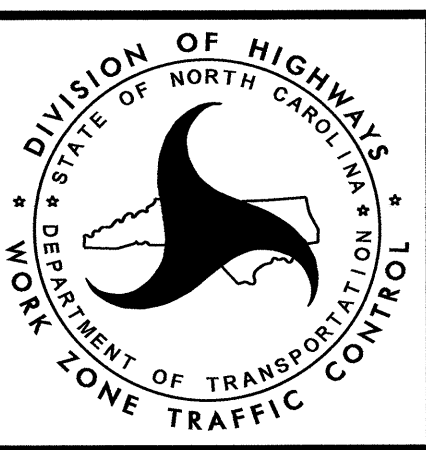
= PROPOSED DRAINAGE INSTALLATION IN THIS PHASE/STEP
 = DRAINAGE INSTALLED IN PREVIOUS PHASE/STEP

27-JUN-2012 12:40
 \\dot\dfs\oc\0\NSProj\TIPPrjects-U\0624\Traffic\TrafficControl\TCP\U-0624-TC-14-PhI-DETAIL7.dgn
 qiyudmi AT TE244741

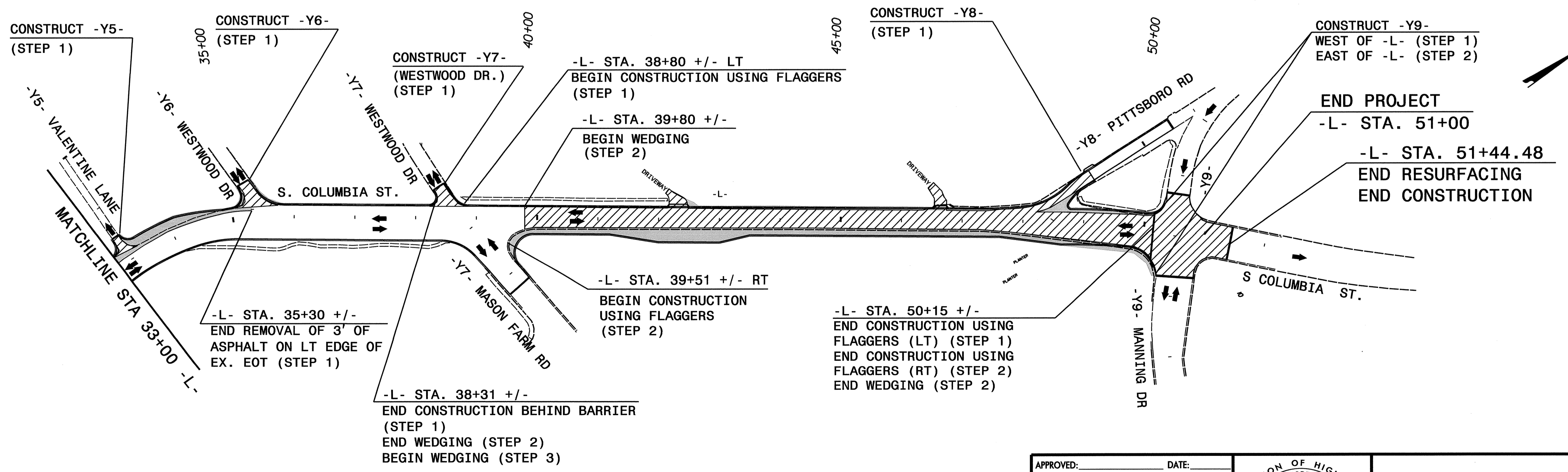
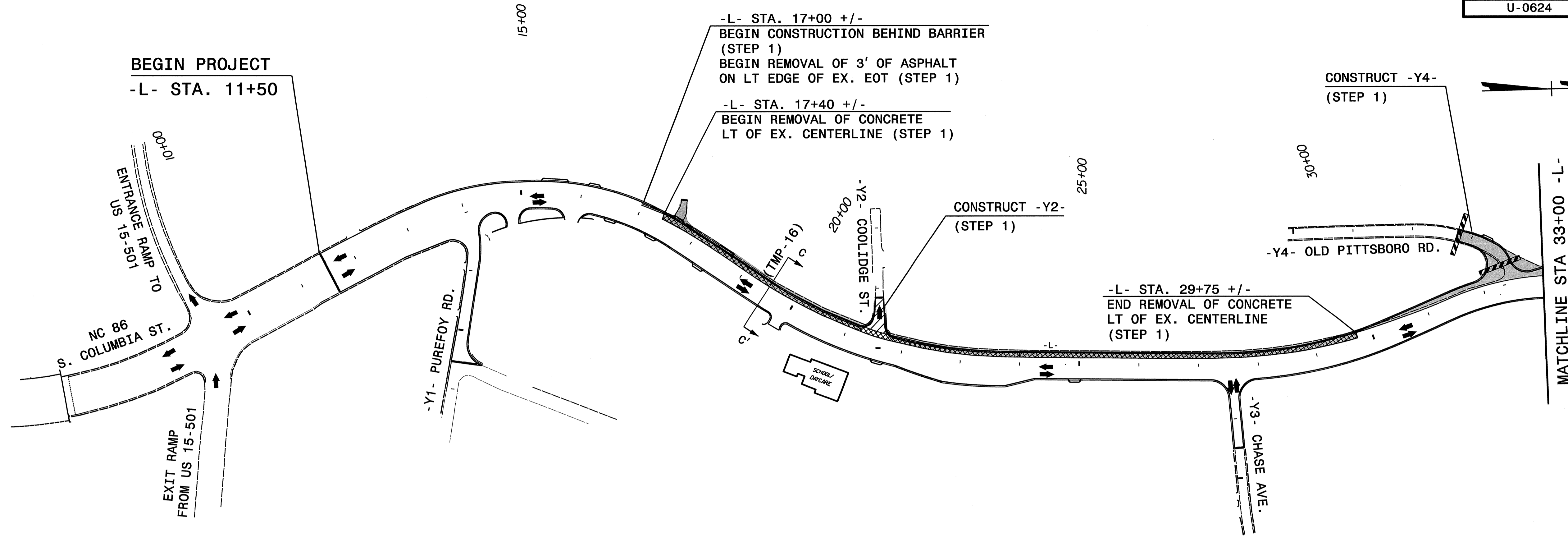
APPROVED: _____ DATE: _____

SEAL

07/28/2012



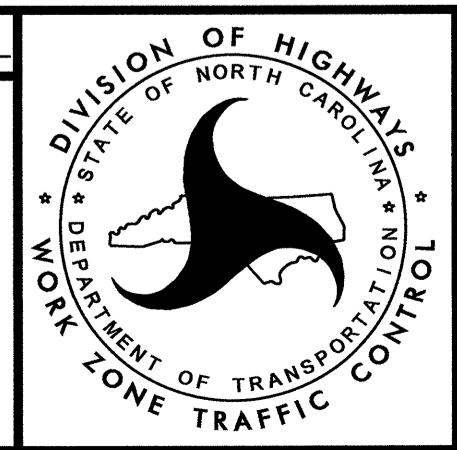
**DETAIL 7 - PHASE I
TRAFFIC PATTERN -
STEPS 7 & 8**



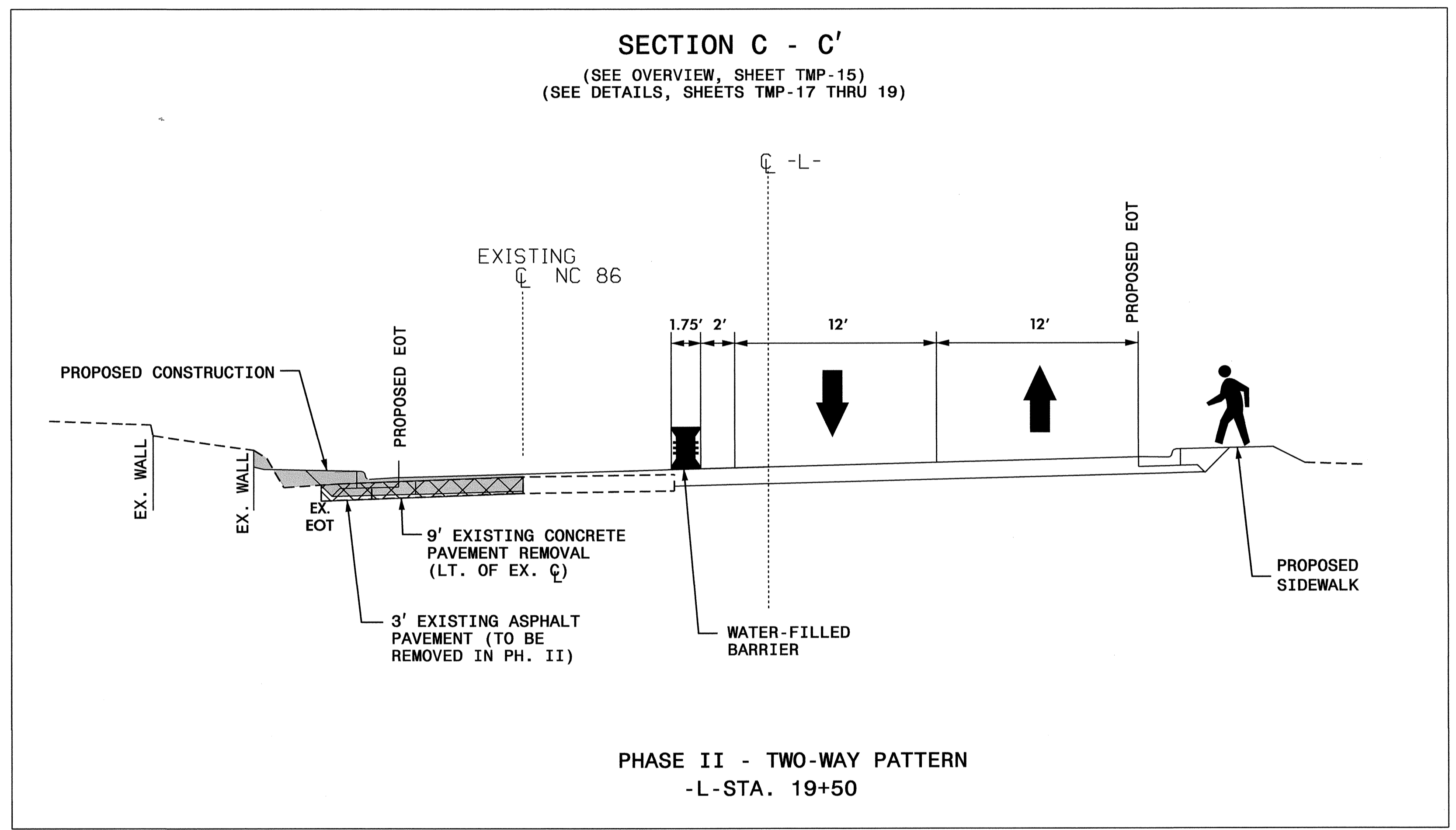
09-JUL-2012 09:26
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 givudmi AT TE24741

APPROVED: _____ DATE: _____

SEAL



PHASE II OVERVIEW



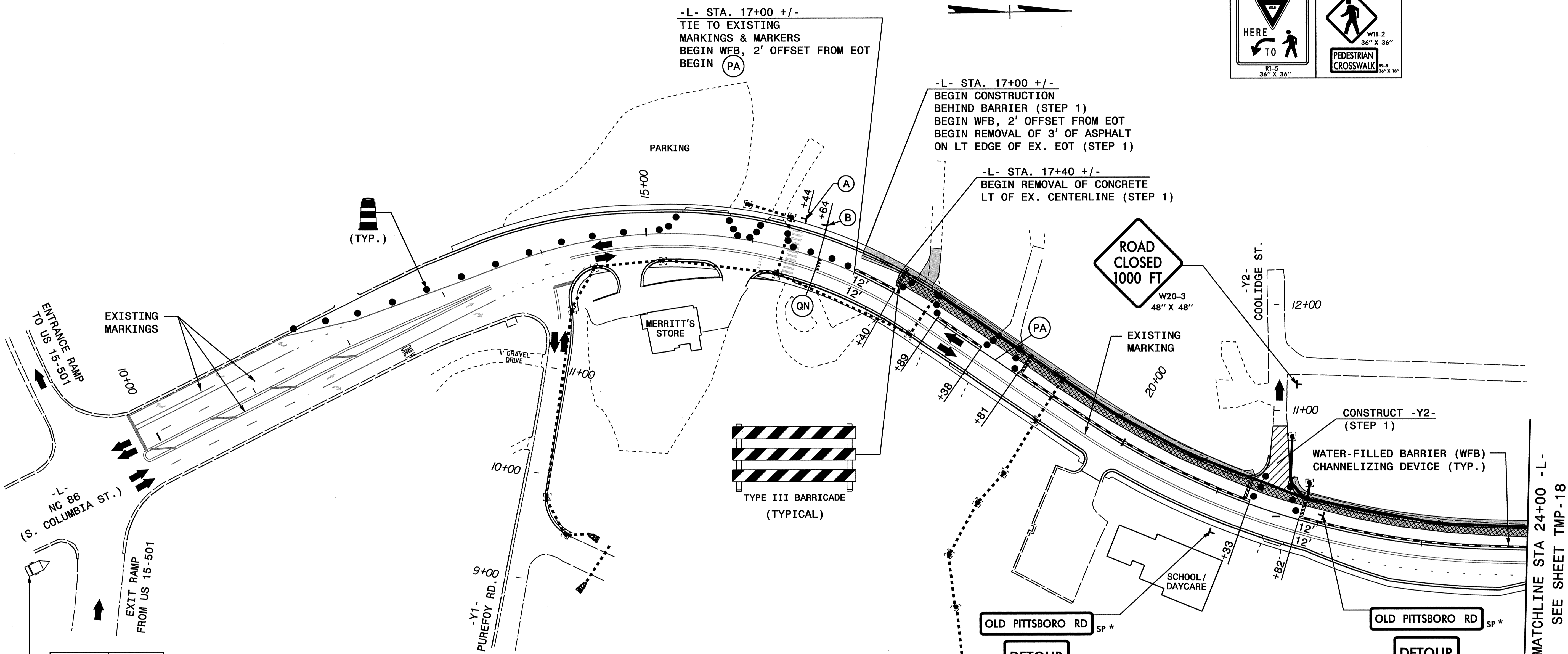
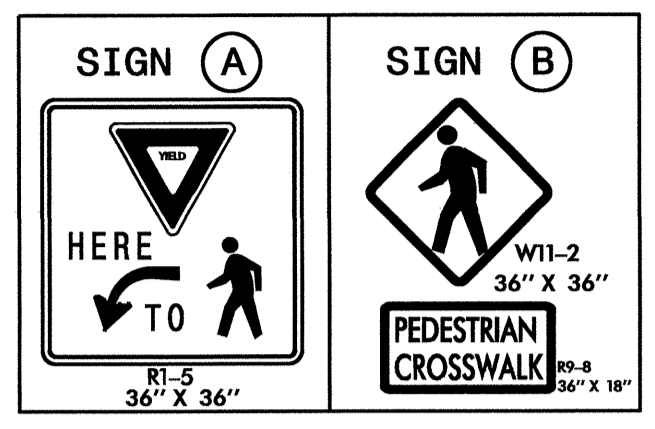
27-JUN-2012 12:43
 \\dot\dfs\001\NSP\proj\TIP\Projects-U\0624\TrafficControl\TCP\U-0624_TC-TCP_16_Ph II Typical.dgn
 alYudml AT E244741

APPROVED: _____ DATE: _____

SEAL

6/28/2012

PHASE II
TYPICAL SECTION



MESSAGE NO. 1	MESSAGE NO. 2
NEW TRAFFIC PATTERN	BEGINS XX/XX
CHANGEABLE MESSAGE SIGN	

INSTALL 21 DAYS PRIOR TO IMPLEMENTING TWO-WAY TRAFFIC PATTERN. AFTER TRAFFIC IS PLACED IN THE PHASE II TRAFFIC PATTERN, REMOVE MESSAGE NO. 2 AND LEAVE MESSAGE BOARD IN PLACE WITH MESSAGE NO. 1 FOR 14 DAYS OR AS DIRECTED BY THE ENGINEER.

DETOUR M4-8 24" X 12"

M6-1 L 21" X 15"

DETOUR M4-8 24" X 12"

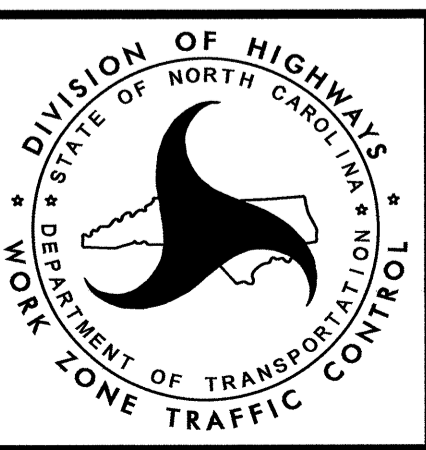
M6-1 21" X 15"

* SEE SHEET SD-1 FOR SPECIAL SIGN DESIGNS.

- = PROPOSED DRAINAGE INSTALLATION IN THIS PHASE/STEP
- = DRAINAGE INSTALLED IN PREVIOUS PHASE/STEP

APPROVED: _____ DATE: _____

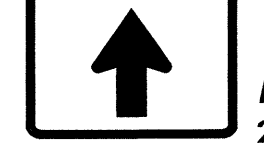
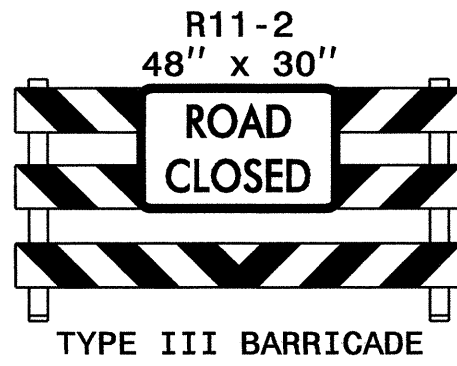
SEAL



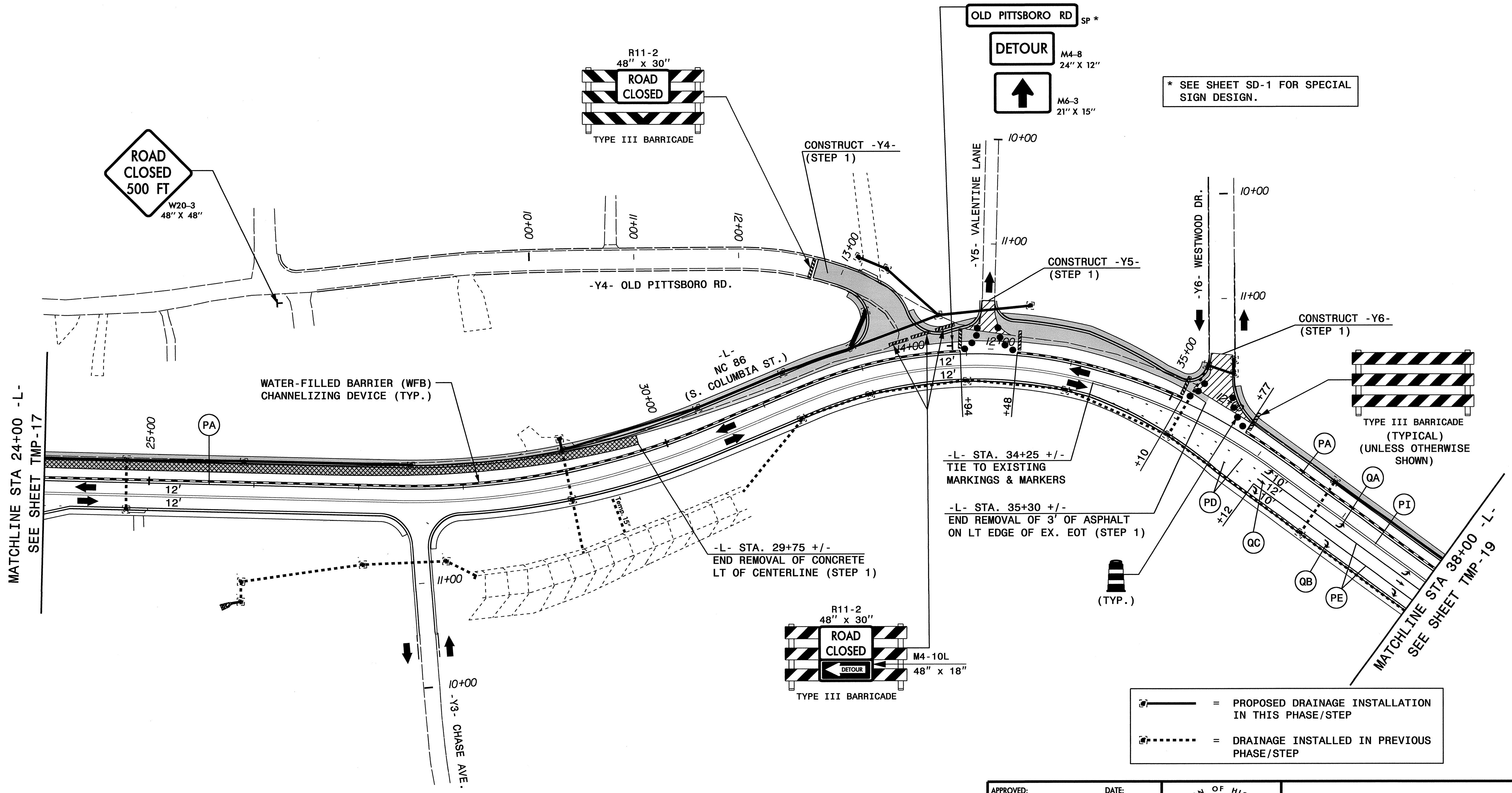
DETAIL 8
PHASE II TRAFFIC PATTERN

27-JUN-2012 12:44 \\dot\dfs\0010\NSPProj\TIPProjects-U0624\Traffic\TrafficControl\TCP\U-0624_TC_TCP_17_Phil_Detail8.dgn givudmi AT TE24741

MATCHLINE STA 24+00 -L- SEE SHEET TMP-18



* SEE SHEET SD-1 FOR SPECIAL SIGN DESIGN.

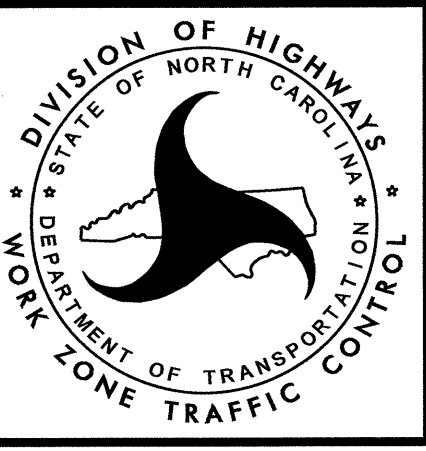


MATCHLINE STA 24+00 -L-
SEE SHEET TMP-17

MATCHLINE STA 38+00 -L-
SEE SHEET TMP-19

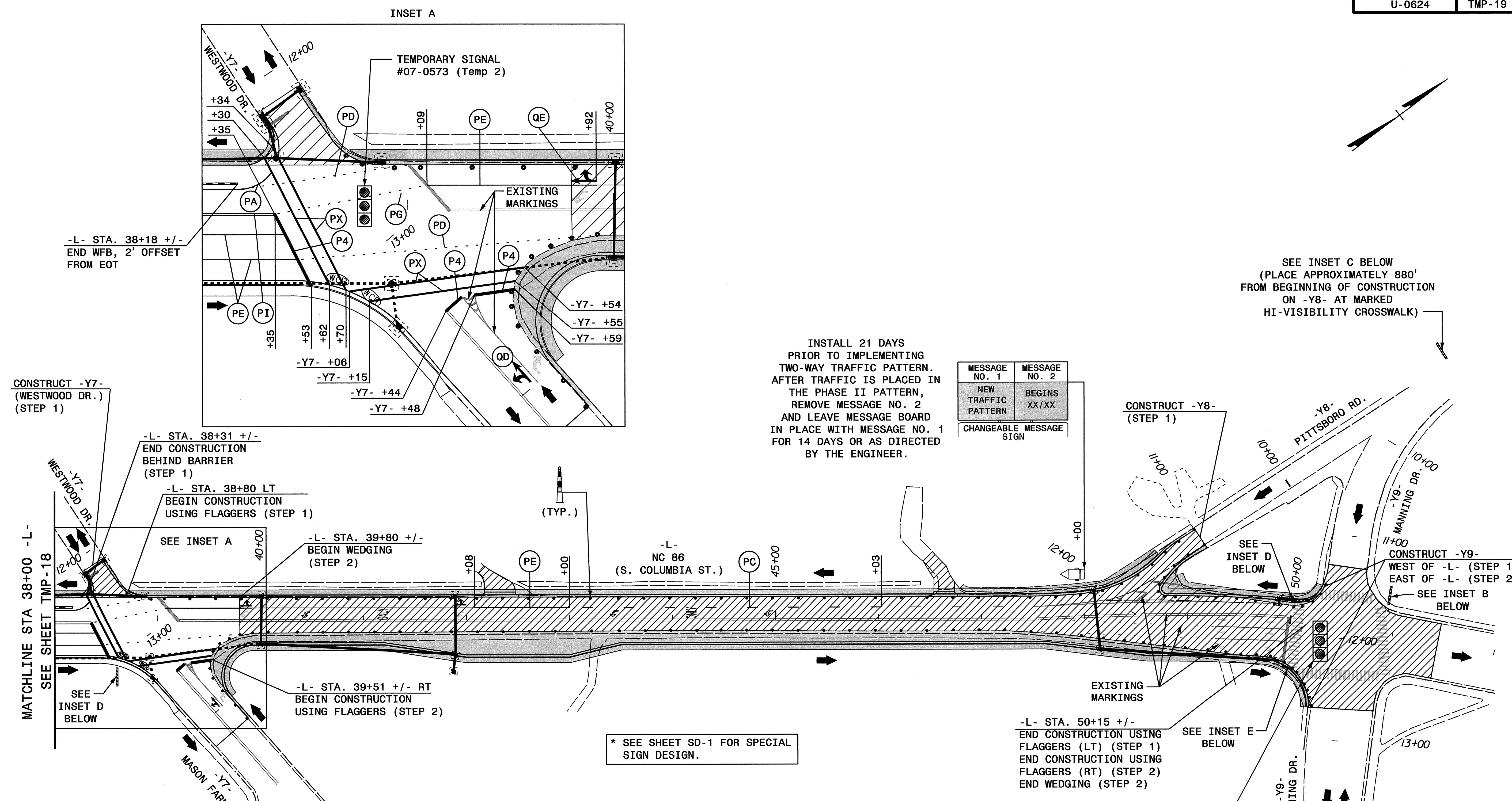
— = PROPOSED DRAINAGE INSTALLATION IN THIS PHASE/STEP
 - - - = DRAINAGE INSTALLED IN PREVIOUS PHASE/STEP

APPROVED: _____ DATE: _____



DETAIL 9
 PHASE II TRAFFIC PATTERN

27-JUN-2012 12:45
 \\dot\gfr\0050\NNSProj\TIPProjects-U0624\Traffic\TrafficControl\TCP-U0624_TC_TCP_IB_PHL_DETAIL9.dgn
 alyudml AT TE24741



MESSAGE NO. 1	MESSAGE NO. 2
NEW TRAFFIC PATTERN	BEGINS XX/XX
CHANGEABLE MESSAGE SIGN	

SEE INSET C BELOW (PLACE APPROXIMATELY 880' FROM BEGINNING OF CONSTRUCTION ON -Y8- AT MARKED HI-VISIBILITY CROSSWALK)

* SEE SHEET SD-1 FOR SPECIAL SIGN DESIGN.

<p>INSET B</p> <p>R9-11a 24" X 12"</p> <p>TYPE III BARRICADE</p> <p>PLACE BARRICADE WITH PEDESTRIAN CROSSING SIGNS HERE WHEN CONSTRUCTING LEFT SIDE OF -L- IN STEP 1</p>	<p>INSET C</p> <p>S. COLUMBIA ST. SP *</p> <p>R9-11a 24" X 12"</p> <p>TYPE III BARRICADE</p> <p>PLACE BARRICADE WITH PEDESTRIAN CROSSING SIGNS HERE WHEN CONSTRUCTING LEFT SIDE OF -L- IN STEP 1</p>	<p>INSET D</p> <p>R9-11a 24" X 12"</p> <p>TYPE III BARRICADE</p> <p>PLACE BARRICADE WITH PEDESTRIAN CROSSING SIGNS HERE WHEN CONSTRUCTING RIGHT SIDE OF -L- IN STEP 2</p>	<p>INSET E</p> <p>R9-11a 24" X 12"</p> <p>TYPE III BARRICADE</p> <p>PLACE BARRICADE WITH PEDESTRIAN CROSSING SIGNS HERE WHEN CONSTRUCTING LEFT SIDE OF -L- IN STEP 1</p>
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— = PROPOSED DRAINAGE INSTALLATION IN THIS PHASE/STEP
 - - - - - = DRAINAGE INSTALLED IN PREVIOUS PHASE/STEP

APPROVED: _____ DATE: _____			<p>DETAIL 10 PHASE II TRAFFIC PATTERN</p>
SEAL			

27-JUN-2012 12:46
 \\dot\dfsroot\0\NNSP\ro\TIP\Projects-U\0624\TrafficControl\TCP-U-0624_TC-TCP_19_Phil_Detail10.dgn
 aljudml AT TE24741