STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO. SHEET NO. B-4144 TCP-1

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

HAYWOOD COUNTY

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"-ROADWAY DESIGN 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
1101.05	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
1145.01	BARRICADES
1150.01	FLAGGERS
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS
1264.02	PLACEMENT OF OBJECT MARKERS

INDEX OF SHEETS

SHEET NO.

TITLE

TCP-1 LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS

TCP-2 & 3 PROJECT NOTES

TCP-4 DETAIL I

TCP-5 DETAIL II

PM - 1 FINAL PAVEMENT MARKING PLAN

LEGEND

GENERAL

→ DIRECTION OF TRAFFIC FLOW

NORTH ARROW

PROPOSED PVMT. ---- EXIST. PVMT.

WORK AREA

REMOVAL OF EXISTING PAVEMENT

TRAFFIC CONTROL DEVICES

T TYPE I BARRICADE

TYPE III BARRICADE

▲ CONE

SKINNY DRUM

FLASHING ARROW PANEL (TYPE C)

STATIONARY SIGN

PORTABLE SIGN

STATIONARY OR PORTABLE SIGN

- CRASH CUSHION

CHANGEABLE MESSAGE SIGN

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

₩ POLICE

FLAGGER

PAVEMENT MARKINGS

CRYSTAL/CRYSTAL PAVEMENT MARKER

YELLOW/YELLOW PAVEMENT MARKER

CRYSTAL/RED PAVEMENT MARKER

PAVEMENT MARKING SYMBOLS

Kimley-Horn and Associates, Inc. © , 2007 Post Office Box 33068 Raleigh, North Carolina 27636 (919) 677-2000	APPROVED:DATE:	PLAN PREPARED FOR N.C.D.O.T. BY: NCDOT CONTACTS:
SCALE: NONE	CAROLLING CAROLLING	J STUART BOURNE, PE TRAFFIC CONTROL ENGINEER
DWG. BY: AMFIIA S. CALLAS	SEAL 033 167	J STEVE KITE, PE TRAFFIC CONTROL PROJECT ENGINEER
DWG. BY: AMELIA S. CALLAS DESIGN BY: J. JASON PACE		JESSICA D KUSE, PE TRAFFIC CONTROL PROJECT DESIGN ENGINEER
REVIEWED BY: A. AHAD SADAT		DAVID W BISSETTE, PE TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN

GENERAL NOTES

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

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) 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 ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE. CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

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.

PAVEMENT EDGE DROP OFF REQUIREMENTS

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

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER. AT NO EXPENSE TO THE DEPARTMENT.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- F) 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.
- G) STATE FORCES WILL BE RESPONSIBLE FOR PERMANENT SIGNING.
- 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) IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS

L) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME MARKER MARKING RICHLAND CREEK ROAD PAINT NONE

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

RICHLAND CREEK ROAD PAINT NONE

MARKING

MARKER

- N) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.
- O) 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.
- P) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

MISCELLANEOUS

ROAD NAME

Q) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAYS 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) AND RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

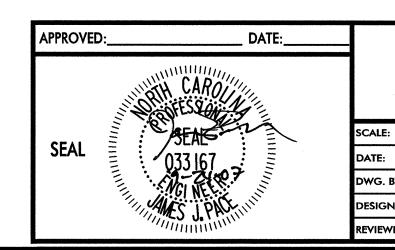
LOCAL NOTES

THE PROPERTY OWNERS OF DRIVEWAY D1 AND D2 ARE TO BE NOTIFIED AT LEAST 3 WEEKS IN ADVANCE OF THEIR DRIVEWAY CONSTRUCTION. COORDINATE WITH THE PROPERTY OWNERS THROUGH THE PHASES OF CONSTRUCTION AS DIRECTED BY THE ENGINEER.

GENERAL NOTES FOR ADVANCED WARNING SIGNS

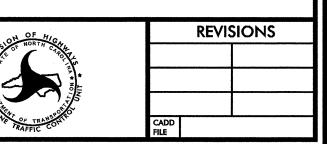
- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS,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

SHEET 2 OF 5



PROJECT NOTES

NONE		
SEF	PT 2007	
BY:	ASC	
N BY:	JJP	
ED BY:	AAS	



PHASING NOTES

PROJ. REFERENCE NO.	SHEET NO.
B-4144	TCP-3

PHASE I, STEPS 1 THROUGH 5 (SEE SHEET TCP-4)

- STEP 1 PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, INSTALL WORK ZONE ADVANCE WARNING SIGNS ON RICHLAND CREEK ROAD AS SHOWN ON TCP-4.
- STEP 2 USING NCDOT ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 1 OF 9 AND FLAGGERS TO MAINTAIN TRAFFIC ON EXISTING RICHLAND CREEK ROAD AND ACCESS TO ALL DRIVEWAYS.
 - CONSTRUCT PROPOSED DRIVEWAY D1 UP TO BUT NOT INCLUDING THE ASPHALT PAVEMENT LAYERS FROM D1 STA. 10+50 TO 12+30.
 - CONSTRUCT DRIVEWAY D1 TEMPORARY GRADE TIE-IN FROM THE EXISTING EDGE OF PAVEMENT ELEVATIONS OF RICHLAND CREEK ROAD TO D1 STA. 10+50. (USE GRAVEL TO CONSTRUCT D1 AT THIS STEP.)
 - BEGIN PROPOSED BRIDGE CONSTRUCTION
- STEP 3 WHILE MAINTAINING TRAFFIC ON EXISTING RICHLAND CREEK ROAD AND ACCESS TO ALL DRIVEWAYS:
 - COMPLETE PROPOSED BRIDGE CONSTRUCTION
 - CONSTRUCT PROPOSED RICHLAND CREEK ROAD'S RELOCATION UP TO BUT NOT FINAL LAYER OF SURFACE COURSE PAVEMENT FROM STA. 13+00 TO 16+00 -L-.

AT STA. 13+00 -L- RT AND STA. 16+00 -L- RT, TEMPORARILY ADJUST PROPOSED DRAINAGE DITCH AND SIDE SLOPES IN ORDER TO KEEP EXISTING RICHLAND CREEK ROAD OPEN FOR TRAFFIC.

- STEP 4 PLACE CHANGEABLE MESSAGE SIGNS (CMS) ON BOTH ENDS APPROACHING THE CONSTRUCTION ONE WEEK IN ADVANCE OF CONSTRUCTION WORK IN STEP 5.
- STEP 5 USING NCDOT ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 1 OF 9 AND FLAGGERS TO MAINTAIN TRAFFIC ON EXISTING RICHLAND CREEK ROAD AND ACCESS TO ALL DRIVEWAYS:
 - CONSTRUCT TEMPORARY GRADE TIE-IN FROM THE EXISTING EDGE OF PAVEMENT ELEVATIONS OF RICHLAND CREEK ROAD (-L- STA. 10+75 TO 12+60) TO THE PROPOSED ELEVATION OF -L- AT STA. 13+00 CONSTRUCTED IN STEP 3.
 - CONSTRUCT TEMPORARY GRADE TIE-IN FROM THE PROPOSED ELEVATION OF -L-AT STA. 16+00 CONSTRUCTED IN STEP 3 TO THE EXISTING EDGE OF PAVEMENT ELEVATIONS OF RICHLAND CREEK ROAD (-L-STA. 15+87 TO 17+94).

CONSTRUCT THE BRIDGE APPROACHING ENDS GUARDRAIL AS MUCH AS POSSIBLE AND PROTECT THE GUARDRAIL ENDS WITH TEMPORARY GUARDRAIL END TREATMENT.

NOTE: KEEP TWO LANE TWO-WAY ROADWAY OPEN FOR TRAFFIC DURING NIGHT TIME AND DAY TIME WHEN THE CONSTRUCTION ACTIVITIES ARE NOT IN PROGRESS.

PHASE II, STEPS 1 THROUGH 7 (SEE SHEET TCP-5)

- STEP 1 USING NCDOT ROADWAY STANDARD DRAWING NO 1101.02 SHEET 1 OF 9, AND FLAGGERS, PLACE TEMPORARY PAVEMENT MARKINGS ON -L-; IN THE FINAL PAVEMENT MARKING PATTERN. (SEE SHEET PM-1) REMOVE EXISTING PAVEMENT MARKINGS AT TIE-INS THAT ARE IN CONFLICT WITH PROPOSED MARKINGS.
- STEP 2 CHANGE CMS MESSAGE AND SHIFT TRAFFIC TO NEWLY CONSTRUCTED RICHLAND CREEK ROAD'S RELOCATION -L-.

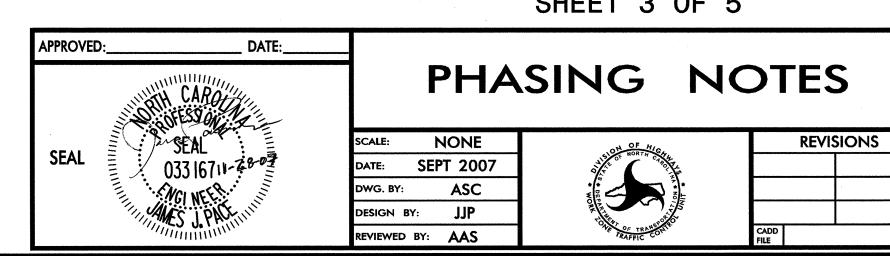
WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING WORK OF PHASE II STEP 3 (SEE INTERMEDIATE CONTRACT TIME)

- STEP 3 USING NCDOT ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 1 OF 9 AND FLAGGERS ROAD AND ACCESS TO ALL DRIVEWAYS:
 - COMPLETE CONSTRUCTION OF PROPOSED TIE-IN UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT FROM EXISTING RICHLAND CREEK ROAD -L- STA. 10+75 TO RELOCATED RICHLAND CREEK ROAD -L- STA. 13+00.
 - COMPLETE CONSTRUCTION OF PROPOSED TIE-IN UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT FROM RELOCATED RICHLAND CREEK ROAD -L- STA. 16+00 TO EXISTING RICHLAND CREEK ROAD -L- STA. 17+94.

NOTE: KEEP TWO LANE TWO-WAY ROADWAY OPEN FOR TRAFFIC DURING NIGHT TIME AND DAY TIME WHEN THE CONSTRUCTION ACTIVITIES ARE NOT IN PROGRESS.

- STEP 4 USING NCDOT ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 1 OF 9 AND FLAGGERS TO MAINTAIN RELOCATED RICHLAND CREEK ROAD'S TRAFFIC:
 - COMPLETE DRIVEWAY D1 CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.
 - CONSTRUCT DRIVEWAY D2 UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.
 - INSTALL TERMINAL SECTIONS AND END OF ROAD MARKERS AT EXISTING BRIDGE BEFORE REMOVING BARRICADE AT THIS LOCATION.
- STEP 5 REMOVE EXISTING BRIDGE
- STEP 6 USING NCDOT ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 1 OF 9 AND FLAGGERS TO MAINTAIN RELOCATED RICHLAND CREEK ROAD'S TRAFFIC:
 - PLACE FINAL LAYER OF SURFACE COURSE PAVEMENT ON -L- FROM STA. 10+75 TO STA. 17+94, AND DRIVEWAYS D1 AND D2.
 - PLACE FINAL PAVEMENT MARKINGS ON RELOCATED RICHLAND CREEK ROAD. SEE SHEET PM-1.
- STEP 7 OPEN ALL LANES TO TRAFFIC.

SHEET 3 OF 5



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