R-2904

TIP PROJECT:

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
R-2904	TCP-1

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

DURHAM 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
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUMS
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
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS (TEMPORARY & PERMANENT)
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
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1264.02	PLACEMENT OF OBJECT MARKERS

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APPROVED: [signature]
DATE: 17 MAR 06

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PLAN PREPARED BY: N.C.D.O.T. TRAFFIC CONTROL, MARKING & DELINEATION UNIT

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PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-2

GENERAL NOTES

A) ADAPT THE TRAFFIC CONTROL PLANS, WHEN DIRECTED BY THE ENGINEER, TO MEET FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT. CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES.

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

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

	ROAD NAME	DAY AND TIME RESTRICTIONS
1.	NC 54	7:00 AM TO 7:00 PM, MONDAY TO FRIDAY

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

ROAD NAME

1. NC 54

HOLIDAY

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

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

D) DO NOT STOP TRAFFIC FOR MORE THAN 10 MINUTES AS FOLLOWS:

	ROAD NAME	OPERATION
1.	ALL ROADS	SHIFTING TRAFFIC

E) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR OTHERWISE DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 40 FT (12m) 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.

H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT (1.5m) 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.

PROJECT NOTES

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT (3m) OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

J) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.

K) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FT (5m) OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.

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

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 HAS A DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES (50mm) ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES (75mm) 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.

N) DO NOT EXCEED A DIFFERENCE OF 1.5 inches (40mm) IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT (150m) IN ADVANCE AND A MINIMUM OF ONCE EVERY MILE THROUGHOUT THE UNEVEN AREA.

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 100 FT (31m) FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE DEPARTMENT.

Q) PROVIDE PERMANENT SIGNING.

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

TRAFFIC CONTROL DEVICES

S) SPACE CHANNELIZING DEVICES IN WORK AREAS EQUAL IN METERS TO 2/3 rds THE POSTED SPEED LIMIT (MPH), EXCEPT 3m ON-CENTER IN RADII, AND 1m OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.

T) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY. STAGGER OR OVERLAP BARRICADES TO ALLOW FOR INGRESS OR EGRESS.

U) PLACE SETS OF THREE DRUMS PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 500 FT (150m) CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC. THESE DRUMS SHALL BE IN ADDITION TO CHANNELIZING DEVICES.

TRFFIC BARRIER

V) INSTALL MOVABLE/PORTABLE CONCRETE BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE MOVABLE/PORTABLE CONCRETE 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.

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

W) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS:

POSTED SPEED LIMIT	MINIMUM OFFSET
LESS THAN 50 MPH	20 FT
50 MPH or HIGHER	30 FT

INSTALL MOVABLE/PORTABLE CONCRETE BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE MOVABLE/PORTABLE CONCRETE 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 CLOSED THE SECTION OF THE ROADWAY UNTIL THE BARRIER CAN BE PLACED OR AFTER BARRIER IS REMOVED.

PAVEMENT MARKINGS AND MARKERS

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

	ROAD NAME	MARKING	MARKER
1.	ALL ROADS	THERMOPLASTIC	PERMANENT RAISED

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

	ROAD NAME	MARKING	MARKER
1.	ALL ROADS	PAINT	TEMPORARY RAISED

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

AA) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.

BB) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

TEMPORARY/FINAL SIGNALS

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

MISCELLANEOUS

DD) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH INTERSECTIONS.

APPROVED: _____ DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PROJECT NOTES

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS

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PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-3

PROJECT PHASING

PHASE I

STEP 1: - CONTRACTOR SHALL PLACE ADVANCE WORK ZONE WARNING SIGNS ALONG EXISTING NC 54 (-L-) AND ALL -Y- LINES/DRIVEWAYS AS SHOWN ON SHEET TCP-20.

- CONTRACTOR SHALL PLACE CHANGEABLE MESSAGE SIGNS (CMS) AS DIRECTED BY THE ENGINEER.

STEP 2: - THE FOLLOWING NOTES ARE APPLICABLE FOR PHASE I, STEP 2.

NOTE: CONTRACTOR SHALL PLACE TRAFFIC BACK INTO THE EXISTING PATTERN AT THE END OF EACH WORK PERIOD.

NOTE: CONTRACTOR SHALL PLACE TYPE III BARRICADES AT ALL -Y- LINES/DRIVEWAYS AND/OR DRUMS TO KEEP PROPOSED/ TEMPORARY WIDENING CLOSED TO TRAFFIC.

NOTE: WHEN CONSTRUCTING DRAINAGE STRUCTURES ADJACENT TO TRAFFIC, INSTALL TEMPORARY STEEL PLATES, AS DIRECTED BY THE ENGINEER. MAY WORK EACH LOCATION INDEPENDENTLY OR CONCURRENTLY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WORK IN A CONTINUOUS MANNER TO PERFORM THE WORK IN THE FOLLOWING SEQUENCE, IN STEPS 'A' THRU 'E'.

A: CLOSE THE APPROPRIATE TRAVEL LANE TO TRAFFIC USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEETS 1, 2 & 3 OF 9.

B: CONSTRUCT PROPOSED STRUCTURE OR INSTALL PRE-CAST DRAINAGE STRUCTURE AS SHOWN IN THE CONSTRUCTION PLANS AND COVER WITH STEEL PLATES TO PROTECT STRUCTURE DURING CURING.

C: OPEN TRAVEL LANE TO EXISTING TRAFFIC PATTERN BY THE END OF EACH WORK PERIOD.

D: WHEN PROPERLY CURED, CLOSE THE APPROPRIATE TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 1, 2 & 3 OF 9. BACKFILL & PAVE, IF REQUIRED, UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT (SEE CONSTRUCTION PLANS).

E: OPEN TRAVEL LANE TO EXISTING TRAFFIC PATTERN BY THE END OF THE WORK PERIOD.

- CONTRACTOR, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2 & 3 OF 9:

-- MAY BEGIN CLEARING/GRUBBING & GRADING OPERATIONS, AND CONSTRUCTION OF PROPOSED DRAINAGE (INCLUDING CURB & GUTTER) ALONG & ACROSS EXISTING NC 54 (-L-) AND ALL -Y- LINES/DRIVEWAYS, AS DIRECTED BY THE ENGINEER (SEE CONSTRUCTION PLANS).

-- CONSTRUCT TEMPORARY PAVEMENT ON THE RIGHT SIDE OF EXISTING NC 54 (-L-) UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT AS FOLLOWS (SEE CONSTRUCTION PLANS AND SHEETS TCP-4, 5 & 6):

STA. 20+00 +/- -L- TO STA. 31+00 +/- -L-
STA. 36+00 +/- -L- TO STA. 37+50 +/- -L-
STA. 40+67 +/- -L- TO STA. 43+00 +/- -L-
STA. 46+00 +/- -L- TO STA. 57+39 +/- -L-

-- CONSTRUCT THE RIGHT SIDE OF PROPOSED WIDENING (UTILIZING PAVING & WEDGING OPERATIONS ACROSS EXISTING PAVEMENT AS REQUIRED) OF NC 54 (-L-) AS FOLLOWS:

STA. 15+91 +/- -L- TO STA. 20+00 +/- -L-
STA. 31+00 +/- -L- TO STA. 36+00 +/- -L-
STA. 43+00 +/- -L- TO STA. 46+00 +/- -L-

PROPOSED DRIVEWAYS, AND STUB OUTS (INCLUDING PROPOSED CURB & GUTTER AND PROPOSED DRAINAGE) UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE (SEE CONSTRUCTION PLANS AND SHEETS TCP-4, 5 & 6).

NOTE: CONTRACTOR MAY CONSTRUCT (UTILIZING PAVING & WEDGING OPERATIONS ACROSS EXISTING PAVEMENT AS REQUIRED) THE LEFT SIDE OF PROPOSED WIDENING OF NC 54 (-L-) FROM:

STA. 15+91 +/- -L- TO STA. 20+00 +/- -L-,

AND PROPOSED DRIVEWAY LEFT OF STA. 15+91 +/- -L- (INCLUDING PROPOSED CURB & GUTTER AND PROPOSED DRAINAGE) UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE (SEE CONSTRUCTION PLANS).

-- PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS, AS MUCH AS POSSIBLE WITHOUT INTERFERING WITH TRAFFIC, ON NEWLY COMPLETED WIDENING/TEMPORARY PAVEMENT RIGHT SIDE OF NC 54 (-L-) FROM STA. 15+50 +/- -L- TO STA. 57+39 +/- -L- (SEE SHEETS TCP-7 THRU TCP-10).

-- INSTALL TEMPORARY SIGNALS AT THE INTERSECTIONS OF NC 54 (-L-) & NORTEL ENTRANCES (STA. 33+00 +/- -L-) AND NC 54 (-L-) & MIAMI BLVD. FOR INTERMEDIATE TRAFFIC PATTERNS (SEE SIGNAL PLANS AND SHEETS TCP-8 & 10).

PHASE II

CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK OF PHASE II, STEP 1 IN ONE WORK PERIOD.

STEP 1: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2 & 3 OF 9:

-- PLACE REMAINDER OF TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS ON NEWLY COMPLETED PROPOSED WIDENING/TEMPORARY PAVEMENT RIGHT SIDE OF NC 54 (-L-), MIAMI BLVD. AND ALL DRIVEWAYS FROM STA. 15+50 +/- -L- TO STA. 57+39 +/- -L-, SHIFT TRAFFIC TO INTERMEDIATE TRAFFIC PATTERN AND ACTIVATE TEMPORARY SIGNALS AT THE INTERSECTIONS OF NC 54 (-L-) & NORTEL ENTRANCES (STA. 33+00 +/- -L-) AND NC 54 (-L-) & MIAMI BLVD (SEE SIGNAL PLANS AND SHEETS TCP-7 THRU TCP-10).

NOTE: CONTRACTOR SHALL PLACE TYPE III BARRICADES AT -Y- LINES/DRIVEWAYS AND/OR DRUMS TO CLOSE EXISTING TO TRAFFIC.

STEP 2: - THE FOLLOWING NOTES ARE APPLICABLE FOR PHASE II, STEP 2.

NOTE: CONTRACTOR SHALL PLACE TRAFFIC BACK INTO THE EXISTING PATTERN AT THE END OF EACH WORK PERIOD.

NOTE: CONTRACTOR SHALL PLACE TYPE III BARRICADES AT ALL -Y- LINES/DRIVEWAYS AND/OR DRUMS TO KEEP PROPOSED WIDENING CLOSED TO TRAFFIC.

NOTE: CONTRACTOR MAY BEGIN CONSTRUCTION OF PROPOSED SIDEWALKS, PROPOSED/REQUIRED CURB CUTS AND WHEEL CHAIR RAMPS, AS DIRECTED BY THE ENGINEER (SEE CONSTRUCTION PLANS AND SIGNAL PLANS).

NOTE: WHEN CONSTRUCTING DRAINAGE STRUCTURES ADJACENT TO TRAFFIC, INSTALL TEMPORARY STEEL PLATES, AS DIRECTED BY THE ENGINEER. MAY WORK EACH LOCATION INDEPENDENTLY OR CONCURRENTLY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WORK IN A CONTINUOUS MANNER TO PERFORM THE WORK IN THE FOLLOWING SEQUENCE, IN STEPS 'A' THRU 'E'.

A: CLOSE THE APPROPRIATE TRAVEL LANE TO TRAFFIC USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEETS 1, 2 & 3 OF 9.

B: CONSTRUCT PROPOSED STRUCTURE OR INSTALL PRE-CAST DRAINAGE STRUCTURE AS SHOWN IN THE CONSTRUCTION PLANS AND COVER WITH STEEL PLATES TO PROTECT STRUCTURE DURING CURING.

C: OPEN TRAVEL LANE TO EXISTING TRAFFIC PATTERN BY THE END OF EACH WORK PERIOD.

D: WHEN PROPERLY CURED, CLOSE THE APPROPRIATE TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 1, 2 & 3 OF 9. BACKFILL & PAVE, IF REQUIRED, UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT (SEE CONSTRUCTION PLANS).

E: OPEN TRAVEL LANE TO EXISTING TRAFFIC PATTERN BY THE END OF THE WORK PERIOD.

- CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2 & 3 OF 9:

-- INSTALL PORTABLE CONCRETE BARRIER (PCB) AND TEMPORARY CRASH CUSHIONS (TCC) ON THE LEFT SIDE OF THE TEMPORARY PATTERN OF NC 54 (-L-) FROM STA. 46+00 +/- -L- TO STA. 56+50 +/- -L- AND CLOSE THE DRIVEWAY LEFT OF STA. 55+50 +/- -L- TO TRAFFIC (SEE SHEETS TCP-9 AND 10).

-- CONSTRUCT, AS MUCH AS POSSIBLE UTILIZING A TEMPORARY SLOPE OF 2:1 AS REQUIRED, THE LEFT SIDE OF PROPOSED WIDENING FOR A TWO LANE SECTION & THREE LANE SECTION (FOR SIGNALIZED INTERSECTION AREAS) AND PROPOSED MEDIAN (GRASS/CONCRETE ISLANDS, AS MUCH AS POSSIBLE) OF NC 54 (-L-) FROM STA. 15+91 +/- -L- TO STA. 57+39 -L- (INCLUDING ALL DRIVEWAYS, PROPOSED CURB & GUTTER AND PROPOSED DRAINAGE) UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE (SEE CONSTRUCTION PLANS AND SHEETS TCP-7 THRU 10).

-- INSTALL TEMPORARY SIGNALS AT THE INTERSECTIONS OF NC 54 (-L-) & NORTEL ENTRANCES (STA. 33+00 +/- -L-) AND NC 54 (-L-) & MIAMI BLVD. FOR INTERMEDIATE TRAFFIC PATTERNS (SEE SIGNAL PLANS AND SHEETS TCP-12 & 14).

-- PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS, AS MUCH AS POSSIBLE WITHOUT INTERFERING WITH TRAFFIC, ON NEWLY COMPLETED WIDENING LEFT SIDE OF NC 54 (-L-) FROM STA. 15+50 +/- -L- TO STA. 57+39 +/- -L- (SEE SHEETS TCP-11 THRU TCP-14).

APPROVED: DATE:

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PROJECT PHASING

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

REVISIONS

CADD FILE

PROJECT PHASING

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-3A

PHASE III

CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK OF PHASE III, STEP 1 IN ONE WORK PERIOD.

STEP 1: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2 & 3 OF 9:

-- PLACE REMAINDER OF TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS ON NEWLY COMPLETED PROPOSED WIDENING LEFT SIDE OF NC 54 (-L-), MIAMI BLVD. AND ALL DRIVEWAYS FROM STA. 15+50 +/- -L- TO STA. 57+39 +/- -L-, SHIFT TRAFFIC TO INTERMEDIATE TRAFFIC PATTERN AND ACTIVATE TEMPORARY SIGNALS AT THE INTERSECTIONS OF NC 54 (-L-) & NORTEL ENTRANCES (STA. 33+00 +/- -L-) AND NC 54 (-L-) & MIAMI BLVD (SEE SIGNAL PLANS AND SHEETS TCP-11 THRU TCP-14).

NOTE: CONTRACTOR SHALL PLACE TYPE III BARRICADES AT -Y- LINES/DRIVEWAYS AND/OR DRUMS TO CLOSE EXISTING TO TRAFFIC.

STEP 2: - THE FOLLOWING NOTES ARE APPLICABLE FOR PHASE III, STEP 2.

NOTE: CONTRACTOR SHALL PLACE TRAFFIC BACK INTO THE EXISTING PATTERN AT THE END OF EACH WORK PERIOD.

NOTE: CONTRACTOR SHALL PLACE TYPE III BARRICADES AT ALL -Y- LINES/DRIVEWAYS AND/OR DRUMS TO KEEP PROPOSED WIDENING CLOSED TO TRAFFIC.

NOTE: CONTRACTOR MAY BEGIN CONSTRUCTION OF PROPOSED SIDEWALKS, PROPOSED/REQUIRED CURB CUTS AND WHEEL CHAIR RAMPS, AS DIRECTED BY THE ENGINEER (SEE CONSTRUCTION PLANS AND SIGNAL PLANS).

NOTE: WHEN CONSTRUCTING DRAINAGE STRUCTURES ADJACENT TO TRAFFIC, INSTALL TEMPORARY STEEL PLATES, AS DIRECTED BY THE ENGINEER. MAY WORK EACH LOCATION INDEPENDENTLY OR CONCURRENTLY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. WORK IN A CONTINUOUS MANNER TO PERFORM THE WORK IN THE FOLLOWING SEQUENCE, IN STEPS 'A' THRU 'E'.

A: CLOSE THE APPROPRIATE TRAVEL LANE TO TRAFFIC USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEETS 1, 2 & 3 OF 9.

B: CONSTRUCT PROPOSED STRUCTURE OR INSTALL PRE-CAST DRAINAGE STRUCTURE AS SHOWN IN THE CONSTRUCTION PLANS AND COVER WITH STEEL PLATES TO PROTECT STRUCTURE DURING CURING.

C: OPEN TRAVEL LANE TO EXISTING TRAFFIC PATTERN BY THE END OF EACH WORK PERIOD.

D: WHEN PROPERLY CURED, CLOSE THE APPROPRIATE TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 1, 2 & 3 OF 9. BACKFILL & PAVE, IF REQUIRED, UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT (SEE CONSTRUCTION PLANS).

E: OPEN TRAVEL LANE TO EXISTING TRAFFIC PATTERN BY THE END OF THE WORK PERIOD.

- CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2 & 3 OF 9:

-- CLOSE THE DRIVEWAY RIGHT OF STA. 56+00 +/- -L- TO TRAFFIC AND CONSTRUCT THE REMAINING RIGHT SIDE OF PROPOSED WIDENING AND PROPOSED MEDIAN (GRASS/CONCRETE ISLANDS, AS MUCH AS POSSIBLE) OF NC 54 (-L-) FROM STA. 15+91 +/- -L- TO STA. 57+39 -L- (INCLUDING ALL DRIVEWAYS, PROPOSED CURB & GUTTER AND PROPOSED DRAINAGE) UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE (SEE CONSTRUCTION PLANS AND SHEETS TCP-11 THRU 14).

-- INSTALL TEMPORARY SIGNALS AT THE INTERSECTIONS OF NC 54 (-L-) & NORTEL ENTRANCES (STA. 33+00 +/- -L-) AND NC 54 (-L-) & MIAMI BLVD. FOR INTERMEDIATE TRAFFIC PATTERNS (SEE SIGNAL PLANS AND SHEETS TCP-16 & 18).

-- PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS, AS MUCH AS POSSIBLE WITHOUT INTERFERING WITH TRAFFIC, ON NEWLY COMPLETED WIDENING RIGHT SIDE OF NC 54 (-L-) FROM STA. 15+50 +/- -L- TO STA. 57+39 +/- -L- FOR A INTERMEDIATE TWO-LANE, TWO-WAY DIVIDED TRAFFIC PATTERN (SEE SHEETS TCP-15 THRU TCP-18).

PHASE IV

CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK OF PHASE IV, STEP 1 IN ONE WORK PERIOD.

STEP 1: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2 & 3 OF 9:

-- PLACE REMAINDER OF TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS ON NEWLY COMPLETED PROPOSED WIDENING PAVEMENT RIGHT SIDE OF NC 54 (-L-), MIAMI BLVD. AND ALL DRIVEWAYS FROM STA. 15+50 +/- -L- TO STA. 57+39 +/- -L-, SHIFT TRAFFIC TO A TWO-LANE, TWO-WAY DIVIDED TRAFFIC PATTERN AND ACTIVATE TEMPORARY SIGNALS AT THE INTERSECTIONS OF NC 54 (-L-) & NORTEL ENTRANCES (STA. 33+00 +/- -L-) AND NC 54 (-L-) & MIAMI BLVD. (SEE SIGNAL PLANS AND SHEETS TCP-15 THRU TCP-18).

NOTE: THE CONTRACTOR SHALL PLACE DRUMS ALONG THE DOUBLE YELLOW CENTER LINE, TO MAINTAIN AN INTERMEDIATE ONE-LANE, ONE-WAY TRAFFIC PATTERN ON WESTBOUND NC 54 (-L-) AND PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) & TEMPORARY RAISED PAVEMENT MARKERS AT THE UNSIGNALIZED INTERSECTION OF NC 54 (-L-) & DRIVEWAY AT STA. 40+25 +/- -L- (SEE SHEETS TCP-15 THRU TCP-18).

NOTE: CONTRACTOR SHALL PLACE TYPE III BARRICADES AND/OR DRUMS TO CLOSE PROPOSED CENTER SECTION OF NC 54 (-L-) AND PROPOSED STUB OUTS TO TRAFFIC (SEE SHEETS TCP-15 THRU TCP-18).

STEP 2: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2 & 3 OF 9:

-- INSTALL WATER FILLED BARRIER ON NC-54 (-L-) FROM STA. 18+00 +/- -L- TO STA. 22+50 +/- -L- AND CONSTRUCT THE REMAINDER OF THE PROPOSED MEDIAN (GRASS/CONCRETE ISLANDS) OF NC 54 (-L-) FROM STA. 16+50 +/- -L- TO STA. 22+00 +/- -L-, STA. 30+00 +/- -L- TO STA. 32+36 +/- -L- AND STA. 54+62 +/- -L- TO STA. 56+70 +/- -L- (SEE CONSTRUCTION PLANS AND SHEETS TCP-15, 16 AND 18).

-- INSTALL REVISED SIGNALS AT THE INTERSECTIONS OF NC 54 (-L-) & NORTEL ENTRANCES (STA. 33+00 +/- -L-) AND NC 54 (-L-) & MIAMI BLVD. FOR FINAL TRAFFIC PATTERNS (SEE SIGNAL PLANS AND SHEETS PM-2 & 3).

PHASE V

CONTRACTOR SHALL MAINTAIN A MINIMUM TWO-LANE, TWO-WAY TRAFFIC PATTERN, AS DIRECTED BY THE ENGINEER, WHEN UTILIZING LANE CLOSURES TO PAVE THE FINAL LAYER OF SURFACE COURSE, PLACE THE FINAL PAVEMENT MARKINGS (THERMOPLASTIC) AND INSTALL PERMANENT RAISED PAVEMENT MARKERS ON NC 54 (-L-).

STEP 1: - CONTRACTOR SHALL, USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2 & 3 OF 9, PLACE THE FINAL LAYER OF SURFACE COURSE, AND FINAL PAVEMENT MARKINGS (THERMOPLASTIC) FOR NC 54 (-L-) IN THE FOLLOWING SEQUENCE:

NOTE: CONTRACTOR MAY UTILIZE CONES VS. DRUMS WHEN PAVING THE FINAL LAYER OF SURFACE COURSE. HOWEVER, DRUMS SHALL BE UTILIZED TO DELINEATE THE TRAVEL WAY WHEN TRAFFIC IS PLACED BACK IN THE INTERMEDIATE TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD.

NOTE: AS DIRECTED BY THE ENGINEER, THE CONTRACTOR MAY INSTALL PERMANENT RAISED PAVEMENT MARKERS WHEN PLACING THE FINAL PAVEMENT MARKINGS (THERMOPLASTIC) OR AS A SEPARATE OPERATION USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 2 & 3 OF 9.

A. KEEPING TRAFFIC IN THE INTERMEDIATE TRAFFIC PATTERN AS SHOWN ON SHEET TCP-19, TYPICAL A-A, AND PAVE THE FINAL LAYER OF SURFACE COURSE FOR THE PROPOSED 12 FOOT INSIDE LANE OF NC 54 (-L-) AND LEFT TURN LANES (AS DIRECTED BY THE ENGINEER). THE CONTRACTOR SHALL PLACE TRAFFIC BACK INTO THE TEMPORARY TWO-LANE, TWO-WAY DIVIDED TRAFFIC PATTERN, AS SHOWN ON SHEET TCP-19, TYPICAL B-B, AT THE END OF EACH WORK PERIOD. (SEE CONSTRUCTION PLANS).

NOTE: THE CONTRACTOR SHALL REPEAT PHASE V, STEP 1A TO PAVE THE FINAL LAYER OF SURFACE COURSE FOR THE OPPOSITE 12 FOOT INSIDE LANE AND LEFT TURN LANES (AS DIRECTED BY THE ENGINEER) OF NC 54 (-L-).

B. PLACE TRAFFIC IN THE INTERMEDIATE TRAFFIC PATTERN AS SHOWN ON SHEET TCP-19A, TYPICAL C-C, ACTIVATE REVISED SIGNALS AT THE NC 54 (-L-) & NORTEL ENTRANCES (STA. 33+00 +/- -L-), NC -54 (-L-) & MIAMI BLVD., AND PAVE THE FINAL LAYER OF SURFACE COURSE FOR THE PROPOSED 12/14 FOOT OUTSIDE LANE, RIGHT TURN LANES (AS DIRECTED BY THE ENGINEER) AND SHOULDER OF NC 54 (-L-), AND ALL DRIVEWAYS, AND PLACE THE FINAL PAVEMENT MARKINGS (THERMOPLASTIC) AS MUCH AS POSSIBLE, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PLACE TRAFFIC BACK INTO THE INTERMEDIATE TWO-LANE, TWO-WAY DIVIDED TRAFFIC PATTERN, AS SHOWN ON SHEET TCP-19A, TYPICAL D-D, AT THE END OF EACH WORK PERIOD. (SEE CONSTRUCTION PLANS AND SHEETS PM-1 THRU PM-3).

NOTE: THE CONTRACTOR SHALL REPEAT PHASE V, STEP 1B TO PAVE THE FINAL LAYER OF SURFACE COURSE FOR THE OPPOSITE 12/14 FOOT OUTSIDE LANE, RIGHT TURN LANES AS DIRECTED BY THE ENGINEER) AND SHOULDER OF NC 54 (-L-).

C. PLACE THE REMAINDER OF THE FINAL PAVEMENT MARKINGS (THERMOPLASTIC), PERMANENT RAISED PAVEMENT MARKERS AND OPEN NC 54 (-L-) TO THE FINAL TRAFFIC PATTERN. (SEE SHEETS TCP-19A, FINAL TRAFFIC PATTERN AND PM-1 THRU PM-3).

APPROVED: _____ DATE: 11 MAR 06

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. I. GETTIER

PHASING CONT.

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

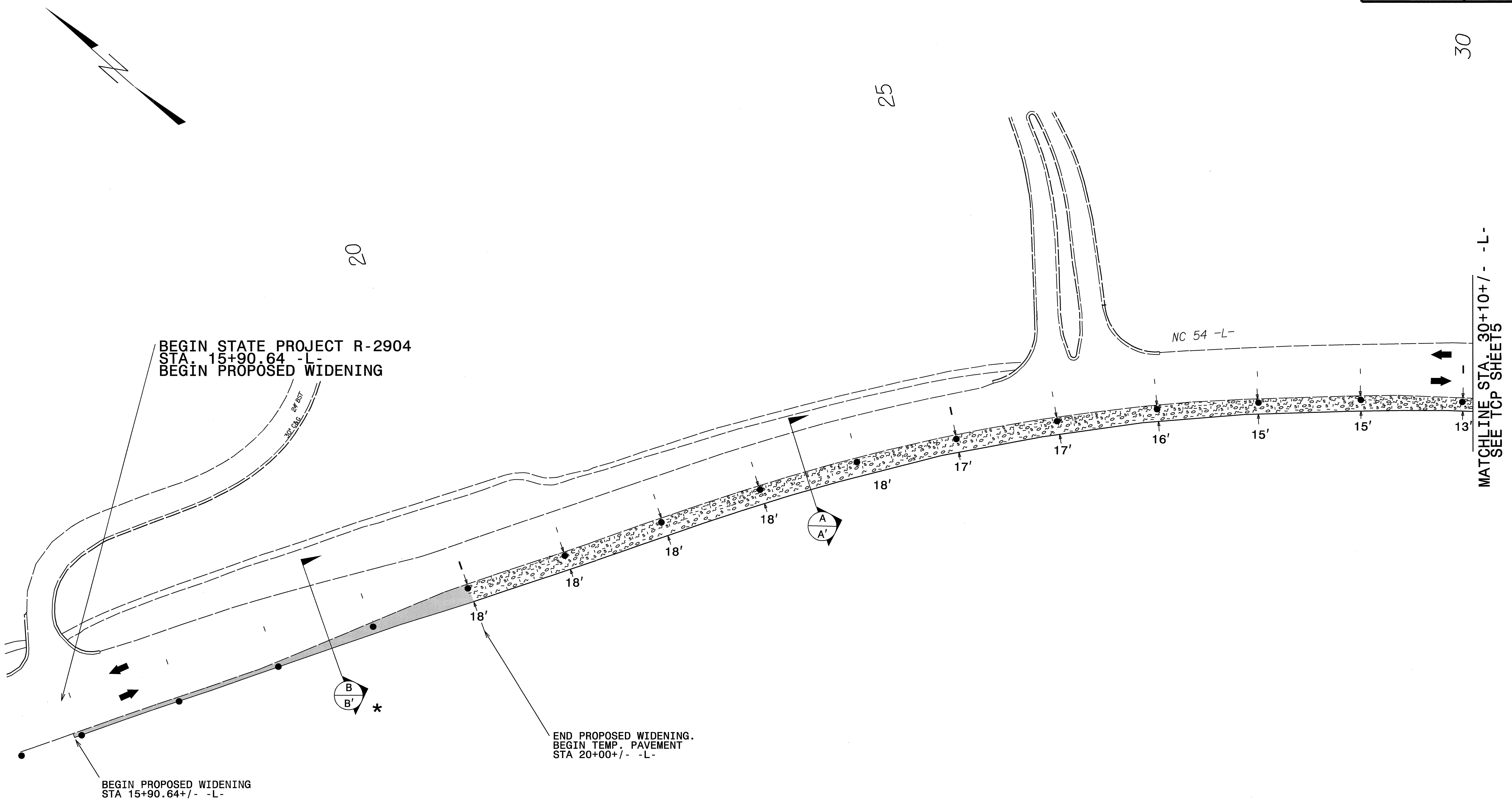
DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

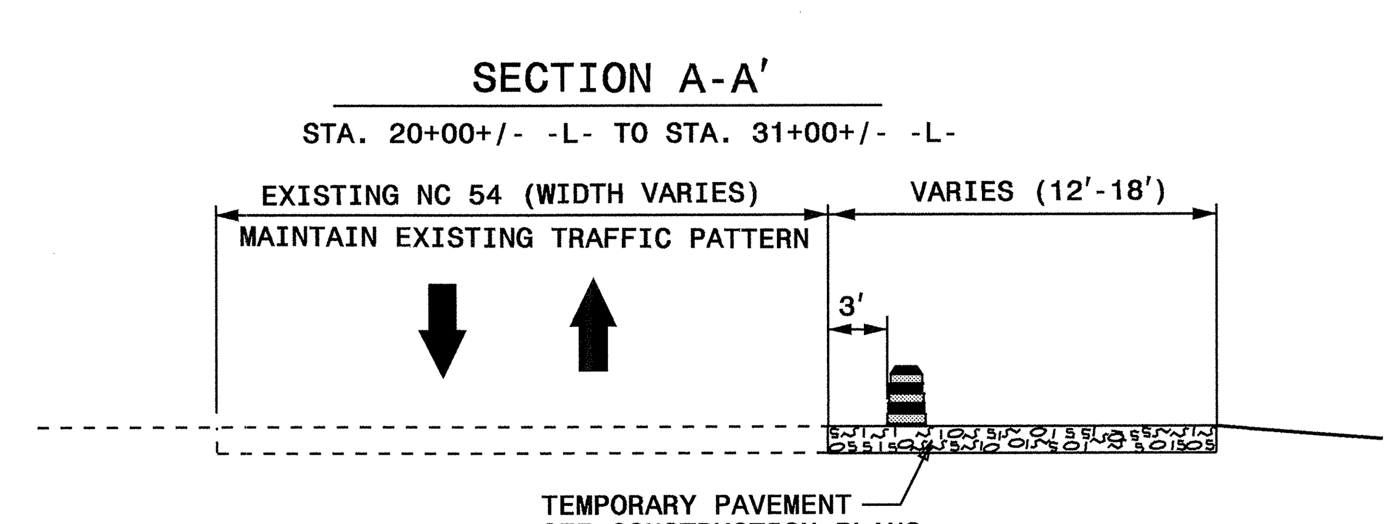
REVISIONS

CADD FILE

16-MAR-2006 12:06
N:\Traffic\Projects\R-2904\traffic\trafficcontrol\tcp\r-2904_tcp.dgn
kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-4





* SECTION B-B′
SEE SHEET TCP-5.

APPROVED: DATE:

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 8973 G. L. GETTIER

PHASE I

SCALE: NONE
DATE: FEB. 06
DWG. BY: KPB
DESIGN BY: KPB
REVIEWED BY: JWG

REVISIONS

CADD FILE

16-MAR-2006 12:27
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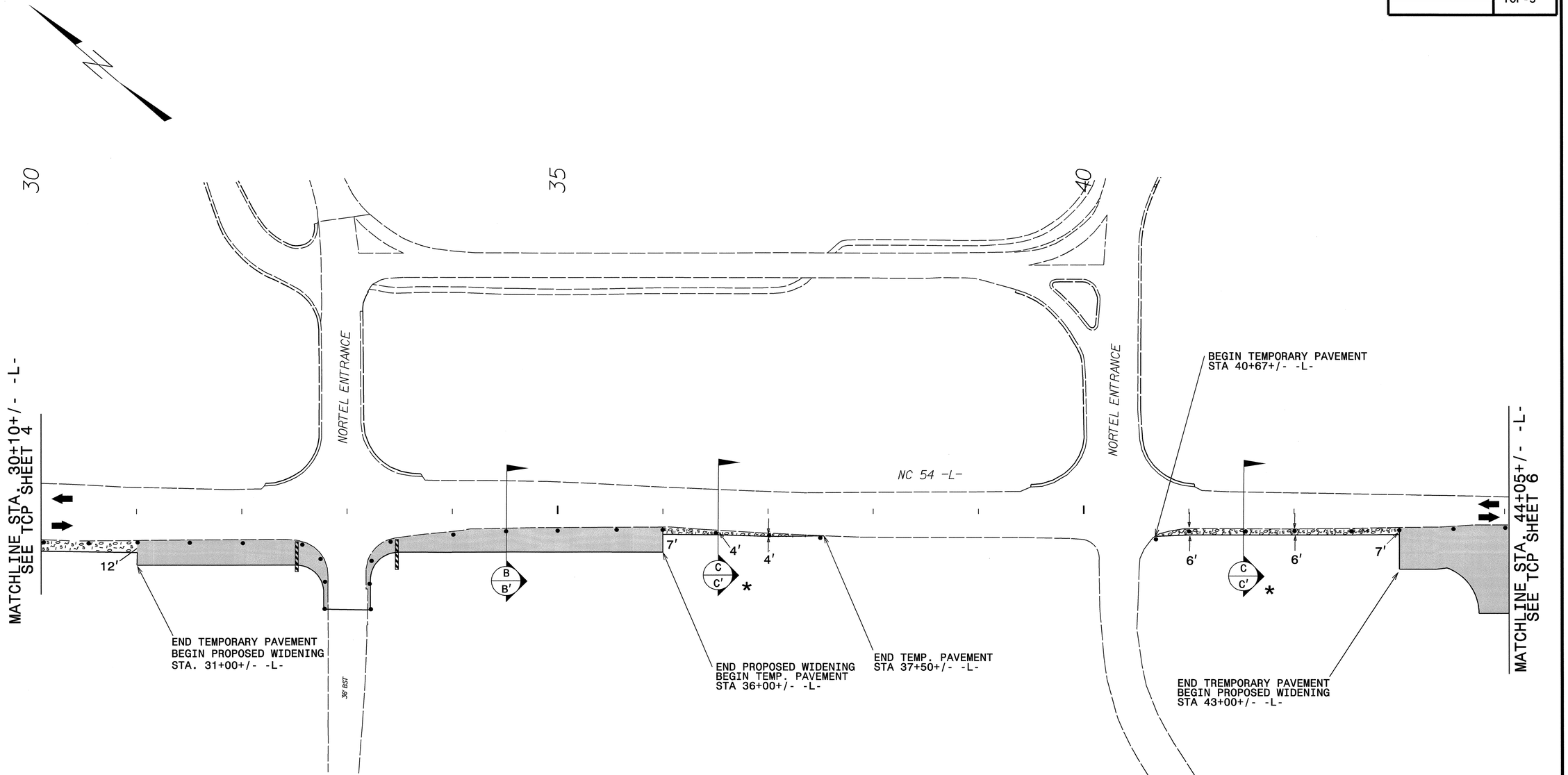
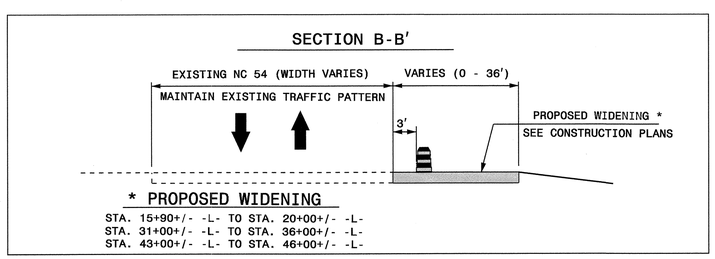
kbroadwell AT WZTC22240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-5





* SECTION C-C'
SEE SHEET TCP-6.

APPROVED: _____ DATE: 11/17/06

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER C. GETTIER

PHASE I

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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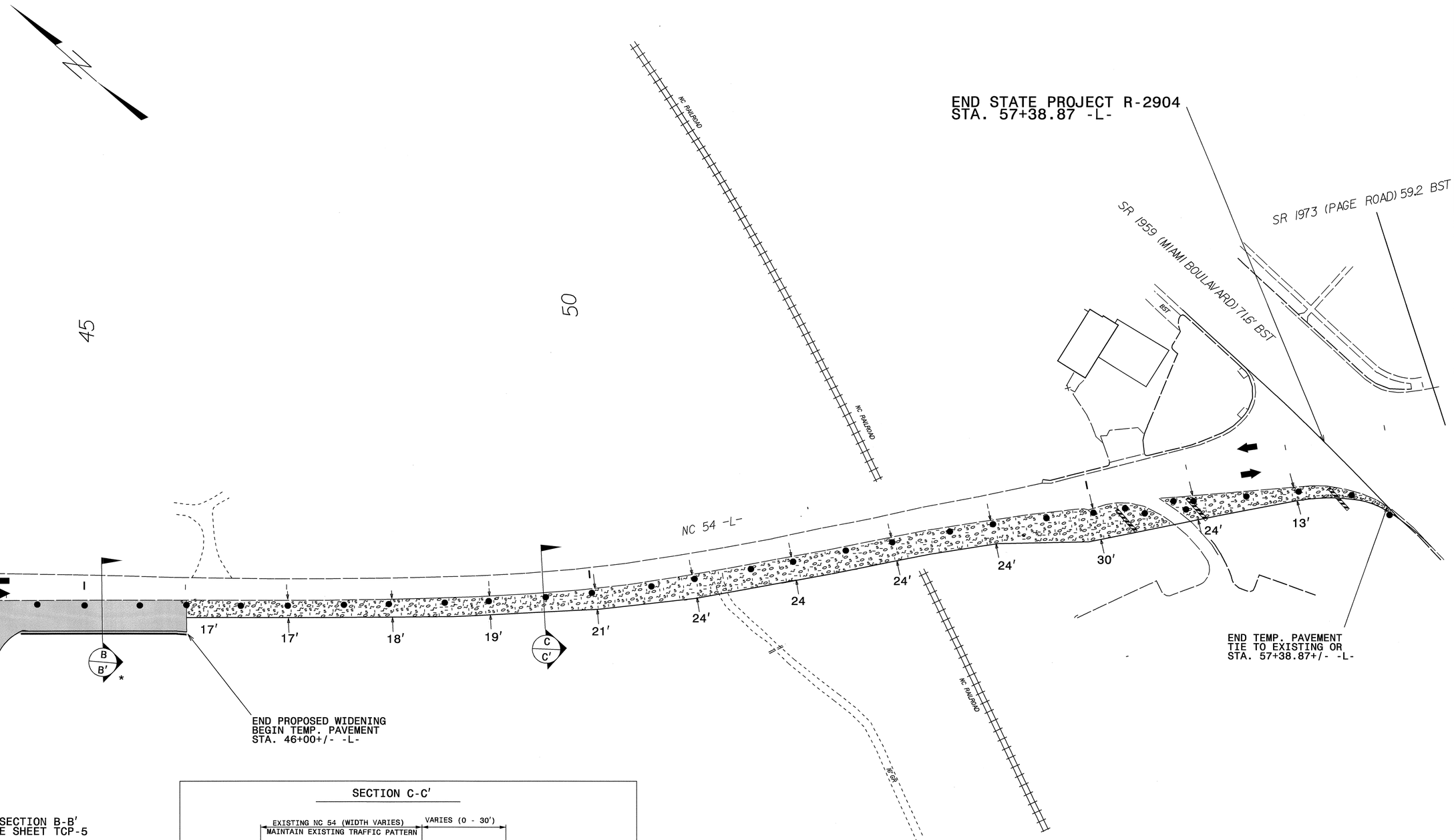
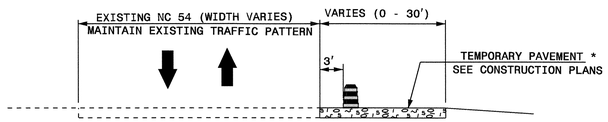
kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-6



* SECTION B-B'
SEE SHEET TCP-5

SECTION C-C'



* TEMPORARY PAVEMENT

STA. 36+00+/- -L- TO STA. 37+50+/- -L-
STA. 40+67+/- -L- TO STA. 43+00+/- -L-
STA. 46+00+/- -L- TO STA. 57+38.87+/- -L-

APPROVED: _____ DATE: 12/20/06

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G L GETTIER

PHASE I

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS
ENGINEERING BRANCH
TRAFFIC ENGINEERING UNIT
TRAFFIC CONTROL SECTION

REVISIONS	
CADD FILE	

16-MAR-2006 12:26
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kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-7

N

10

15

20

BEGIN STATE PROJECT R-2904
STA. 15+90.64 -L-

EXISTING PAVEMENT MARKING

POT Sta. 10+00.00

8' BST

24' BST

30' C&G

12'

14'

350'

SR 1889 (OWLS DEN)

35 M.P.H.
W13-1
24" X 24"

W1-4R
48" X 48"

BEGIN CURB & GUTTER
STA. 22+00+/- -L-

PA

PS

45' TYP.

11'

D
D'

END SHIFT TAPER
STA. 23+00 +/- -L-

MATCHLINE SEE TCP SHEET STA. 23+00 -L-

PI

PD

STA. 16+00+/- -L-

BEGIN SHIFT TAPER
STA.15+50 +/- -L-

END DROP LANE
STA. 20+00 +/- -L-

: QA

: QC

SECTION D-D'

PAINTED ISLAND VARIES

PHASE I CONSTRUCTION
VARIES 29'+/- TO 38'+/-

VARIES

3'

STA. 15+90.64 -L- TO STA. 46+00 -L-

PROPOSED/TEMPORARY PAVEMENT
STA. 15+90+/- -L- TO STA. 31+00+/- -L-

APPROVED: _____ DATE: 12/14/06

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PHASE I
PHASE II

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

16-MAR-2006 12:06
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kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-8

N

25

30

35

35 M.P.H. W13-1 24" X 24"
W1-4L 48" X 48"

35 M.P.H. W13-1 24" X 24"
W1-4R 48" X 48"

35 M.P.H. W13-1 24" X 24"
W1-4L 48" X 48"

NORTEL ENTRANCE

END CURB & GUTTER (SEE CONTRUCTION PLAN)

BEGIN CURB & GUTTER (SEE CONTRUCTION PLAN)

END CURB & GUTTER (SEE CONTRUCTION PLAN)

NC 54 -L-

45' (typ)

350'

-L- STA. 23+00+/- SEE TCP SHEET 7 MATCHLINE

STA. 25+75+/- -L-

STA. 26+65+/- -L-

STA. 32+54+/- -L-

STA. 33+45+/- -L-

STA. 34+60+/- -L-

BEGIN SHIFT STA. 34+50 +/- -L-

TIE TO EXISTING

21' OFFSET LEFT OF -L-

49' OFFSET RIGHT OF -L-

TIE TO EXISTING

BEGIN SHIFT STA. 30+00 +/- -L-

END SHIFT STA. 31+00 +/- -L-

-L- STA. 35+60 -L- SEE TCP SHEET 9 MATCHLINE

PI PA P4 PE PD D D' E E'

11' 5' 8' 60' 150' 36' BST

* SECTION D-D'
SEE SHEET TCP-7.

: QA
: QC
: QE

SECTION E-E'

WORK AREA 36' +/-

3' PA 11' PI 11' PE 11' PD 5'-8' PA 4' SHOULDER

STA. 31+00+/- -L- TO STA. 32+50+/- -L-

APPROVED: DATE:

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTLER

PHASE I
PHASE II

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

16-MAR-2006 12:05
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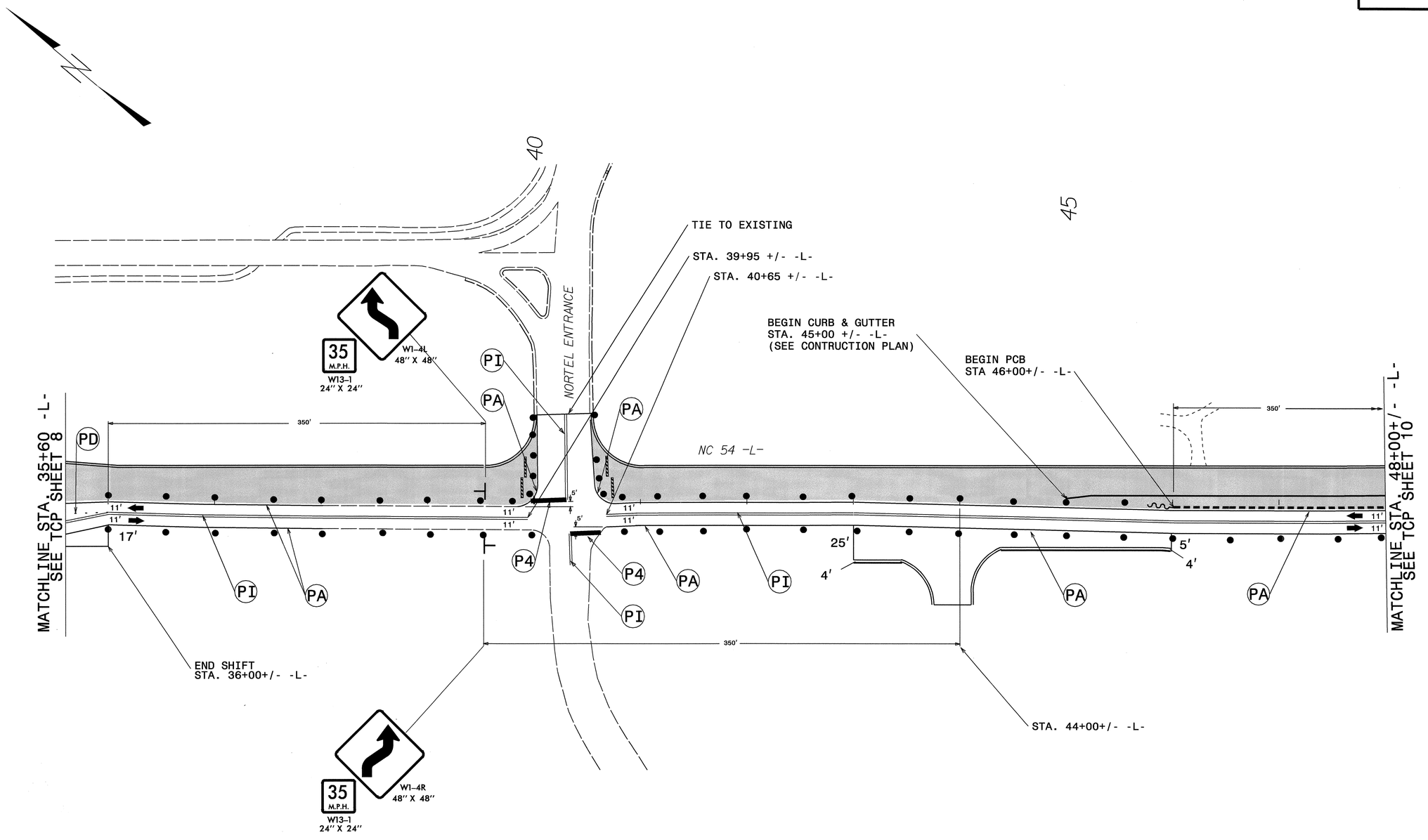
kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-9



APPROVED: _____ DATE: 21 Mar 06

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PHASE I
PHASE II

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

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

REVISIONS	
CADD FILE	

16-MAR-2006 12:05
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kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-10

N

50

55

09

SR 1959 (MIAMI BOULAVARD) 60.4' BST

SR 1973 (PAGE ROAD) 59.2 BST

NC 54 -L-

NC 54 57.5' BST

NC RAILROAD

END STATE PROJECT R-2904
STA. 57+38.87 -L-

END PCB
STA 56+50+/- -L-

STA. 57+50 +/- -L-
48' OFFSET LEFT OF-L-

STA. 57+09 +/- -L-
17' OFFSET LEFT OF-L-

MATCHLINE STA. 48+00+/- -L-
SEE TCP SHEET 9

END CURB & GUTTER
STA 48+75+/- -L-
(SEE CONTRUCTION PLAN)

35 M.P.H.
W1-4R
48" X 48"
W13-1
24" X 24"

350'

11'

BEGIN SHIFT
STA. 54+00 +/- -L-

END SHIFT
STA. 55+00 +/- -L-

STA. 57+31+/- -L-

STA. 57+60+/- -L-

PA PI PD PE P4

F
F'

: QA
: QB
: QC
: QE

SECTION F-F'

PHASE I CONSTRUCTION
*VARIES 29'+/- TO 32'+/-
**VARIES 32'+/- TO 74'+/-

VARIES
1'-4'

1' 2' 2'

11' 11'

2:1

PCB

*STA. 46+00 +/- -L- TO STA. 52+00 +/- -L-
**STA. 52+00 +/- -L- TO STA. 57+38.87+/- -L-
(CURB AND GUTTER SECTION)

TEMPORARY PAVEMENT
STA. 46+00+/- -L- TO STA. 57+38.87+/- -L-

APPROVED _____ DATE: 2/28/06

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G L GETTIER

PHASE I
PHASE II

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS ESTABLISHED DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

16-MAR-2006 12:05
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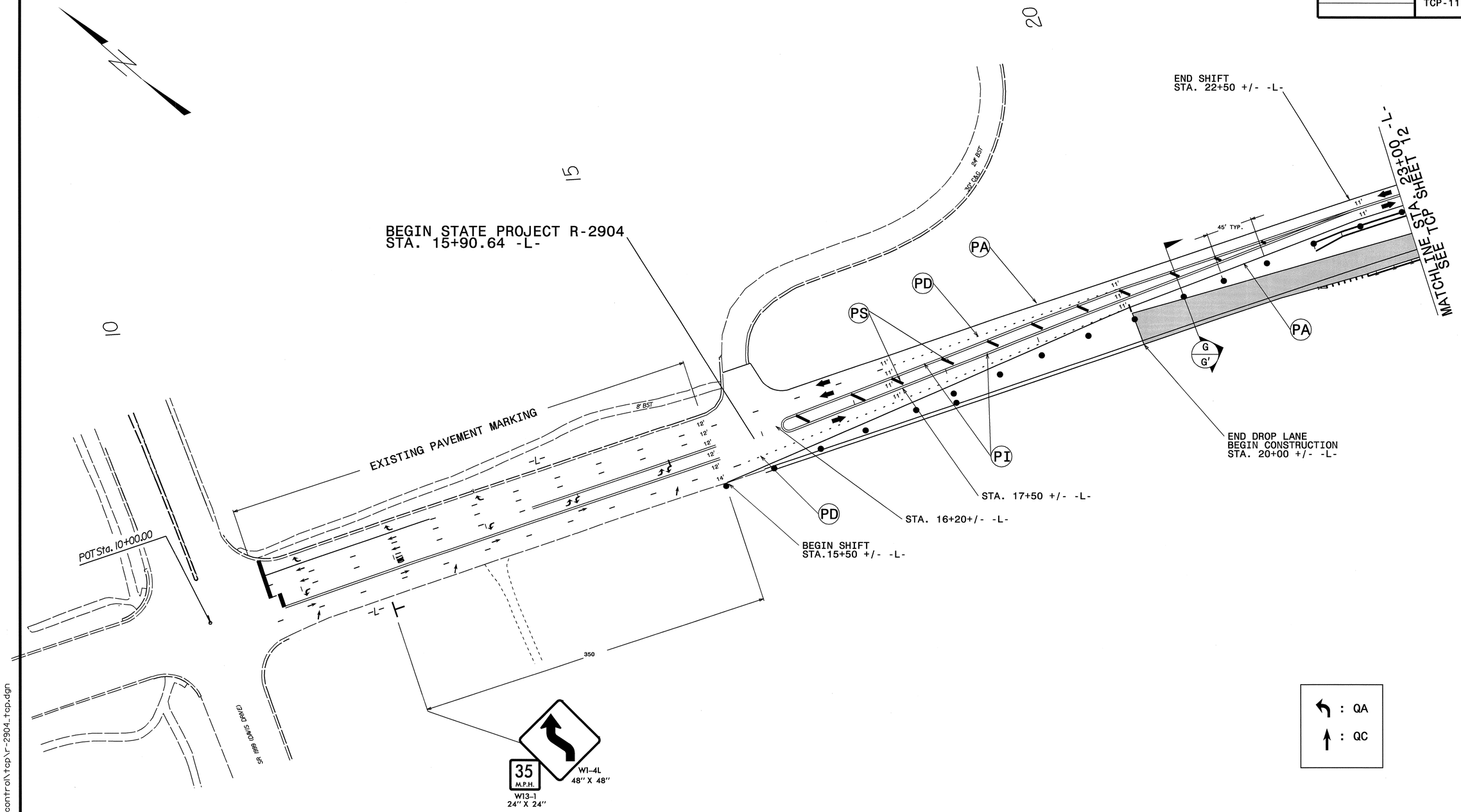
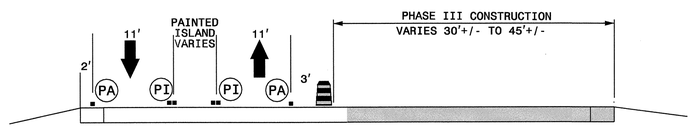
kbroadwell AT WZTC22240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-11



SECTION G-G'



STA. 15+90.64 -L- TO STA. 33+13.27 -L-

APPROVED: DATE: 3/16/2006

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PHASE II
PHASE III

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

16-MAR-2006 12:04
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kbrodwell XT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-12

N

25

30

35

NC 54 -L-

NORTEL ENTRANCE

STA. 26+68 +/- -L-

STA. 25+85 +/- -L-

BEGIN SHIFT
STA. 30+00 +/- -L-

62' LEFT OF -L-

STA. 32+54+/- -L-

TIE TO EXISTING

BEGIN SHIFT TAPER
STA. 34+50 +/- -L-

STA. 33+45+/- -L-

MATCHLINE STA. 23+00 -L-
SEE TCP SHEET 11

MATCHLINE STA. 35+60 -L-
SEE TCP SHEET 13

END SHIFT
STA. 31+00 +/- -L-

19' RIGHT OF -L-

TIE TO EXISTING

BEGIN CURB & GUTTER
(SEE CONSTRUCTION PLAN)
STA. 33+60 +/- -L-

STA. 31+50 +/- -L-

35 M.P.H.
W13-1
24" X 24"

W1-4R
48" X 48"

35 M.P.H.
W13-1
24" X 24"

W1-4L
48" X 48"

: QA
: QB
: QC
: QD
: QE

APPROVED: _____ DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PHASE II
PHASE III

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

REVISIONS	
CADD FILE	

16-MAR-2006 12:04
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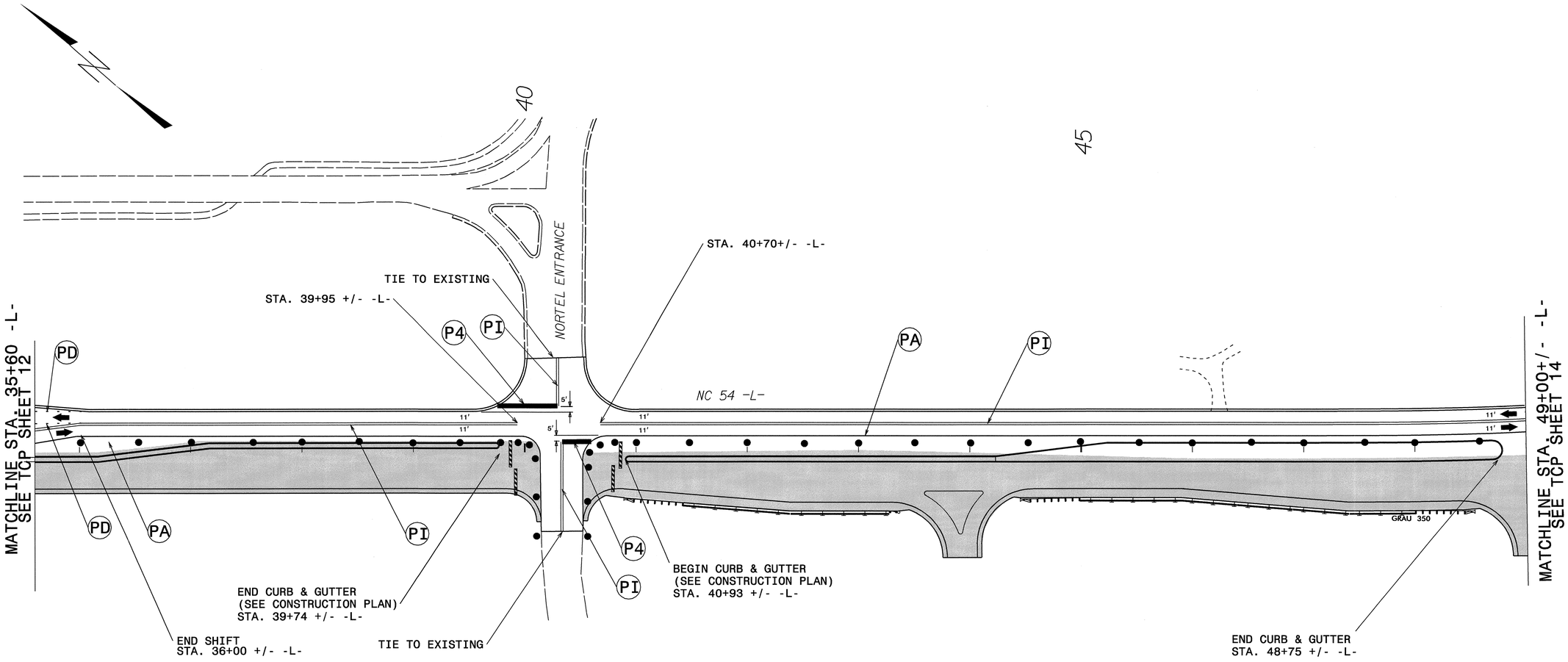
kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-13



APPROVED _____ DATE: 12/19/06

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PHASE II
PHASE III

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

16-MAR-2006 12:04
\\ents-cof60\1\2904\traffic\trafficcontrol\tcp\r-2904_tcp.dgn
kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-14

N

50

55

60

SR 1959 (MIAMI BOULAVARD) 7.16' BST

NC RAILROAD

END SHIFT
STA. 55+00 +/- -L-

BEGIN SHIFT
STA. 54+00 +/- -L-

STA. 56+98 +/- -L-, 100' LT

STA. 56+42 +/- -L-, 59' LT

2% CONC.

6"

P4

PA

PD

PI

PE

4.5'+/-

11'

60'

150'

SR 1973 (PAGE ROAD) 59.2 BST

END STATE PROJECT R-2904
STA. 57+38.87 -L-

NC 54 57.5 BST

MATCHLINE STA. 49+00+/- -L-
SEE TCP SHEET 13

NC 54 -L-

H
H'

STA. 56+00 +/- -L-

END END CURB & GUTTER
STA. 52+25.00 +/- -L-

BEGIN CURB & GUTTER
STA. 49+60+/- -L-

350'

STA. 57+12 +/- -L-

STA. 57+30 +/- -L-

35
M.P.H.

W13-1
24" X 24"

W1-4R
48" X 48"

: QA

: QC

: QE

SECTION H-H'

PHASE III CONSTRUCTION
VARIES 40'+/- TO 65'+/-

11'

11'

3'

STA. 33+13.27 -L- TO STA. 57+38.87 -L-

APPROVED: _____ DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. J. GETTIER

PHASE II
PHASE III

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

16-MAR-2006 12:03
\\Rdcorfs01\r2904$\traffic\trafficontrol\top\r-2904_tcp.dgn
kbroadwell AT W2TC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-15

N

STA. 15+90.64 -L- BEGIN STATE PROJECT R-2904

10

15

20

POT Sta. 10+00.00

EXISTING PAVEMENT MARKING

NC 54 (-L-)

8' BST

SR 1999 (DAVIS DRIVE)

W1

11'

BEGIN WATER FILLED BARRIER STA. 18+00 +/- -L-

24' BST

30' C&G

END CURB & GUTTER (TIE TO PROPOSED) MONOLITHIC ISLAND)(SEE CONSTRUCTION PLAN)

BEGIN CURB & GUTTER
BEGIN PAVEMENT REMOVAL
(SEE CONSTRUCTION PLAN)

MATCHLINE STA 22+50+/- -L-
SEE SHEET TCP-16

I
I

PD

PB

PA

PB

STA. 21+50+/- -L-

BEGIN SHIFT
STA. 15+50+/- -L-

END SHIFT
STA. 19+00+/- -L-

END WATER FILLED
BARRIER STA. 22+50 +/- -L-

35
M.P.H.

W13-1
24" X 24"

W1-4R
48" X 48"

350'

: QA

: QB

: QC

SECTION I-I'

STA. 15+90.64 -L- TO STA. 33+13.27 -L-
(DIVIDED TRAFFIC PATTERN)

EXISTING MARKING

PHASE IV CONSTRUCTION
PAVEMENT REMOVAL

11'

2'

PA

PI

PB

* WATER FILLED BARRIER
STA. 18+00 +/- -L- TO
STA. 22+50 +/- -L-

STA. 16+50 +/- -L- TO STA. 22+00 +/- -L-

UNLESS OTHERWISE SPECIFIED WEST BOUND MARKING PATTERN SHOULD REMAIN AS PHASE III.

APPROVED: _____ DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. I. GETTIER

PHASE III
PHASE IV

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

16-MAR-2006 12:03
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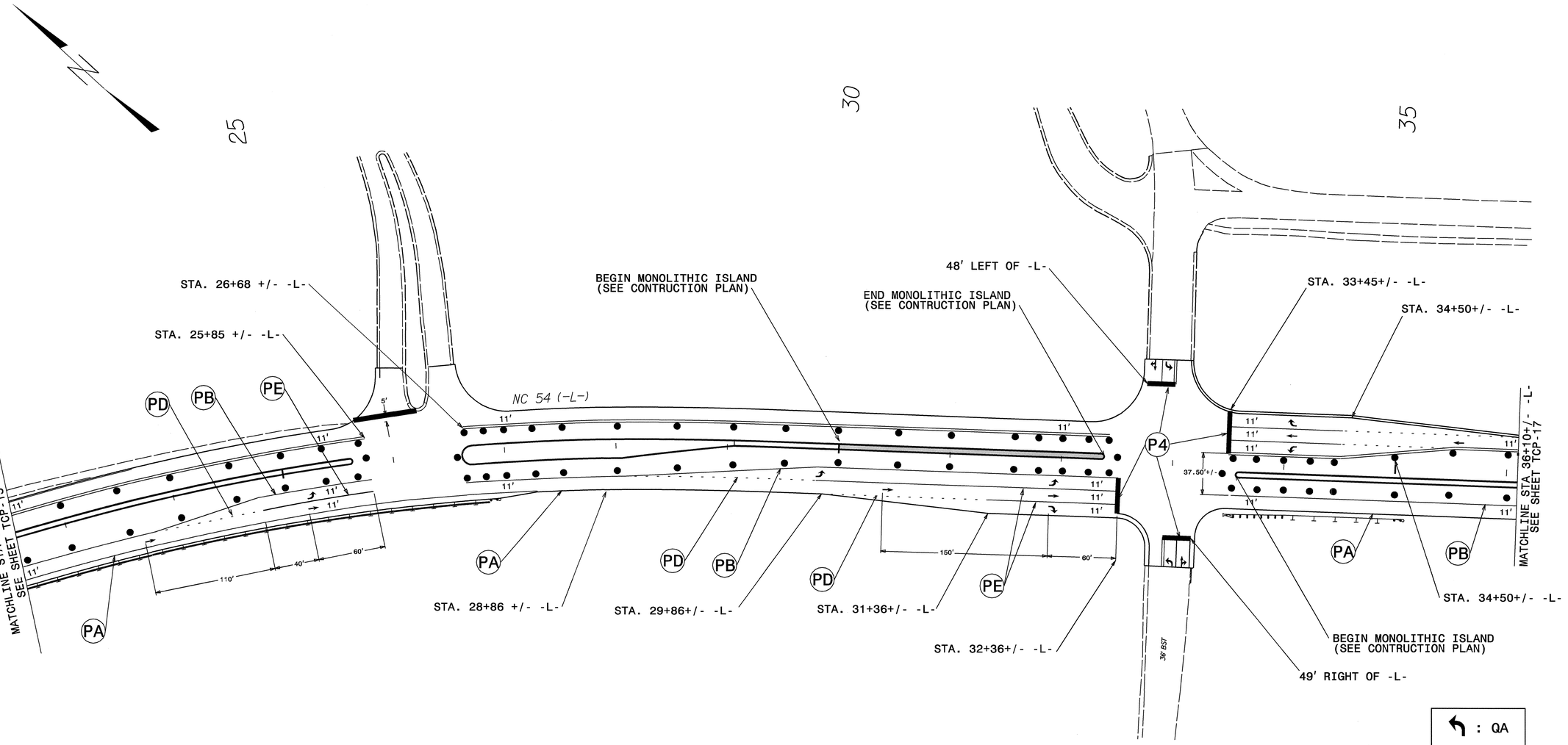
kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-16



UNLESS OTHERWISE SPECIFIED WEST BOUND
MARKING PATTERN SHOULD REMAIN AS PHASE III.

APPROVED: _____ DATE: 12 mar 06

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PHASE III
PHASE IV

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

16-MAR-2006 12:03
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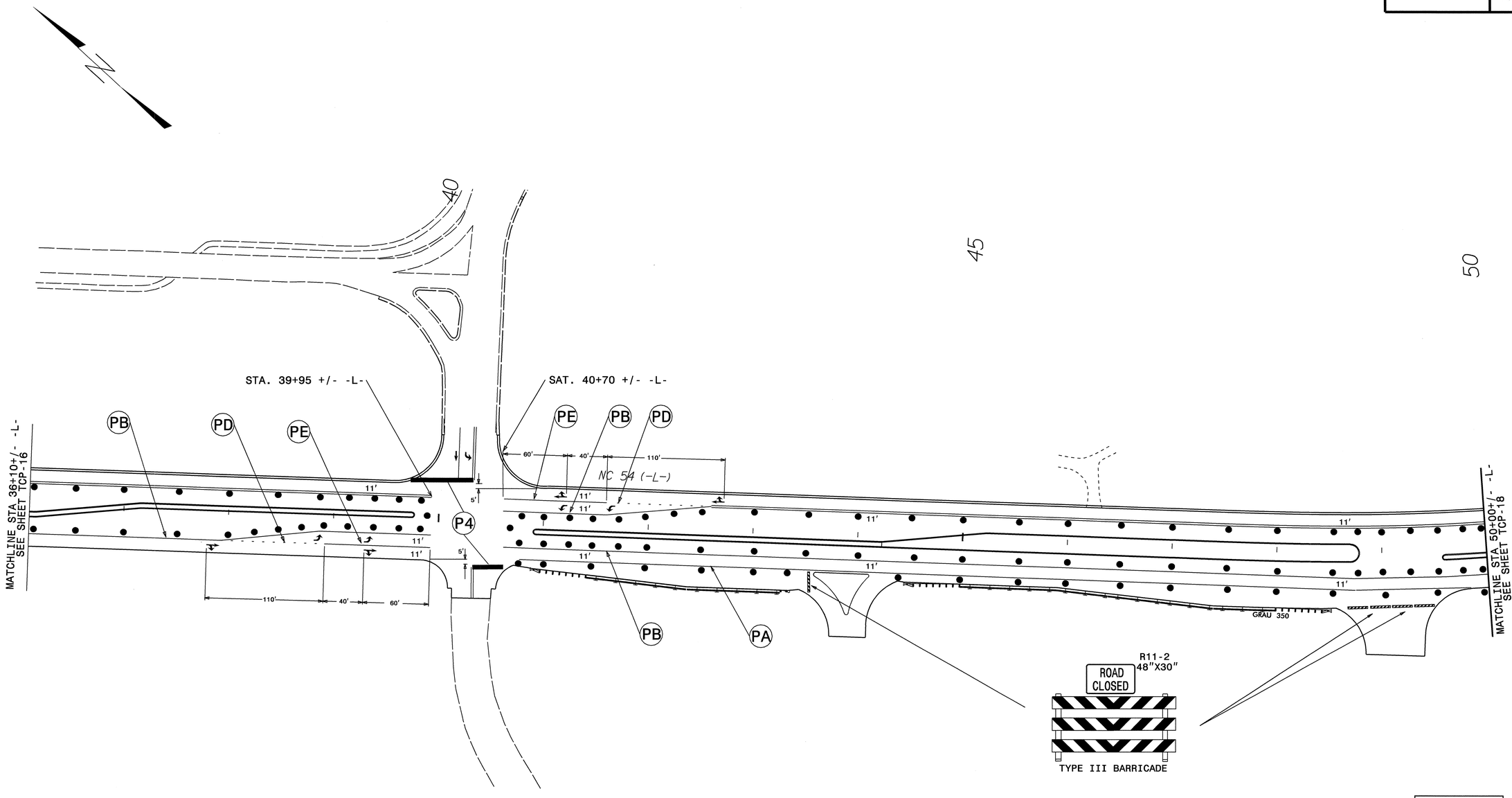
kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-17



UNLESS OTHERWISE SPECIFIED WEST BOUND
MARKING PATTERN SHOULD REMAIN AS PHASE III.

APPROVED _____ DATE: 17 MAR 06

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTLER

PHASE III
PHASE IV

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

16-MAR-2006 12:02
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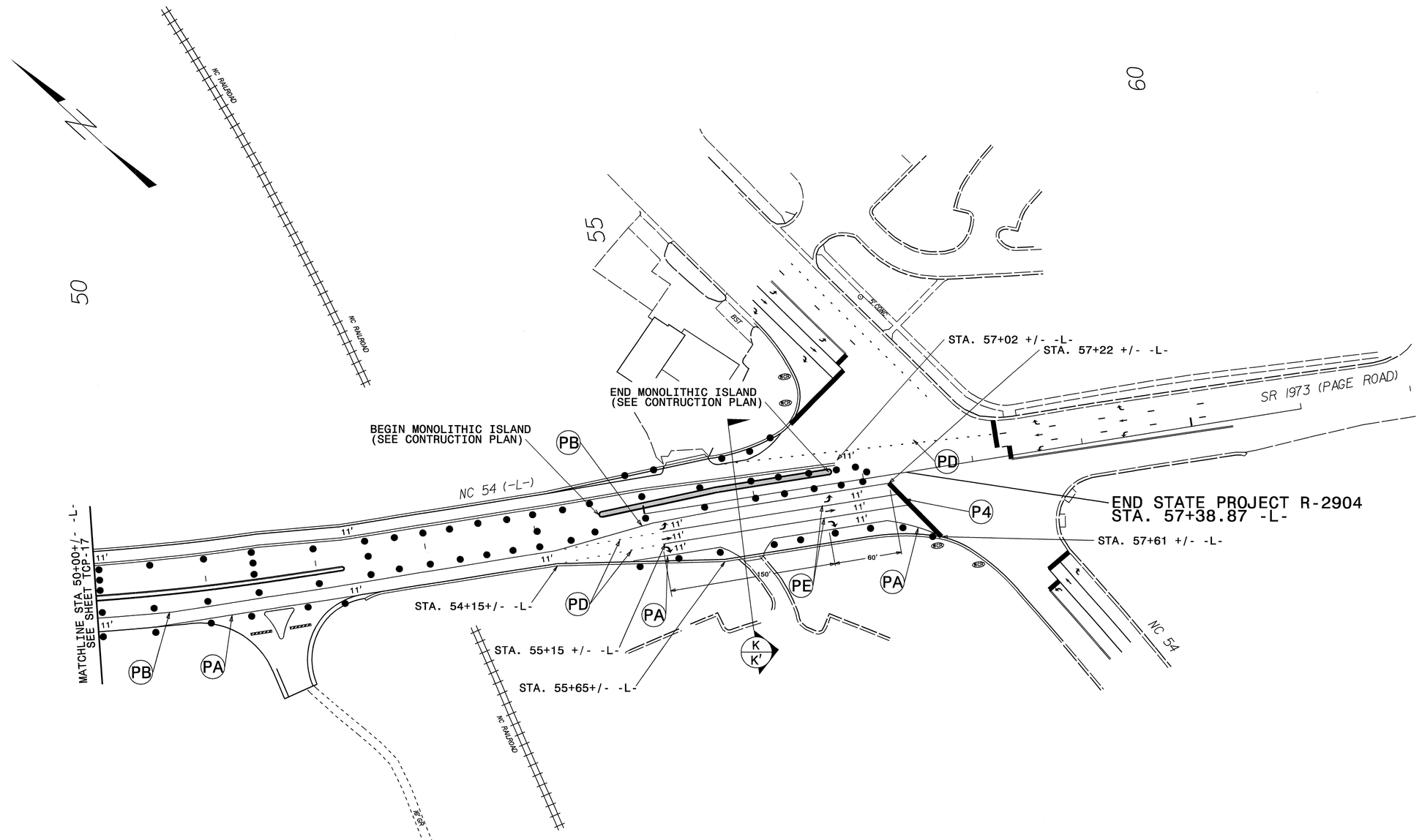
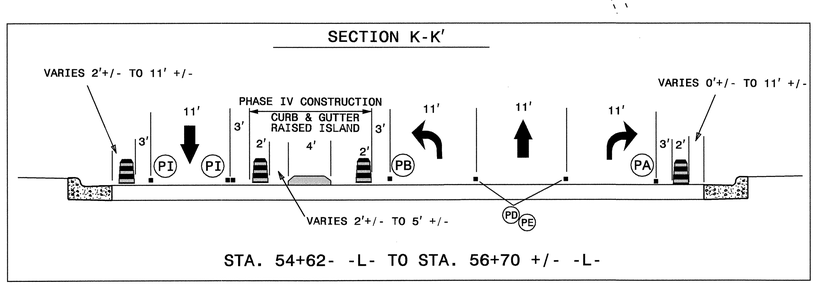
kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-18





STA. 54+62- -L- TO STA. 56+70 +/- -L-

: QA

: QC

UNLESS OTHERWISE SPECIFIED WEST BOUND
MARKING PATTERN SHOULD REMAIN AS PHASE III.

APPROVED: _____ DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PHASE III
PHASE IV

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

16-MAR-2006 12:02
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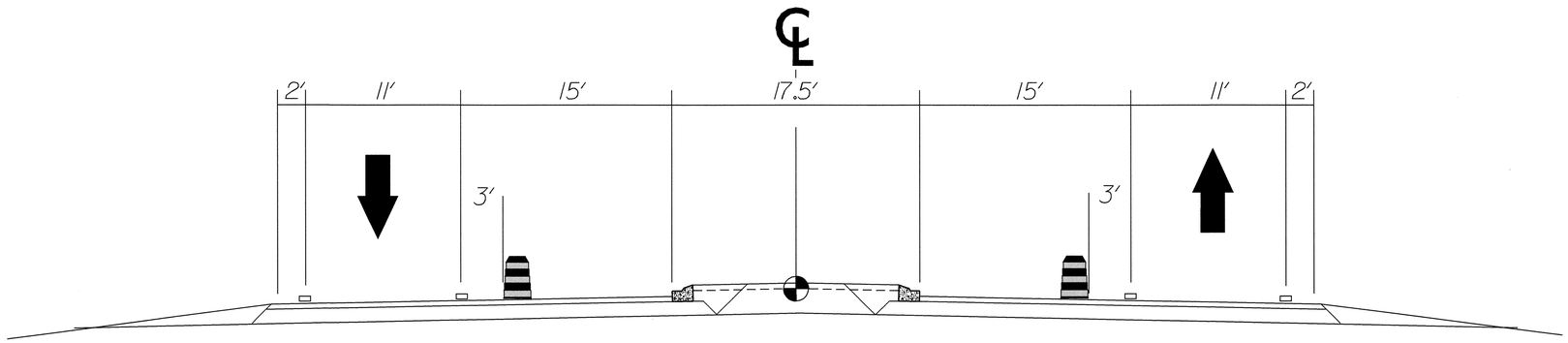
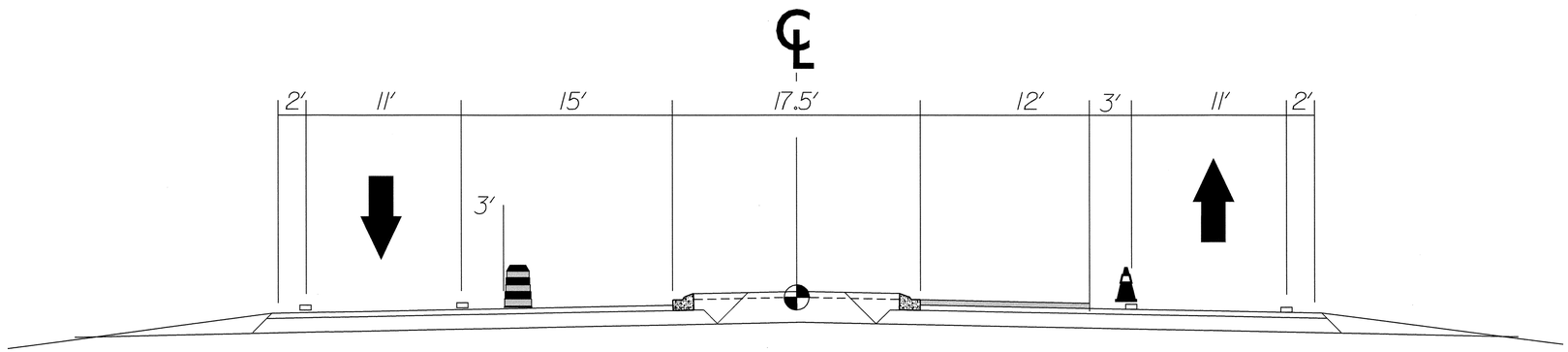
kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-19

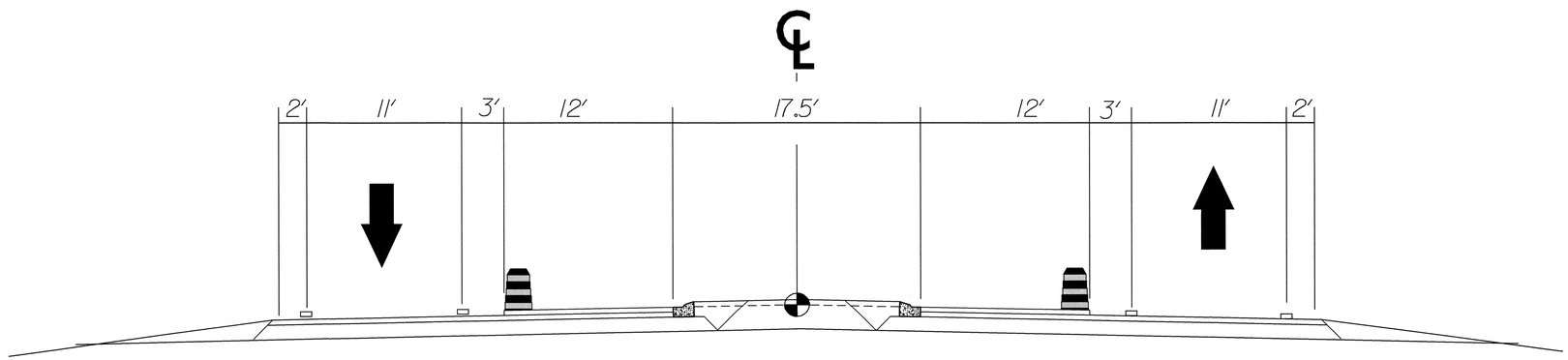


EXISTING INTERMEDIATE PATTERN



TYPICAL A–A

(NOTE: FLIP TYPICAL A–A TO PAVE THE LEFT SIDE)



TYPICAL B–B

SEE SHEET PM–1 FOR PAVEMENT MARKING SCHEDULE .

SEE ROADWAY STANDARD DRAWING NO. 1250.01 AND 1251.01 FOR PAVEMENT MARKER SPACING AND RAISED PAVEMENT MARKERS.

APPROVED _____ DATE: 3/MAR/06

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. I. GETTIER

PHASE V

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

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

REVISIONS

CADD FILE

16-MAR-2006 12:10
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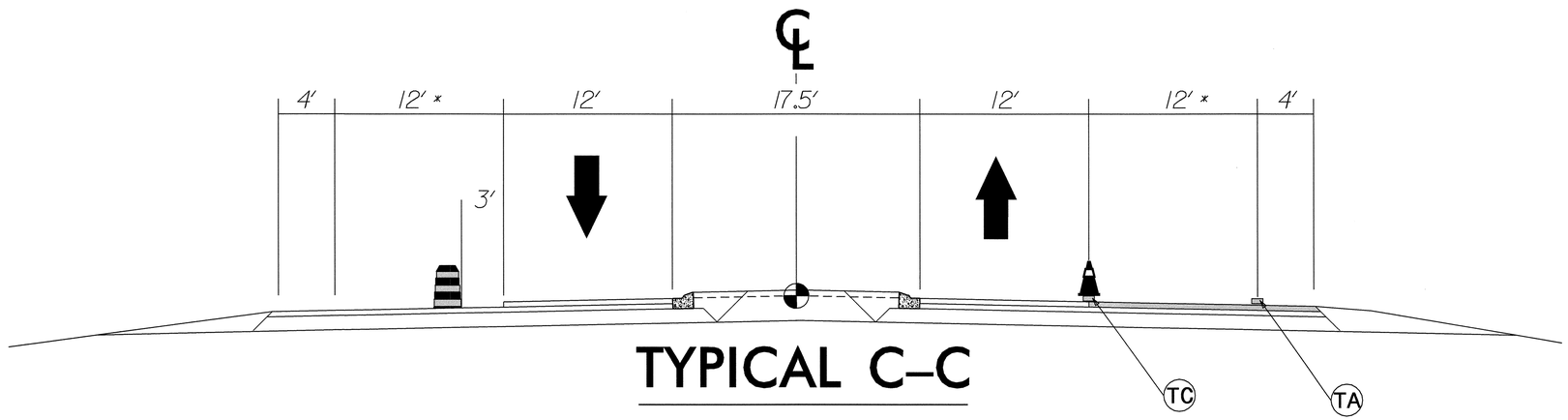
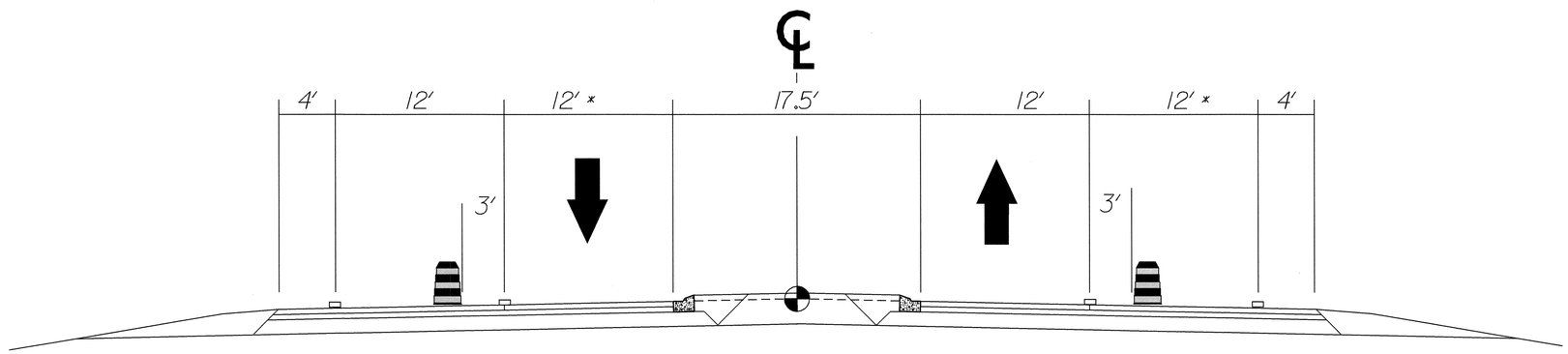
kbroadwell AT WZTC224240

PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-19A



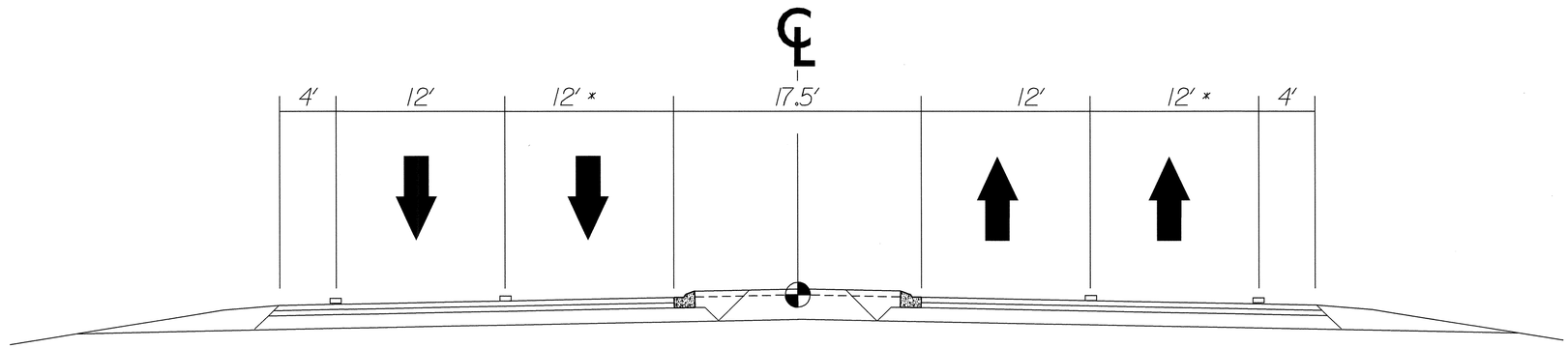
TYPICAL C–C

(NOTE: FLIP TYPICAL C-C TO PAVE THE LEFT SIDE)
*14' FOR CURB & GUTTER SECTION



TYPICAL D–D

*14' FOR CURB & GUTTER SECTION



FINAL TRAFFIC PATTERN

*14' FOR CURB & GUTTER SECTION

SEE SHEET PM–1 FOR PAVEMENT MARKING SCHEDULE .

SEE ROADWAY STANDARD DRAWING NO. 1250.01 AND 1251.01 FOR PAVEMENT MARKER SPACING AND RAISED PAVEMENT MARKERS.

APPROVED: _____ DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

PHASE V

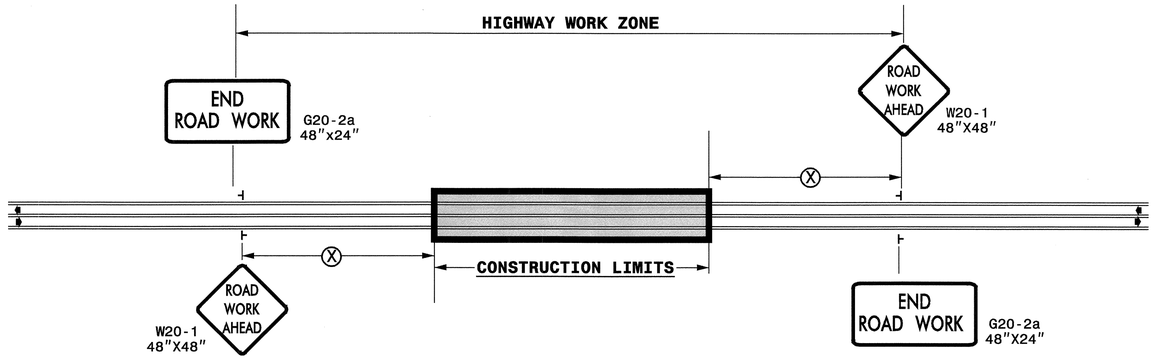
SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

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

REVISIONS	
CADD FILE	

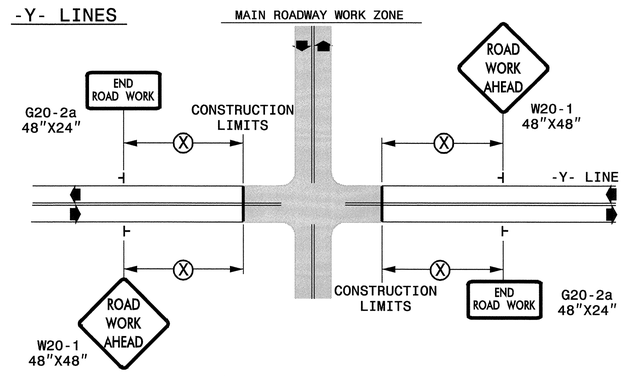
PROJ. REFERENCE NO.	SHEET NO.
R-2904	TCP-20

TWO-WAY UNDIVIDED ** (L-LINES)



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

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



GENERAL NOTES

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

DETAIL DRAWING FOR TWO-WAY UNDIVIDED WORK ZONE WARNING SIGNS

SHEET 1 OF 1

APPROVED: _____ DATE: 12/08/04

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 8973 ENGINEER G. L. GETTIER

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

SCALE:	NONE
DATE:	FEB. 06
DWG. BY:	KPB
DESIGN BY:	KPB
REVIEWED BY:	JWG

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

16-MAR-2006 12:02
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kbroadwell AT WZTC224240