STATE PROJECT REFERENCE NO.	SHEET NO.
I-3819A	TCP-1.1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

IREDELL COUNTY

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - 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 ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

INDEX OF SHEETS

SEE TCP-1.2

Part 2 of 3

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- NORTH ARROW
- PROPOSED PVMT. ---------- EXIST. PVMT.
- PROPOSED CONCRETE CONSTRUCTION
- PROPOSED ASPHALT CONSTRUCTION
- TEMPORARY CONSTRUCTION
- CONTINUING CONSTRUCTION
- REMOVAL OF EXISTING PAVEMENT

TRAFFIC CONTROL DEVICES

- TYPE III BARRICADE
- CONE
- DRUM
- 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
- BARRIER (PORTABLE, MOVABLE, WATER-FILLED)

PAVEMENT MARKINGS

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

PLAN REVIEWED BY: WORK ZONE TRAFFIC CONTROL UNIT		APPROVED: Michael T. Rzepka DATE: 1-4-12	PLAN PREPARED FOR N.C.D.O.T. BY: Florence & Hutcheson CONSULTING ENGINEERS
J. S. BOURNE, P.E.	STATE TRAFFIC MANAGEMENT ENGINEER	SEAL NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA	M. T. RZEPKA, P.E. PROJECT ENGINEER
G. L. GETTIER, P.E.	WESTERN WZTC ENGINEER		G. E. PARKER DESIGN ENGINEER
J. W. GILSTRAP	PROJECT DESIGN ENGINEER		G. E. PARKER DESIGN TECHNICIAN

TIP PROJECT: I-3819A

1/5/2012
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Florence & Hutcheson

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-1.2

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1.1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TCP-1.2	INDEX OF SHEETS AND TEMPORARY PAVEMENT MARKING SCHEDULE
TCP-1.3 & 1.4	PROJECT NOTES
TCP-2.1	PHASE I, STEPS 1 & 2 PHASING
TCP-2.2 & 2.3	PHASE I, STEP 2 OVERVIEW
TCP-2.4 & 2.5	PHASE I, STEP 2 SECTIONS
TCP-2.6 THRU 2.25	PHASE I, STEP 2 DETAILS
TCP-2.26	TEMPORARY SHORING NOTES
TCP-3.1	PHASE I, STEP 3 PHASING
TCP-3.2 & 3.3	PHASE I, STEP 3 OVERVIEW
TCP-3.4	PHASE I, STEP 3 SECTIONS
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TCP-5.2 & 5.3	PHASE I, STEP 5 OVERVIEW
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TCP-5.6 THRU 5.18	PHASE I, STEP 5 DETAILS
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TCP-6.1	PHASE I, STEP 6 PHASING
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TCP-7.1	PHASE II, PHASING
TCP-7.2 & 7.3	PHASE II, OVERVIEW
TCP-7.4 & 7.5	PHASE II, SECTIONS
TCP-7.6 THRU 7.20	PHASE II, DETAILS

SHEET NO.	TITLE
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TCP-8.2 & 8.3	PHASE III, STEP 1 OVERVIEW
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TCP-8.6 THRU 8.15	PHASE III, STEP 1 DETAILS
TCP-8.16	TEMPORARY SHORING NOTES
TCP-9.1	PHASE III, STEP 2 PHASING
TCP-9.2 & 9.3	PHASE III, STEP 2 OVERVIEW
TCP-9.4	PHASE III, STEP 2 SECTIONS
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TCP-10.18	TEMPORARY SHORING NOTES
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TCP-11.6 THRU 11.20	PHASE IV, STEP 1 DETAILS
TCP-12.1	PHASE IV, STEP 2 OVERVIEW & PHASING
TCP-12.2	PHASE IV, STEP 2 SECTION
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TCP-13.1	PHASE V, STEP 1 PHASING
TCP-13.2 & 13.3	PHASE V, STEP 1 OVERVIEW
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TCP-13.5 THRU 13.18	PHASE V, STEP 1 DETAILS
TCP-14.1 & 14.2	PHASE V, STEP 2 OVERVIEW & PHASE V, STEPS 2 & 3 PHASING
TCP-15.1	"WORK ZONE" SPEED LIMIT REDUCTION
TCP-15.2	SIGN DESIGNS
TCP-15.3	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

TEMPORARY PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
	PAINT (4")
PA	WHITE EDGELINE
PB	YELLOW EDGELINE
PC	10 FT. WHIT SKIP
PD	2 FT. WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PI	DOUBLE YELLOW CENTERLINE
	PAINT (8")
PR	WHITE GORELINE
PV	YELLOW DIAGONAL
	PAINT (24")
P4	WHITE STOP BAR
	COLD APPLIED PLASTIC, TYPE IV (4")
CA	WHITE EDGELINE
CB	YELLOW EDGELINE
CC	10 FT. WHITE SKIP
CI	DOUBLE YELLOW CENTERLINE
	COLD APPLIED PLASTIC, TYPE IV (8")
CV	YELLOW DIAGONAL
	PAINT SYMBOL
QA	LEFT ARROW
QB	RIGHT ARROW
QC	STRAIGHT ARROW
QD	COMBO STRAIGHT-LEFT ARROW
QE	COMBO STRAIGHT-RIGHT ARROW
QI	ALPHANUMERIC CHARACTER
QM	24" YIELD LINE TRIANGLE
	COLD APPLIED PLASTIC, TYPE IV SYMBOL
DB	RIGHT ARROW
DD	COMBO STRAIGHT-LEFT ARROW
	TEMPORARY RAISED MARKER
MH	YELLOW & YELLOW
MI	CRYSTAL & RED

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

INDEX OF SHEETS AND TEMPORARY PAVEMENT MARKING SCHEDULE

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

1/4/2012
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PROJECT NOTES

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-1.3

GENERAL NOTES

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

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

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
I-40, I-77 & RAMPS	6:00 AM TO 8:00 PM, MONDAY THRU FRIDAY 8:00 AM TO 9:00 PM, SATURDAY & SUNDAY
US 21	7:00 AM TO 9:00 PM, MONDAY THRU FRIDAY 9:00 AM TO 8:00 PM, SATURDAY & SUNDAY
US 64 (DAVIE AVE.)	7:00 AM TO 7:00 PM, MONDAY THRU FRIDAY
GLENWAY DR.	7:00 AM TO 9:00 PM, MONDAY THRU FRIDAY 8:00 AM TO 9:00 PM, SATURDAY & SUNDAY

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

ROAD NAME

I-40
I-77
US 21

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 AM DECEMBER 31st TO 8:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 PM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 AM THURSDAY AND 8:00 PM MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY TO 8:00 PM TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 8:00 PM THE DAY AFTER INDEPENDENCE DAY.

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

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
I-40	5:00 AM TO 12:00 MIDNIGHT, MONDAY THRU SUNDAY	30 MINUTES, TRAFFIC OPERATIONS
I-77	4:00 AM TO 12:00 MIDNIGHT, MONDAY THRU SUNDAY	30 MINUTES, TRAFFIC OPERATIONS
US 21	5:00 AM TO 12:00 MIDNIGHT, MONDAY THRU THURSDAY; 5:00 AM FRIDAY UNTIL 12:00 MIDNIGHT SUNDAY	30 MINUTES, TRAFFIC OPERATIONS; 60 MINUTES, OVERHEAD STRUCTURE WORK

D) DO NOT USE MEDIAN CROSSOVERS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-40	6:00 AM TO 8:00 PM, MONDAY THRU FRIDAY 8:00 AM TO 9:00 PM, SATURDAY & SUNDAY

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

ROAD NAME	DAY AND TIME RESTRICTIONS
I-40, I-77 & RAMPS	6:00 AM TO 8:00 PM, MONDAY THRU FRIDAY 8:00 AM TO 9:00 PM, SATURDAY & SUNDAY

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 AND SHOULDER CLOSURE REQUIREMENTS

G) 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.

H) 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.

I) 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.

J) 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.

K) 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.

L) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON ALL ROADS.

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

APPROVED: Michael T Rzyska DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZYSKA

PROJECT NOTES

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
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PAVEMENT EDGE DROP OFF REQUIREMENTS

N) 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.

O) 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) 1000 FEET IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

Q) 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.

R) PROVIDE PERMANENT SIGNING.

S) 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.

T) 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.

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

V) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 1000 FEET IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

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

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

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

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

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

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

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

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC CONTROL DEVICES

Y) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

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

AA) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 1000 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

BB) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS SHOWN IN THE PAVEMENT MARKING PLAN.

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

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED
PROPOSED STRUCTURES	COLD APPLIED PLASTIC (TYPE IV)	TEMPORARY RAISED
EXISTING STRUCTURES	PAINT	TEMPORARY RAISED

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 DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.

TEMPORARY / FINAL SIGNALS

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

MISCELLANEOUS

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

JJ) ALL WHEELCHAIR 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.

KK) 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.).

LL) WHERE LANE SHIFTS OCCUR ON I-40 AND I-77, PLACE SHIFT SIGNS W1-4L OR W1-4R 1000 FEET IN ADVANCE OF SHIFT ON BOTH SIDES OF ROADWAY.

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PROJECT NOTES

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS

CADD FILE

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.1

PHASE I, STEPS 1 & 2

NOTES:

- RSD REFERS TO THE NCDOT ROADWAY STANDARD DRAWINGS
- ALL PROPOSED ASPHALT CONSTRUCTION IN PHASE I THROUGH PHASE V, STEP 2 IS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

PHASE I

STEP 1

USING RSD 1101.01 (SHEETS 1, 2 & 3) AND SHEETS TCP-15.1 & 15.2, INSTALL ALL ADVANCE WARNING SIGNS AND SPEED REDUCTION SIGNS AS DIRECTED BY THE ENGINEER.

STEP 2

USING BARRICADE, DRUMS AND TEMPORARY MARKINGS, CLOSE EXISTING EXIT/ENTRANCE RAMPS TO/FROM US 64 (DAVIE AVE.) AND EXISTING SYLVESTER RD. (SR 2437) AT PROPOSED CUL-DE-SAC (SEE TCP-2.17 THRU TCP-2.19). RESIGN WB US 64 TO WB I-40 TRAFFIC TO USE OLD MOCKSVILLE ROAD INTERCHANGE. RESIGN EB I-40 TO US 64 TRAFFIC TO USE OLD MOCKSVILLE ROAD INTERCHANGE.

USING RSD 1101.02 (SHEET 3 OF 15), INSTALL TEMPORARY GUARDRAIL ON TRAILING END OF EXISTING EB I-40 BRIDGES OVER US 21 AND FOURTH CREEK AND BEGIN CONSTRUCTION OF RIGHT PORTIONS OF PROPOSED STRUCTURES OVER -Y4- (US 21) AND FOURTH CREEK. WORK AROUND US 21 RAMP D TRAFFIC UNTIL US 21 RAMP D TRAFFIC IS SHIFTED TO PROPOSED RAMP D IN PHASE I, STEP 3 (SEE TCP-2.11).

USING RSD 1101.02 (SHEET 10 OF 15), INSTALL TEMPORARY GUARDRAIL ON TRAILING END OF EXISTING WB I-40 BRIDGE OVER FOURTH CREEK AND BEGIN CONSTRUCTION OF -Y4RPA- STA 17+44± TO STA 21+00±, INCLUDING STRUCTURE (SEE TCP-2.11).

AWAY FROM TRAFFIC CONSTRUCT -Y4RPD- (INCL. STRUCTURE) FROM STA 23+13± TO -P1S5EB3- WITH TEMP. TIE TO US 21 (SEE TCP-2.11 & 2.12).

USING RSD 1101.02 (SHEET 3 OF 15), STRENGTHEN (MINIMUM 5′ WIDTH) I-40 AND I-77 EXISTING OUTSIDE SHOULDERS AT THE FOLLOWING LOCATIONS, PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND SHIFT TRAFFIC WITH NARROWED LANES (11′) TO SAME (SEE TCP-2.6 THRU TCP-2.17, TCP-2.20 THRU TCP-2.23):

EB I-40 -L- STA 21+00± TO STA 85+00± OUTSIDE SHOULDER
WB I-40 -L- STA 26+00± TO STA 81+00± OUTSIDE SHOULDER
EB I-40 -L- STA 120+00± TO STA 176+00± OUTSIDE SHOULDER
WB I-40 -L- STA 124+50± TO STA 165+00± OUTSIDE SHOULDER
NB I-77 -Y- STA 119+00± TO STA 138+00± OUTSIDE SHOULDER
NB I-77 -Y- STA 142+00± TO STA 185+75± OUTSIDE SHOULDER
SB I-77 -Y- STA 144+00± TO STA 172+50± OUTSIDE SHOULDER

USING RSD 1101.02 (SHEET 3 OF 15), STRENGTHEN (MINIMUM 5′ WIDTH) I-40 EXISTING OUTSIDE SHOULDER FROM EB I-40 -L- STA 99+50± TO STA 119+00±. PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND NARROW LANES (11′) TOWARD MEDIAN. INSTALL PCB ALONG OUTSIDE LANE OF EB I-40 AND CONSTRUCT TEMPORARY OUTSIDE STRENGTHENING AND WIDENING OF EB I-40 FROM -L- STA 101+95± TO STA 117+50± (SEE TCP-2.12 & 2.13).

BEHIND BARRIER, CONSTRUCT TEMPORARY US 21 RAMP D TIE FROM -P1S5EB3- TO TEMPORARY WIDENING OF I-40 NEAR -L- STA 102+00± (SEE TCP-2.12).

USING RSD 1101.02 (SHEET 3 OF 15), INSTALL PORTABLE CONCRETE BARRIER (PCB) ALONG MEDIAN OF WB & EB I-40 WEST OF US 21 AND CONSTRUCT TEMPORARY PAVEMENT IN THE MEDIAN OF I-40 FROM -L- STA 24+80± TO STA 57+00±. BEGIN CONSTRUCTION OF TEMPORARY PAVEMENT IN THE MEDIAN OF I-40 FROM -L- STA 57+00± TO STA 82+10± (SEE TCP-2.6 THRU TCP-2.11).

USING RSD 1101.02 (SHEET 3 OF 15), INSTALL PCB ALONG MEDIAN OF WB & EB I-40 FROM THE I-77 INTERCHANGE EASTWARD. BEHIND BARRIER CONSTRUCT THE FOLLOWING I-40 MEDIAN PAVEMENT (SEE TCP-2.14 THRU TCP-2.17):

I-40 -L- STA 125+00± TO STA 155+20±, TEMPORARY
EB I-40 -L- STA 150+00± TO STA 173+00±, PROPOSED
WB I-40 -L- STA 145+00± TO STA 161+50±, PROPOSED

USING RSD 1101.02 (SHEET 3 OF 15), INSTALL PCB ALONG MEDIAN OF NB I-77 BETWEEN FOURTH CREEK AND I-40. BEHIND BARRIER AND USING RSD 1101.02 (3 OF 15), CONSTRUCT PROPOSED MEDIAN WIDENING OF NB I-77 FROM STRUCTURE OVER FOURTH CREEK TO -Y- STA 135+00 (SEE TCP-2.20).

USING RSD 1101.02 (SHEET 3 OF 15), INSTALL PCB ALONG MEDIAN OF SB & NB I-77 NORTH OF I-40. BEHIND BARRIER AND USING RSD 1101.02 (3 OF 15), CONSTRUCT THE FOLLOWING I-77 MEDIAN PAVEMENT (SEE TCP-2.21 THRU TCP-2.23):

FROM EXISTING STRUCTURE OVER I-40 TO NB I-77 -Y- STA 157+28±, TEMPORARY
FROM EXISTING STRUCTURE OVER I-40 TO SB I-77 -Y- STA 157+86±, TEMPORARY
NB I-77 -Y- STA 157+28± TO STA 182+75±, PROPOSED
SB I-77 -Y- STA 157+86± TO STA 169+00±, PROPOSED

AWAY FROM TRAFFIC CONSTRUCT PROPOSED -SR1-.

USING RSD 1101.02 (SHEETS 1 & 3 OF 15), CONSTRUCT THE FOLLOWING PROPOSED (SEE TCP-2.9, 2.10, 2.13, 2.18, 2.21, 2.22 & 2.24):

-Y3A- (GAITHER RD.) STA 32+86± TO STA 44+20±
-Y5- (GLENWAY DR.) STA 38+90± TO STA 67+00±
-Y10A- (DAVIE AVE.) STA 11+00± TO STA 23+00±
CUL-DE-SAC ON SYLVESTER RD. (SR 2437) (AFTER COMPLETING & OPENING PROPOSED -SR1-)

AWAY FROM TRAFFIC OR BEHIND EXISTING GUARDRAIL, BEGIN CONSTRUCTION OF THE FOLLOWING PROPOSED (SEE TCP-2.11, 2.15, 2.16, 2.20 & 2.22):

-YRPA- FROM -YRPAB- TO -YRPA- STA 33+00±
-YRPAB- STA 15+22± TO STA 27+00±
-YRPD- (INCL. STRUCTURE) FROM -YRPBD- TO -YRPD- STA 10+85±
-YRPBD- STA 48+15± TO STA 60+91±

USING RSD 1101.02 (SHEET 7 & 10 OF 15), INSTALL PCB AND TEMPORARY PAVEMENT MARKINGS ON EXISTING US 21 RAMP C. AWAY FROM TRAFFIC AND BEHIND BARRIER, BEGIN CONSTRUCTION OF PROPOSED -Y4RPC- FROM STA 12+36± TO STA 25+00± (PORTION) WITH TEMPORARY TIE TO US 21 (SEE TCP-2.10 & 2.11).

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -Y8-, INCLUDING PROPOSED STRUCTURE, FROM -Y3A- TO -Y8- STA 22+17± (SEE TCP-2.10 & 2.25).

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF TEMPORARY TIE BETWEEN -Y8- AND -Y2DW-(SEE TCP-2.25).

AWAY FROM TRAFFIC AND BEHIND BARRIER OR GUARDRAIL, BEGIN CONSTRUCTION OF -P1S5EB3- FROM PROPOSED STRUCTURE OVER FOURTH CREEK TO -L- STA 119+15± (SEE TCP-2.11 THRU TCP-2.13).

BEHIND BARRIER, BEGIN CONSTRUCTION OF TEMPORARY US 21 RAMP D TIE FROM -P1S5EB3- TO TEMPORARY WIDENING OF I-40 NEAR -L- STA 114+00± (SEE TCP-2.13).

USING RSD 1101.02 (SHEET 10 OF 15), INSTALL PCB AND TEMPORARY PAVEMENT MARKINGS ON EXISTING I-77 RAMP C. AWAY FROM TRAFFIC AND BEHIND BARRIER, BEGIN CONSTRUCTION OF TEMPORARY I-77 RAMP C TIE FROM -P1S5EB3- TO EXISTING I-77 RAMP C (SEE TCP-2.13 & 2.14).

APPROVED: Michael T Rzyska DATE: 1-4-12

SEAL

PHASE I, STEPS 1 & 2 PHASING

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

REVISIONS

CADD FILE

1/4/2012
r:\3819\traffic\traffiocontrol\tcp\100% ddl\3819a_tc_tcp_phasing.dgn

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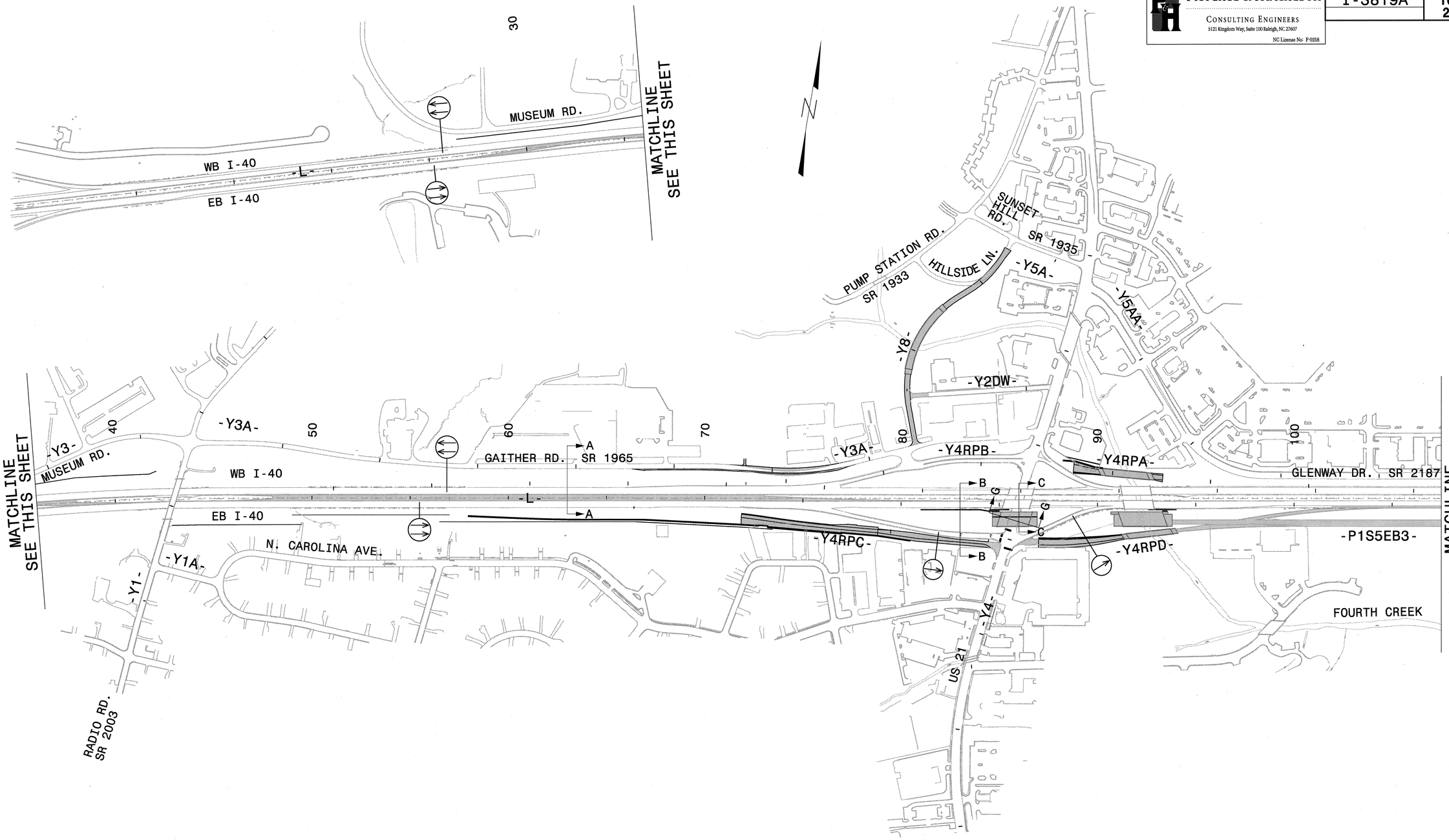
	I-3819A	TCP-2.2



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15876 MICHAEL T. RZEPKA

PHASE I, STEP 2 OVERVIEW SHEET 1 OF 2

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\trafficcontrol\tap\000_dgn\3819a_tcp_p1_s2_ovw_a.dgn

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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.3

MATCHLINE B
SEE THIS SHEET

MATCHLINE B
SEE THIS SHEET

CONSTRUCT -SR1-
(NOT SHOWN)

MATCHLINE
SEE SHEET TCP-2.2

MATCHLINE A
SEE THIS SHEET

MATCHLINE A
SEE THIS SHEET

SR 2187
GLENWAY DR.
SB I-77
NB I-77
-Y5-
-YRPB-
-YRPBD-
-YRPA-
-YRPC-
-YRPD-
-Y10A-
-Y-
-L-
WB I-40
EB I-40
SYLVESTER RD.
SR 2437
DAVIE AVE.
US 64
FOURTH CREEK
A
B
C
D
D
E
E
F
F
110
120
130
140
150
160
170
180
190

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 2 OVERVIEW SHEET 2 OF 2

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
I:\3819\traffic\trafficcontrol\tcp\100% dd\I3819a_tc_tcp_p1_s2_ovw_b.dgn

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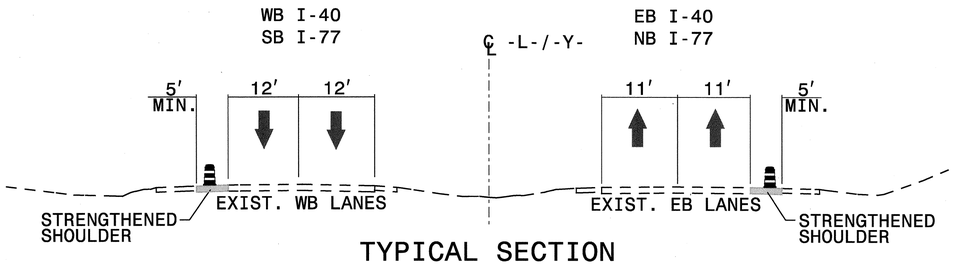
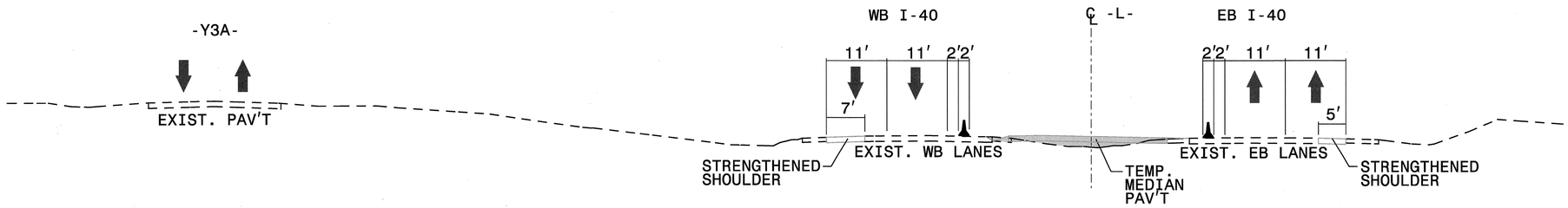
NC License No: F-0258

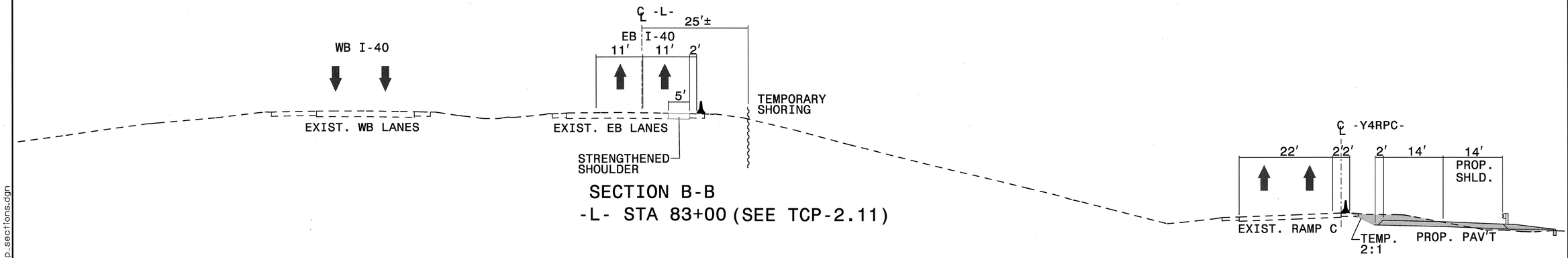
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.4



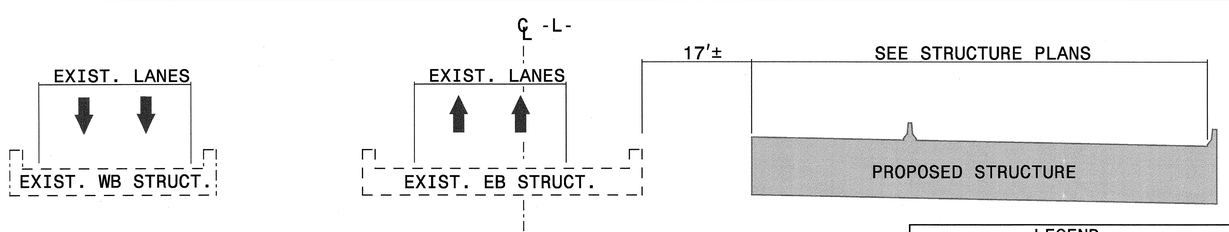
TYPICAL SECTION
SHOULDER STRENGTHENING
UNDER LANE CLOSURES
VARIOUS LOCATIONS



SECTION A-A
-L- STA 63+00 (SEE TCP-2.9)



SECTION B-B
-L- STA 83+00 (SEE TCP-2.11)



SECTION C-C
-L- STA 86+00 (SEE TCP-2.11)

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 SECTIONS

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
P:\3819\traffic\traffiocontrol\tap\100% ddn\3819a_tc_tap_sections.dgn

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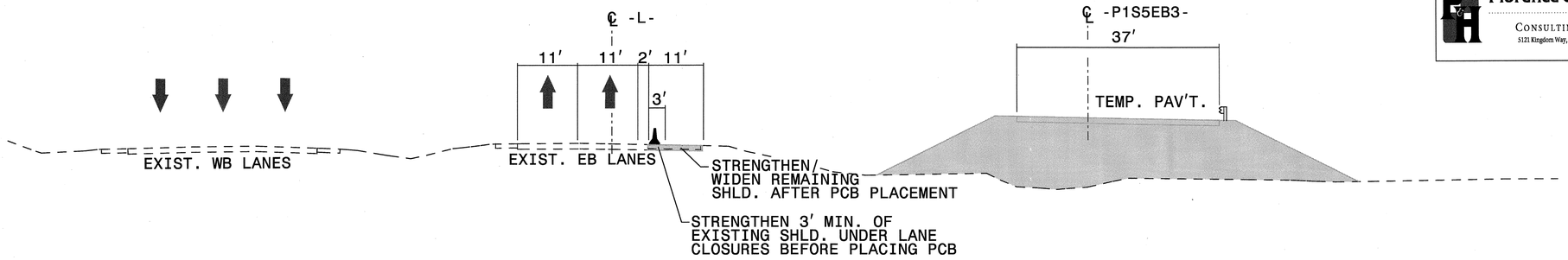
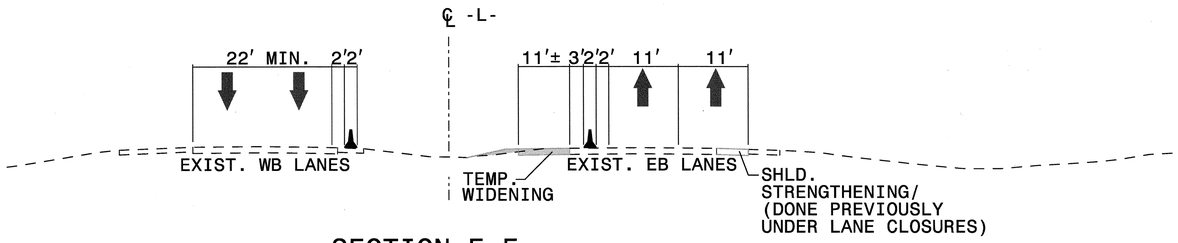
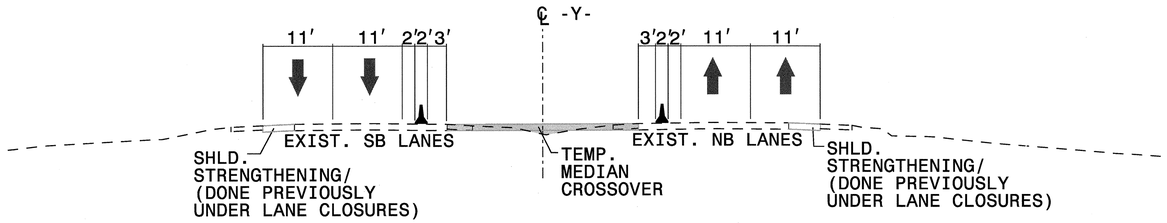


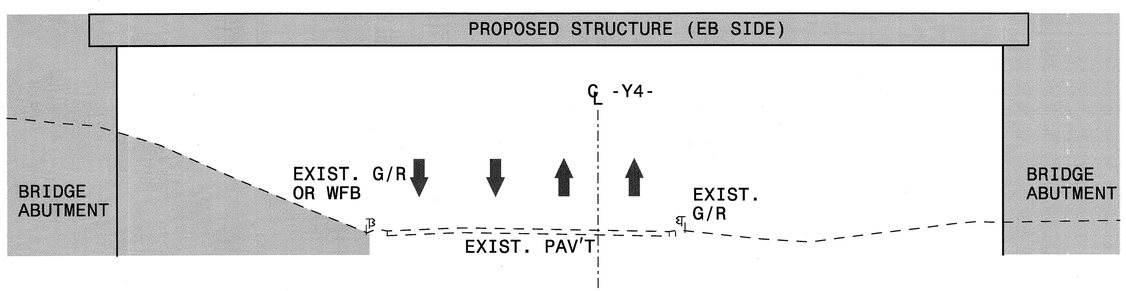
SECTION D-D
-L- STA 108+00 (SEE TCP-2.12)



SECTION E-E
-L- STA 140+00 (SEE TCP-2.15)



SECTION F-F
-Y- STA 150+00 (SEE TCP-2.21)



SECTION G-G
-Y4- STA 26+00 (SEE TCP-2.11)

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 SECTIONS

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_sections.dgn

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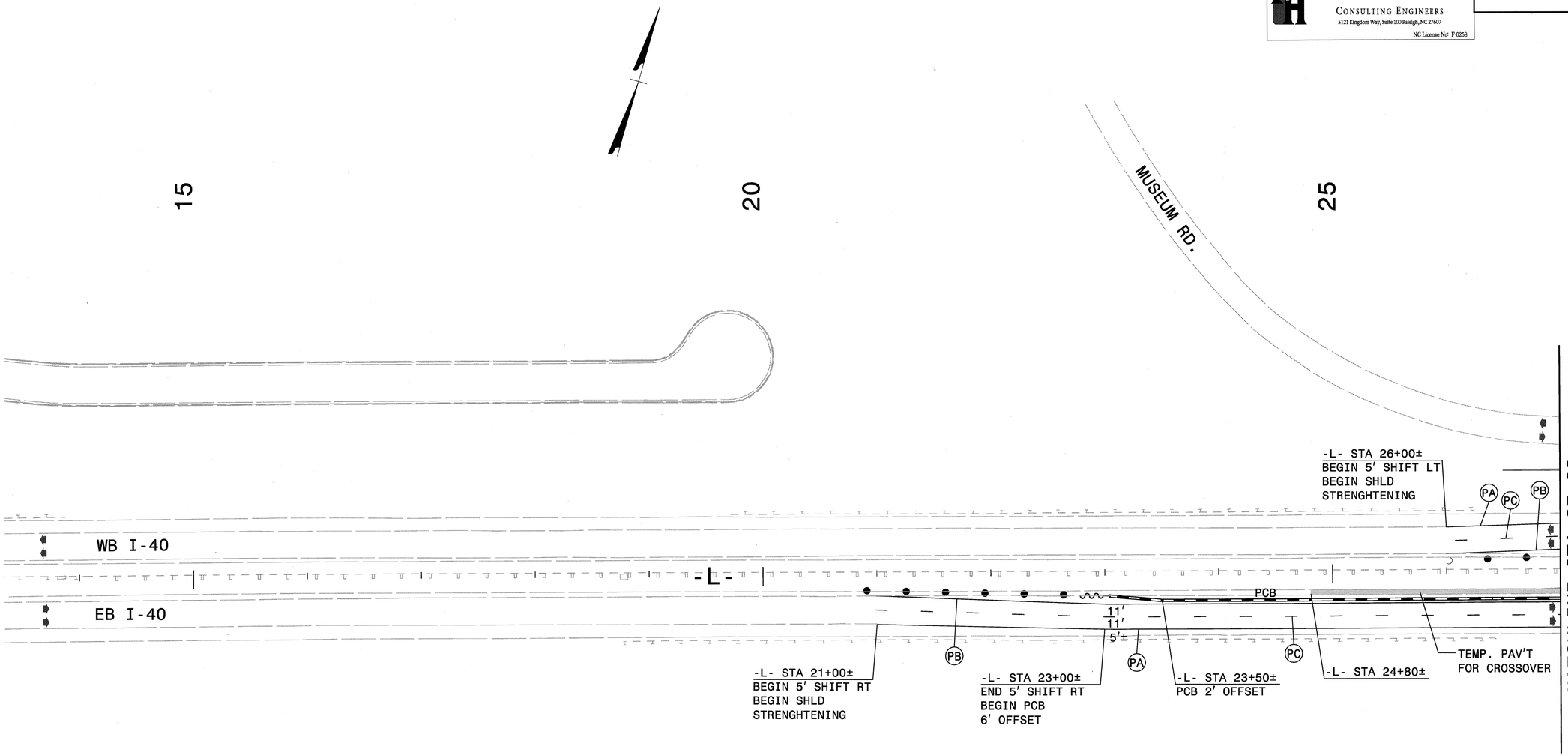
	I-3819A	TCP-2.6



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\00%_dd\3819a_tcp_pi_s2_det_101.dgn

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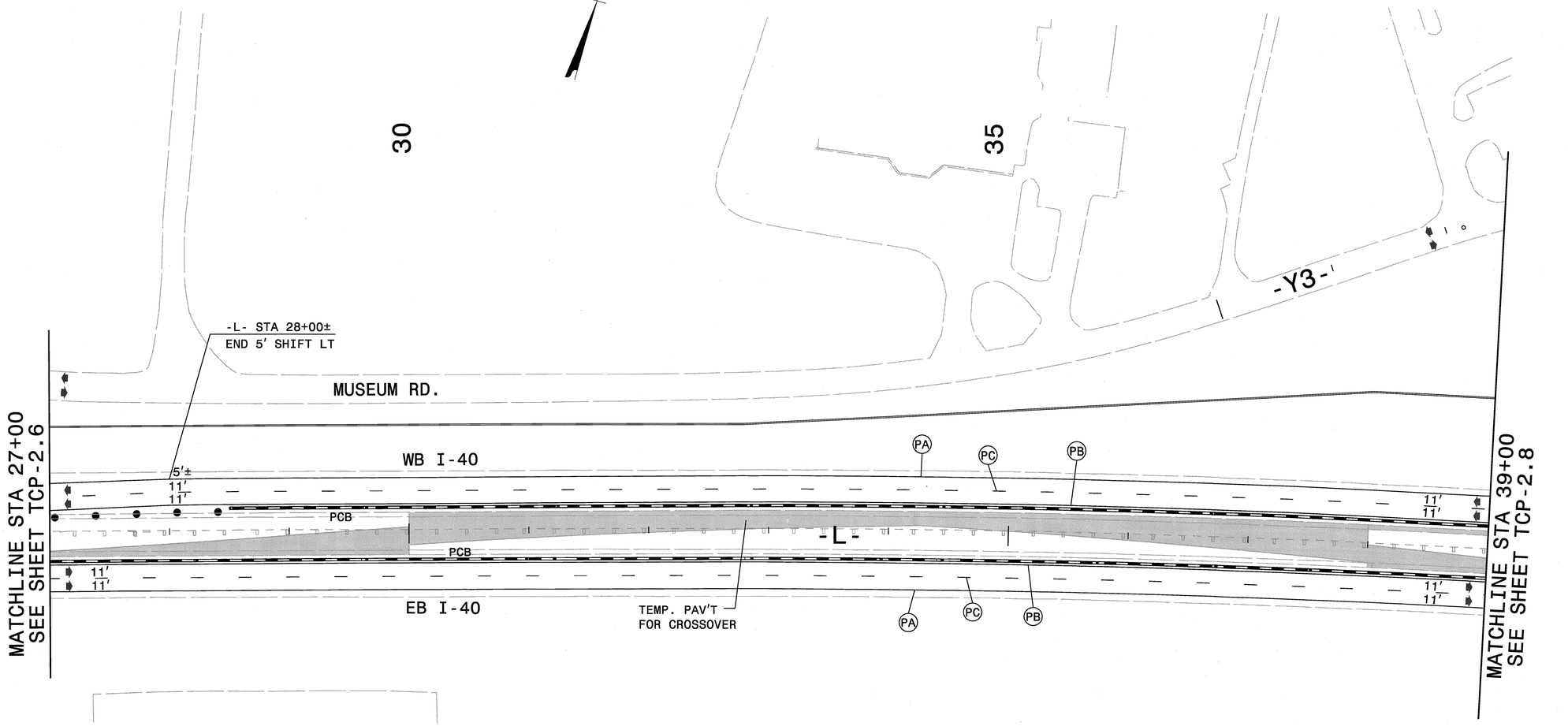
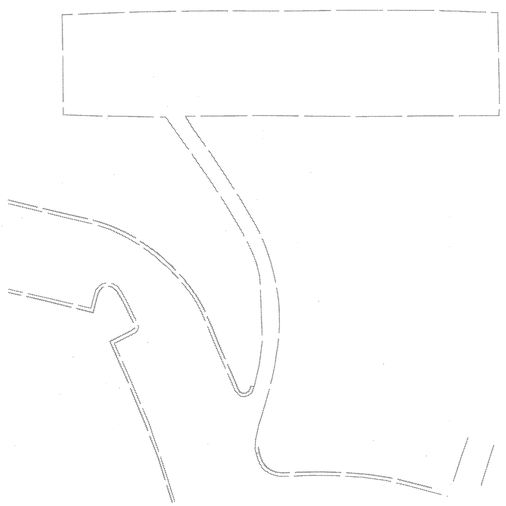
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.7





LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
c:\i3819\traffic\traffiocontrol\tcp\100% ddi\i3819a_tc_tcp_pl_s2_det_102.dgn

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PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.8

40

45

50

-Y3-

-Y3A-

MUSEUM RD.

GAITHER RD. SR 1965

-Y1-

MATCHLINE STA 39+00
SEE SHEET TCP-2.7

MATCHLINE STA 53+00
SEE SHEET TCP-2.9

WB I-40

PA

PC

PB

11'
11'

PCB

-L-

-P1S3EB1-

EB I-40

TEMP. PAV'T
FOR CROSSOVER

TEMP. PAV'T
FOR CROSSOVER
& MEDIAN DETOUR

RADIO RD. SR 2003

-Y1A-

BST

CONC

N. CAROLINA AVE.

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
P:\3819\traffic\trafficcontrol\tcp\I00X dd\I3819a_tc_tcp_pl_s2_det_I03.dgn

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.9

55 60 65

GAITHER RD. SR 1965

-Y3A-

A (SEE TCP-2.4)

-Y3A- STA 32+86±

MATCHLINE STA 53+00
SEE SHEET TCP-2.8

-L- STA 53+00±
BEGIN 2' SHIFT LT

-L- STA 55+00±
END 2' SHIFT LT

PA PC PB

-LCDWB-

WB I-40

-L- STA 66+00±
BEGIN TEMP. WIDENING

PD

11' 11' 2'± 2'

PCB

-P1S3EB1-

-L-

PCB

11' 11'

-L- STA 57+00±

EB I-40

TEMP. PAV'T FOR MEDIAN DETOUR

A

MATCHLINE STA 67+00
SEE SHEET TCP-2.10

GR

CONC

6" CURB

6"CONC CURB GUTTER PAVED OVER

N. CAROLINA AVE.

30" CMP

BST

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
C:\I3819\traffic\trafficcontrol\tcp\100% ddl\I3819a_tc_tcp_pl_s2_det_104.dgn

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5121 Kingsdown Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.10

70

75

80

-Y8-

GAITHER RD. SR 1965

-Y3A-

-Y3A- STA 44+20±

RAMP B

-L- STA 68+95±

-L- STA 71+92±

-L- STA 75+03±

-L- STA 76+80±
END TEMP.
WIDENINIG

-L- STA 77+50±
PCB 2' OFFSET

-L- STA 78+00±
END PCB 6' OFFSET
BEGIN 7' SHIFT RT

-L- STA 81+00±
END 7' SHIFT RT
TIE TO EXIST.

QC PA PC PB PD PR

-LCDWB-

WB I-40

2' 11' 11' 11' 11' 11'

PCB

-L-

-P1S3EB1-

PCB

11' 11' 11' 11'

MATCHLINE STA 67+00
SEE SHEET TCP-2.9

TEMP. PAV'T
FOR MEDIAN
DETOUR

PA PC PB PD PR

-Y4RPC- STA 12+36±
BACK OF GORE

-L- STA 71+80±

-L- STA 75+46±

-L- STA 76+00±

-L- STA 77+50±
BEGIN PCB
6' OFFSET

-L- STA 78+00±
BEGIN PCB
2' OFFSET

-L- STA 78+00±
PCB 2' OFFSET

EB I-40

11'

RAMP C

PA

-Y4RPC-

MATCHLINE STA 81+00
SEE SHEET TCP-2.11

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

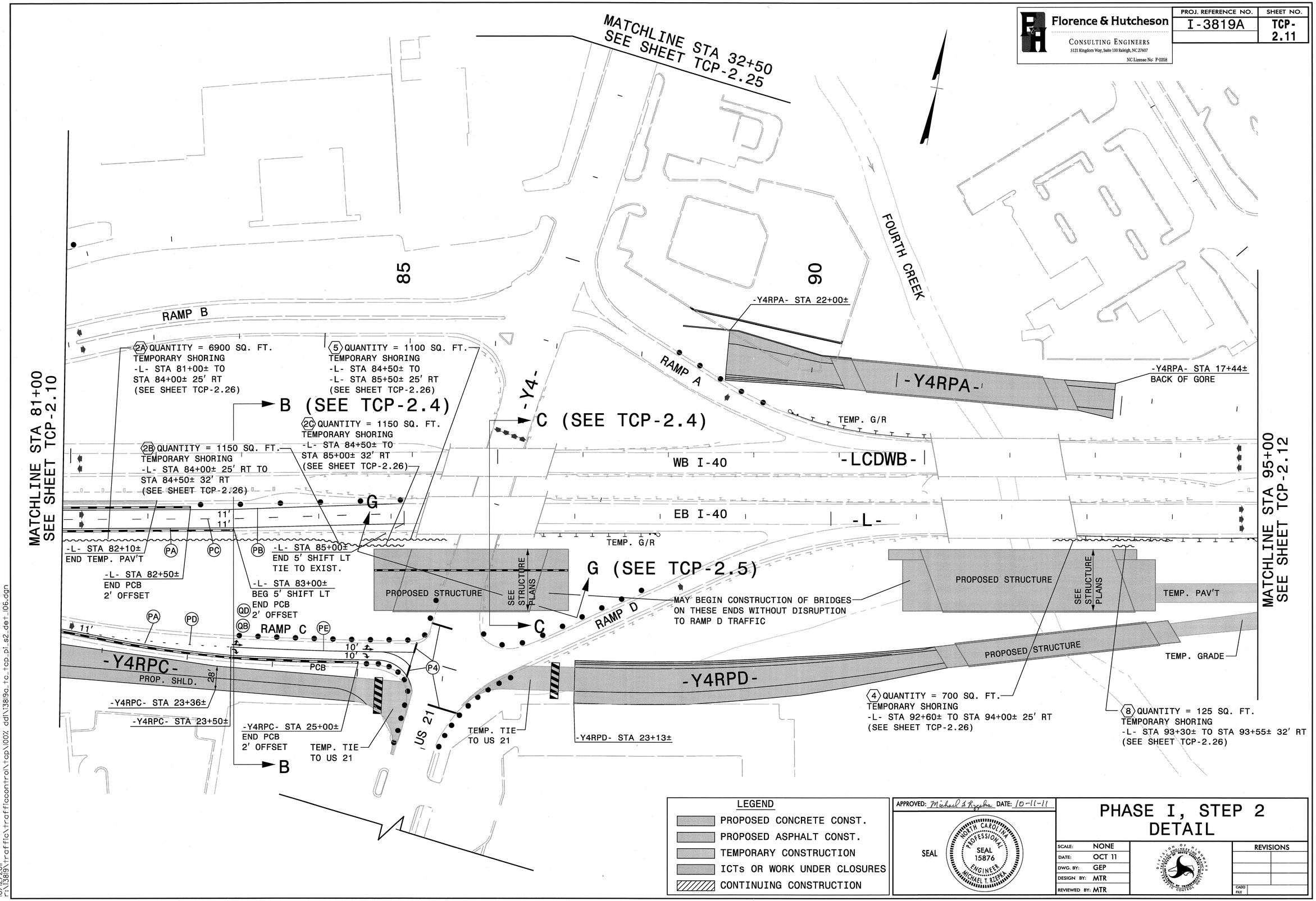
REVISIONS

CADD FILE

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\00% dd\3819a_tc_tcp_p1_s2_det_05.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.11



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pi_s2_det_l06.dgn

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CONSULTING ENGINEERS
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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.12

100

105

-Y5-

GLENWAY DR. SR 2187

MATCHLINE STA 95+00
SEE SHEET TCP-2.11

-LCDWB-

WB I-40

-L- STA 100+50±
END 3' SHIFT LT

-L- STA 101+95±

D

MATCHLINE STA 109+00
SEE SHEET TCP-2.13

-L-

11'
11'

EB I-40

PCB

11'

11'
11'

PB

PA

PC

-L- STA 99+50±
BEG 3' SHIFT
TIE TO EXIST.

-P1S4Y4RPD1-

-L- STA 100+50±
BEGIN PCB
6' OFFSET

-L- STA 101+00±
PCB 2' OFFSET

TEMP. PAV'T

-P1S5EB3-

D
(SEE TCP-2.5)

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
c:\i3819\traffic\trafficcontrol\tcp\100% ddl\i3819a_tc_tcp_pi_s2_det_107.dgn

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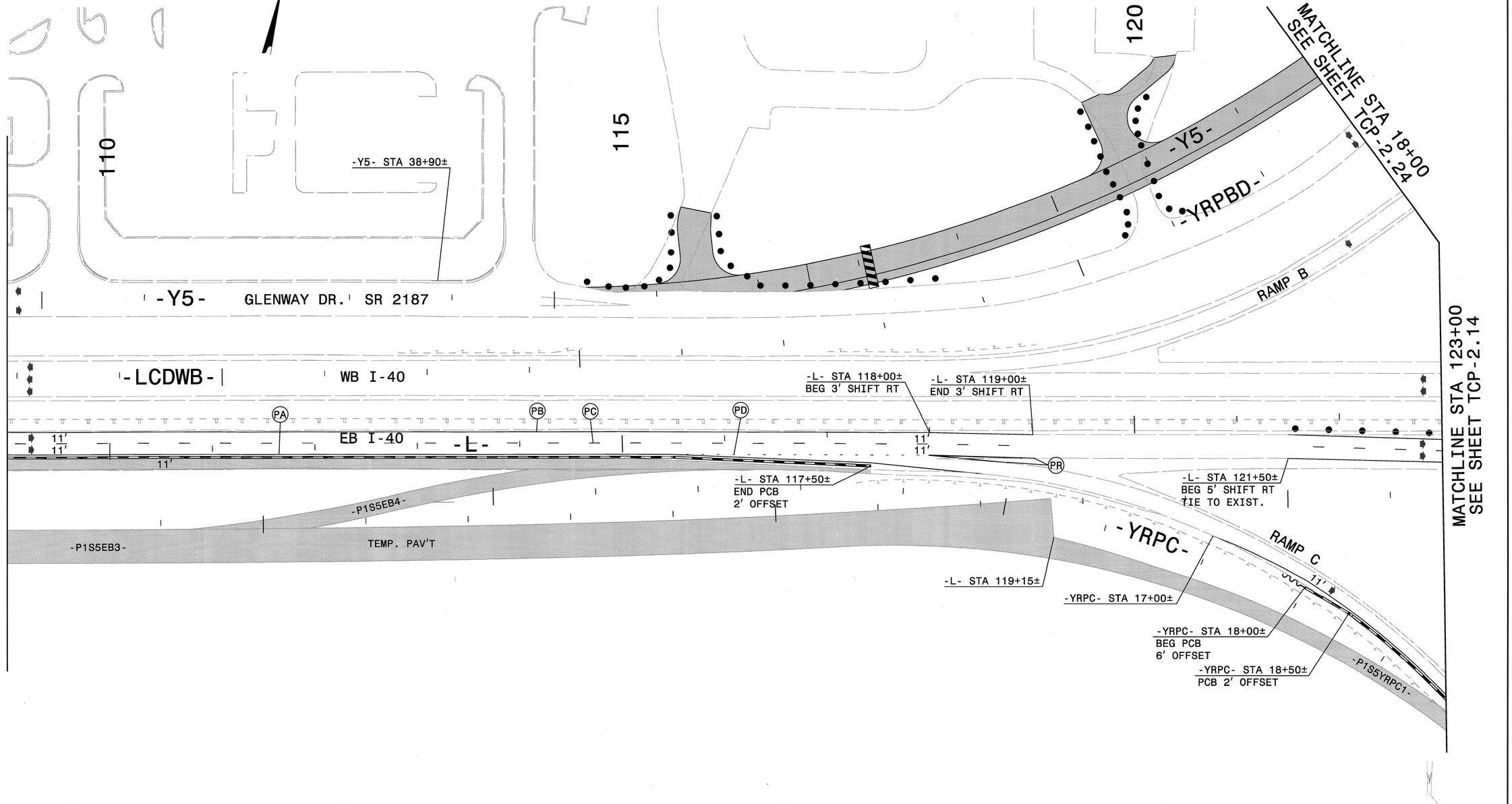
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.13



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS

CADD FILE

10/12/2011
r:\i3819\traffic\trafficcontrol\tcp\i00x_dd\i3819a_tc_tcp_pi_s2_det_i08.dgn

Florence & Hutcheson
CONSULTING ENGINEERS
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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.14

(FOR WORK ON I-77 SEE TCP-2.21)

RAMP B

LOOP B

LOOP A

LOOP C

LOOP D

RAMP C

125

130

135

A

B

C

D

SB I-77

NB I-77

WB I-40

EB I-40

-L-

-P1S4WB1-

PCB

11′

-L- STA 127+00±
BEGIN PCB
2′ OFFSET

-L- STA 126+50±
END 5′ SHIFT LT

-L- STA 124+50±
BEG 5′ SHIFT LT
TIE TO EXIST.

-L- STA 127+74±
BEG TEMP. PAV'T

-L- STA 125+00±
BEG TEMP. PAV'T

-L- STA 124+00±
PCB 2′ OFFSET

-L- STA 123+50±
END 5′ SHIFT RT
BEGIN PCB
6′ OFFSET

-YRPC- STA 22+00±
END PCB
2′ OFFSET

PR PB PD PA PC

MATCHLINE STA 123+00
SEE SHEET TCP-2.13

MATCHLINE STA 137+00
SEE SHEET TCP-2.15

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROLS

REVISIONS

CADD FILE

10/12/2011
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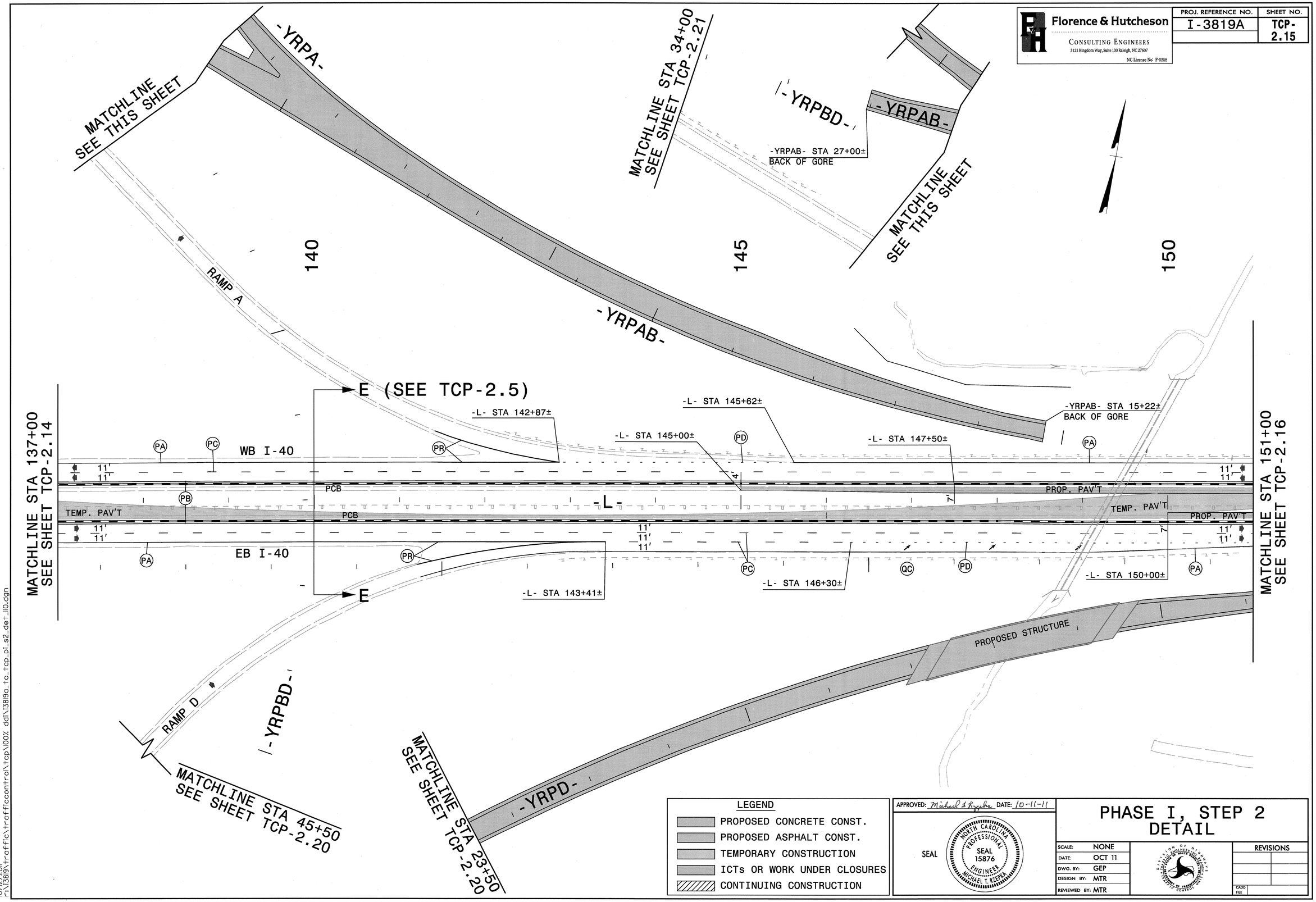

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-2.15
MATCHLINE SEE THIS SHEET
-YRPA-
MATCHLINE STA 34+00 SEE SHEET TCP-2.21
-YRPBD-
-YRPAB-
-YRPAB- STA 27+00± BACK OF GORE
MATCHLINE SEE THIS SHEET
140
145
150
RAMP A
-YRPAB-
E (SEE TCP-2.5)
-L- STA 142+87±
-L- STA 145+62±
-L- STA 145+00±
-L- STA 147+50±
-YRPAB- STA 15+22± BACK OF GORE
MATCHLINE STA 137+00 SEE SHEET TCP-2.14
MATCHLINE STA 151+00 SEE SHEET TCP-2.16
WB I-40
PCB
PROP. PAV'T
TEMP. PAV'T
-L-
EB I-40
-L- STA 143+41±
-L- STA 146+30±
-L- STA 150+00±
E
PROPOSED STRUCTURE
RAMP D
-YRPBD-
MATCHLINE STA 45+50 SEE SHEET TCP-2.20
MATCHLINE STA 23+50 SEE SHEET TCP-2.20
-YRPD-
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE I, STEP 2 DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pi_s2_det_110.dgn

Florence & Hutcheson
CONSULTING ENGINEERS
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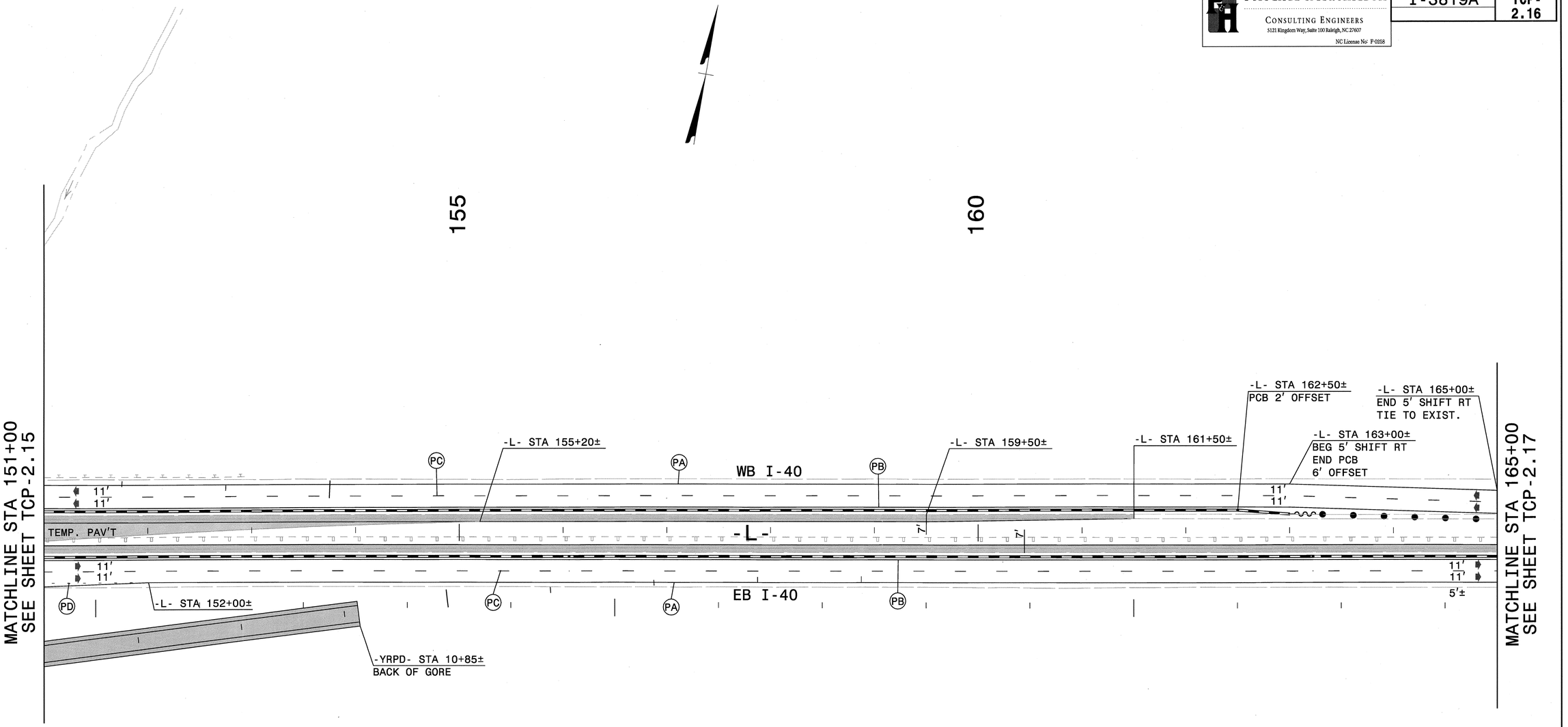
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.16



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
C:\I3819\traffic\traffiocontrol\tcp\I00% ddl\I3819a_tc_tcp_pl_s2_det_III.dgn

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CONSULTING ENGINEERS
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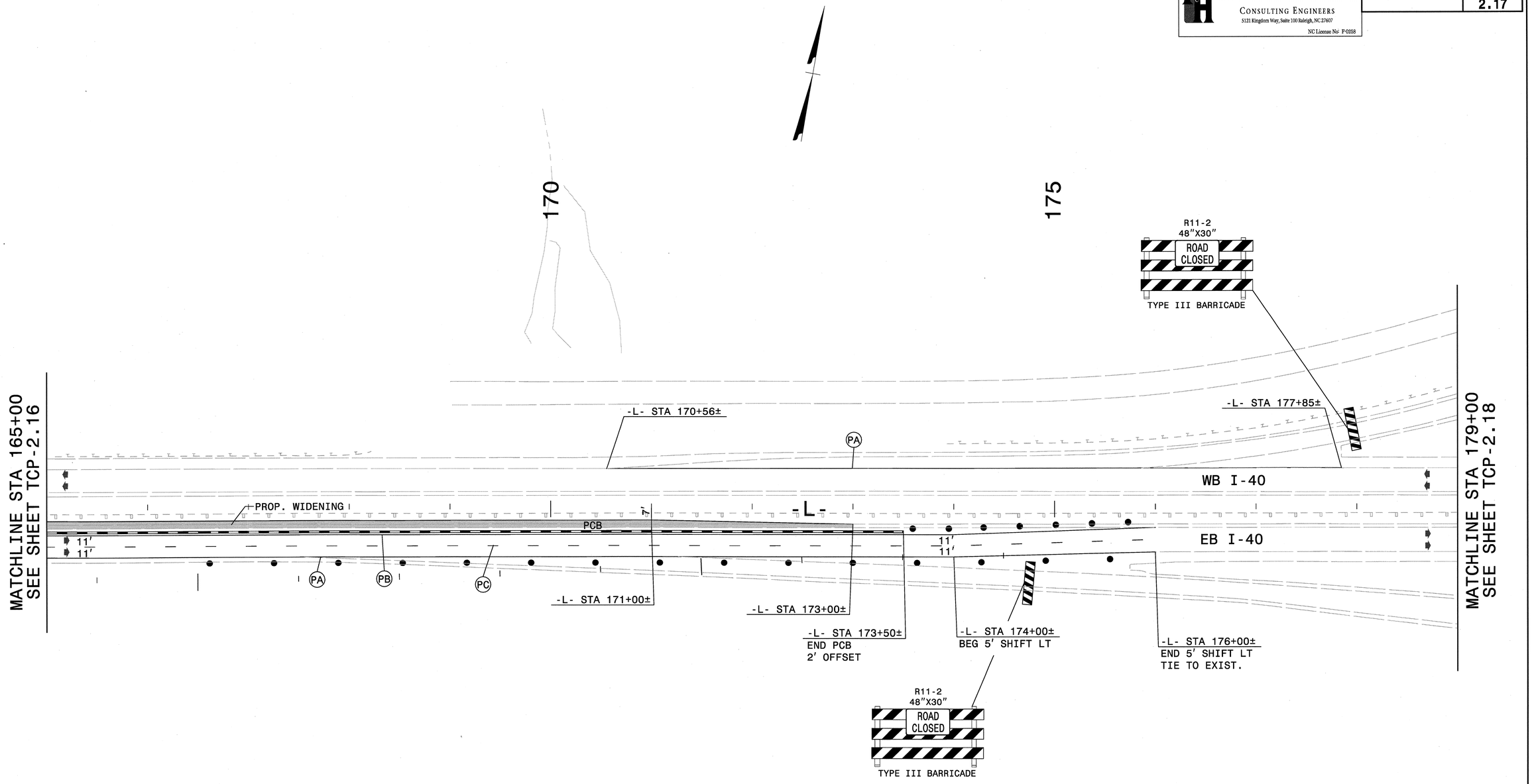
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.17



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

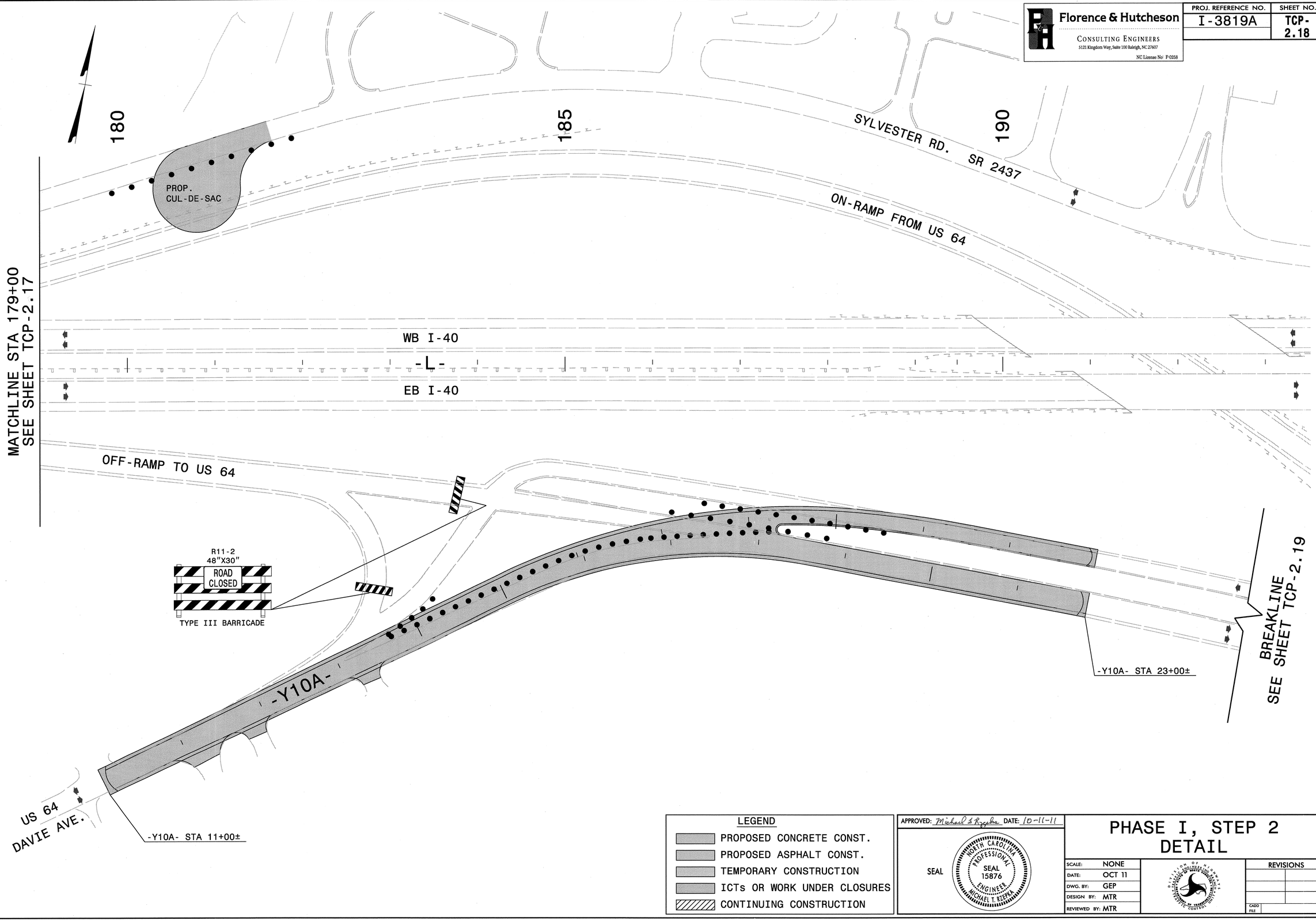
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pi_s2_det_l12.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0268	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-2.18



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

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

PHASE I, STEP 2 DETAIL

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

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

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\00%_dd\3819a_tc_tcp_pi_s2_det_ll3.dgn

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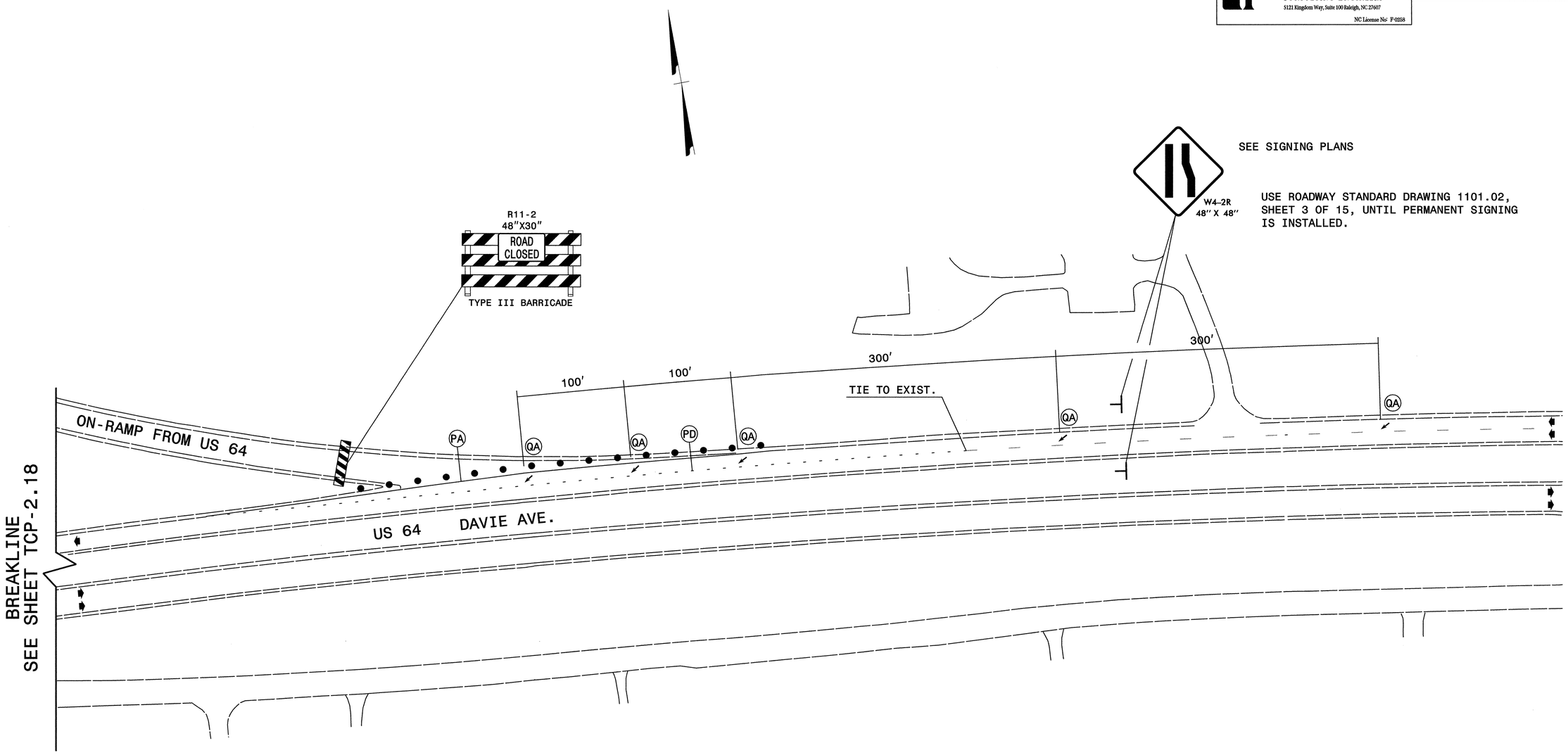
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.19



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

REVISIONS

CADD FILE

1/4/2012
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pl_s2_det_us64.dgn

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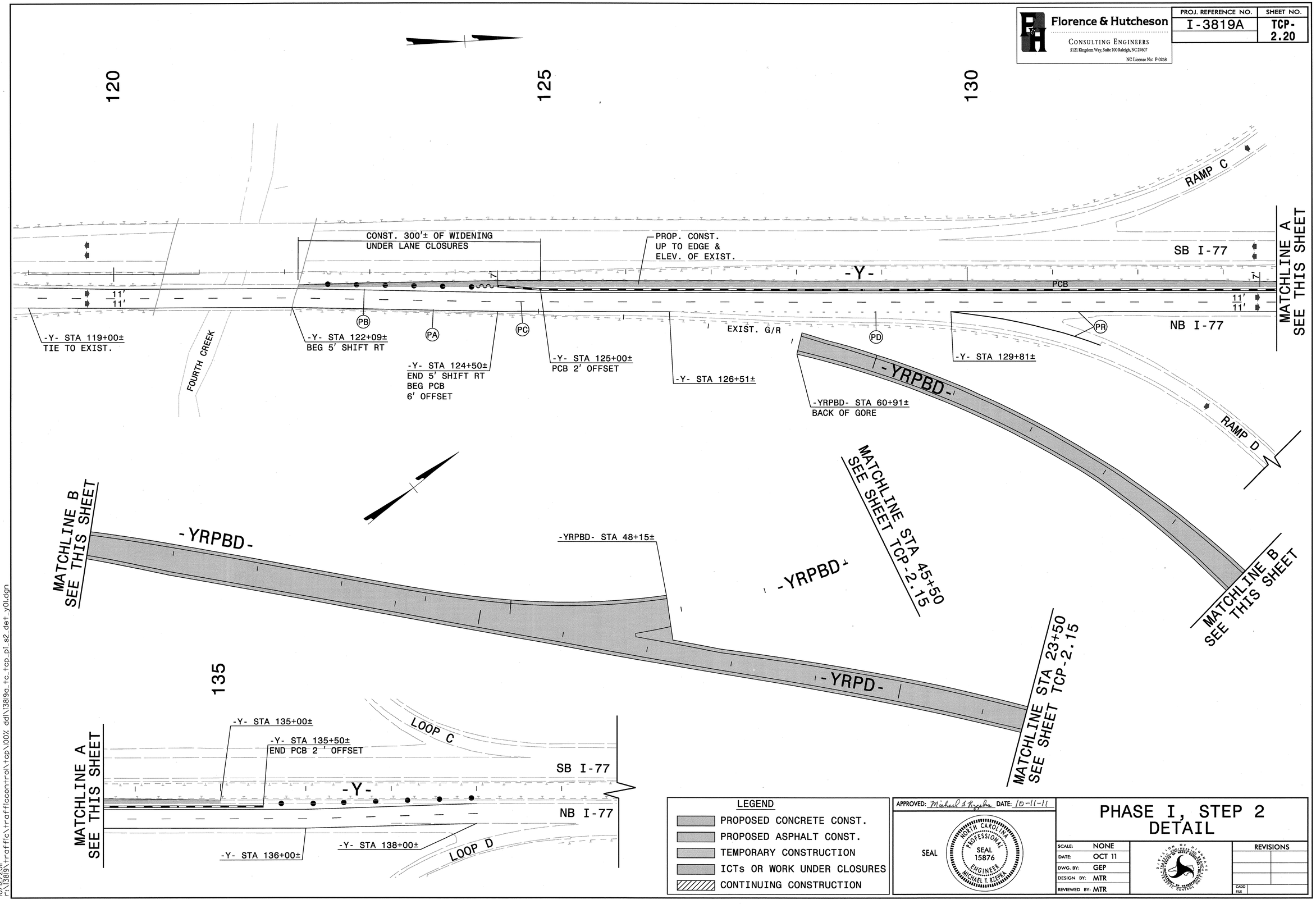
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.20



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pi_s2_det_y01.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.21

MATCHLINE STA 27+00
SEE SHEET TCP-2.24

145

150

-Y5-

RAMP B

GLENWAY DR.

-Y- STA 144+00±
TIE TO EXIST.
BEG 5' SHIFT LT

CONST. 400'± OF TEMP. WIDENING
BEHIND LANE CLOSURES

LOOP B

-Y- STA 146+00±
END 5' SHIFT LT

-Y- STA 146+50±
BEG PCB 2' OFFSET

F (SEE TCP-2.5)

-Y- STA 154+00±

SB I-77

NB I-77

11'
11'

PCB
PCB

-Y-

TEMP. PAV'T

PR
PA
PB
PC
PD

-Y- STA 145+36±
BEG 5' SHIFT RT

-Y- STA 147+00±
END 5' SHIFT RT
BEG PCB
6' OFFSET

-Y- STA 147+50±
PCB 2' OFFSET

-Y- STA 142+00±
TIE TO EXIST.

EB I-40

WB I-40

(FOR WORK ON
I-40 SEE TCP-2.14)

-YRPBD-

RAMP A

-Y- STA 154+67±

MATCHLINE STA 155+00
SEE SHEET TCP-2.22

MATCHLINE STA 34+00
SEE SHEET TCP-2.15

LOOP A

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER

REVISIONS

CADD FILE

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\i00x dd\i3819a_tc_tcp_pi_s2_det_y02.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.22

R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE

160

165

-Y5- STA 67+00±

-Y5-

GLENWAY DR. SR 2187

MATCHLINE STA 155+00
SEE SHEET TCP-2.21

-Y- STA 158+00±

-Y- STA 157+86±

PD

PA

PC

PB

PROP. CONST.
UP TO EDGE &
ELEV. OF EXIST.

SB I-77

-Y- STA 167+00±

11′ 11′

PCB

TEMP. PAV'T

7′

PCB

-Y-

11′ 11′ 11′

NB I-77

QC

-Y- STA 156+85±

-Y- STA 157+28±

PD

-Y- STA 159+00±

PC

-Y- STA 162+00±

PA

PB

-YRPA- STA 33+00±
BACK OF GORE

-YRPA-

MATCHLINE STA 169+00
SEE SHEET TCP-2.23

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

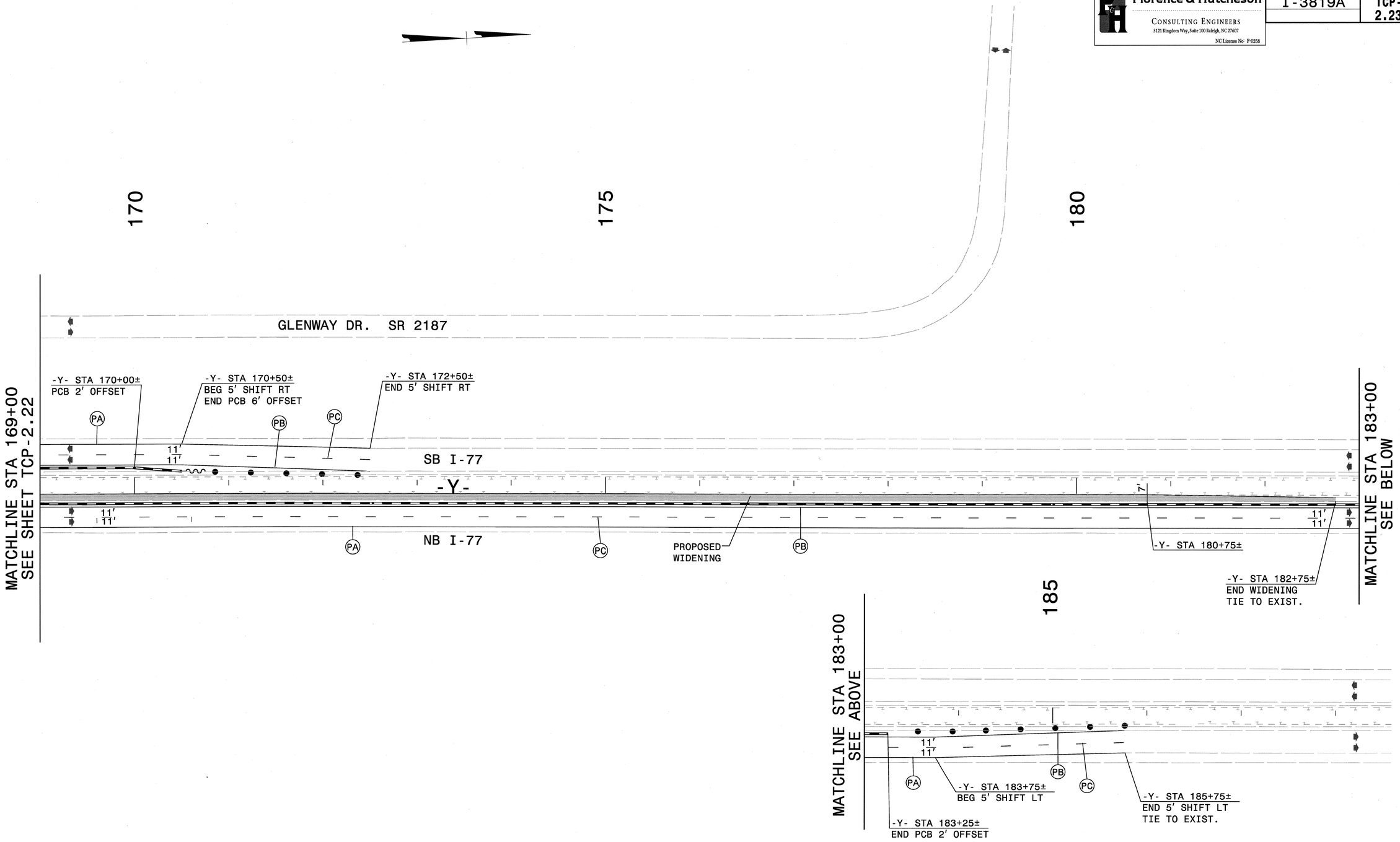
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF ENGINEERING SERVICES TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
C:\I3819\traffic\traffiocontrol\tcp\100% dd\I3819a_tc_tcp_pl_s2_det_y03.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-2.23



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

REVISIONS

CADD FILE

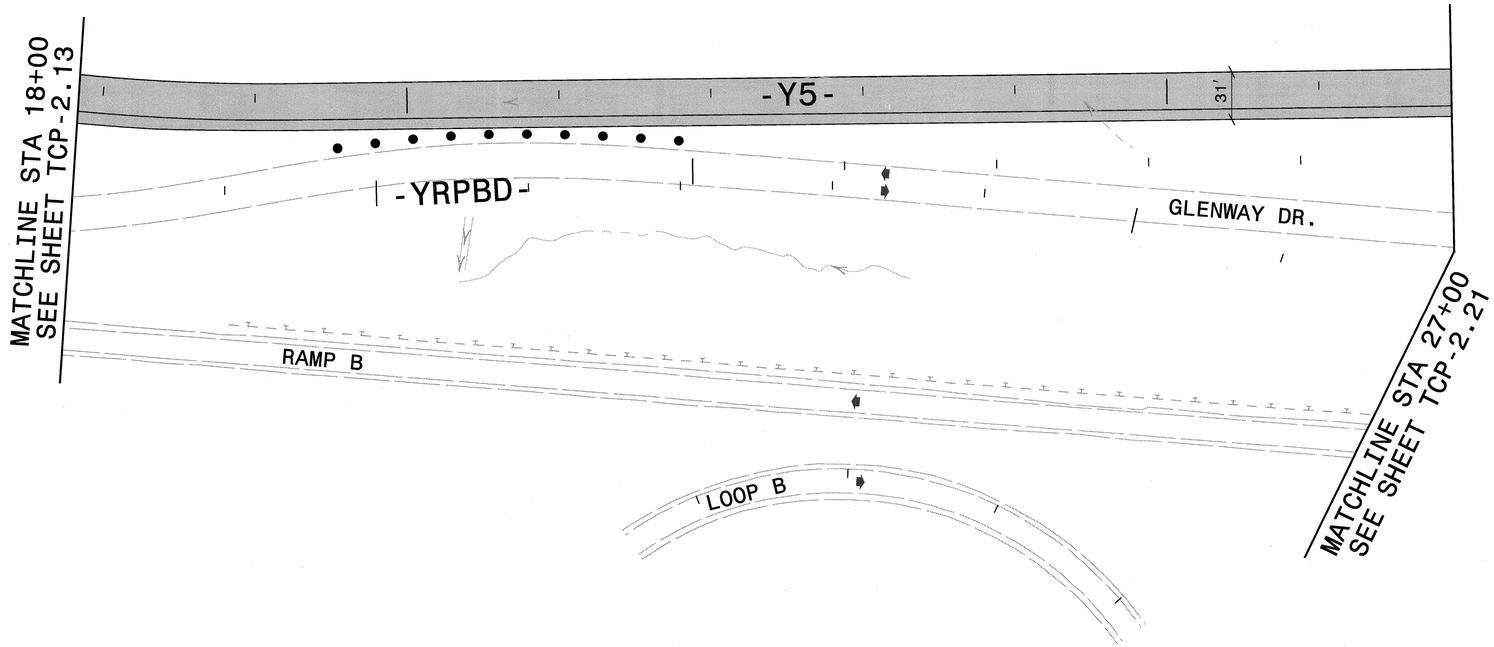
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pl_s2_det_y04.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.24

20

25



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Ryzhka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
P:\I3819\traffic\trafficcontrol\tcp\00%_dd\I3819a_tc_tcp_pi_s2_det_yrpbd01.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.25

PUMP STATION RD. SR 1933

SUNSET HILL RD. SR 1935

US 21

GLENWAY DR. SR 2187

R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE

-Y5A-

-Y8- STA 22+17±
BACK OF TURNOUT

-Y8-

-Y4-

-Y5AA-

-Y2DW-

40

35

R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE

MATCHLINE STA 32+50
SEE SHEET TCP-2.11

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
r:\3819\traffic\traffiocontrol\tcp\00% dd\i3819a_tc_tcp_pl_s2_det_y402.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-2.26

TEMPORARY SHORING NOTES

TEMPORARY SHORING NO. 2A (SEE SHEET TCP-2.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 81+00± -L- TO STATION 84+00± -L-, 25′ RIGHT OF -L-.

DESIGN TEMPORARY SHORING FROM STATION 81+00± -L- TO 84+00± -L- , 25′ RIGHT OF -L-, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 81+00± -L- TO 84+00± -L-, 25′ RIGHT OF -L-. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STA. 81+00± -L- TO 84+00± -L- , 25′ RIGHT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 2B (SEE SHEET TCP-2.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 84+00± -L- TO STATION 84+50± -L-, 25′ RIGHT OF -L- TO 32′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 84+00± -L- TO STATION 84+50± -L-, 25′ RIGHT OF -L- TO 32′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 84+00± -L- TO STATION 84+50± -L-, 25′ RIGHT OF -L- TO 32′ RIGHT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 84+00± -L- TO STATION 84+50± -L-, 25′ RIGHT OF -L- TO 32′ RIGHT . THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 2C (SEE SHEET TCP-2.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 84+50± -L-TO STATION. 85+00± -L-, 32′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 84+50± -L- TO STATION. 85+00± -L-, 32′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

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

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STA. 84+50± -L-TO STA. 85+00± -L-, 32′ RIGHT OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 4 (SEE SHEET TCP-2.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 92+60± -L- TO STATION 94+00± -L-, 25′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 92+60± -L- TO STATION 94+00± -L-, 25′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 92+60± -L- TO STATION 94+00± -L-, 25′ RIGHT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 92+60± -L- TO STATION 94+00± -L-, 25′ RIGHT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 5 (SEE SHEET TCP-2.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 84+50± -L- TO STATION 85+50± -L-, 25′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 84+50± -L- TO STATION 85+50± -L-, 25′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 84+50± -L- TO STATION 85+50± -L-, 25′ RIGHT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 8 (SEE SHEET TCP-2.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 93+30± -L- TO STATION 93+55± -L-, 32′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 93+30± -L- TO STATION 93+55± -L-, 32′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

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

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 93+30± -L- TO STATION 93+55± -L-, 32′ RIGHT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 93+30± -L- TO STATION 93+55± -L-, 32′ RIGHT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 12-16-11 AND SEALED BY A PROFESSIONAL ENGINEER, ERIC N. WILLIAMS, PE, LICENSE #026962.

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

TEMPORARY SHORING NOTES

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

DIVISION OF HIGHWAYS ENGINEERING BRANCH TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

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1/4/2012
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PHASE I, STEP 3

CONTRACTOR SHALL WORK IN PHASE I, STEP 3 AND STEPS 3A/3B/3C SIMULTANEOUSLY.

STEP 3

USING RSD 1101.02 (SHEET 1 OF 15), PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND SHIFT TRAFFIC TO FOLLOWING PROPOSED (SEE TCP-3.2, 3.3, 3.8, 3.14, 3.15 & 3.17):

-Y3A- (GAITHER RD.) STA 32+86± TO STA 44+20±
-Y5- (GLENWAY DR.) STA 38+90± TO STA 67+00±
-Y10A- (DAVIE AVE.) STA 11+00± TO STA 23+00±

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING FOR WB I-40 EAST OF I-77 (SEE TCP-3.9 THRU TCP-3.11):

- INSTALL/RESET PCB ALONG EXISTING WB I-40 MEDIAN SHOULDER
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS
- SHIFT WB I-40 TRAFFIC TO EXISTING LANES, FROM -L- STA 124+50± TO STA 145+50±
- SHIFT WB I-40 TRAFFIC TO PROPOSED MEDIAN WIDENING FROM -L- STA 145+50± TO STA 161+50± (11′ LANES)
- INSTALL PCB ALONG OUTSIDE WB I-40 LANE ADJACENT TO PROPOSED -YRPAB- TIE

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING FOR EB I-40 EAST OF I-77 (SEE TCP-3.9 THRU TCP-3.12):

- INSTALL/RESET PCB ALONG EB I-40 MEDIAN
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS
- SHIFT EB I-40 TRAFFIC TO TEMPORARY MEDIAN WIDENING FROM -L- STA 125+00± TO STA 138+00± (11′ LANES)
- SHIFT EB I-40 TRAFFIC TO EXISTING LANES, FROM -L- STA 138+00± TO STA 149+00±
- SHIFT EB I-40 TRAFFIC TO PROPOSED MEDIAN WIDENING FROM -L- STA 149+00± TO STA 173+00± (11′ LANES)
- INSTALL PCB ALONG OUTSIDE EB I-40 LANE ADJACENT TO PROPOSED -YRPD- TIE

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING FOR NB I-77 SOUTH OF I-40 (SEE TCP-3.13):

- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS
- SHIFT NB I-77 TRAFFIC TO PROPOSED MEDIAN WIDENING FROM FOURTH CREEK TO -L- STA 135+00± (11′ LANES)
- INSTALL PCB ALONG OUTSIDE NB I-77 LANE ADJACENT TO PROPOSED -YRPBD- TIE

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING FOR NB I-77 NORTH OF I-40 (SEE TCP-3.14 THRU TCP-3.16):

- INSTALL/RESET PCB ALONG NB I-77 MEDIAN TEMPORARY WIDENING (-P1S4NB1-)
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS
- SHIFT NB I-77 TRAFFIC TO MEDIAN TEMPORARY PAVEMENT (-P1S4NB1-) FROM NORTH OF I-40 TO -L- STA 157+28± (11′ LANES)
- SHIFT NB I-77 TRAFFIC TO PROPOSED MEDIAN WIDENING FROM -L- STA 157+28± TO STA 182+75± (11′ LANES)
- INSTALL PCB ALONG OUTSIDE NB I-77 LANE ADJACENT TO PROPOSED STRUCTURE OVER -YRPBD- AND PROPOSED -YRPA- TIE
- BEHIND DRUMS, INSTALL PCB ALONG INSIDE SHOULDER OF EXISTING I-77 RAMP A

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING FOR US 21 RAMP D (SEE TCP-3.6 THRU TCP-3.8):

- REMOVE PCB ALONG EB I-40 OUTSIDE LANE BETWEEN US 21 RAMP D AND I-77 RAMP C
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON EB I-40 AUXILIARY LANE, -Y4RPD- AND TEMPORARY RAMP D TIE FROM -P1S5EB3- TO EB I-40 AUXILIARY LANE
- OPEN -Y4RPD- WITH TEMPORARY TIE TO EB I-40 AND AUXILIARY LANE TO I-77 RAMP C
- CLOSE EXISTING RAMP D AND INSTALL PCB ACROSS EXISTING RAMP D GORE AT I-40

BEHIND BARRIER CONSTRUCT THE FOLLOWING PROPOSED (SEE TCP-3.10 THRU TCP-3.13, 3.15 & 3.16):

-YRPA- STA 33+08± TO NB I-77
-YRPAB- FROM STA 15+22± TO WB I-40
-YRPD- FROM STA 10+85± TO EB I-40
-YRPBD- FROM STA 60+91± TO NB I-77 (ALSO USING RSD 1101.02 (SHEET 3 OF 15))

BEHIND BARRIER, INSTALL TEMPORARY SHORING AND BEGIN CONSTRUCTION OF NB I-77 PORTION OF PROPOSED STRUCTURE OVER -YRPBD- (SEE TCP-3.14).

BEHIND BARRIER, BEGIN CONSTRUCTION OF PROPOSED -L- CONNECTING RIGHT PORTIONS OF PROPOSED STRUCTURES OVER US 21 AND FOURTH CREEK (SEE TCP-3.6).

USING RSD 1101.02 (SHEET 1 OF 15), INSTALL WATER-FILLED BARRIER (WFB) ALONG -Y5- AND BEGIN CONSTRUCTION PROPOSED THE FOLLOWING PROPOSED (SEE TCP-3.8, 3.14, 3.15 & 3.17):

-YRPBD- FROM STA 13+02± TO STA 26+00± INCLUDING RETAINING WALL AND SINGLE-FACED BARRIERS
-YRPB- FROM PROPOSED -YRPBD- TO STA 22+20±

BEHIND DRUMS AND EXISTING GUARDRAIL, BEGIN CONSTRUCTION OF TEMPORARY PAVEMENT TIE FROM PROPOSED -YRPBD- TO EXISTING I-77 RAMP B (SEE TCP-3.8 & 3.17).

COMPLETE THE FOLLOWING BEGUN IN STEP 2:

-YRPA- FROM -YRPAB- TO -YRPA- STA 33+08±
-YRPAB- STA 15+22± TO STA 27+00±
-YRPD- (INCL. STRUCTURE) FROM -YRPBD- TO -YRPD- STA 10+85±
-YRPBD- STA 48+15± TO STA 60+91±
TEMPORARY PAVEMENT IN THE MEDIAN OF I-40 FROM -L- STA 57+00± TO STA 82+10±

RADIO ROAD

WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK STEPS 3A THROUGH 3C IN 245 CONSECUTIVE DAYS (SEE INTERMEDIATE CONTRACT TIME AND SPECIAL PROVISIONS).

STEP 3A

USING RSD 1101.03 (SHEET 1 & 2 OF 15), CLOSE RADIO RD. (-Y1-) FROM CAROLINA AVENUE TO MUSEUM ROAD (SEE TCP-3.20 FOR DETOUR ROUTE). CLOSE CAROLINA AVENUE ACCESS (-Y1A) TO RADIO RD.

BEGIN WORK ON PROPOSED -Y1- STRUCTURE OVER I-40, -Y1- ROADWAY APPROACHES SOUTH OF -Y3- AND -Y1A- (SEE TCP-3.5 & 3.18). USE TEMPORARY MEDIAN CROSSOVER ON I-40 FOR EXISTING STRUCTURE REMOVAL AND PROPOSED STRUCTURE (SEE TCP-3.19).

STEP 3B

USING RSD 1101.02 (SHEET 1 OF 15), CONSTRUCT PROPOSED ROADWAY APPROACHES ON -Y1- (NORTH OF -Y3-), -Y3- (MUSEUM RD.) AND -Y3A- (GAITHER RD.) (SEE TCP-3.5 & 3.18).

PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND OPEN MUSEUM RD. (-Y3-) AND GAITHER RD. (-Y3A-).

STEP 3C

COMPLETE WORK ON PROPOSED -Y1- STRUCTURE OVER I-40, -Y1- ROADWAY APPROACHES SOUTH OF -Y3- AND -Y1A-.

PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND OPEN RADIO RD. (-Y1-).

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 3 PHASING

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

REVISIONS

CADD FILE

1/4/2012
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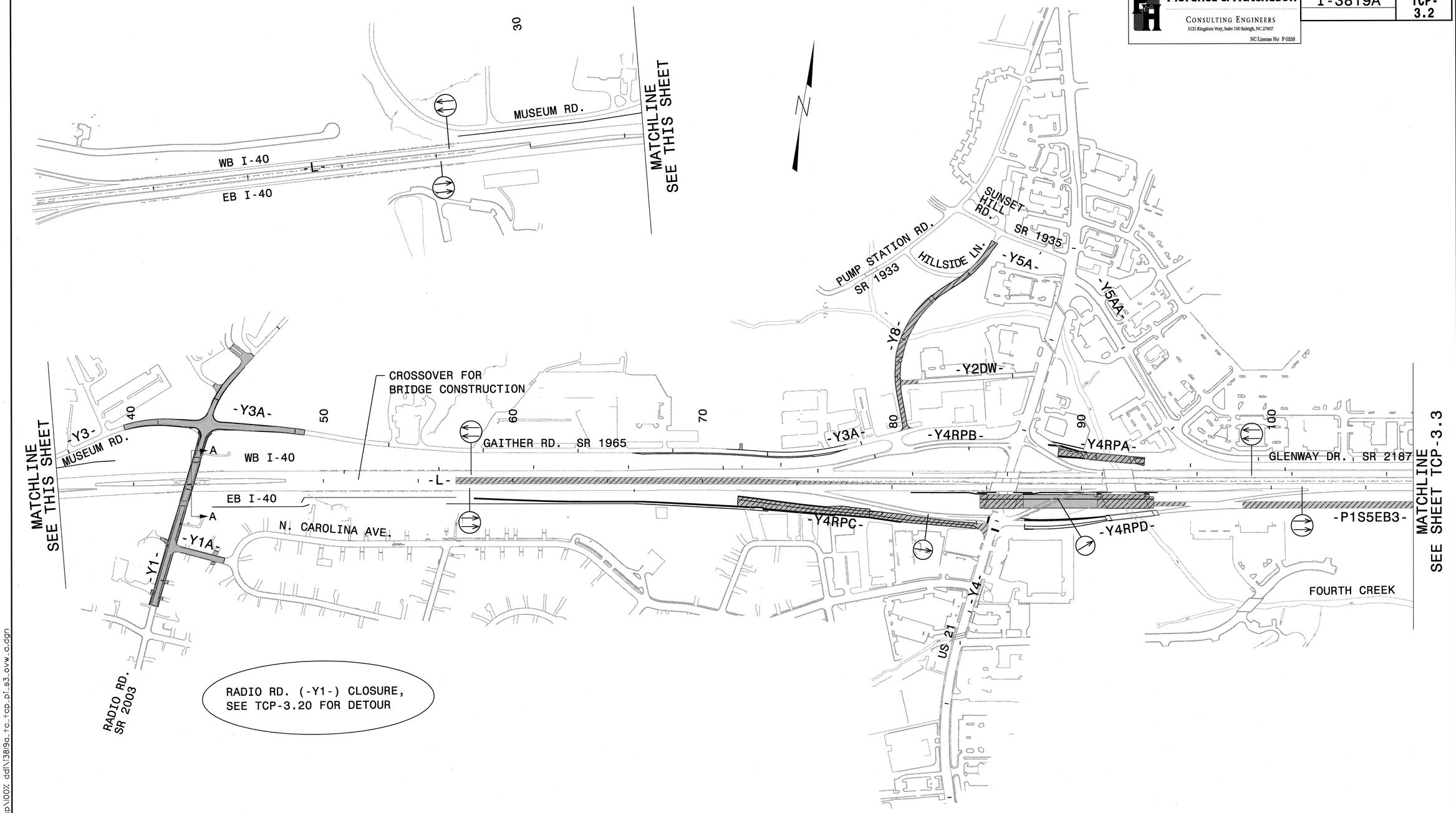
Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.2



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 OVERVIEW SHEET 1 OF 2

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

REVISIONS

CADD FILE

10/12/2011
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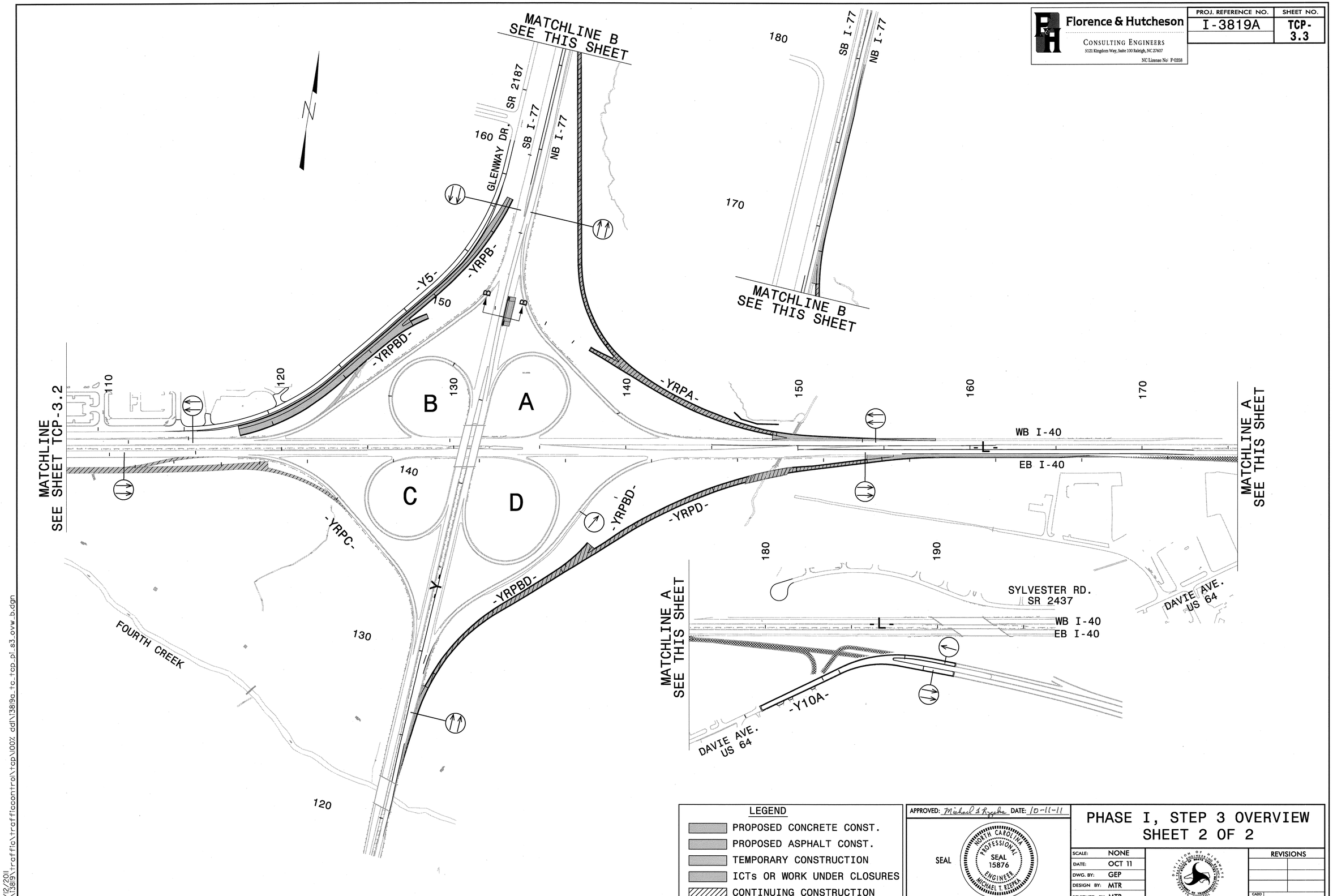
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-3.3



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 OVERVIEW SHEET 2 OF 2

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

REVISIONS

CADD FILE

10/12/2011
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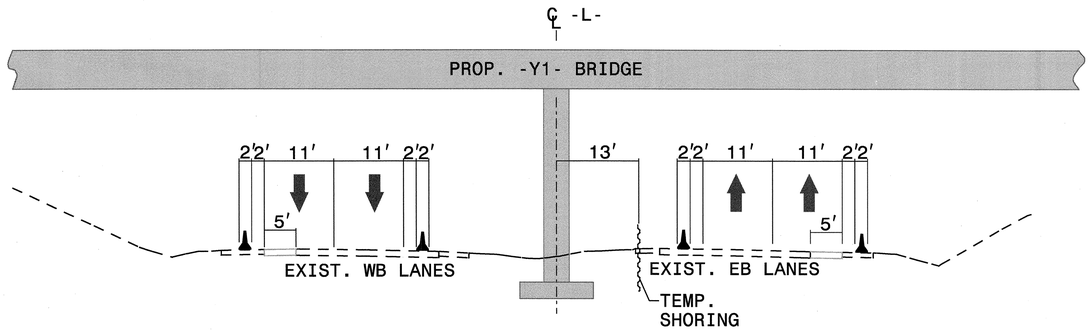
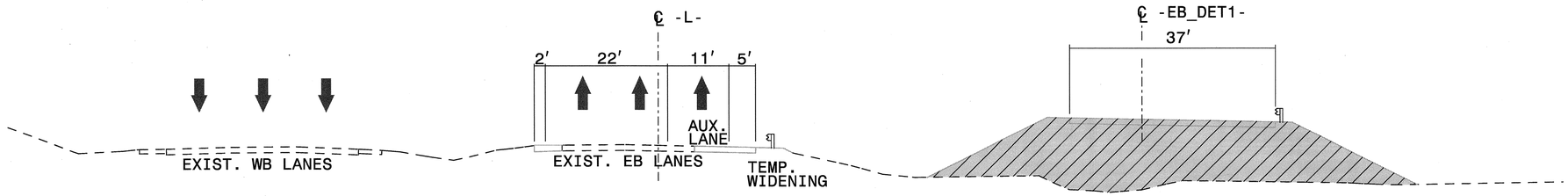
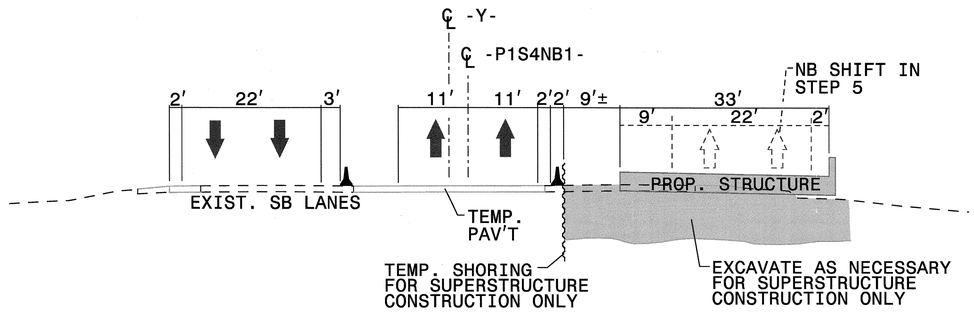
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.4



SECTION A-A
-L- STA 43+00 (SEE TCP-3.5)



SECTION B-B
-L- STA 108+00 (SEE TCP-3.7)



SECTION C-C
-Y- STA 150+00 (SEE TCP-3.14)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 SECTIONS

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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10/12/2011
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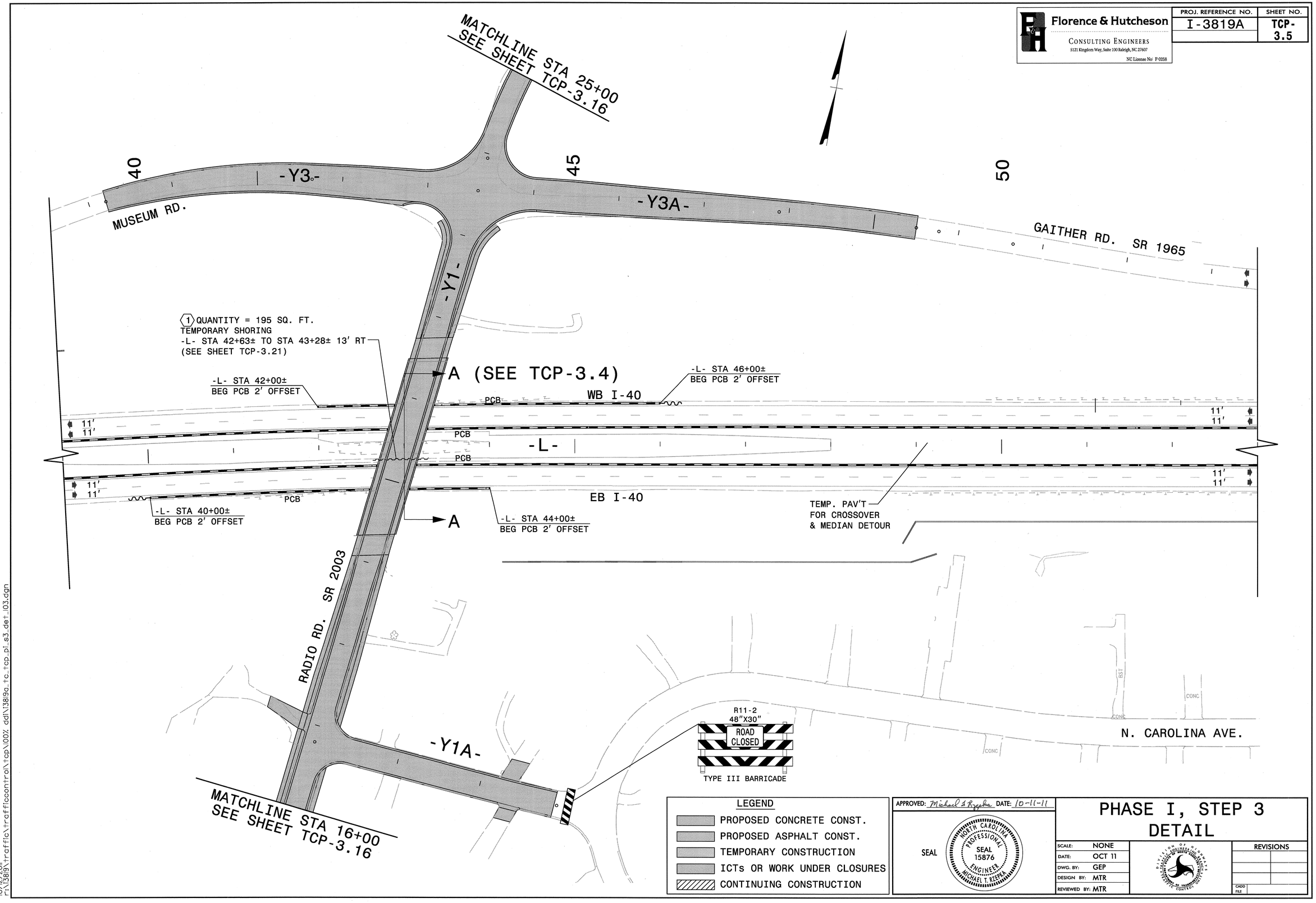
	I-3819A	TCP-3.5



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.6

85

90

RAMP B

RAMP A

-Y4-

-Y4RPA-

6 QUANTITY = 1200 SQ. FT.
TEMPORARY SHORING
-L- STA 86+40± TO -L- STA 87+40± 25' RT
(SEE SHEET TCP-3.21)

TEMP. G/R

WB I-40

-LCDWB-

-L- STA 91+30±
END PCB 4' OFFSET

EB I-40

PCB

-L-

11'
11'

PROPOSED STRUCTURE

PROPOSED STRUCTURE

TEMP. PAV'T

MATCHLINE STA 95+00
SEE SHEET TCP-3.7

QA
QE
RAMP C
PE

11'
10'
10'

-Y4RPC-
PROP. SHLD.
26'

PCB

P4

-L- STA 87+90±
BEG PCB BEHIND G/R

-L- STA 89+40±
PCB 4' OFFSET

PB

-Y4RPD-

CB

CA

PA

7 QUANTITY = 225 SQ. FT.
TEMPORARY SHORING
-L- STA 90+80± TO STA 91+05± 32' RT
(SEE SHEET TCP-3.21)

TEMP. TIE
TO US 21

TEMP. TIE
TO US 21

3B QUANTITY = 1000 SQ. FT.
TEMPORARY SHORING
-L- STA 87+40± 32' RT TO
STA 87+90± 25' RT
(SEE SHEET TCP-3.21)

3C QUANTITY = 7400 SQ. FT.
TEMPORARY SHORING
-L- STA 87+90± TO STA 91+60± 25' RT
(SEE SHEET TCP-3.21)

US 21

3A QUANTITY = 1000 SQ. FT.
TEMPORARY SHORING
-L- STA 86+90± TO -L- STA 87+40± 32' RT
(SEE SHEET TCP-3.21)

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
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10/2/2011
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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.7

100

105

-Y5-

GLENWAY DR. SR 2187

MATCHLINE STA 95+00
SEE SHEET TCP-3.6

-LCDWB-

WB I-40

-L- STA 101+95±

B

-L-

11'
11'

EB I-40

11'
11'
11'

PCB

-P1S4Y4RPD1-

PB

PA

PR

-L- STA 105+00±
BEG TEMP. G/R

-L- STA 105+65±

PD

PA

TEMP. G/R

TEMP. PAV'T

-P1S5EB3-

MATCHLINE STA 109+00
SEE SHEET TCP-3.8

B
(SEE TCP-3.4)

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/2/2011
P:\I3819\traffic\trafficcontrol\tcp\I00Z_ddI\I3819a_tc_tcp_pl_s3_det_I07.dgn

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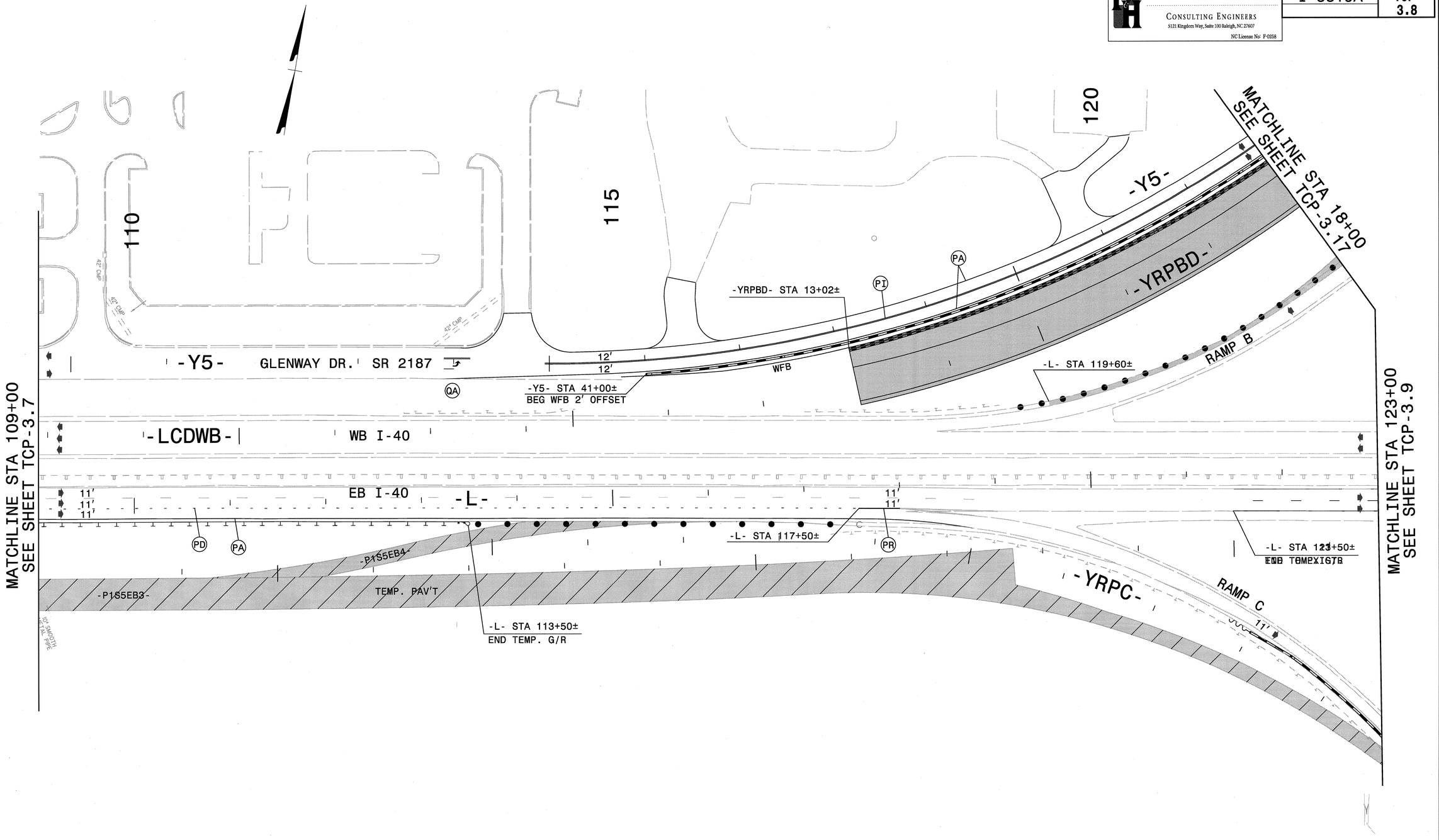
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.8



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

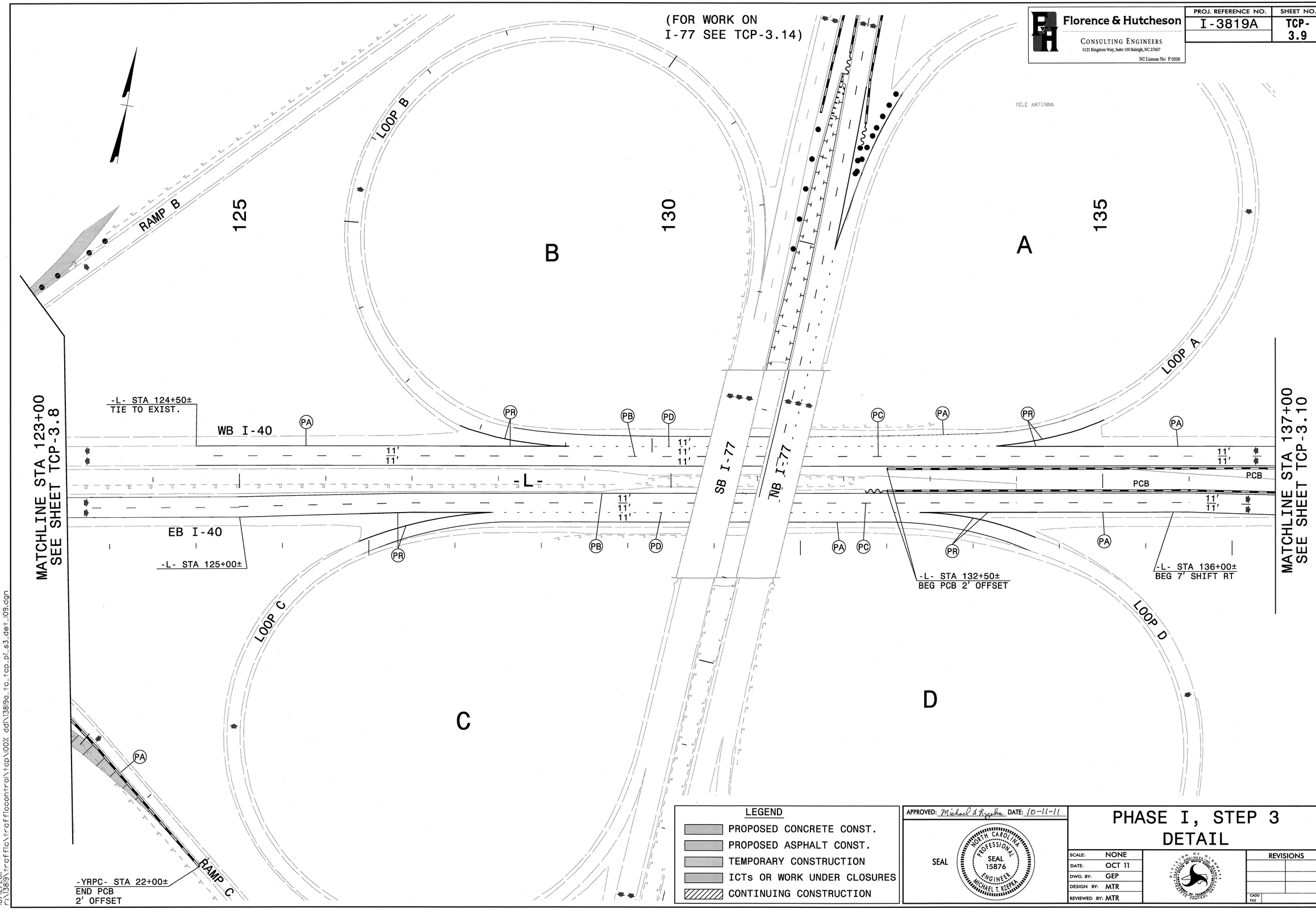
PHASE I, STEP 3 DETAIL

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

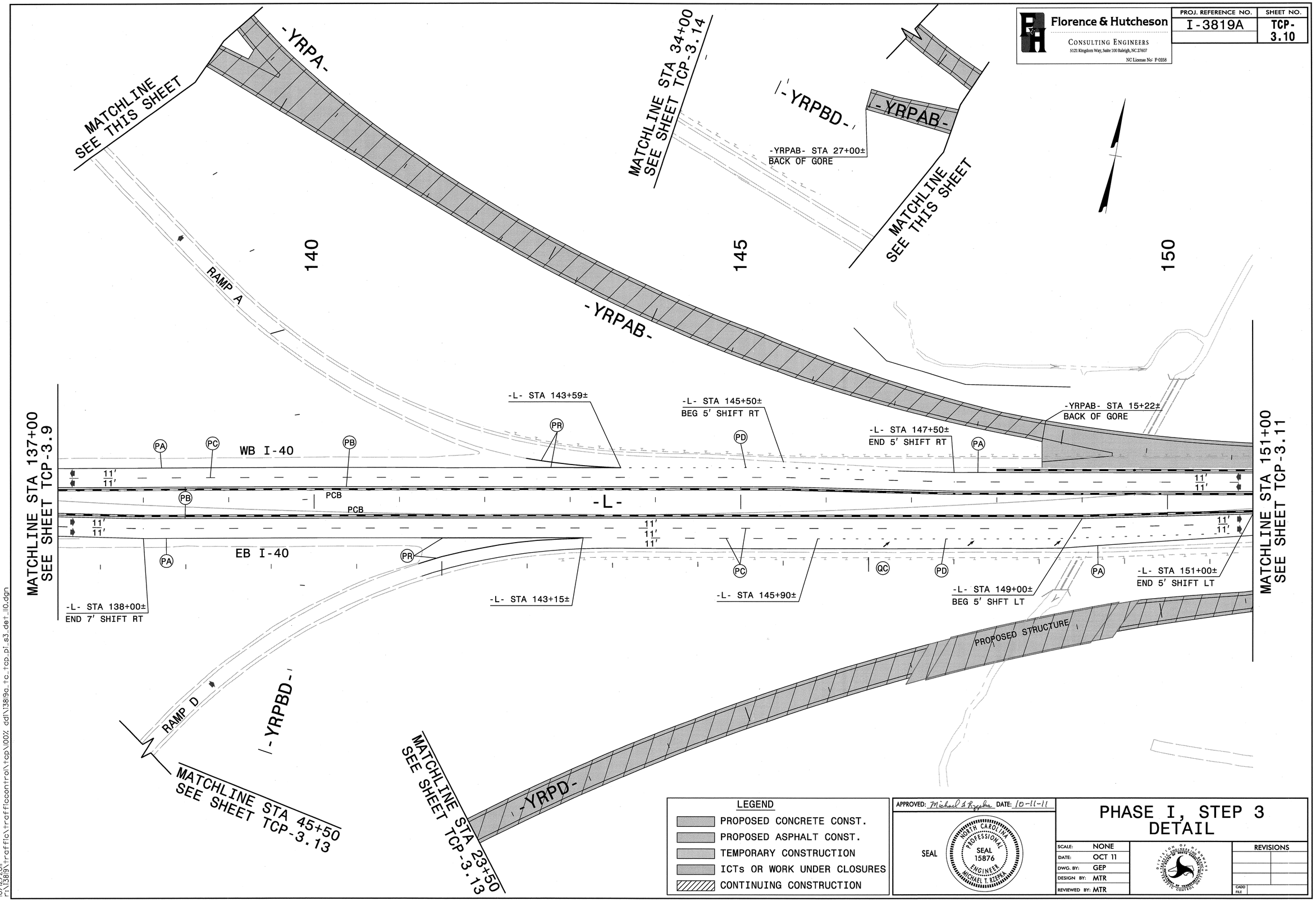
REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pi_s3_det_108.dgn



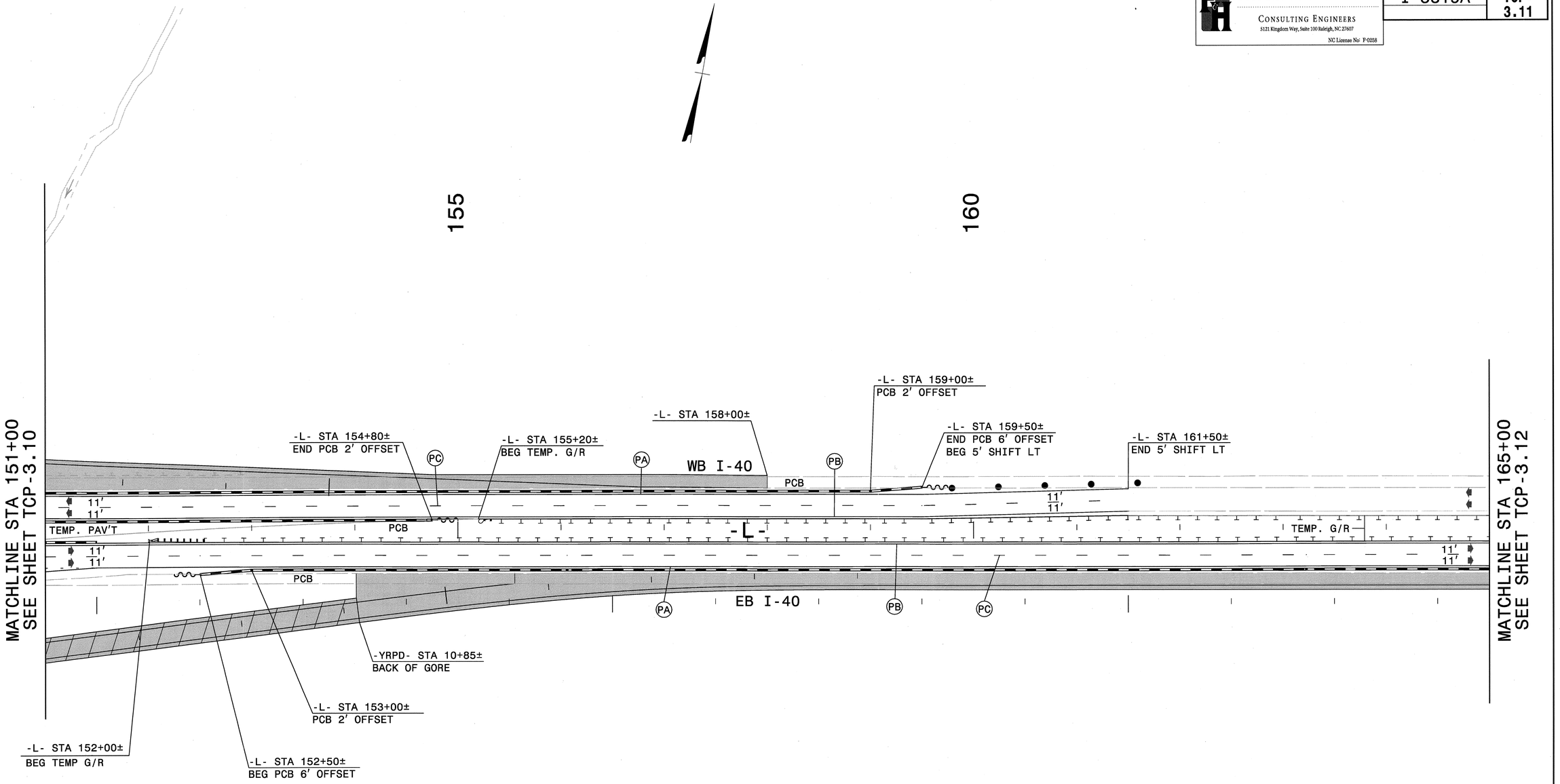
(FOR WORK ON
I-77 SEE TCP-3.14)
Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-3.9
TELE ANTENNA
RAMP B
LOOP B
125
130
135
B
A
LOOP A
MATCHLINE STA 123+00
SEE SHEET TCP-3.8
MATCHLINE STA 137+00
SEE SHEET TCP-3.10
-L- STA 124+50±
TIE TO EXIST.
WB I-40
EB I-40
-L-
SB I-77
NB I-77
PCB
-L- STA 125+00±
-L- STA 132+50±
BEG PCB 2' OFFSET
-L- STA 136+00±
BEG 7' SHIFT RT
LOOP C
LOOP D
C
D
RAMP C
-YRPC- STA 22+00±
END PCB
2' OFFSET
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE I, STEP 3
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pi_s3_det_109.dgn



Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-3.10
MATCHLINE SEE THIS SHEET
-YRPA-
MATCHLINE STA 34+00 SEE SHEET TCP-3.14
-YRPBD-
-YRPAB-
-YRPAB- STA 27+00± BACK OF GORE
MATCHLINE SEE THIS SHEET
140
145
150
RAMP A
-YRPAB-
-L- STA 143+59±
-L- STA 145+50± BEG 5' SHIFT RT
-L- STA 147+50± END 5' SHIFT RT
-YRPAB- STA 15+22± BACK OF GORE
MATCHLINE STA 137+00 SEE SHEET TCP-3.9
WB I-40
PA
PC
PB
PR
PD
11'
PCB
-L-
EB I-40
QC
-L- STA 138+00± END 7' SHIFT RT
-L- STA 143+15±
-L- STA 145+90±
-L- STA 149+00± BEG 5' SHFT LT
-L- STA 151+00± END 5' SHIFT LT
MATCHLINE STA 151+00 SEE SHEET TCP-3.11
PROPOSED STRUCTURE
RAMP D
-YRPBD-
MATCHLINE STA 45+50 SEE SHEET TCP-3.13
MATCHLINE STA 23+50 SEE SHEET TCP-3.13
-YRPD-
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE I, STEP 3 DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddt\13819a_tc_tcp_pl_s3_det_110.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.11



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pi_s3_det_III.dgn

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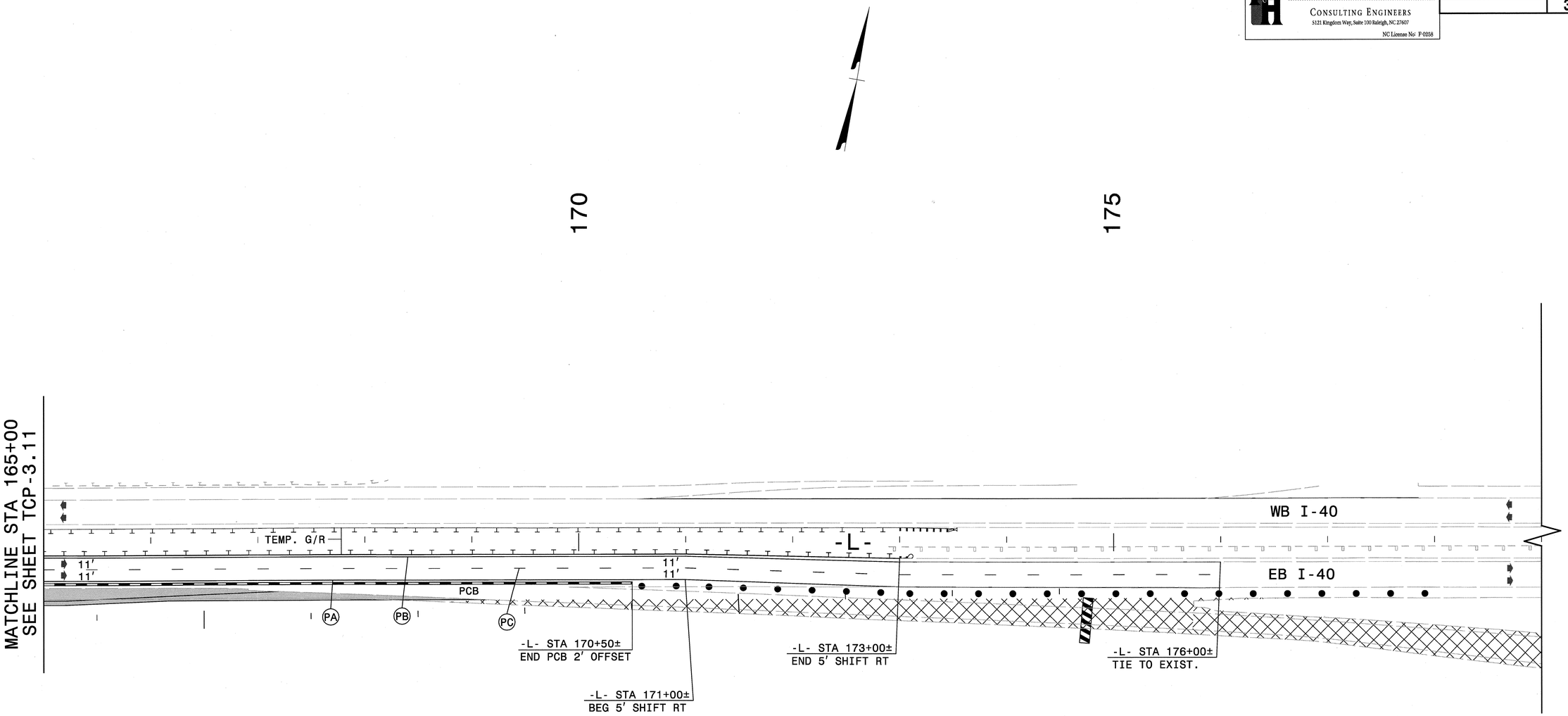

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pi_s3_det_112.dgn

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.13

120

125

130

RAMP C

SB I-77

-Y-

TEMP. G/R

11′
11′

NB I-77

MATCHLINE A
SEE THIS SHEET

CONST. 200′±
UNDER LANE CLOSURES

-Y- STA 121+17±
BEG 5′ SHIFT LT

-Y- STA 119+00±
TIE TO EXIST.

FOURTH CREEK

PA

-Y- STA 123+62±
BEG PCB 2′ OFFSET

PB

-Y- STA 124+50±
END 5′ SHIFT LT

PC

-Y- STA 125+60±

-YRPBD- STA 60+91±
BACK OF GORE

-Y- STA 128+50±
END PCB 2′ OFFSET

PD

-Y- STA 129+33±

PR

-YRPBD-

RAMP D

MATCHLINE B
SEE THIS SHEET

-YRPBD-

-YRPBD- STA 48+15±

-YRPBD-

MATCHLINE STA 45+50
SEE SHEET TCP-3.10

MATCHLINE B
SEE THIS SHEET

-YRPD-

MATCHLINE STA 23+50
SEE SHEET TCP-3.10

135

MATCHLINE A
SEE THIS SHEET

LOOP C

SB I-77

-Y-

NB I-77

PA

PB

PC

LOOP D

-Y- STA 138+00±
TIE TO EXIST.

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

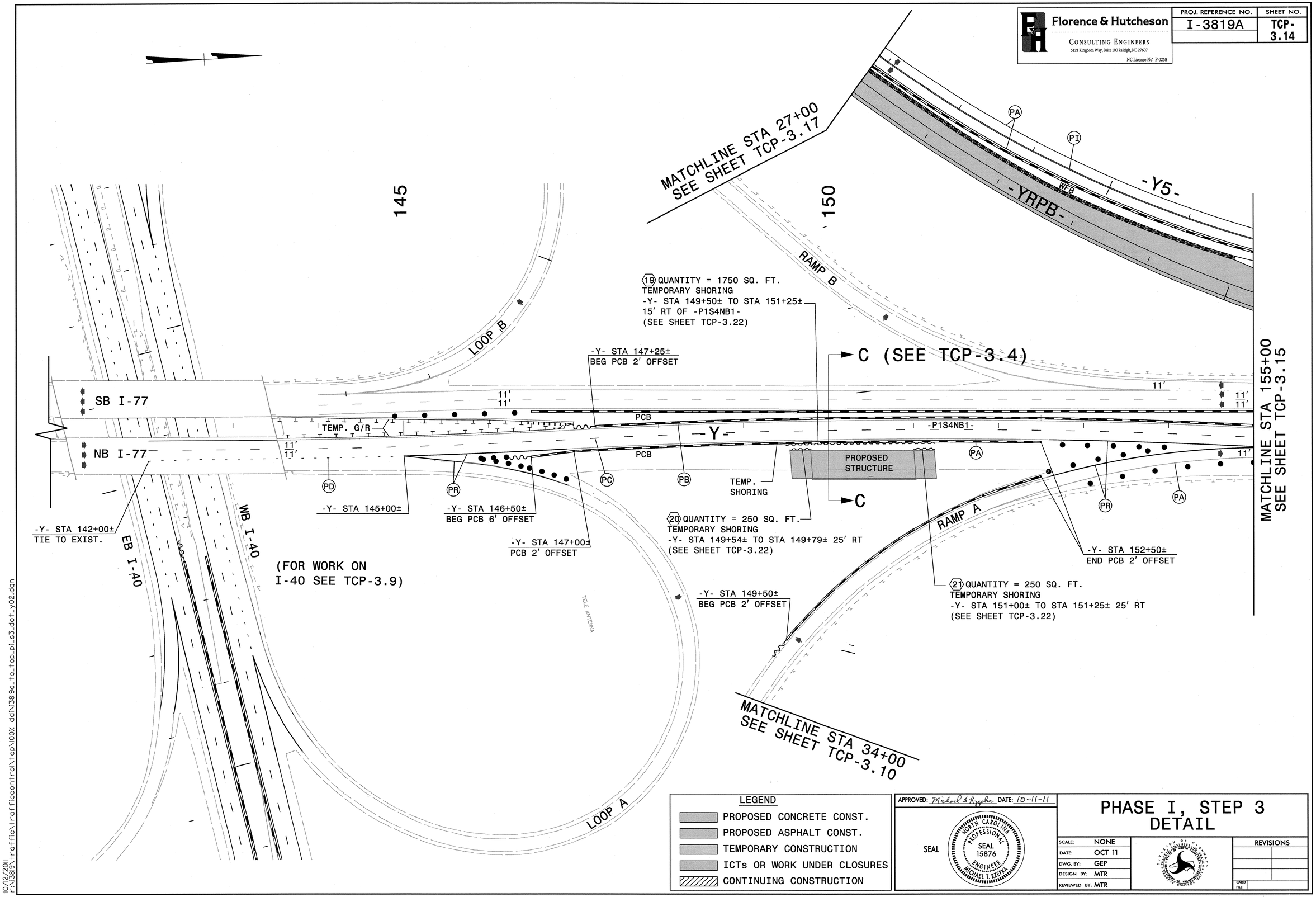
REVISIONS

CADD FILE

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\100% ddl\3819a_tc_tcp_pi_s3_det_y01.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.14



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

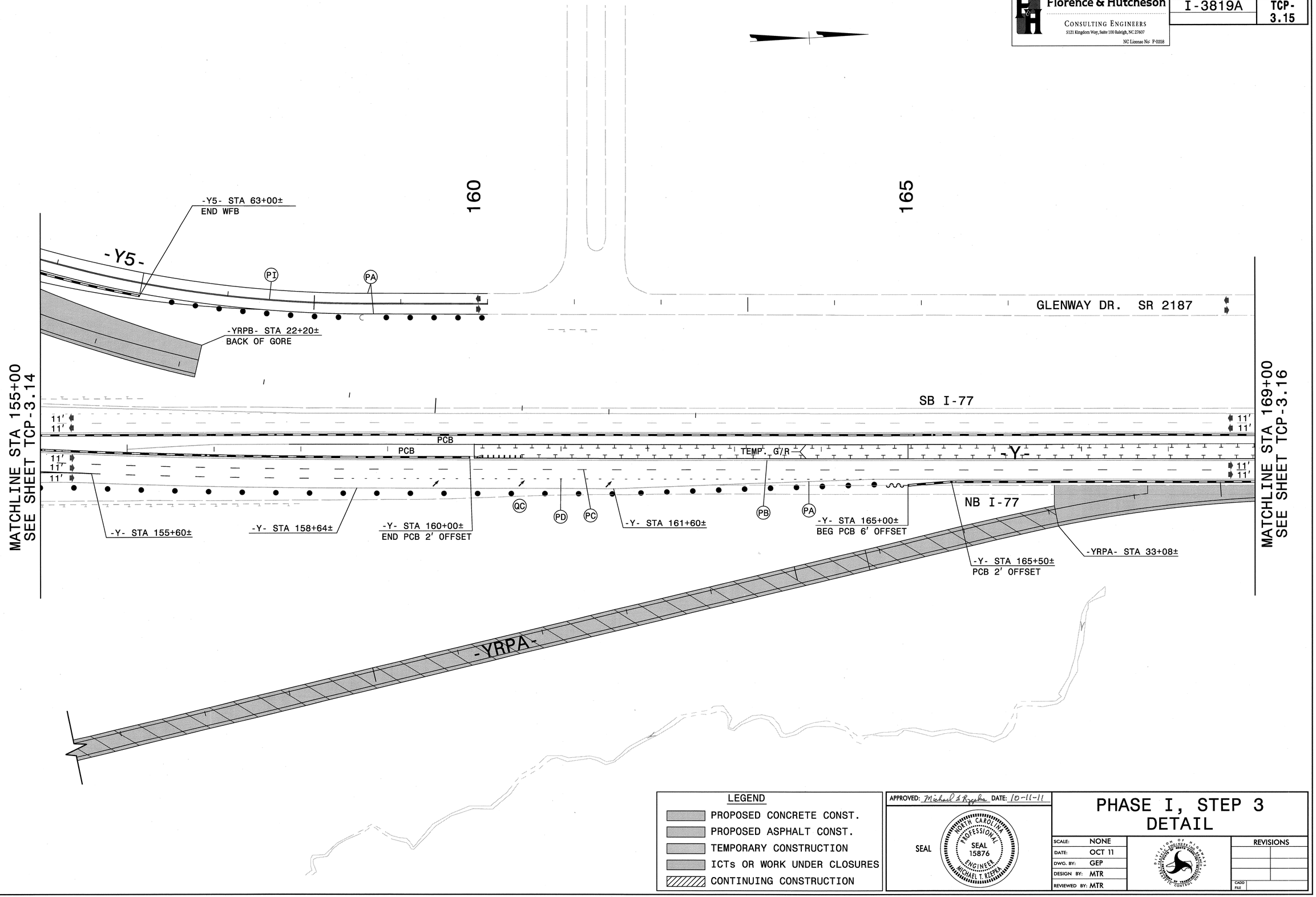
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pi_s3_det_y02.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-3.15



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

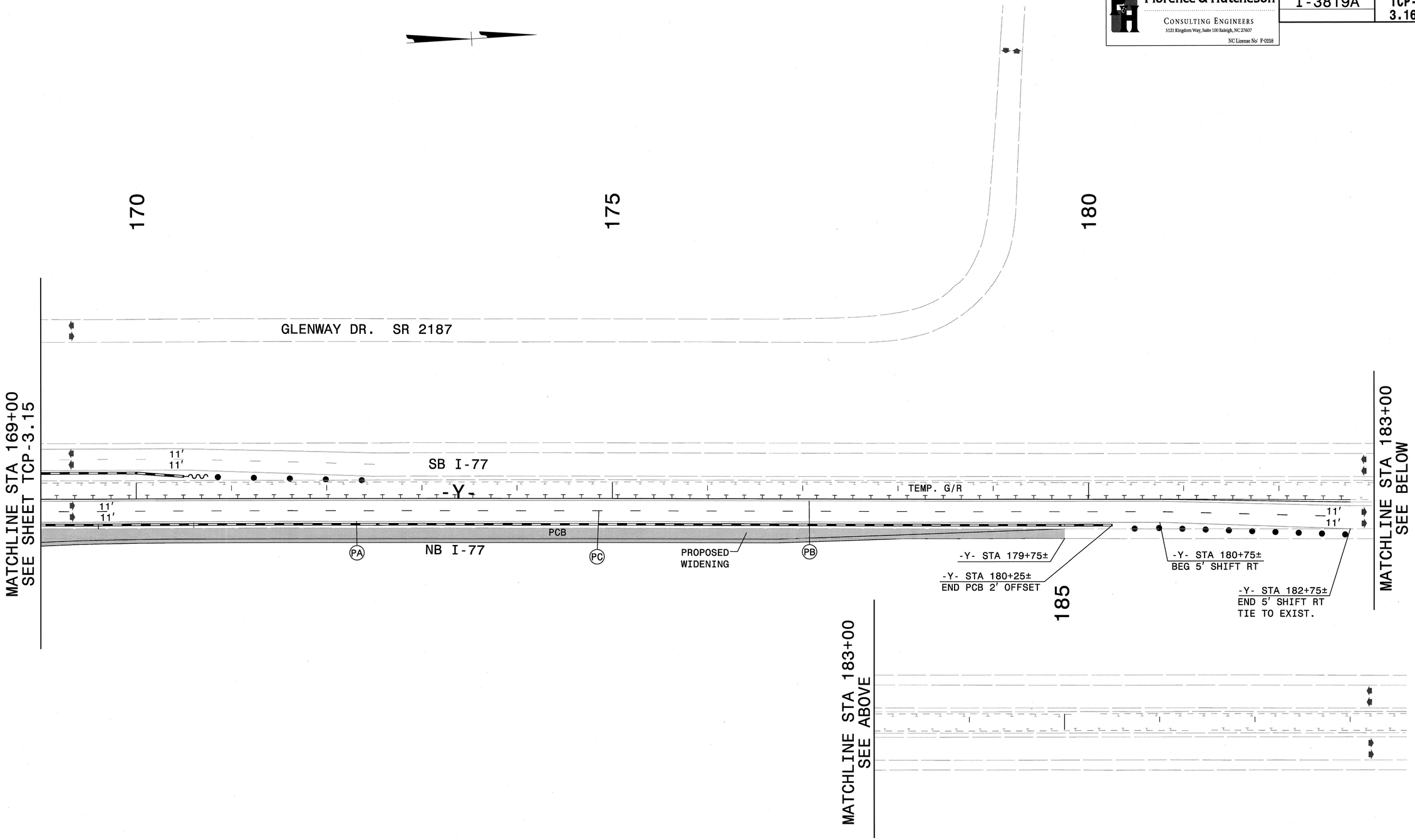
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\100% dd\3819a_tc_tcp_pi_s3_det_y03.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-3.16



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

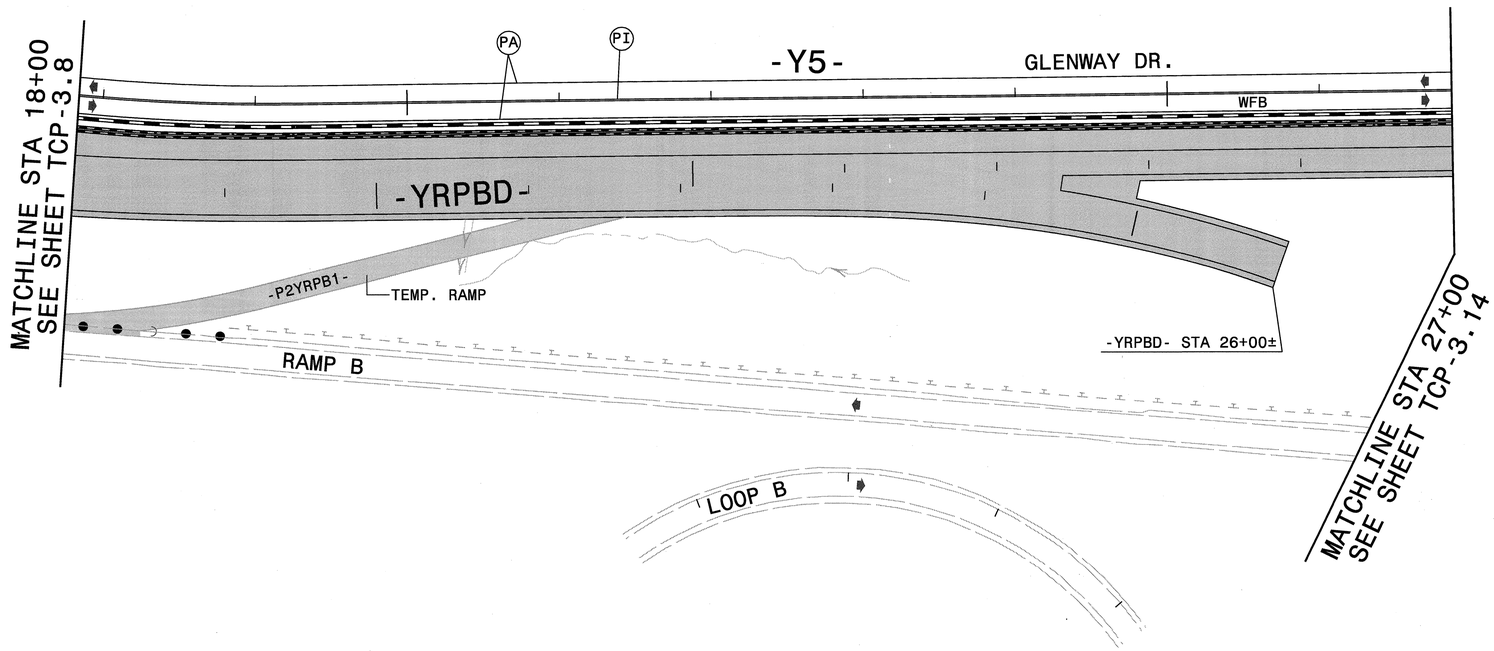
REVISIONS	
CADD FILE	

10/12/2011
R:\I3819\traffic\trafficcontrol\tcp\100%_dd\I3819a_tc_tcp_pi_s3_det_y04.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-3.17

20

25



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

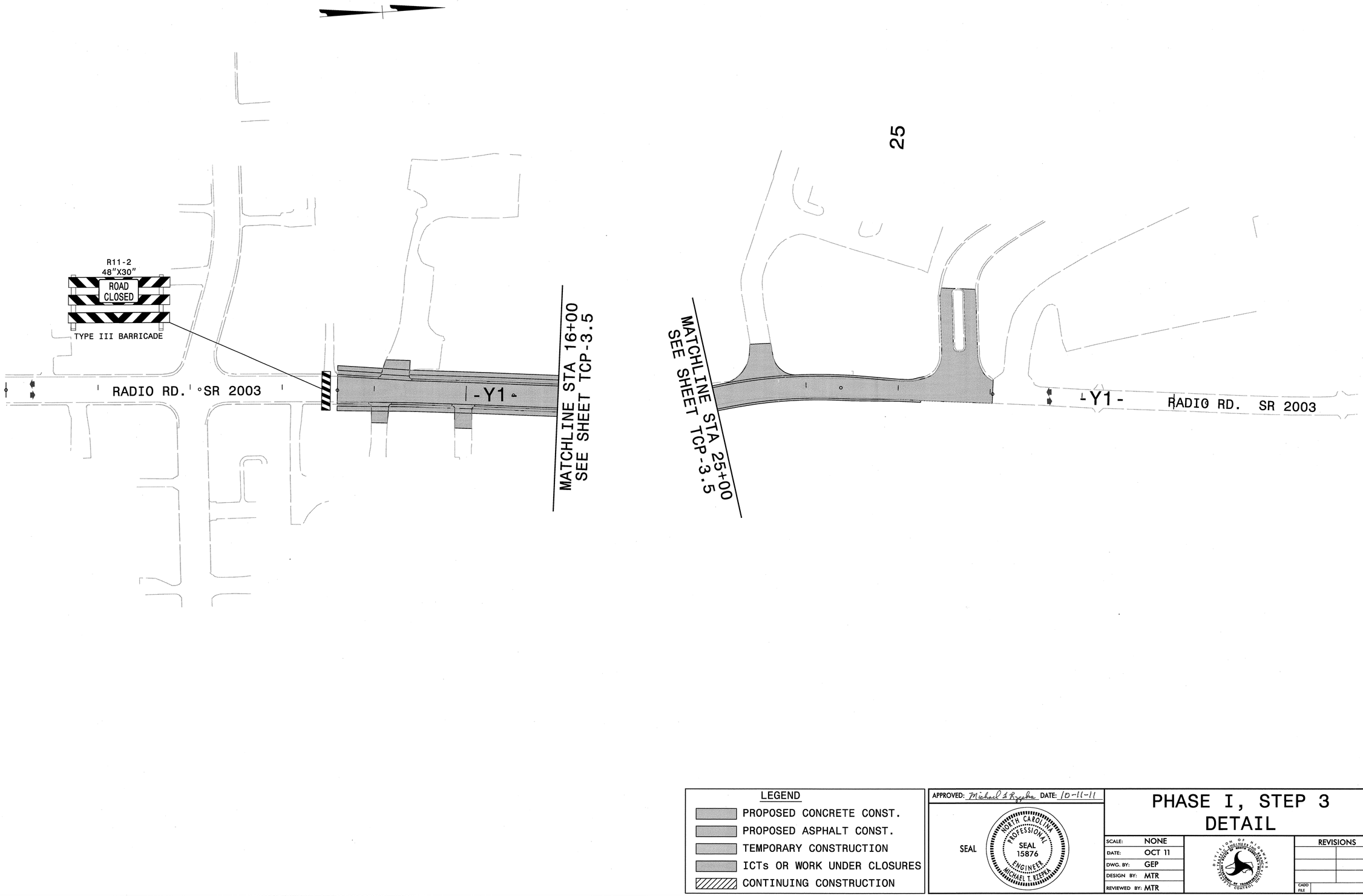
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
R:\3819\traffic\trafficcontrol\tcp\00% dd\I3819a_tc_tcp_p1_s3_det_yrpbd01.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	I-3819A	TCP-3.18



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 3 DETAIL

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

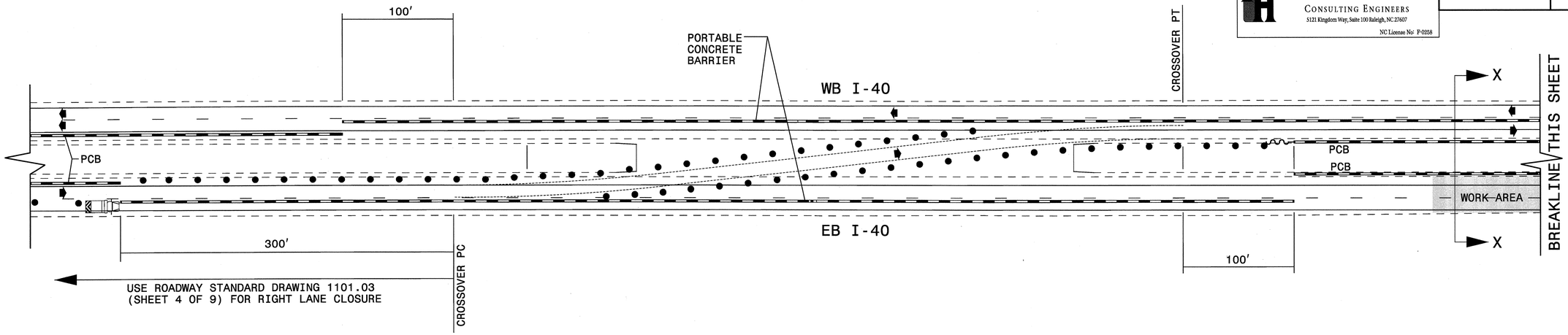
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

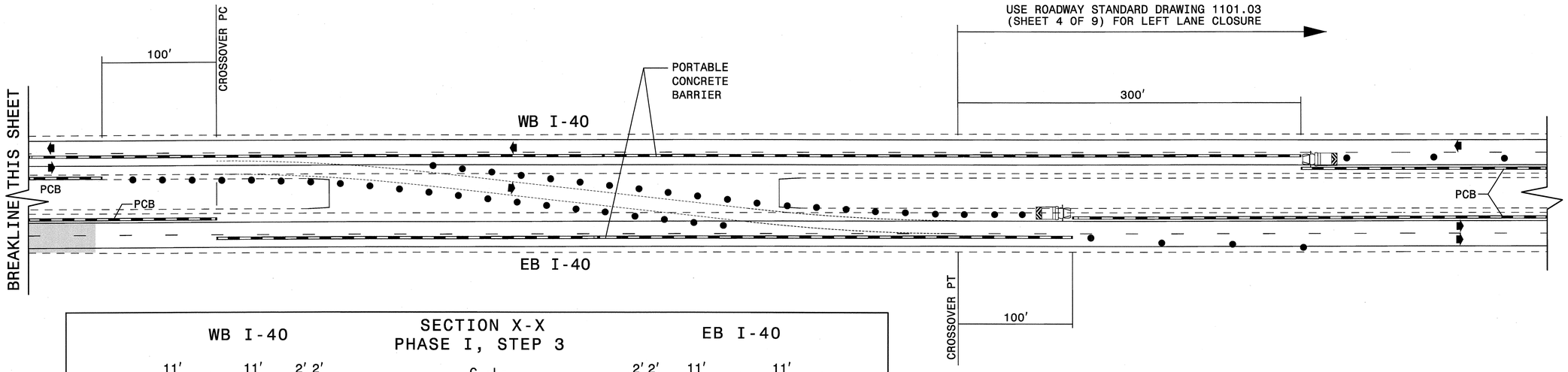
REVISIONS	
CADD FILE	

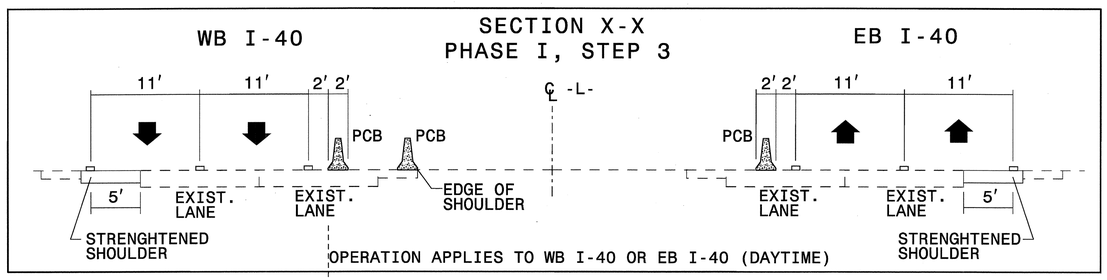
10/12/2011
R:\3819\traffic\trafficcontrol\tcp\100% ddl\3819a_tc_tcp_pl_s3_det_y01.dgn

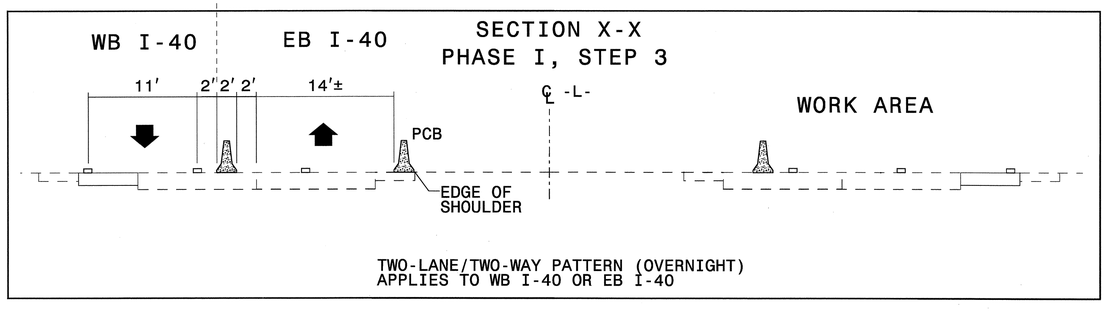
Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.19









NOTES:

1. DETAIL APPLIES TO AN EB CROSSOVER. MIRROR DETAIL FOR WB CROSSOVER.
2. USE ROADWAY STANDARD DRAWING 1101.03 (SHEET 4 OF 9) FOR APPLICABLE SIGNING OF CROSSOVER OPERATION.
3. USE TMIA IF CRASH CUSHIONS ARE NOT USED.

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

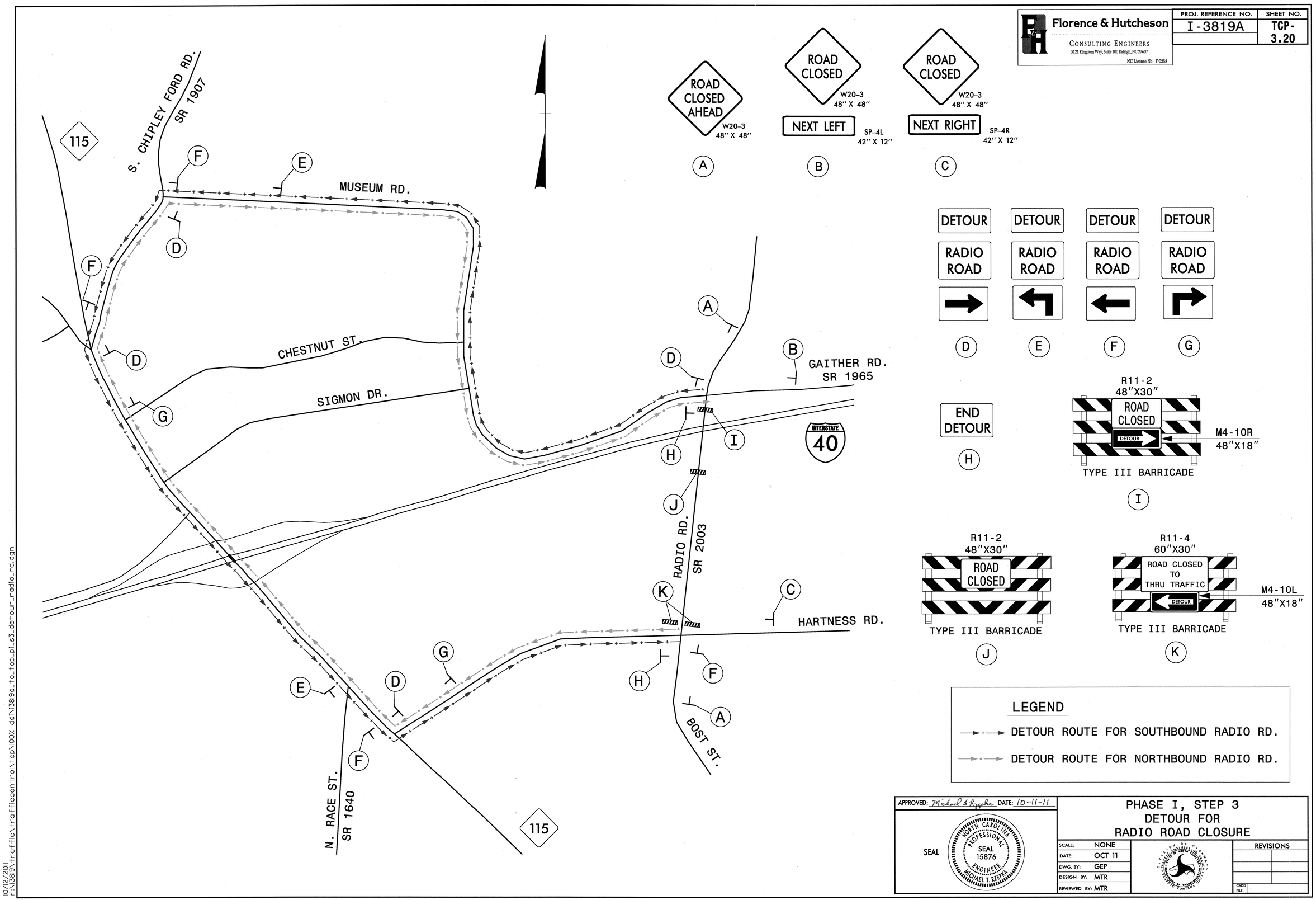
PHASE I, STEP 3 DETAIL TEMP. MEDIAN CROSSOVERS ON I-40

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
P:\13819\traffic\trafficcontrol\tcp\00% dd\13819a_tc_tcp_p1_s3_det_xover.dgn



Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-3.20
ROAD CLOSED AHEAD
W20-3
48" X 48"
A
ROAD CLOSED
W20-3
48" X 48"
NEXT LEFT
SP-4L
42" X 12"
B
ROAD CLOSED
W20-3
48" X 48"
NEXT RIGHT
SP-4R
42" X 12"
C
DETOUR
RADIO ROAD
D
E
F
G
END DETOUR
H
R11-2
48"X30"
ROAD CLOSED
DETOUR
M4-10R
48"X18"
TYPE III BARRICADE
I
R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE
J
R11-4
60"X30"
ROAD CLOSED TO THRU TRAFFIC
DETOUR
M4-10L
48"X18"
TYPE III BARRICADE
K
S. CHIPLEY FORD RD.
SR 1907
115
MUSEUM RD.
CHESTNUT ST.
SIGMON DR.
GAITHER RD.
SR 1965
INTERSTATE
40
RADIO RD.
SR 2003
HARTNESS RD.
BOST ST.
N. RACE ST.
SR 1640
115
LEGEND
DETOUR ROUTE FOR SOUTHBOUND RADIO RD.
DETOUR ROUTE FOR NORTHBOUND RADIO RD.
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE I, STEP 3
DETOUR FOR
RADIO ROAD CLOSURE
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% dd\13819a_tc_tcp_pl_s3_detour_radio_rd.dgn

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0958

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.21

TEMPORARY SHORING NOTES

TEMPORARY SHORING NO. 1 (SEE SHEET TCP-3.5)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 42+63± -L- TO STATION 43+28± -L-, 13′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 42+63± -L- TO STATION 43+28± -L-, 13′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ= 120 LB/CF
- FRICTION ANGLE φ= 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 42+63± -L- TO STATION 43+28± -L-, 13′ RIGHT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 42+63± -L- TO Sta. 43+28± -L-, 13′ RIGHT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 42+63± -L- TO STATION 43+28± -L-, 13′ RIGHT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 3A (SEE SHEET TCP-3.6)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 86+90± -L- TO STATION 87+40± -L-, 32′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 86+90± -L- TO STATION 87+40± -L-, 32′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ= 120 LB/CF
- FRICTION ANGLE φ= 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

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

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 86+90± -L- TO STATION 87+40± -L-, 32′ RIGHT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 3B (SEE SHEET TCP-3.6)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 87+40± -L- TO STATION 87+90± -L-, 32′ RIGHT TO 25′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 87+40± -L- TO STATION 87+90± -L-, 32* RIGHT TO 25′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ= 120 LB/CF
- FRICTION ANGLE φ= 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 87+40± -L- TO STATION 87+90± -L-, 32′ RIGHT TO 25′ RIGHT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 87+40± -L- TO STATION 87+90± -L-, 32′ RIGHT TO 25′ RIGHT . THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 3C (SEE SHEET TCP-3.6)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 87+90± -L- TO STATION 91+60± -L-, 25* RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 87+90± -L- TO STATION 91+60± -L-, 25* RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ= 120 LB/CF
- FRICTION ANGLE φ= 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR*S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 87+90± -L- TO STATION 91+60± -L-, 25* RIGHT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 87+90± -L- TO STATION 91+60± -L-, 25* RIGHT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 6 (SEE SHEET TCP-3.6)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 86+40± -L- TO STATION 87+40± -L-, 25′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 86+40± -L- TO STATION 87+40± -L-, 25′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ= 120 LB/CF
- FRICTION ANGLE φ= 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 86+40± -L- TO STATION 87+40± -L-, 25′ RIGHT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 7 (SEE SHEET TCP-3.6)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 90+80± -L- TO STATION 91+05± -L-, 32′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 90+80± -L- TO STATION 91+05± -L-, 32′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ= 120 LB/CF
- FRICTION ANGLE φ= 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

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

AT THE CONTRACTO'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 90+80± -L- TO STATION 91+05± -L-, 32′ RIGHT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 90+80± -L- TO STATION 91+05± -L-, 32′ RIGHT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 12-16-11 AND SEALED BY A PROFESSIONAL ENGINEER, ERIC N. WILLIAMS, PE, LICENSE #026962.

APPROVED: Michael T Rzepka DATE: 1-4-12

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

TEMPORARY SHORING NOTES

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

DIVISION OF HIGHWAYS — ENGINEERING AND SAFETY SUPPORT BRANCH — TRAFFIC ENGINEERING AND SAFETY SYSTEMS UNIT — TRAFFIC CONTROL

REVISIONS

CADD FILE

1/4/2012
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Florence & Hutcheson
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5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-3.22

TEMPORARY SHORING NOTES

TEMPORARY SHORING NO. 19 (SEE SHEET TCP-3.14)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 149+50± -Y- TO STATION 151+25± -Y-, 15′ RIGHT OF -P1S4NB1-.

DESIGN TEMPORARY SHORING FROM STATION 149+50± -Y- TO STATION 151+25± -Y-, 15′ RIGHT OF -P1S4NB1-, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ= 120 LB/CF
FRICTION ANGLE φ= 30 DEGREES
COHESION C = 0 LB/SF

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 149+50± -Y- TO STATION 151+25± -Y-, 15′ RIGHT OF -P1S4NB1-. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 149+50± -Y- TO STATION 151+25± -Y-, 15′ RIGHT OF -P1S4NB1-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 20 (SEE SHEET TCP-3.14)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 149+54± -Y- TO STATION 149+79± -Y-, 25′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 149+54± -Y- TO STATION 149+79± -Y-, 25′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ= 120 LB/CF
FRICTION ANGLE φ= 30 DEGREES
COHESION C = 0 LB/SF

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 149+54± -Y- TO STATION 149+79± -Y-, 25′ RIGHT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 149+54± -Y- TO STATION 149+79± -Y-, 25′ RIGHT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 21 (SEE SHEET TCP-3.14)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 151+00± -Y- TO Sta. 151+25± -Y-, 25′ RIGHT.

DESIGN TEMPORARY SHORING FROM STATION 151+00± -Y- TO Sta. 151+25± -Y-, 25′ RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ= 120 LB/CF
FRICTION ANGLE φ= 30 DEGREES
COHESION C = 0 LB/SF

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 151+00± -Y- TO Sta. 151+25± -Y-, 25′ RIGHT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 151+00± -Y- TO Sta. 151+25± -Y-, 25′ RIGHT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 12-16-11 AND SEALED BY A PROFESSIONAL ENGINEER, ERIC N. WILLIAMS, PE, LICENSE #026962.

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

TEMPORARY SHORING NOTES

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

1/4/2012
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Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.1

PHASE I, STEP 4

STEP 4

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING FOR EB I-40 WEST OF US 21 (SEE TCP-4.6 THRU TCP-4.11):

- INSTALL/RESET PCB ALONG EXISTING EB I-40 AND -P1S3EB1- MEDIAN LANE
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND TIE TO EXISTING
- SHIFT EB I-40 TRAFFIC TO EXISTING MEDIAN LANE FROM -L- STA 21+00± TO STA 45+18± AND TO -P1S3EB1-
- INSTALL PCB ALONG OUTSIDE EB I-40 AT -Y1- STRUCTURE

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING IN QUADRANT A (SEE TCP-4.13, 4.14, 4.18 & 4.19):

- REMOVE PCB ALONG NB I-77 AT PROPOSED -YRPA- AND ALONG WB I-40 AT PROPOSED -YRPAB- TIES
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -YRPAB- AND -YRPA- AND TIE TO EXISTING PATTERNS
- OPEN RAMP -YRPAB- PORTION AND -YRPA- TO TRAFFIC
- CLOSE EXISTING I-77 RAMP A

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING IN QUADRANT D (SEE TCP-4.13 THRU TCP-4.16):

- REMOVE PCB ALONG NB I-77 AT PROPOSED -YRPBD- AND ALONG EB I-40 AT PROPOSED -YRPD- TIES
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -YRPBD- AND -YRPD- AND TIE TO EXISTING. PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON EB I-40 FROM -L- STA 155+00± TO STA 173+00± - OPEN RAMP -YRPBD- PORTION AND -YRPD- TO TRAFFIC
- CLOSE EXISTING I-77 RAMP D - SHIFT EB I-40 TO FINAL PATTERN (12′ LANES) FROM -L- STA 155+00± TO STA 173+00±

USING RSD 1101.02 (SHEET 3 OF 15), INSTALL PCB ALONG -P1S3EB1- OUTSIDE LANE AND CONSTRUCT PROPOSED EB I-40 LANES FROM -L- STA 56+50± TO STA 69+00±. CONSTRUCT PROPOSED -Y4RPC- FROM EB I-40 TO -Y4RPC- STA 12+36± (SEE TCP-4.9 & 4.10).

USING RSD 1101.02 (SHEET 3 OF 15), INSTALL PCB ALONG EB I-40 OUTSIDE LANE FROM I-77 LOOP C TO -YRPD- AND ALONG INSIDE -YRPD-. CONSTRUCT TEMPORARY WIDENING (-P1S4EB2-). CONSTRUCT PROPOSED EB I-40 WIDENING FROM -L- STA 149+00± TO BACK OF -YRPD- GORE (SEE TCP-4.12 THRU TCP-4.14).

USING RSD 1101.02 (SHEET 3 OF 15), INSTALL PCB ALONG NB I-77 OUTSIDE LANE AND INSIDE -YRPBD-. CONSTRUCT PROPOSED NB I-77 OUTSIDE WIDENING FROM -YRPBD- BACK OF GORE TO -Y- STA 132+00± (SEE TCP-4.16).

BEHIND BARRIER, CONSTRUCT PROPOSED NB I-77 FROM -L- STA 145+36± TO -YRPA- BACK OF GORE (SEE TCP-4.17 & 4.18).

USING RSD 1101.02 (SHEET 10 OF 15), CONSTRUCT TEMPORARY TIE FROM PROPOSED NB I-77 TO EXISTING LOOP A (SEE TCP-4.17).

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF THE FOLLOWING (SEE TCP-4.13, 4.16 & 4.17):

- PROPOSED -YRPBD- FROM PROPOSED STRUCTURE ON NB I-77 TO STA 40+00±
- PROPOSED -YRPBD- STA 44+00± TO STA 48+15±

COMPLETE CONSTRUCTION OF THE FOLLOWING BEGUN EARLIER:

- NB I-77 PORTION OF PROPOSED STRUCTURE OVER -YRPBD-
- PROPOSED -Y4RPC- FROM STA 12+36± TO STA 25+00± (PORTION) WITH TEMPORARY TIE TO US 21

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 4
PHASING

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

REVISIONS	
CADD FILE	

1/4/2012
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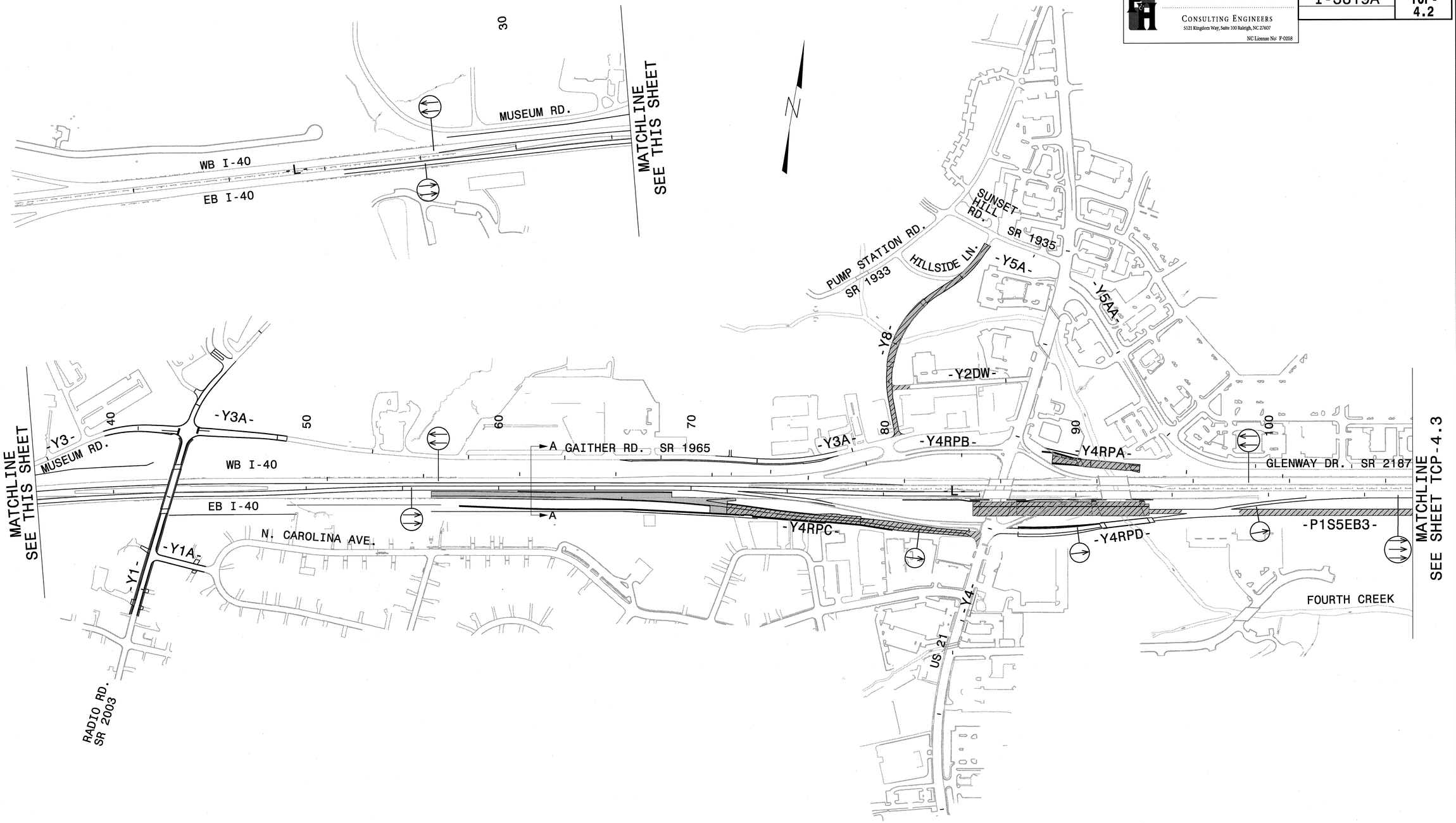
Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-4.2



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

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

PHASE I, STEP 4 OVERVIEW SHEET 1 OF 2

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
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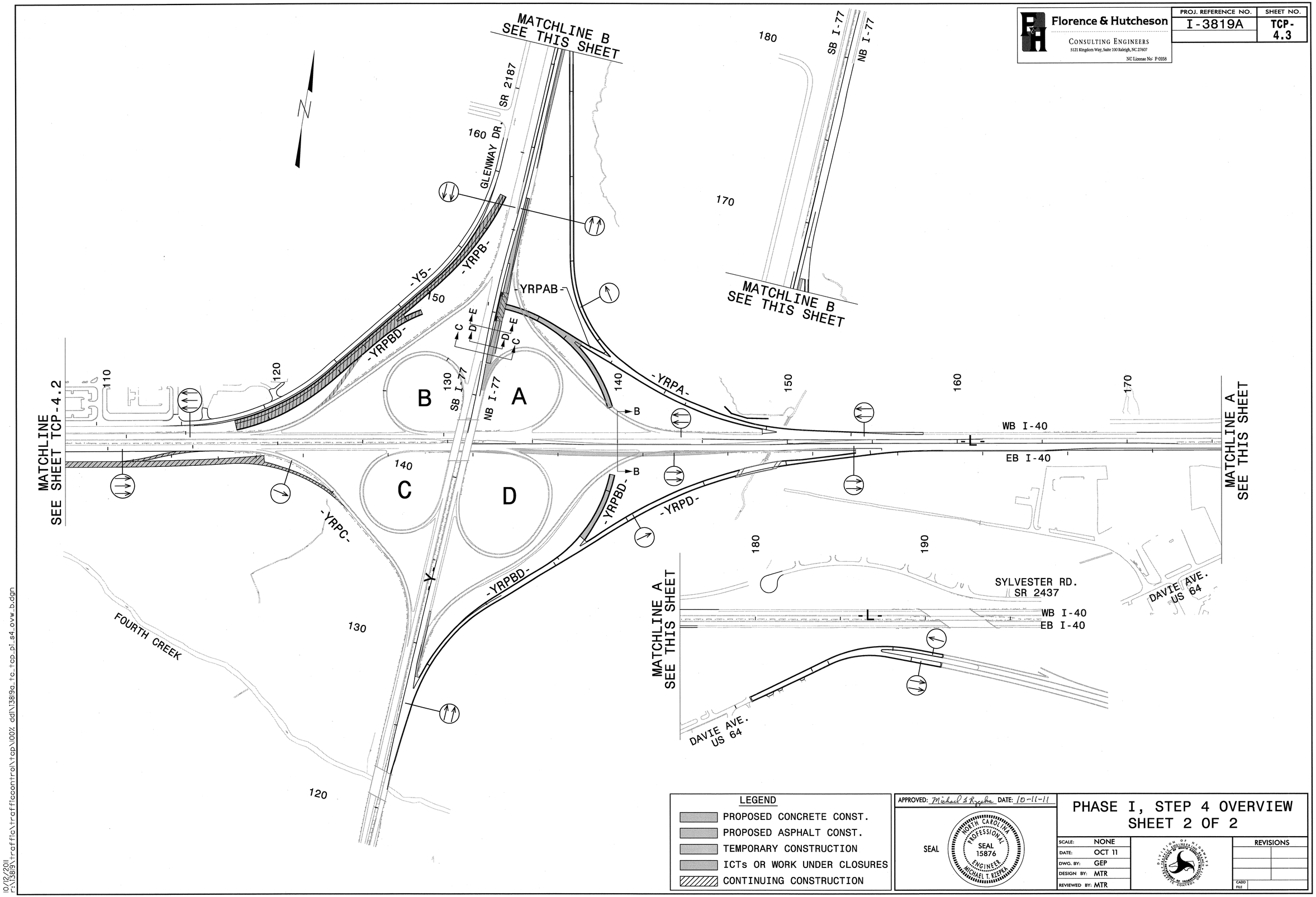
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.3



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 OVERVIEW SHEET 2 OF 2

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
I:\3819S\traffic\traffic control\tcp\100% dd\13819a_tc_tcp_pl_s4_ovw_b.dgn

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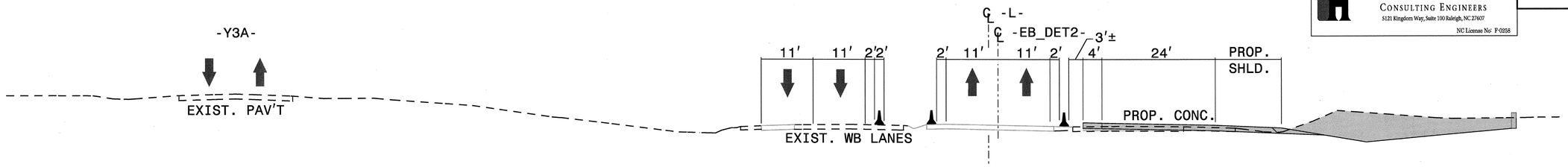
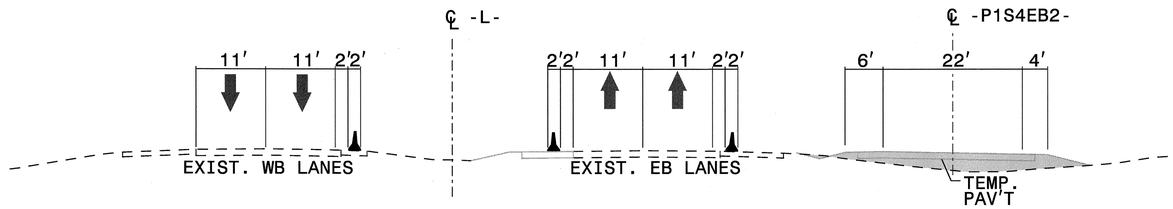
NC License No: P-0258

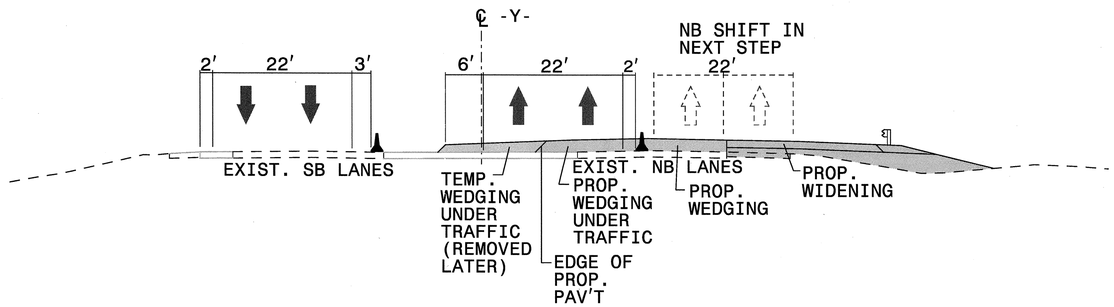
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.4



SECTION A-A
-L- STA 63+00 (SEE TCP-4.9)



SECTION B-B
-L- STA 140+00 (SEE TCP-4.13)



SECTION C-C
-Y- STA 147+50 (SEE TCP-4.17)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 SECTIONS

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

REVISIONS

CADD FILE

10/12/2011
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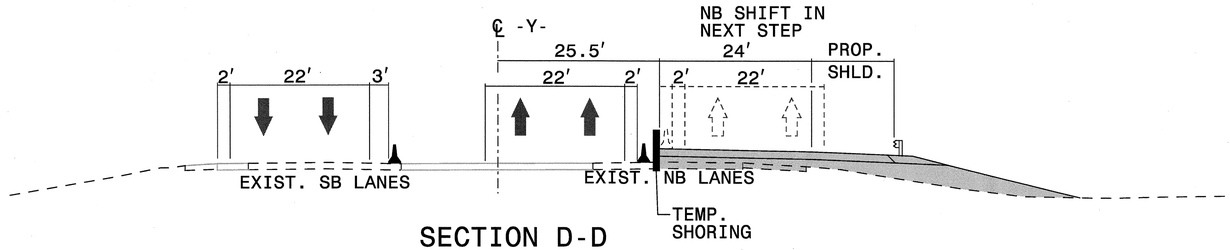
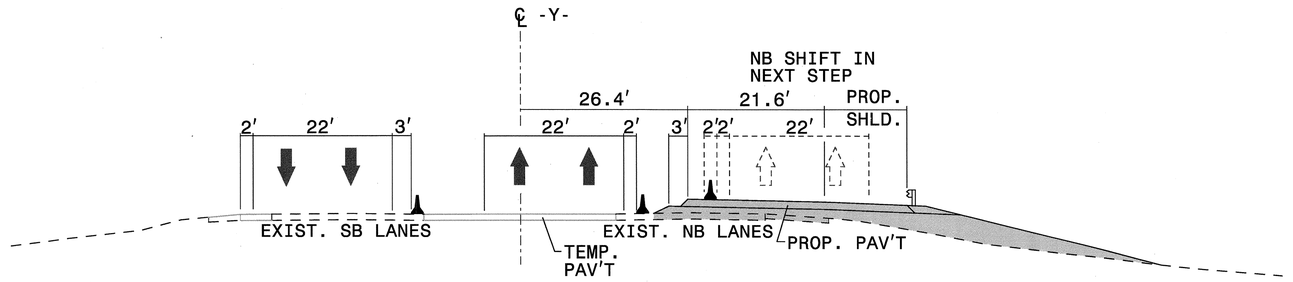
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.5



SECTION D-D
-Y- STA 148+00 (SEE TCP-4.17)



SECTION E-E
-Y- STA 149+00 (SEE TCP-4.17)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 SECTIONS

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
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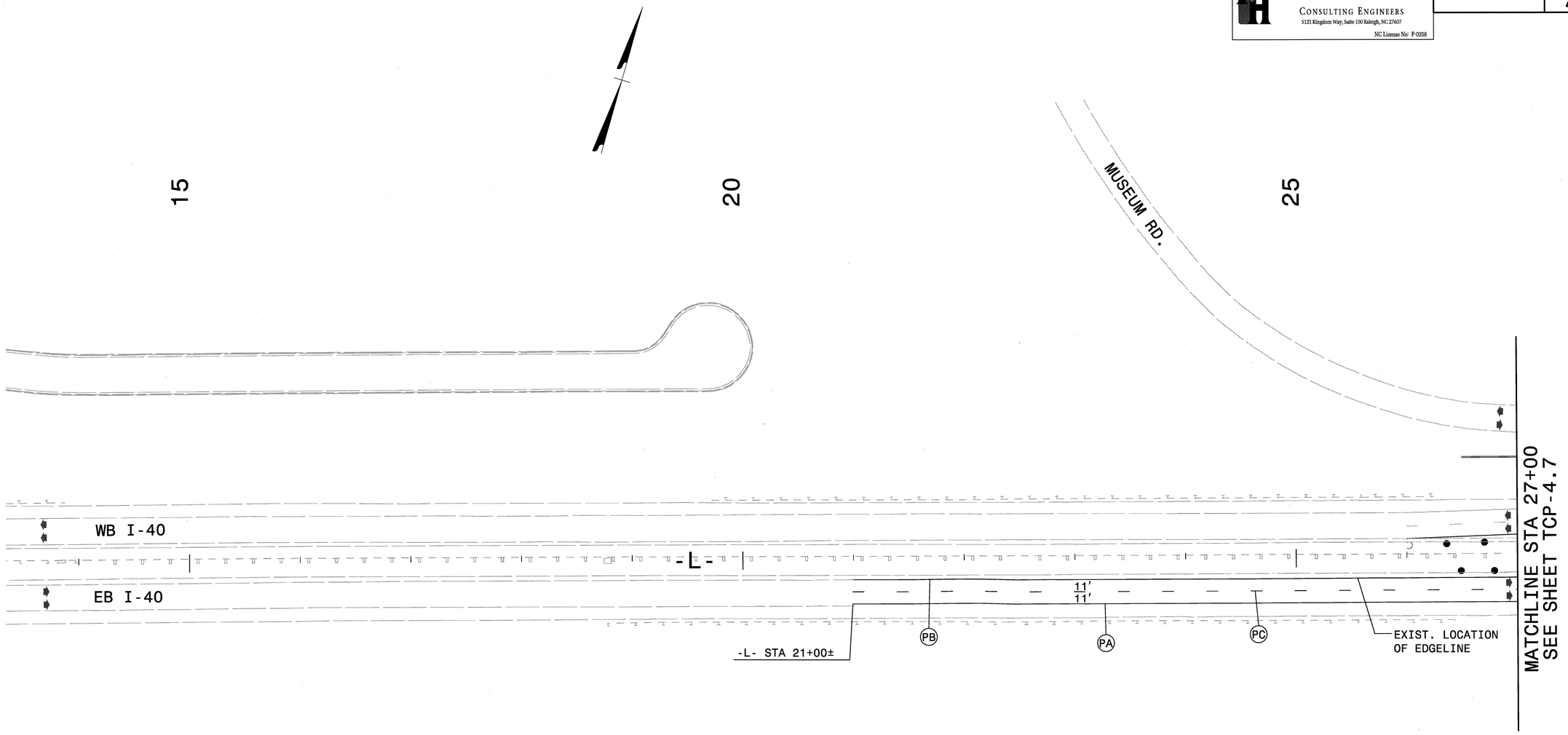
Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No- P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-4.6



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

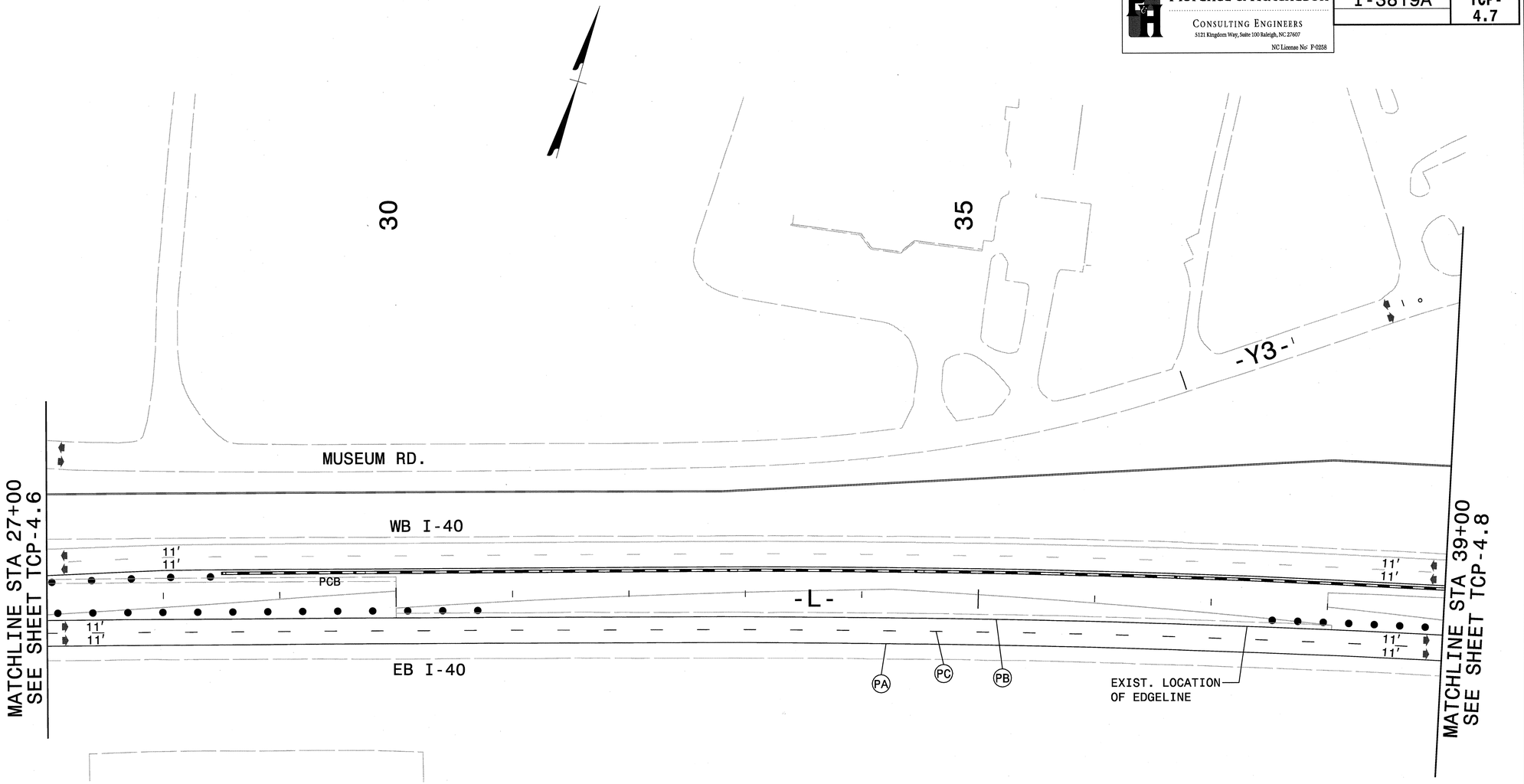
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

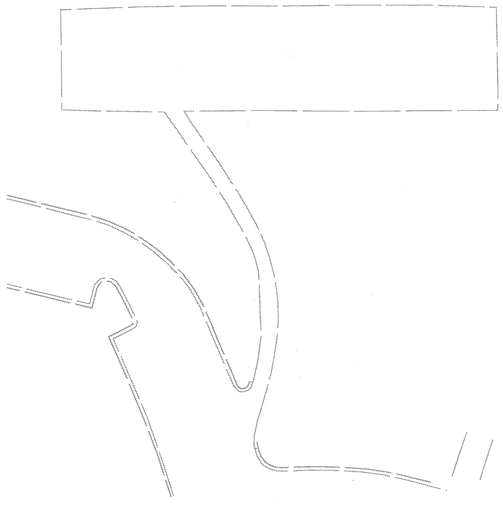
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\00?_dd\3819a_tc_tcp_pi_s4_det_01.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	I-3819A	TCP-4.7





LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL

REVISIONS	
CADD FILE	

10/12/2011
I:\I3819\traffic\traffiocontrol\tcp\100% ddl\I3819a_tc_tcp_pi_s4_det_102.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.8

40

-Y3-

MUSEUM RD.

45

-Y3A-

50

GAITHER RD. SR 1965

PE PD PI PA

-Y1-

CA CI

WB I-40

11′ 11′

PCB

PCB -L-

11′ 11′

-P1S3EB1-

11′ 11′

EB I-40 PA PC PB

MATCHLINE STA 39+00
SEE SHEET TCP-4.7

MATCHLINE STA 53+00
SEE SHEET TCP-4.9

-L- STA 40+00±
PCB 2′ OFFSET LT
BEG PCB 9′ OFFSET RT

-L- STA 39+50±
BEG PCB 6′ OFFSET

-L- STA 44+00±
END PCB 9′ OFFSET

-P1S3EB1- STA 10+00±
-L- STA 45+18±

RADIO RD. SR 2003

-Y1A-

BST

CONC

CONC

N. CAROLINA AVE.

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 4 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
P:\3819\traffic\trafficcontrol\tcp\100% ddt\3819a_tc_tcp_pi_s4_det_103.dgn

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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.9

55

60

65

GAITHER RD. SR 1965

-Y3A-

A (SEE TCP-4.4)

-LCDWB-

WB I-40

2'±

11' 11' 11' 11'

2'

11' 11'

PCB

-L-

-P1S3EB1-

11' 11'

PA PC PB

PCB

-L- STA 53+50±
PCB 2' OFFSET

-L- STA 56+50±

EB I-40

-L- STA 61+00±
BEG MED. SHLD.

-L- STA 63+00±

A

-L- STA 53+00±
BEG PCB 6' OFFSET

MATCHLINE STA 53+00
SEE SHEET TCP-4.8

MATCHLINE STA 67+00
SEE SHEET TCP-4.10

GR

CONC

6"CONC CURB
GUTTER PAVED OVER

N. CAROLINA AVE.

6" CURB

BST

30" CMP

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
R:\13819\traffic\traffiocontrol\tcp\100% dd\13819a_tc_tcp_p1_s4_det_104.dgn

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CONSULTING ENGINEERS
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PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.10

70

75

80

GAITHER RD. SR 1965

-Y3A-

-LCDWB-

RAMP B

WB I-40

11′ 11′ 11′ 11′ 2′ 11′ 11′ 11′ 11′

PCB

PCB

EXIST G/R

-L-

-P1S3EB1-

11′ 11′ 11′ 11′

-L- STA 70+15±

-L- STA 72+45±

-L- STA 73+00±
END PCB 2′ OFFSET

-L- STA 69+00±

-L- STA 76+00±

-L- STA 79+00±
END PCB 2′ OFFSET

PR

PA PC PB

EB I-40

11′

RAMP C

-Y4RPC-

-Y4RPC- STA 12+36±
BACK OF GORE

-Y8-

MATCHLINE STA 67+00
SEE SHEET TCP-4.9

MATCHLINE STA 81+00
SEE SHEET TCP-4.11

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
P:\13819\traffic\trafficcontrol\tcp\00% ddi\13819a_tc_tcp_pl_s4_det_l05.dgn

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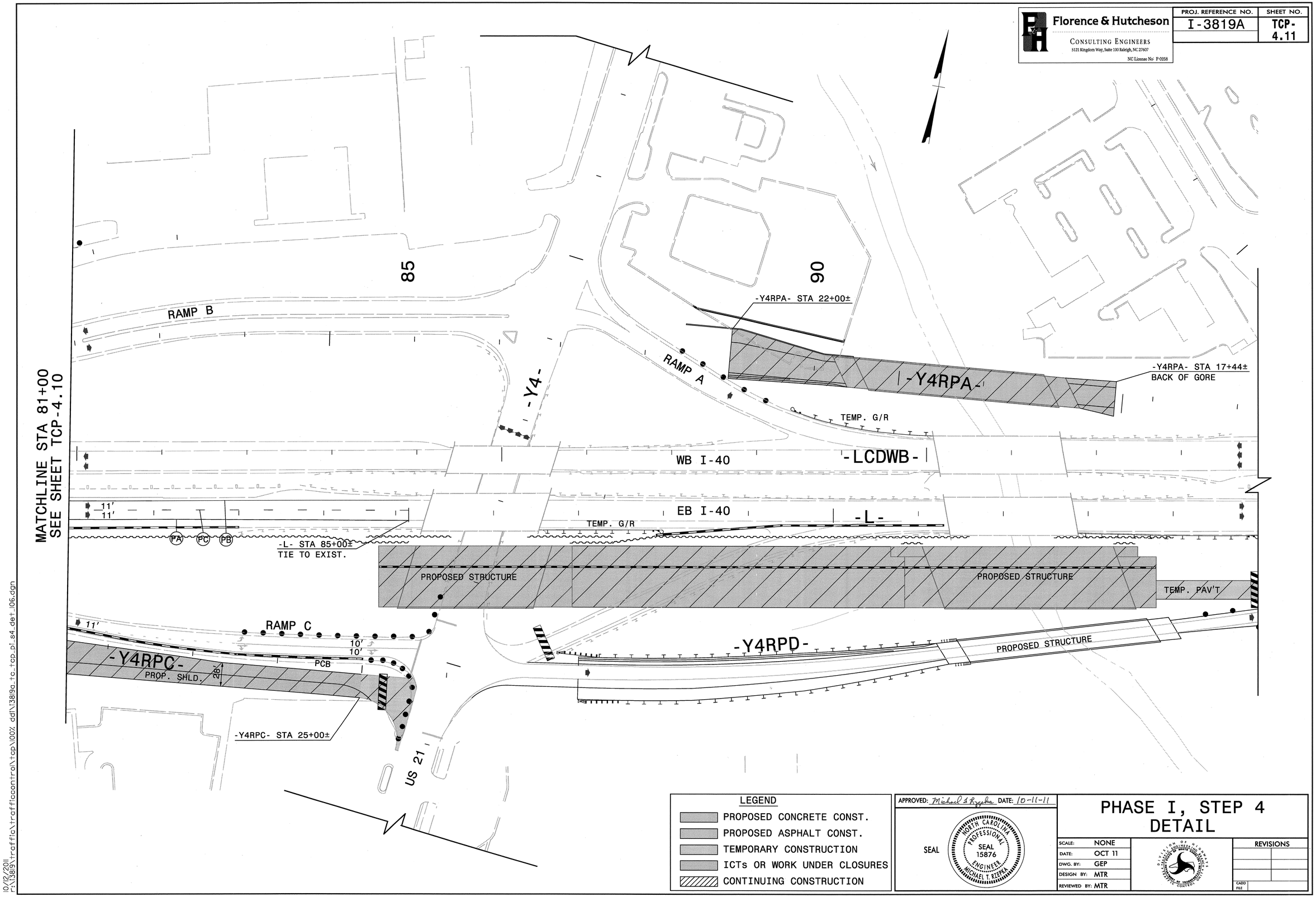
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.11



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pl_s4_det_106.dgn

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.12

(FOR WORK ON I-77 SEE TCP-4.17)

LOOP B

RAMP B

125

B

130

A

135

LOOP A

WB I-40

EB I-40

11′ 11′ 11′ 11′ 11′ 11′

-L-

SB I-77

NB I-77

PCB

PCB

PCB

-P1S4EB2-

PA

-L- STA 128+20±
BEG PCB 2′ OFFSET

-L- STA 133+34±
END PCB 2′ OFFSET

-L- STA 133+80±
BEG PCB 2′ OFFSET

LOOP C

LOOP D

C

D

PA

RAMP C

-YRPC- STA 22+00±
END PCB
2′ OFFSET

MATCHLINE STA 137+00
SEE SHEET TCP-4.13

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

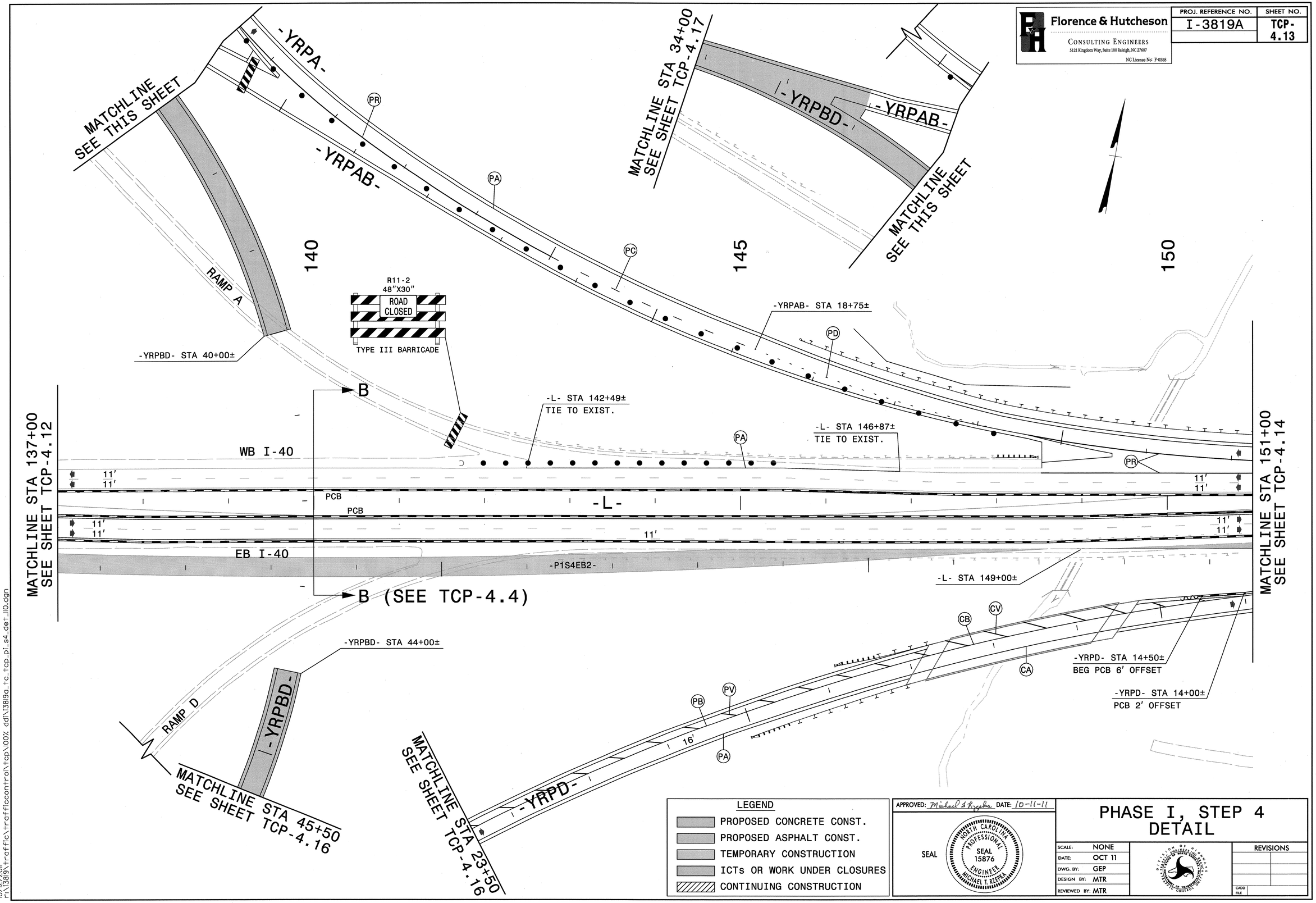
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

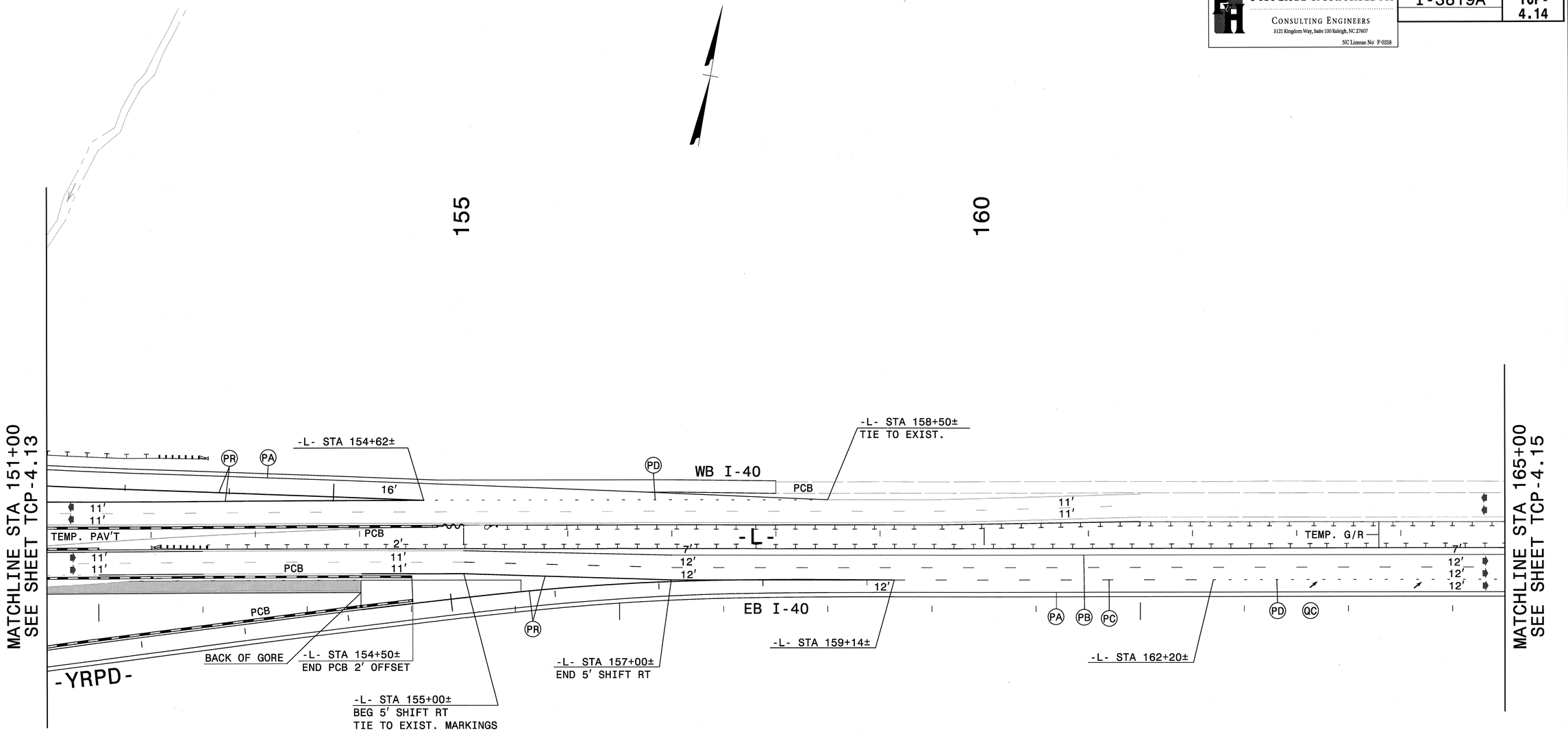
CADD FILE

10/12/2011
P:\3819\traffic\trafficcontrol\tcp\i00x_dd\i3819a_tc_tcp_pi_s4_det_i09.dgn



Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-4.13
MATCHLINE SEE THIS SHEET
-YRPA-
-YRPAB-
PR
PA
PC
PD
140
145
150
MATCHLINE STA 34+00 SEE SHEET TCP-4.17
-YRPBD-
-YRPAB-
MATCHLINE SEE THIS SHEET
RAMP A
R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE
-YRPAB- STA 18+75±
-YRPBD- STA 40+00±
B
-L- STA 142+49±
TIE TO EXIST.
-L- STA 146+87±
TIE TO EXIST.
WB I-40
11'
PCB
-L-
EB I-40
-P1S4EB2-
-L- STA 149+00±
B (SEE TCP-4.4)
MATCHLINE STA 137+00 SEE SHEET TCP-4.12
MATCHLINE STA 151+00 SEE SHEET TCP-4.14
-YRPBD- STA 44+00±
RAMP D
-YRPBD-
MATCHLINE STA 45+50 SEE SHEET TCP-4.16
MATCHLINE STA 23+50 SEE SHEET TCP-4.16
-YRPD-
16'
PB
PV
CB
CV
CA
-YRPD- STA 14+50±
BEG PCB 6' OFFSET
-YRPD- STA 14+00±
PCB 2' OFFSET
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE I, STEP 4
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pl_s4_det_110.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-4.14



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

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

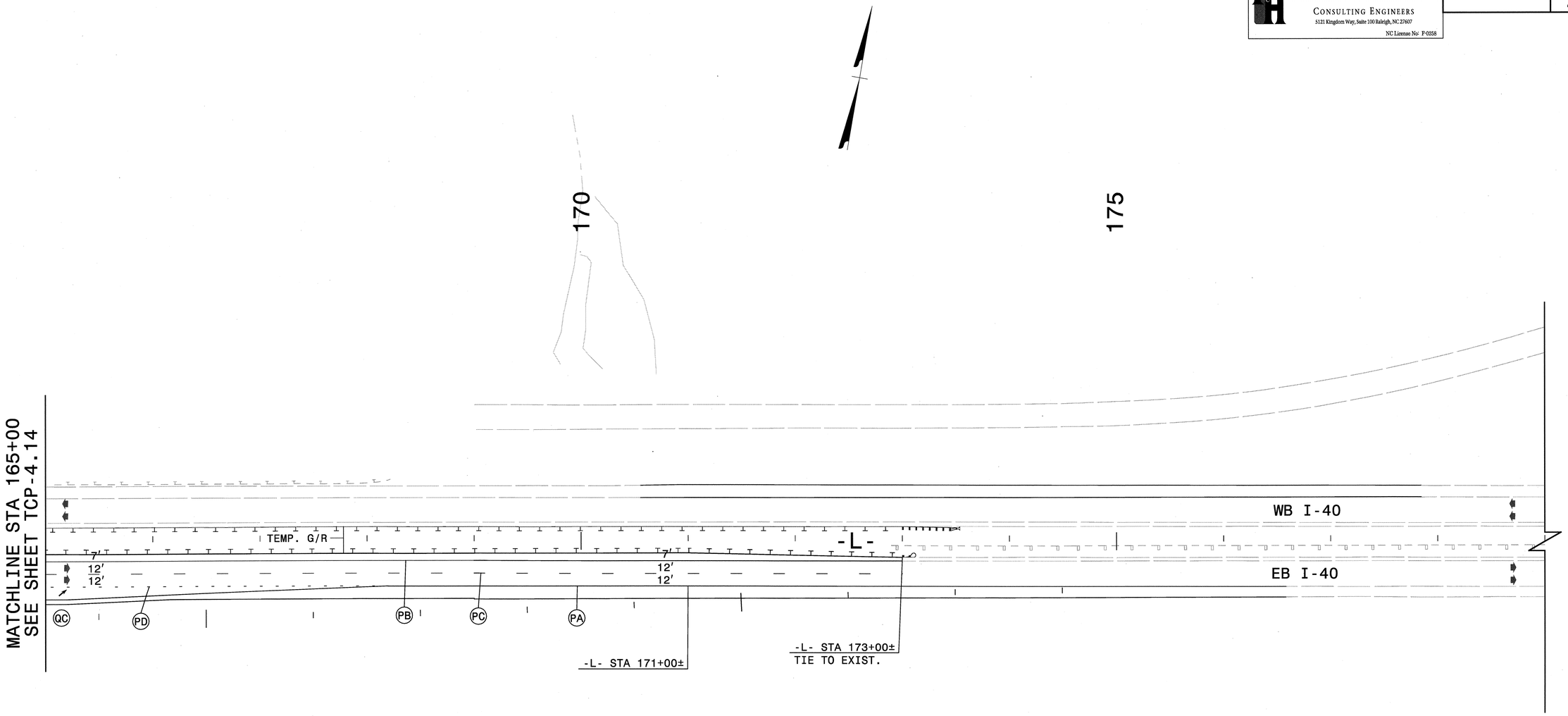
REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pi_s4_det_III.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.15



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
R:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pl_s4_det_ll2.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-4.16

120

125

130

RAMP C

BACK OF GORE

SB I-77

-Y-

11′
11′

PCB

MATCHLINE A
SEE THIS SHEET

NB I-77

-Y- STA 122+23±

PD

-Y- STA 124+19±

PR

-Y- STA 126+50±
BEG PCB 6′ OFFSET -Y-
2′ OFFSET -YRPBD-

PA

-YRPBD- STA 60+60±
END PCB 2′ OFFSET

-Y- STA 132+00±

-Y- STA 132+50±
END PCB 2′ OFFSET

-YRPBD-

RAMP D

-YRPBD- STA 57+00±

PB

MATCHLINE B
SEE THIS SHEET

MATCHLINE B
SEE THIS SHEET

-YRPBD-

16′

PB

R11-2
48″X30″
ROAD
CLOSED
TYPE III BARRICADE

-YRPBD- STA 48+15±
BACK OF GORE

-YRPBD- STA 47+05±

-YRPBD-

MATCHLINE STA 45+50
SEE SHEET TCP-4.13

MATCHLINE STA 23+50
SEE SHEET TCP-4.13

PA

-YRPD-

PV

PB

16′

135

MATCHLINE A
SEE THIS SHEET

LOOP C

SB I-77

-Y-

11′
11′

NB I-77

LOOP D

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

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

DIVISION OF HIGHWAYS · TRAFFIC ENGINEERING BRANCH · TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
r:\3819\traffic\traffiocontrol\tcp\100% ddl\3819a_tc_tcp_pl_s4_det_y01.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-4.17

145

150

GLENWAY DR.

-Y5-

-YRPB-

RAMP B

LOOP B

PR

C (SEE TCP-4.4)

D (SEE TCP-4.5)

E (SEE TCP-4.5)

SB I-77

NB I-77

11′
11′

TEMP. G/R

PCB

-Y-

-P1S4NB1-

-Y- STA 145+36±

TEMP. TIE

EB I-40

WB I-40

(FOR WORK ON
I-40 SEE TCP-4.12)

-YRPBD-

RAMP A

-Y- STA 152+50±
PCB 2′ OFFSET
TIE TO EXIST. PCB

MATCHLINE STA 155+00
SEE SHEET TCP-4.18

MATCHLINE STA 34+00
SEE SHEET TCP-4.13

LOOP A

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

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

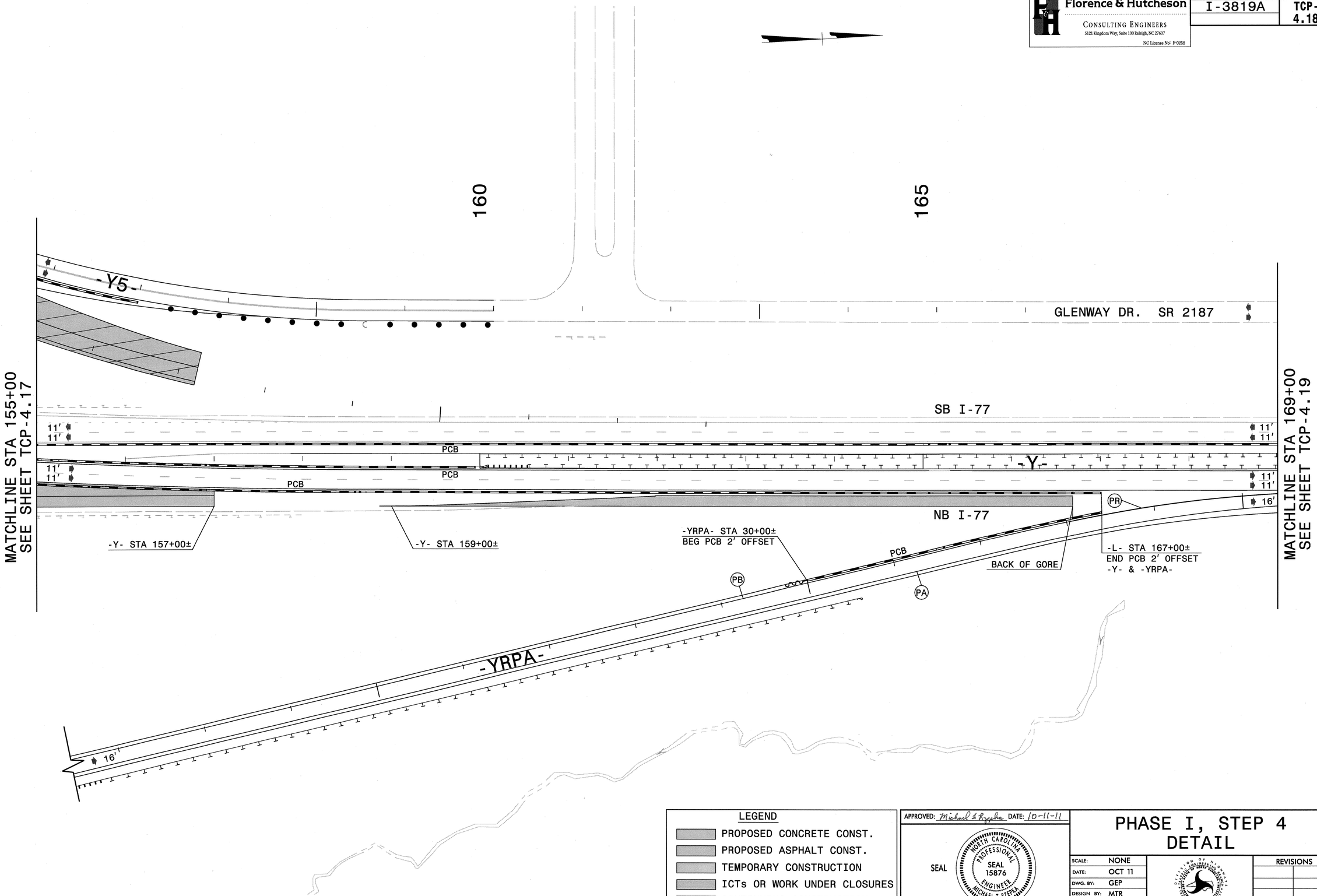
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
c:\i3819\traffic\trafficcontrol\tcp\100% dgn\i3819a_tc_tcp_pi_s4_det_y02.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-4.18



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

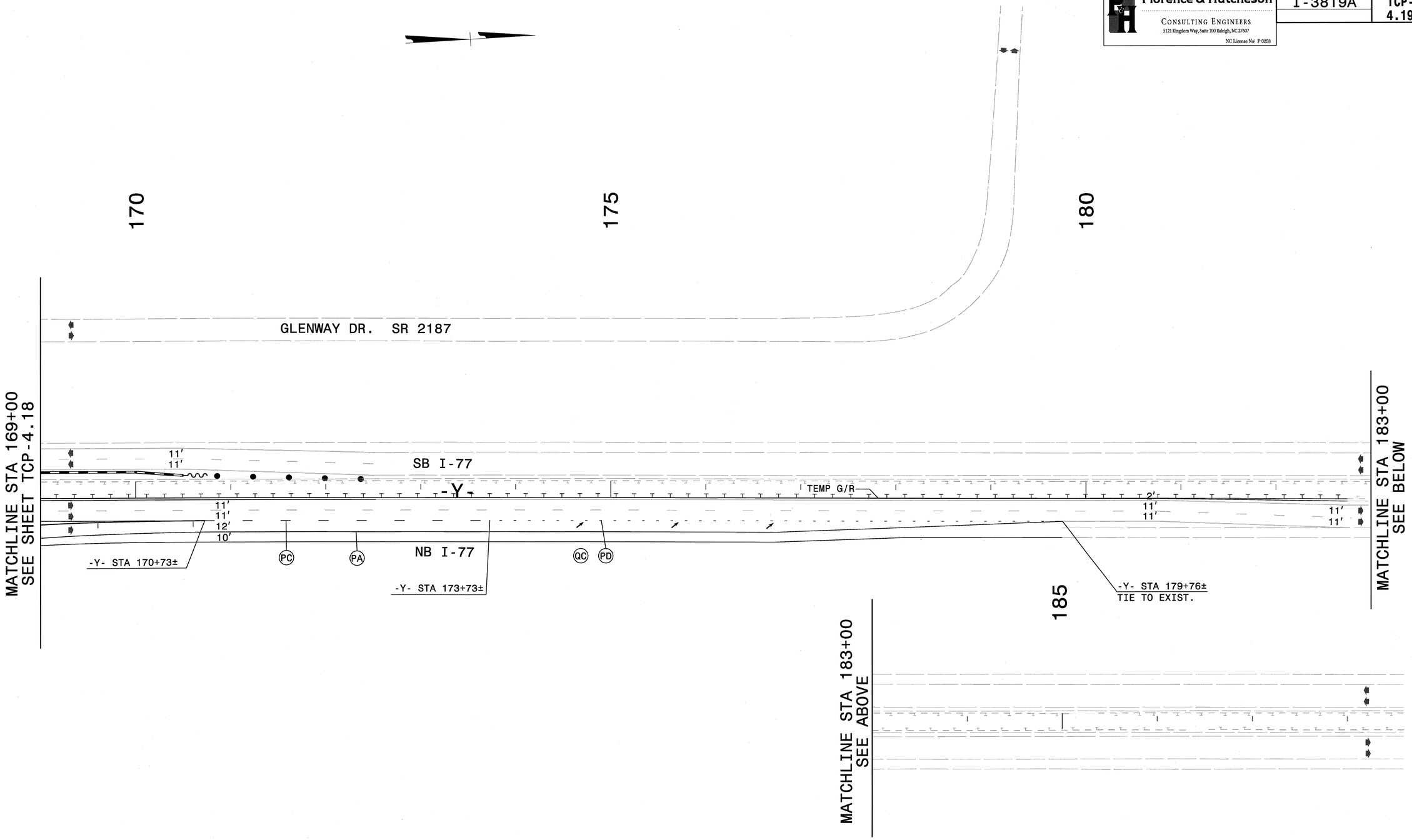
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pi_s4_det_y03.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-4.19



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 4 DETAIL

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

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pi_s4_det_y04.dgn

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0158

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.1

PHASE I, STEP 5

STEP 5

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING FOR US 21 RAMP C (SEE TCP-5.6 THRU TCP-5.9):

- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON PROPOSED EB I-40 & -Y4RPC-
- OPEN PROPOSED -Y4RPC- TO TRAFFIC VIA TEMPORARY EXIT AT -L- STA 49+00±
- CLOSE EXISTING US 21 RAMP C AND INSTALL PCB

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING FOR I-40 EAST OF I-77 (SEE TCP-5.12 THRU TCP-5.14):

- REMOVE PCB ALONG EB I-40 OUTSIDE LANE FROM I-77 LOOP C TO -YRPD- AND ALONG INSIDE -YRPD-
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -P1S4EB2- AND TIE TO EXISTING
- SHIFT EB I-40 TRAFFIC TO -P1S4EB2-
- INSTALL PCB ALONG EB I-40 MEDIAN LANE (-P1S4EB2-) AND ALONG WB I-40 MEDIAN LANE (P1S4WB1-)
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -P1S4WB1- AND TIE TO EXISTING
- SHIFT WB I-40 TRAFFIC TO -P1S4WB1- - INSTALL PCB ALONG WB I-40 OUTSIDE LANE (-P1S4WB1-) AND ALONG INSIDE -YRPAB-

USING RSD 1101.02 (SHEET 3 OF 15), PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS IN FINAL LOCATION AND SHIFT NB I-77 TRAFFIC TO PROPOSED PATTERN FROM -Y- STA 121+00± TO STA 135+00± (SEE TCP-5.15).

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING ON I-77 NORTH OF I-40 (SEE TCP-5.16 THRU TCP-5.18):

- REMOVE PCB ALONG NB I-77 OUTSIDE LANE (-P1S4NB1-) AND ALONG INSIDE -YRPA-
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS FOR -P1S5NB2- AND TIE TO EXISTING
- SHIFT NB I-77 TRAFFIC TO -P1S5NB2-
- REMOVE PCB ALONG NB I-77 MEDIAN LANE (-P1S4NB1-) AND ALONG SB I-77 MEDIAN LANE
- INSTALL/RESET PCB ALONG NB I-77 MEDIAN LANE (-P1S5NB2-) AND ALONG SB I-77 MEDIAN LANE (-P1S5SB1-)
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS FOR -P1S5SB1- AND TIE TO EXISTING
- SHIFT SB I-77 TRAFFIC TO -P1S5SB1-
- INSTALL/RESET PCB ALONG SB I-77 MEDIAN LANE (-P1S5SB1-) AND ALONG INSIDE OF EXISTING I-77 RAMP B

BEHIND BARRIER, CONSTRUCT THE FOLLOWING (SEE TCP-5.8 & 5.9):

- PROPOSED EB I-40 FROM -L- STA 69+00± TO STA 78+00±
- TEMPORARY PAVEMENT (-P1S5EB3-) FROM BACK OF -Y4RPC- GORE TO PROPOSED STRUCTURE OVER US 21
- REMAINING PORTION OF PROPOSED -Y4RPC- TO STA 25+00± WITH TEMPORARY TIE TO US 21

BEHIND BARRIER, INSTALL TEMPORARY SHORING AND CONSTRUCT PROPOSED WB I-40 STRUCTURE OVER -YRPBD- AND ROADWAY APPROACHES FROM -L- STA 136+00± TO STA 145+00± (SEE TCP-5.12 & 5.13).

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF PROPOSED -YRPBD- FROM STA 40+00± TO WB I-40 STRUCTURE (SEE TCP-5.13).

BEHIND BARRIER, INSTALL TEMPORARY SHORING AND BEGIN CONSTRUCTION OF SB I-77 PORTION OF PROPOSED STRUCTURE OVER -YRPBD- (SEE TCP-5.16).

BEHIND BARRIER, CONSTRUCT PROPOSED -YRPB- STA 22+20± TO SB I-77 (SEE TCP-5.17).

COMPLETE CONSTRUCTION OF THE FOLLOWING BEGUN EARLIER:

RIGHT PORTIONS OF PROPOSED STRUCTURES OVER -Y4- (US 21) AND FOURTH CREEK.
PROPOSED -L- CONNECTING RIGHT PORTIONS OF PROPOSED STRUCTURES OVER US 21 AND FOURTH CREEK
-YRPBD- FROM STA 20+00± TO STA 25+00±
-P1S5EB3- FROM PROPOSED STRUCTURE OVER FOURTH CREEK TO -L- STA 119+15±
TEMPORARY I-77 RAMP C TIE FROM -P1S5EB3- TO EXISTING I-77 RAMP C
TEMPORARY US 21 RAMP D TIE FROM -P1S5EB3- TO EB I-40 NEAR -L- STA 114+00±
TEMPORARY PAVEMENT TIE FROM PROPOSED -YRPBD- TO EXISTING I-77 RAMP B

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 5 PHASING

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

REVISIONS

CADD FILE

1/4/2012
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_phasing.dgn

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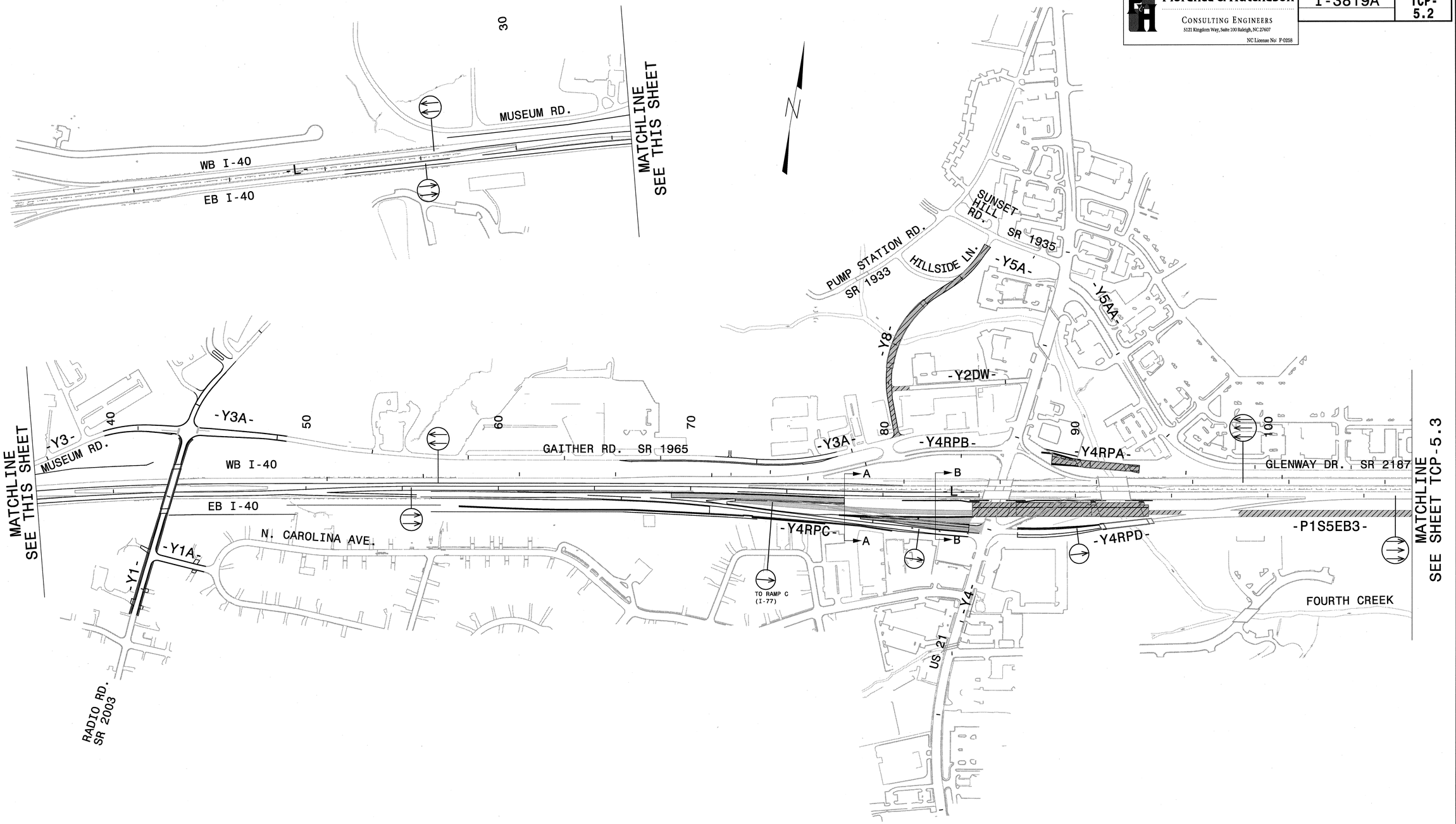
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.2



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 5 OVERVIEW SHEET 1 OF 2

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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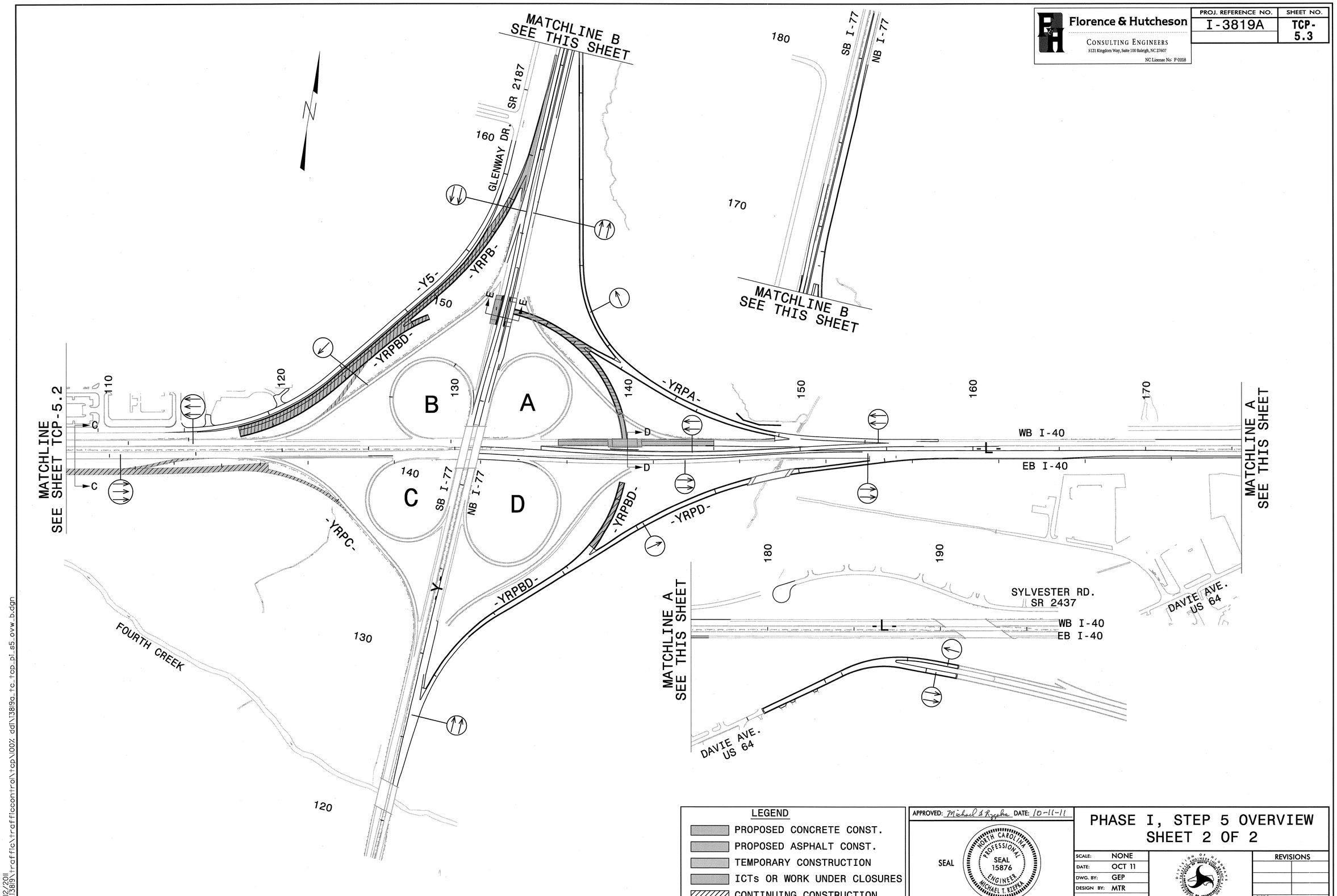
10/12/2011
P:\3819\traffic\trafficcontrol\tcp\00% ddi\3819a_tc_tcp_pi_s5_ovw_a.dgn



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PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.3

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

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NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 OVERVIEW SHEET 2 OF 2

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

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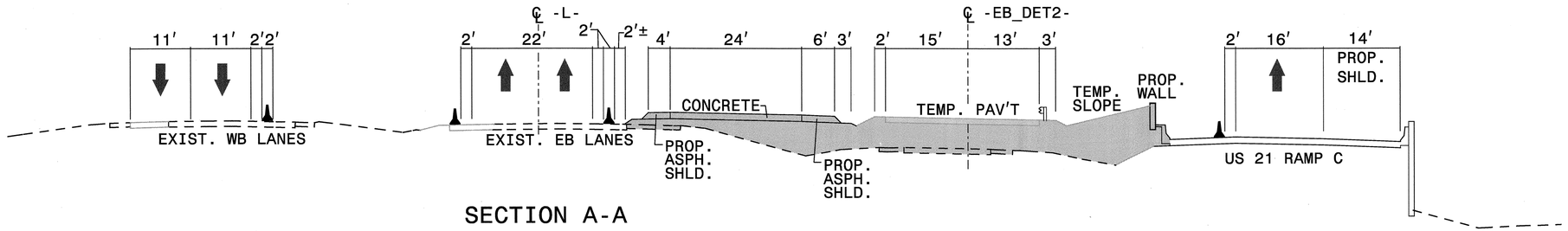
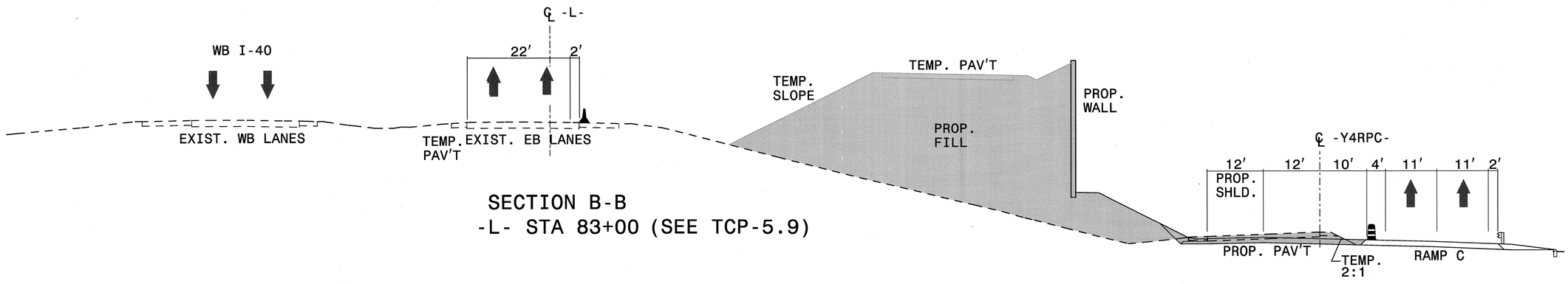
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.4



SECTION A-A
-L- STA 78+00 (SEE TCP-5.8)



SECTION B-B
-L- STA 83+00 (SEE TCP-5.9)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

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

PHASE I, STEP 5 SECTIONS

SCALE:	NONE
DATE:	OCT 11
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r:\3819\traffic\trafficcontrol\tcp\00% ddi\3819a_tc_tcp_sections.dgn

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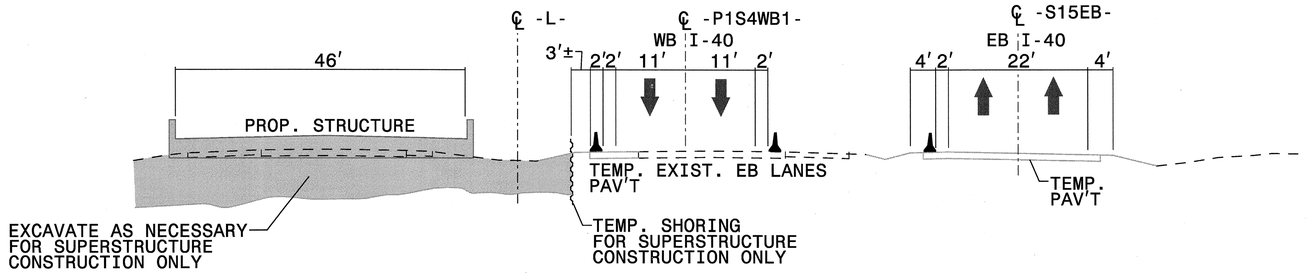
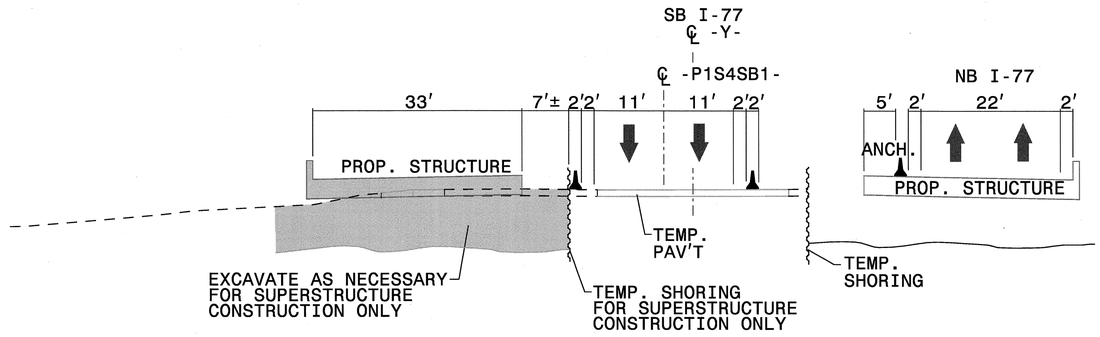
	I-3819A	TCP-5.5



SECTION C-C
-L- STA 140+00 (SEE TCP-5.13)



SECTION D-D
-Y- STA 150+00 (SEE TCP-5.16)

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 SECTIONS

SCALE:	NONE
DATE:	OCT 11
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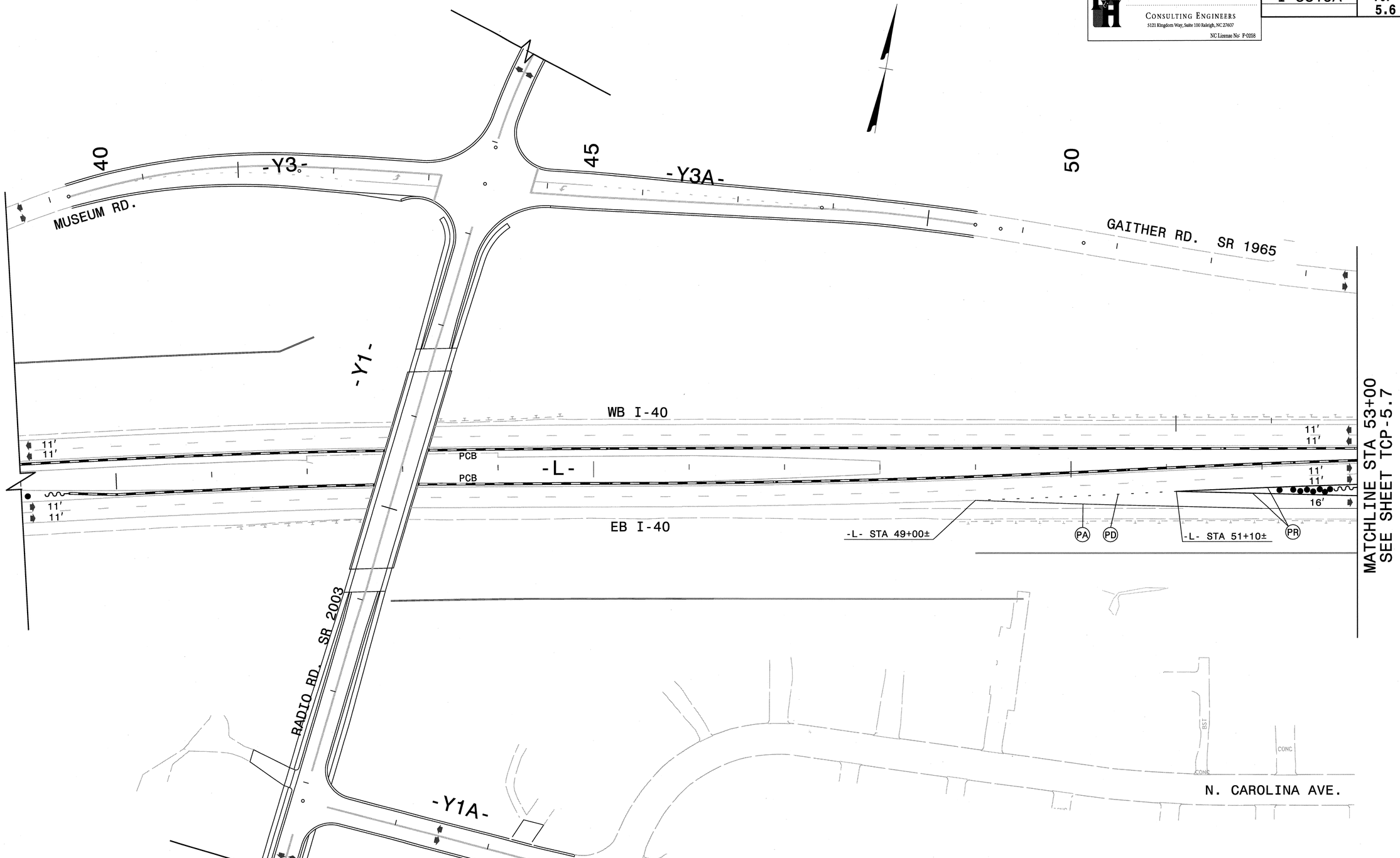
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.6



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

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

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10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pl_s5_det_l03.dgn

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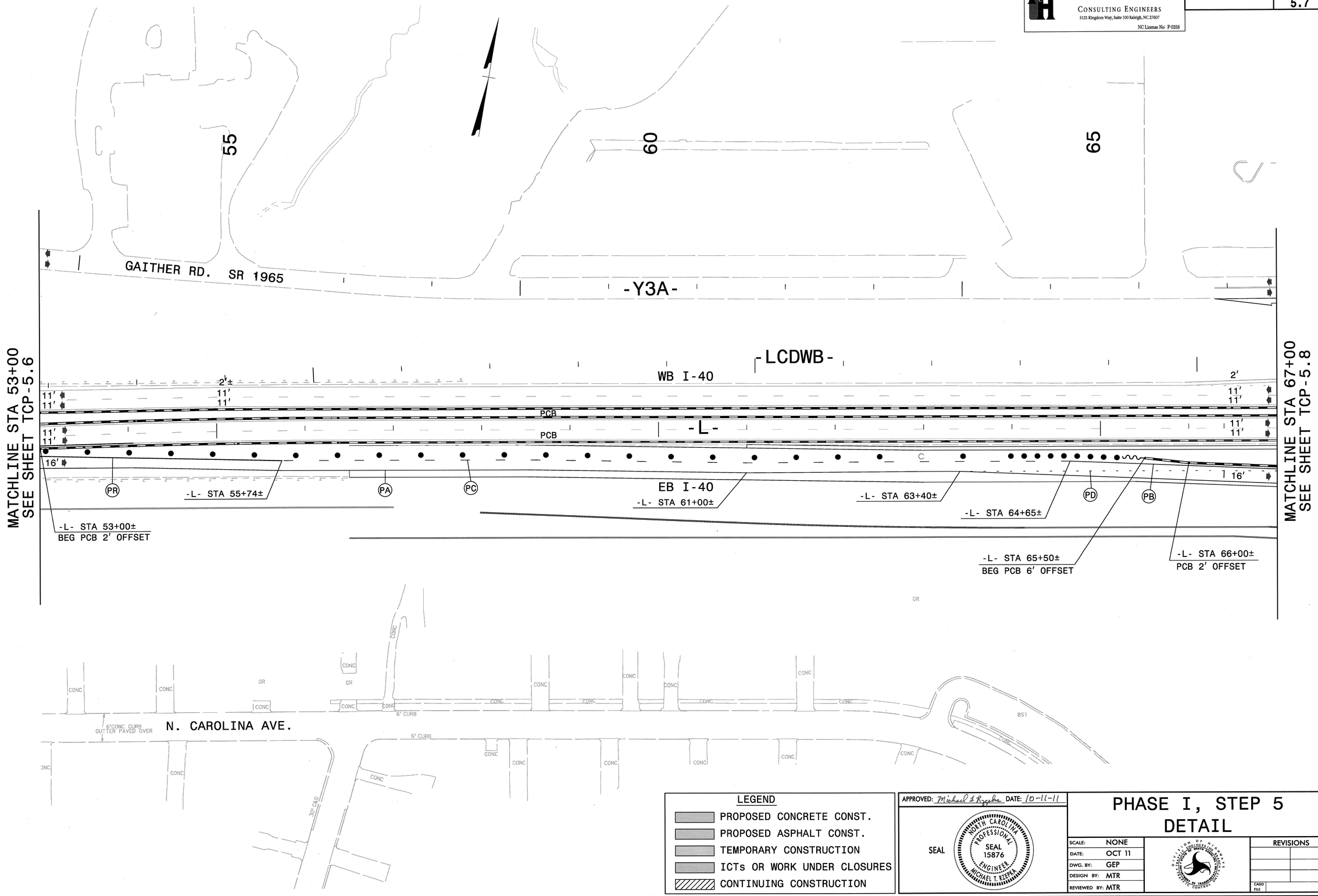
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.7



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
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REVISIONS

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10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pl_s5_det_104.dgn

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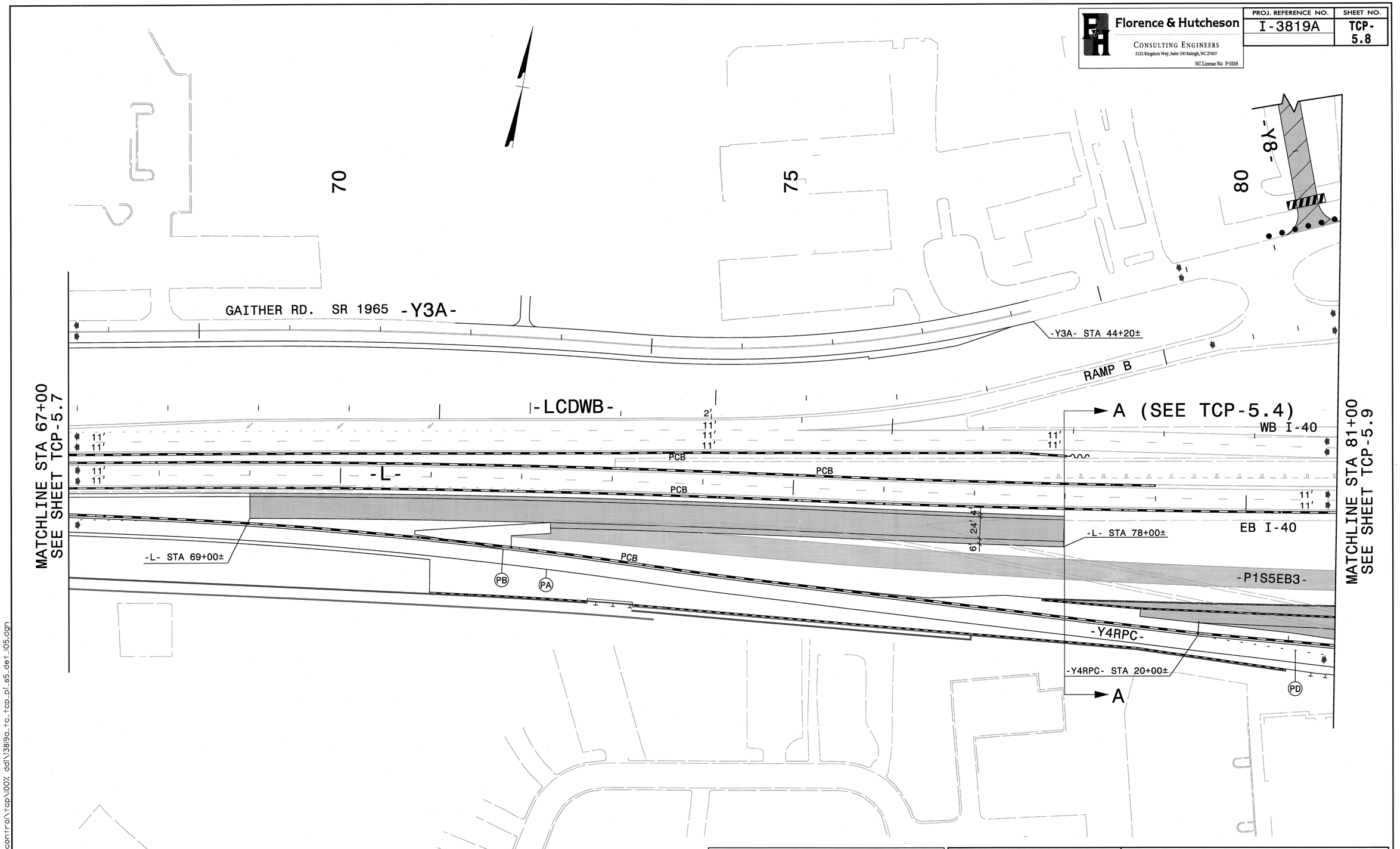
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.8



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

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NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
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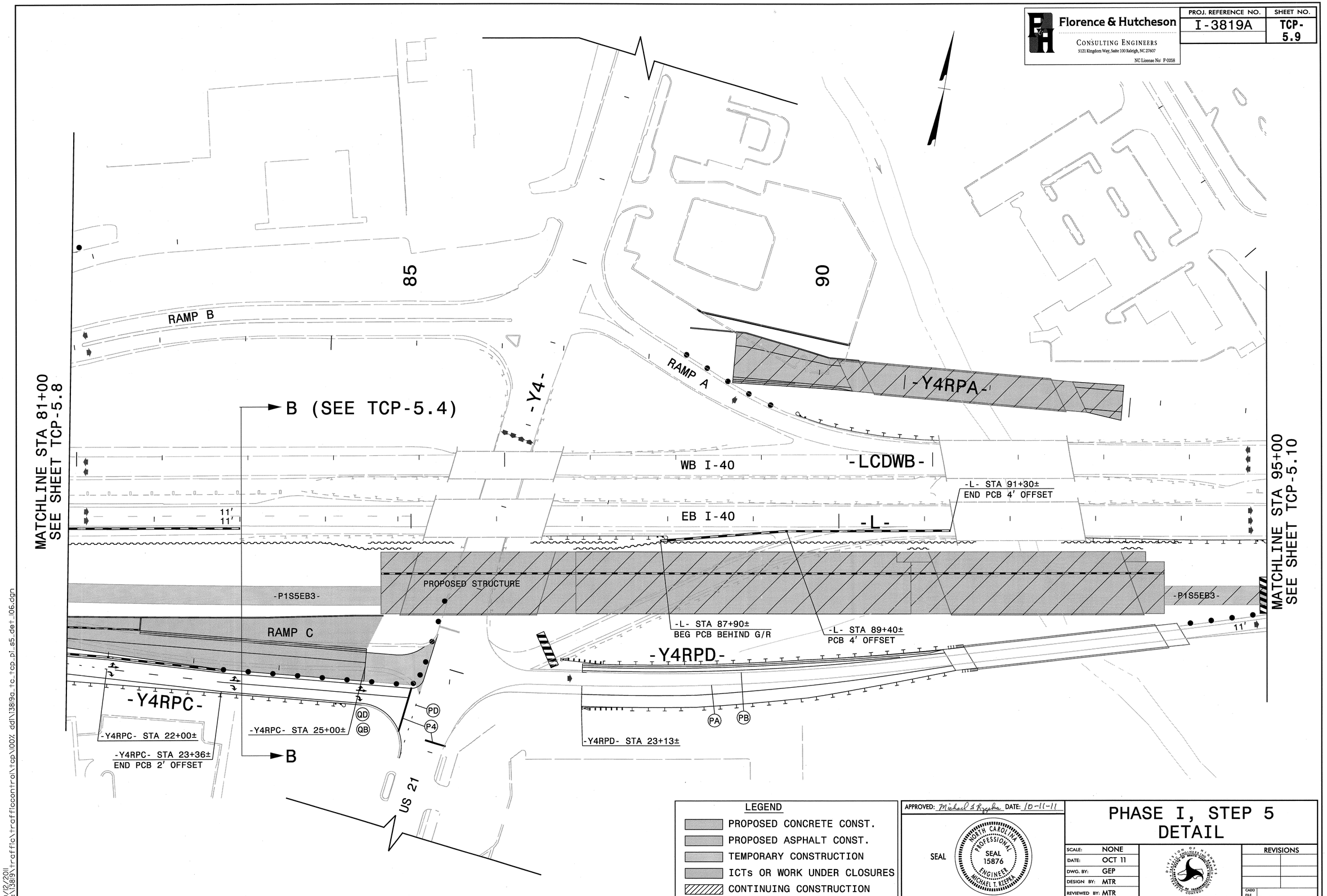

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

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

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CADD FILE

10/12/2011
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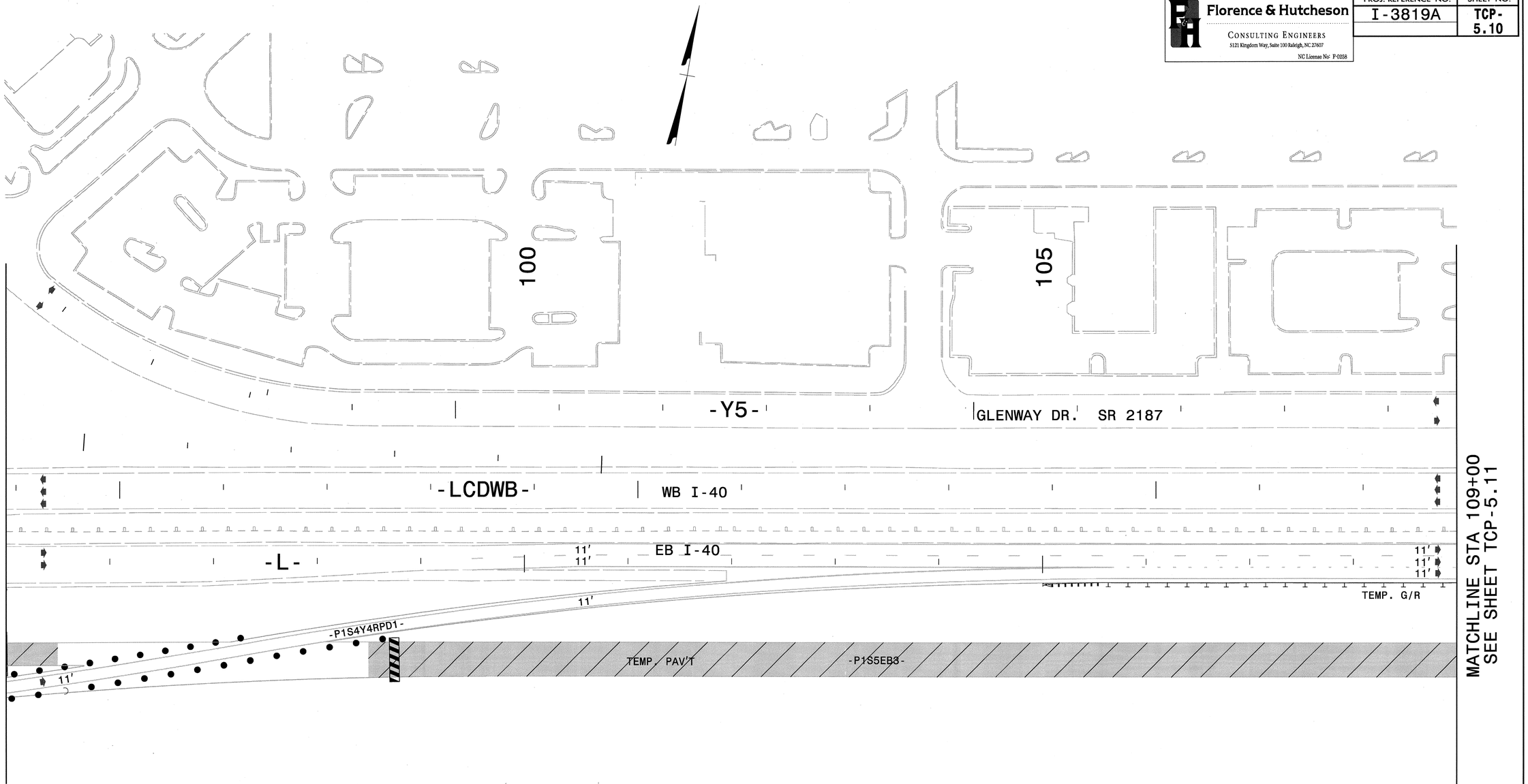
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.10



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

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10/12/2011
P:\I3819\traffic\trafficcontrol\tcp\100% dd\I3819a_tc_tcp_pl_s5_det_107.dgn

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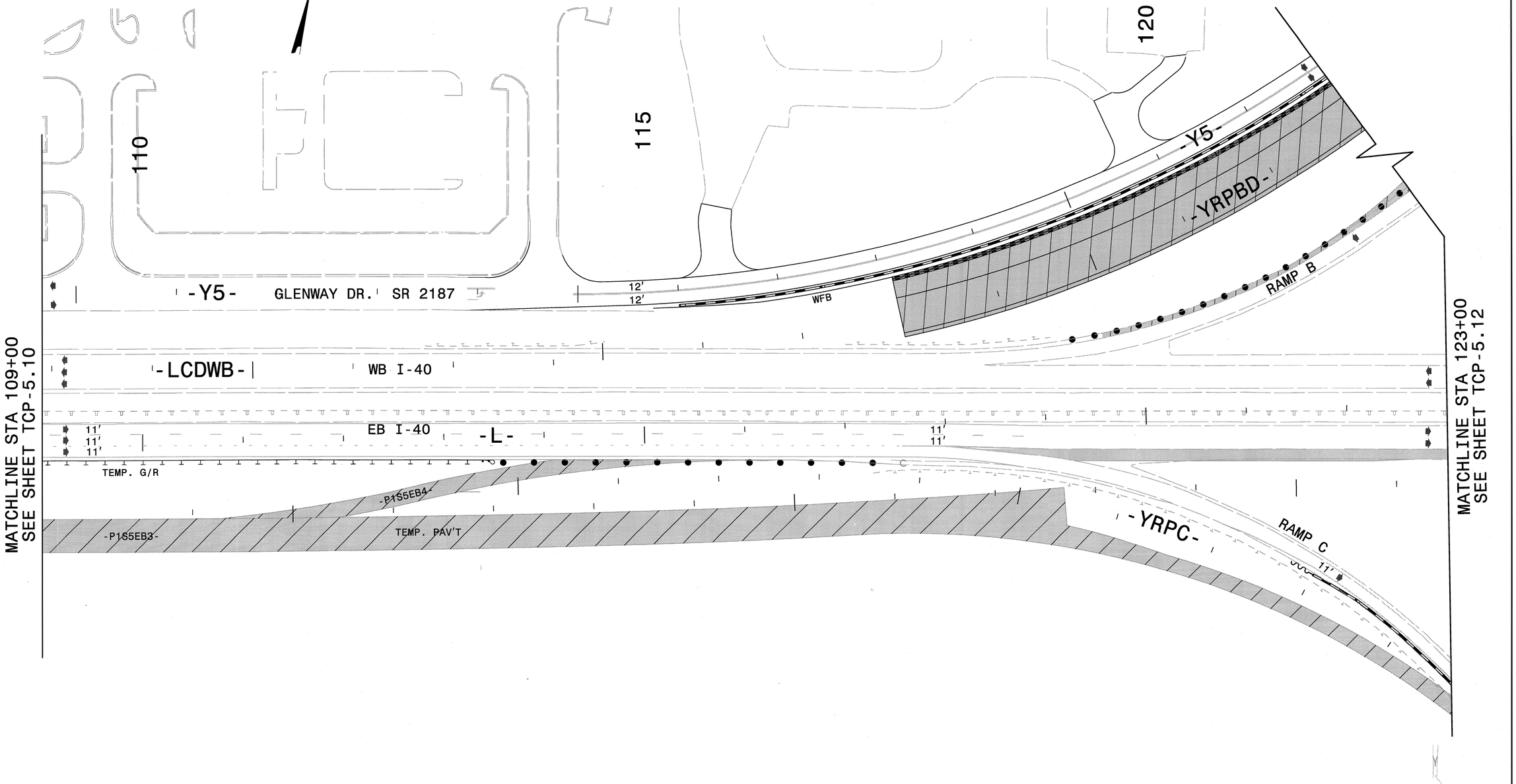
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.11



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
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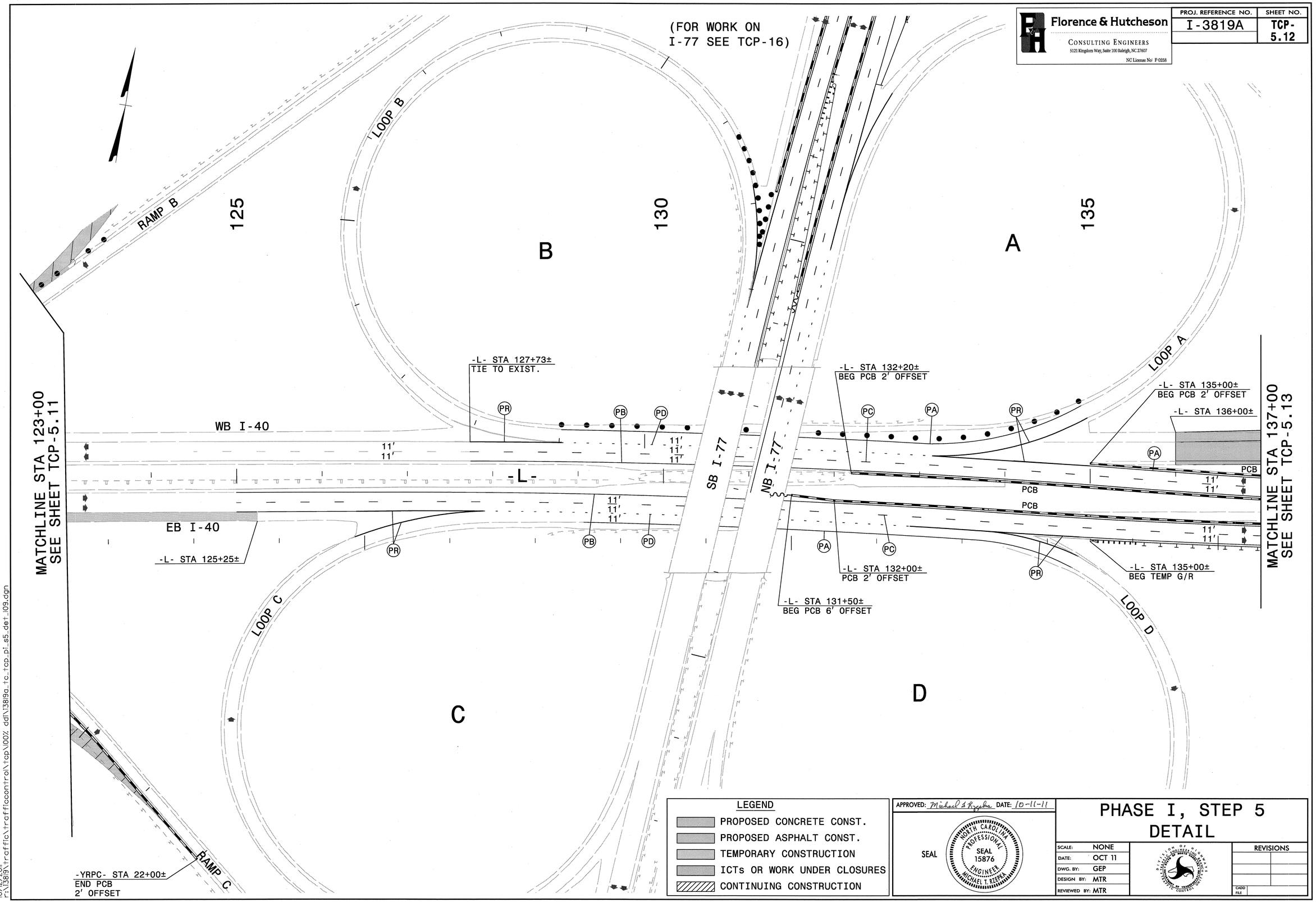

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5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-5.12
(FOR WORK ON I-77 SEE TCP-16)
RAMP B
LOOP B
125
130
135
B
A
C
D
LOOP A
LOOP C
LOOP D
RAMP C
WB I-40
EB I-40
SB I-77
NB I-77
-L-
MATCHLINE STA 123+00 SEE SHEET TCP-5.11
MATCHLINE STA 137+00 SEE SHEET TCP-5.13
-L- STA 127+73± TIE TO EXIST.
-L- STA 125+25±
-L- STA 132+20± BEG PCB 2' OFFSET
-L- STA 132+00± PCB 2' OFFSET
-L- STA 131+50± BEG PCB 6' OFFSET
-L- STA 135+00± BEG PCB 2' OFFSET
-L- STA 136+00±
-L- STA 135+00± BEG TEMP G/R
-YRPC- STA 22+00± END PCB 2' OFFSET
PR
PB
PD
PC
PA
PCB
11'
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE I, STEP 5
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pl_s5_det_109.dgn

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	I-3819A	TCP-5.13

MATCHLINE SEE THIS SHEET

-YRPA-

MATCHLINE STA 34+00 SEE SHEET TCP-5.16

-YRPBD-

-YRPAB-

MATCHLINE SEE THIS SHEET

140

145

150

RAMP A

-YRPBD- STA 40+00±

-YRPAB-

C (SEE TCP-5.5)

17 QUANTITY = 1630 SQ. FT.
TEMPORARY SHORING
-L- STA 139+00± TO STA 140+63±
18' LT OF -P1S4WB1-
(SEE SHEET TCP-5.19)

-L- STA 145+00±

MATCHLINE STA 137+00 SEE SHEET TCP-5.12

PROPOSED STRUCTURE

-L- STA 149+29±
BEG PCB 2' OFFSET

MATCHLINE STA 151+00 SEE SHEET TCP-5.14

WB I-40 PCB -L-

PA PC PB

-P1S4WB1-

11' 11'

-P1S4EB2-

TEMP. G/R

EB I-40

C

-L- STA 147+30±
END PCB 2' OFFSET

-YRPBD- STA 44+00±

RAMP D

-YRPBD-

MATCHLINE STA 45+50 SEE SHEET TCP-5.15

-YRPD-

MATCHLINE STA 23+50 SEE SHEET TCP-5.15

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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10/12/2011
c:\i3819\traffic\traffiocontrol\tcp\100% ddl\i3819a_tc_tcp_pi_s5_det_110.dgn

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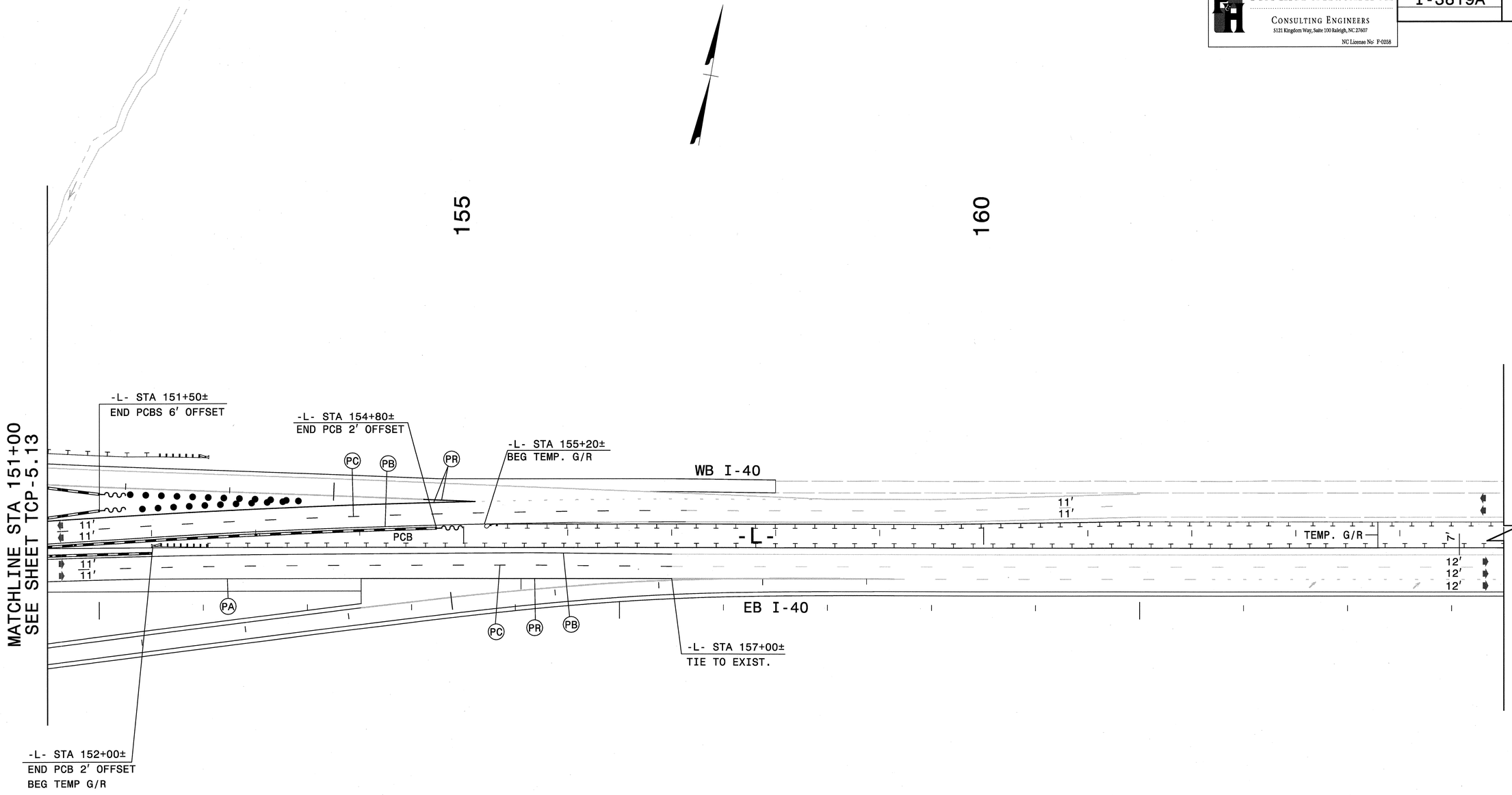
	I-3819A	TCP-5.14



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING BRANCH

REVISIONS	
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10/12/2011
r:\3819\traffic\trafficcontrol\tcp\00%_dd\i3819a_tc_tcp_pi_s5_det_III.dgn

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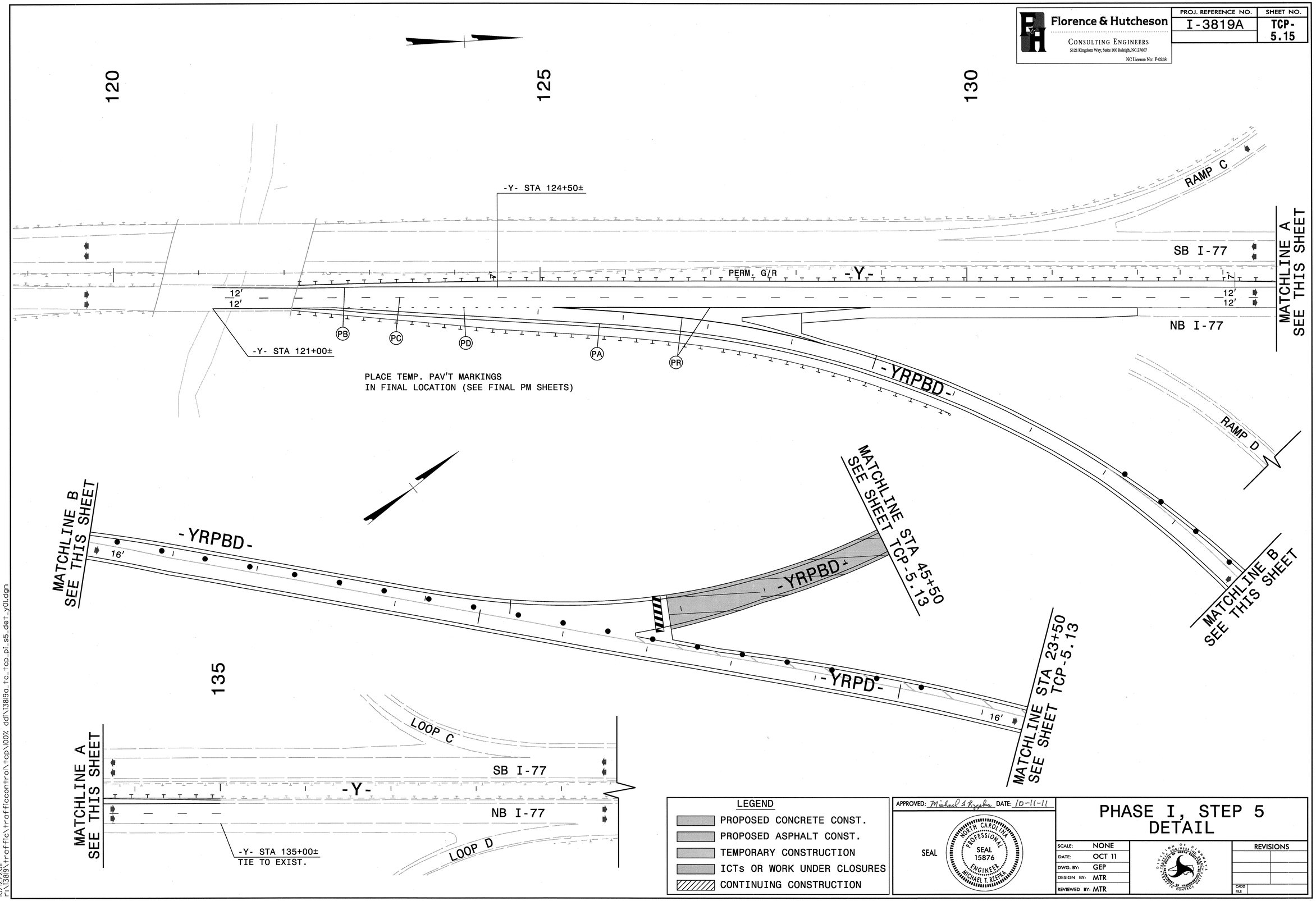

LEGEND

- PROPOSED CONCRETE CONST.
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APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

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

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10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pi_s5_det_y01.dgn

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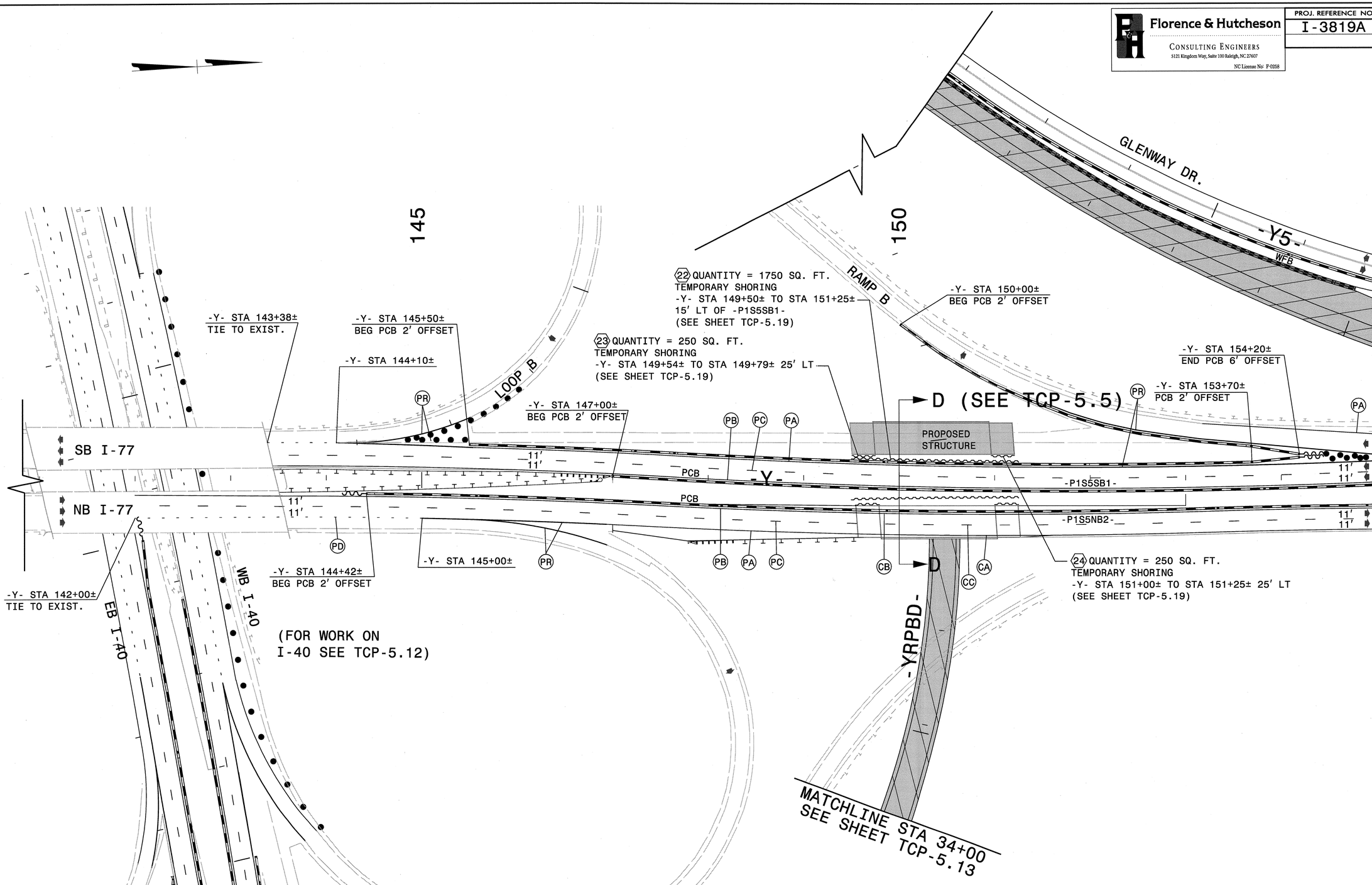

LEGEND

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APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

SCALE:	NONE
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REVIEWED BY:	MTR

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CADD FILE

10/12/2011
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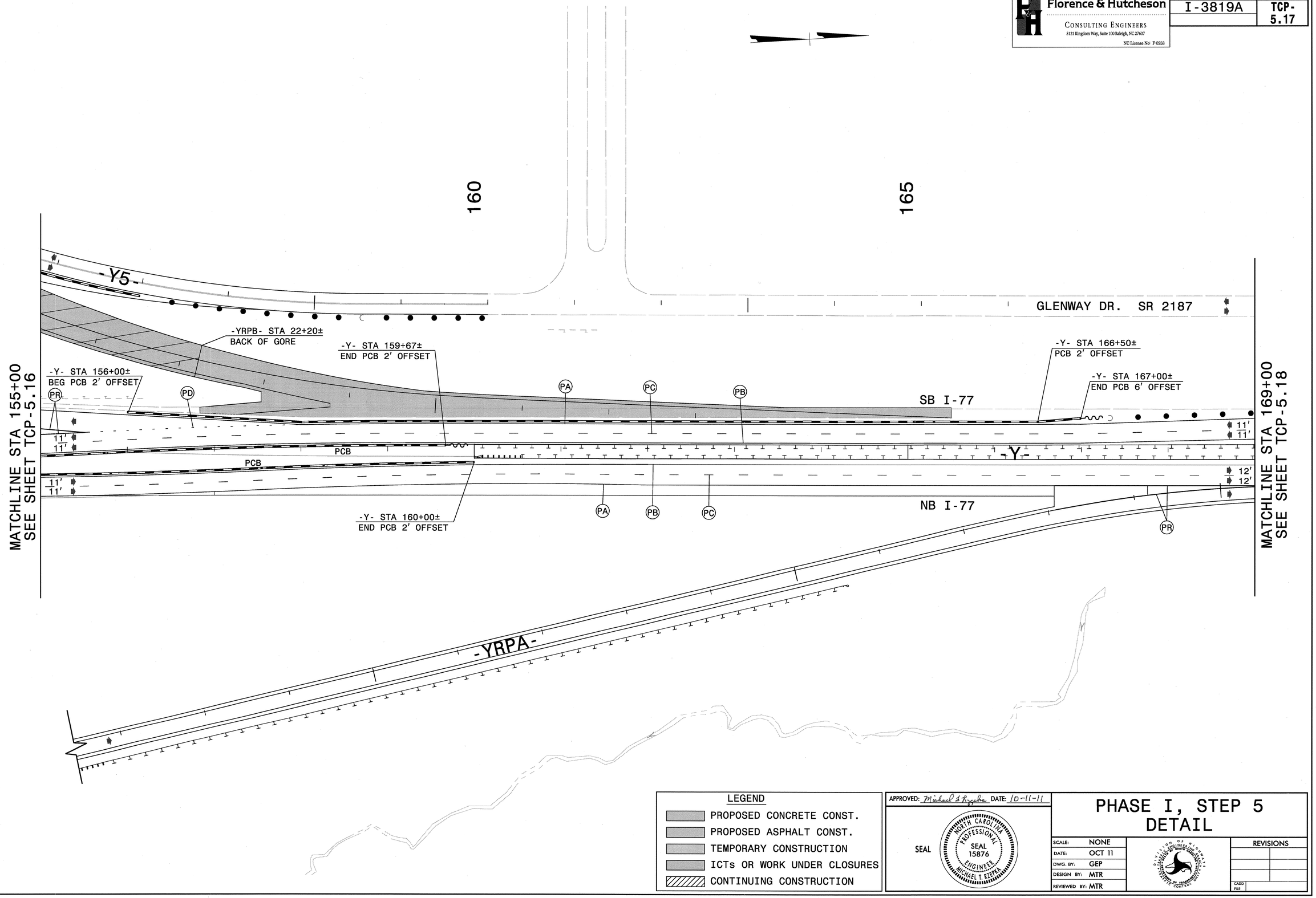
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.17



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
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Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-5.18

170

175

180

GLENWAY DR. SR 2187

MATCHLINE STA 169+00
SEE SHEET TCP-5.17

PA

PB

PC

11'
11'

SB I-77

12'
12'
12'

NB I-77

MATCHLINE STA 183+00
SEE BELOW

185

MATCHLINE STA 183+00
SEE ABOVE

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 5 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
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NC License No: P-0958

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-5.19

TEMPORARY SHORING NOTES

TEMPORARY SHORING NO. 17 (SEE SHEET TCP-5.13)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 139+00± -L- TO STATION 140+63± -L-, 18′ LEFT OF -P1S4WB1-.

DESIGN TEMPORARY SHORING FROM STATION 139+00± -L- TO STATION 140+63± -L-, 18′ LEFT OF -P1S4WB1-, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 30 DEGREES
COHESION C = 0 LB/SF

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 139+00± -L- TO STATION 140+63± -L-, 18′ LEFT OF -P1S4WB1-. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 139+00± -L- TO STATION 140+63± -L-, 18′ LEFT OF -P1S4WB1-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 22 (SEE SHEET TCP-5.16)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 149+50± -Y- TO STATION 151+25± -Y-, 15′ LEFT OF -P1S5SB1-.

DESIGN TEMPORARY SHORING FROM STATION 149+50± -Y- TO STATION 151+25± -Y-, 15′ LEFT OF -P1S5SB1-, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 30 DEGREES
COHESION C = 0 LB/SF

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 149+50± -Y- TO STATION 151+25± -Y-, 15′ LEFT OF -P1S5SB1-. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 149+50± -Y- TO STATION 151+25± -Y-, 15′ LEFT OF -P1S5SB1-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 23 (SEE SHEET TCP-5.16)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 149+54± -Y- TO STATION 149+79± -Y-, 25′ LEFT.

DESIGN TEMPORARY SHORING FROM STATION 149+54± -Y- TO STATION 149+79± -Y-, 25′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 30 DEGREES
COHESION C = 0 LB/SF

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 149+54± -Y- TO STATION 149+79± -Y-, 25′ LEFT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 149+54± -Y- TO STATION 149+79± -Y-, 25′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 24 (SEE SHEET TCP-5.16)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 151+00± -Y- TO STATION 151+25± -Y-, 25′ LEFT.

DESIGN TEMPORARY SHORING FROM STATION 151+00± -Y- TO STATION 151+25± -Y-, 25′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 30 DEGREES
COHESION C = 0 LB/SF

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 151+00± -Y- TO STATION 151+25± -Y-, 25′ LEFT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 151+00± -Y- TO STATION 151+25± -Y-, 25′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 12-16-11 AND SEALED BY A PROFESSIONAL ENGINEER, ERIC N. WILLIAMS, PE, LICENSE #026962.

APPROVED: Michael T Kiepka DATE: 1-4-12

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KIEPKA

TEMPORARY SHORING NOTES

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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1/4/2012
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NC License No: F-0268

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.1

PHASE I, STEP 6

STEP 6

USING RSD 1101.02 (SHEETS 9 & 10 OF 15), COMPLETE THE FOLLOWING ON -P1S5EB3- (SEE TCP-6.9 THRU TCP-6.14):

- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -P1S5EB3-
- INSTALL PCB ALONG -P1S5EB3- MEDIAN LANE AND KEEP MEDIAN LANE CLOSED
- OPEN -P1S5EB3- TO I-77 RAMP C TRAFFIC AND OPEN TEMPORARY I-77 RAMP C TIE FROM -P1S5EB3- TO EXISTING I-77 RAMP C
- CLOSE EXISTING I-77 RAMP C ACCESS FROM EB I-40
- OPEN TEMPORARY US 21 RAMP D TIE FROM -P1S5EB3- TO TEMPORARY WIDENING OF I-40 NEAR -L- STA 114+00±
- CLOSE TEMPORARY US 21 RAMP D TIE FROM -P1S5EB3- TO TEMPORARY WIDENING OF I-40 NEAR -L- STA 102+00±

USING RSD 1101.02 (SHEET 3 OF 15), CONSTRUCT REMAINING -P1S5EB3- FROM -L- STA 119+15± TO EXISTING EB I-40 (SEE TCP-6.13 THRU TCP-6.14).

USING RSD 1101.02 (SHEET 3 OF 15), PLACE PCB ALONG EB I-40 OUTSIDE LANE AND CONSTRUCT -P2EB5- PAVEMENT FROM -L- STA 25+50± TO STA 53+00± (SEE TCP-6.6 THRU TCP-6.9).

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING ON WB I-40 EAST OF I-77 (SEE TCP-6.14 THRU TCP-6.16):

- REMOVE PCB ALONG -P1S4WB1- OUTSIDE LANE
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON PROPOSED WB I-40 AND TIE TO EXISTING
- SHIFT WB I-40 TRAFFIC TO PROPOSED LANES
- WEDGE WB I-40 LANES UNDER TRAFFIC FROM -L- STA 144+00± TO STA 158+00±
- INSTALL/RESET PCB ALONG WB I-40 MEDIAN LANE

BEHIND BARRIER, INSTALL TEMPORARY SHORING AND CONSTRUCT PROPOSED EB I-40 STRUCTURE OVER -YRPBD- AND ROADWAY APPROACHES FROM -L- STA 136+00± TO STA 144+00±. CONSTRUCT PROPOSED MEDIAN PAVED SHOULDER TO -L- STA 150+00± (SEE TCP-6.14 & 6.15).

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING ON I-77 NORTH OF I-40 (SEE TCP-6.13 & TCP-6.17 THRU TCP-19):

- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -YRPB-, -YRPBD- AND TEMPORARY RAMP TIE FROM -YRPBD- TO EXISTING I-77 RAMP B
- REMOVE PCB ALONG -P1S5SB1- OUTSIDE LANE ADJACENT TO PROPOSED -YRPB-
- SHIFT I-77 RAMP B TRAFFIC TO PROPOSED -YRPB-, -YRPBD- AND TEMPORARY RAMP TIE TO EXISTING RAMP B
- CLOSE EXISTING RAMP B ACCESS FROM SB I-77.

BEHIND BARRIER, CONSTRUCT PROPOSED SB I-77 FROM -L- STA 145+50± TO STA 157+00± (SEE TCP-6.17 & 6.18).

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -YRPBD- FROM STA 26+00± TO SB I-77 PORTION OF PROPOSED STRUCTURE (SEE TCP-6.17 & 6.19).

COMPLETE CONSTRUCTION OF SB I-77 PORTION OF PROPOSED STRUCTURE OVER -YRPBD-.

WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK STEP 6A IN 10 CONSECUTIVE DAYS (SEE INTERMEDIATE CONTRACT TIME AND SPECIAL PROVISIONS).

STEP 6A

CLOSE I-77 LOOP B ACCESS FROM WB I-40 (SEE TCP-6.20 FOR DETOUR ROUTE).

EXTEND PCB ON SB I-77 FROM -Y- STA 145+50 TO EXISTING SB I-77 BRIDGE OVER I-40 (SEE TCP-6.17).

CONSTRUCT PROPOSED I-77 LOOP B AND TIE TO EXISTING SB I-77 LANES (SEE TCP-6.17).

REMOVE PCB TO -Y- STA 145+50± AND PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS.

REMOVE LOOP B CLOSURE AND REOPEN TO TRAFFIC.

APPROVED: Michael T Kozma DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KOZMA

PHASE I, STEP 6 PHASING

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

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

REVISIONS

CADD FILE

1/4/2012
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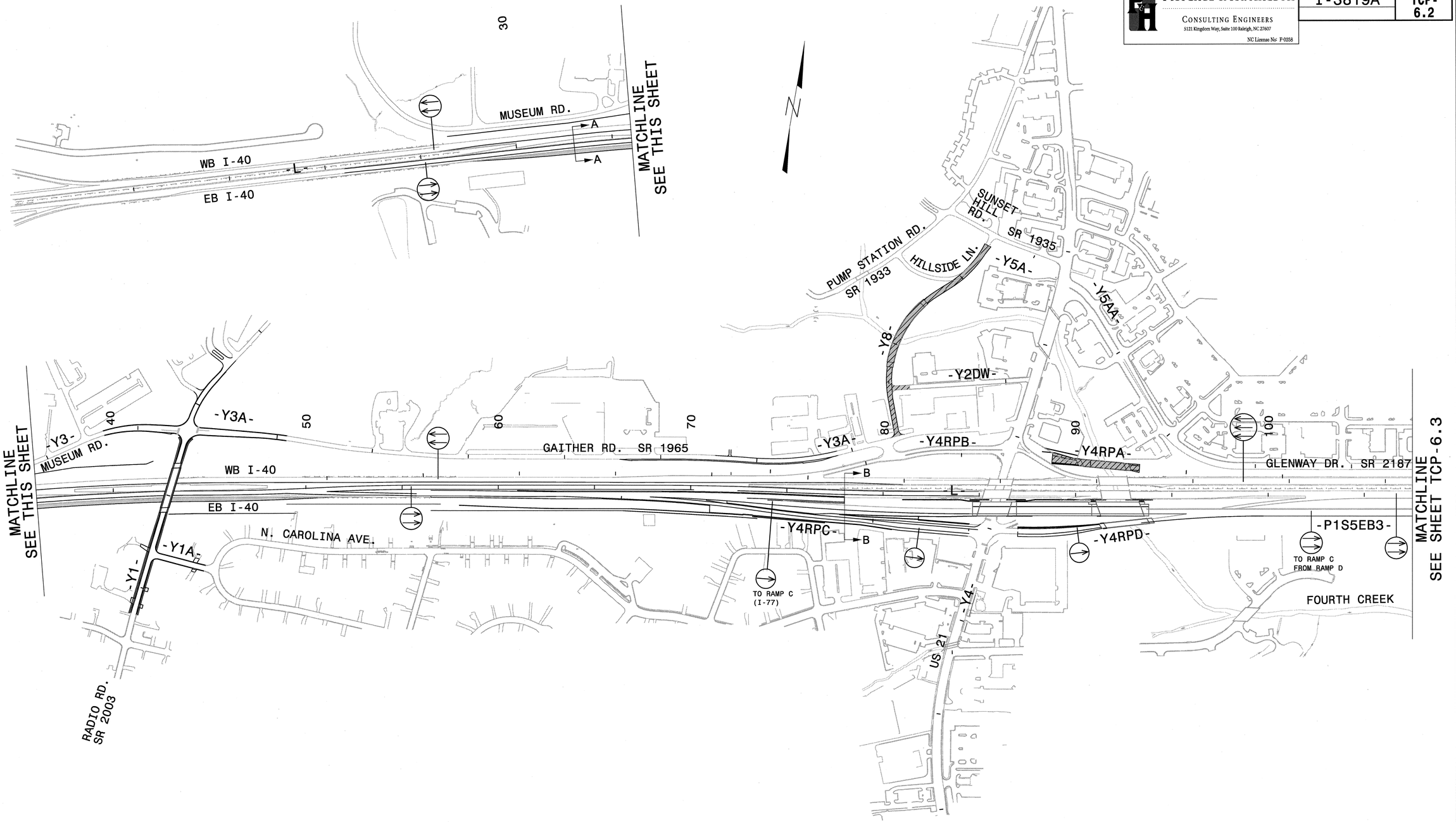
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.2



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 6 OVERVIEW SHEET 1 OF 2

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/2/2011
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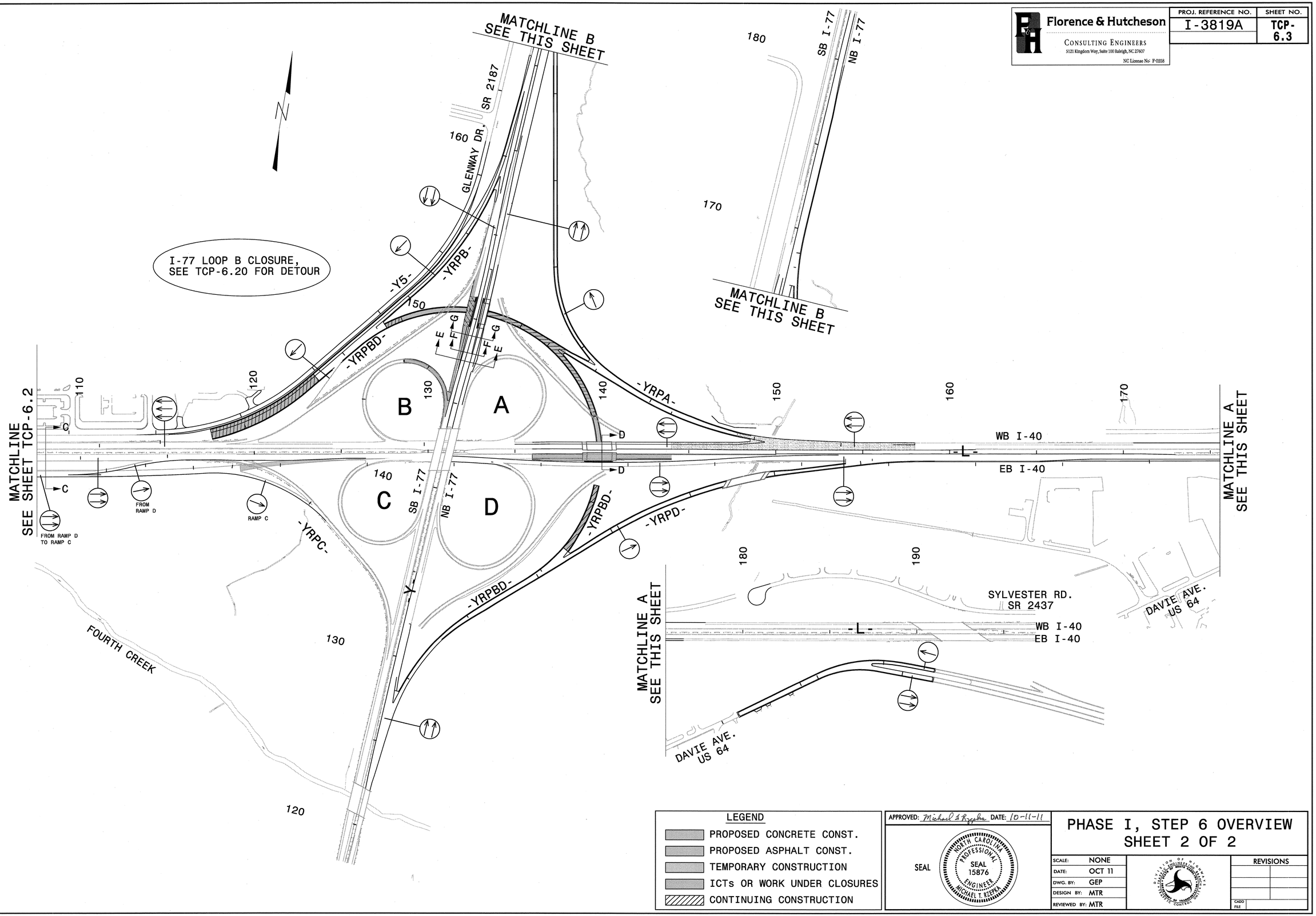
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.3



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 OVERVIEW SHEET 2 OF 2

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

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

REVISIONS	
CADD FILE	

10/12/2011
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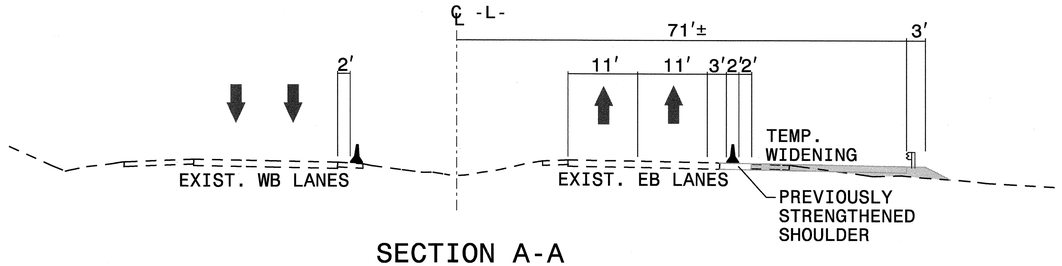
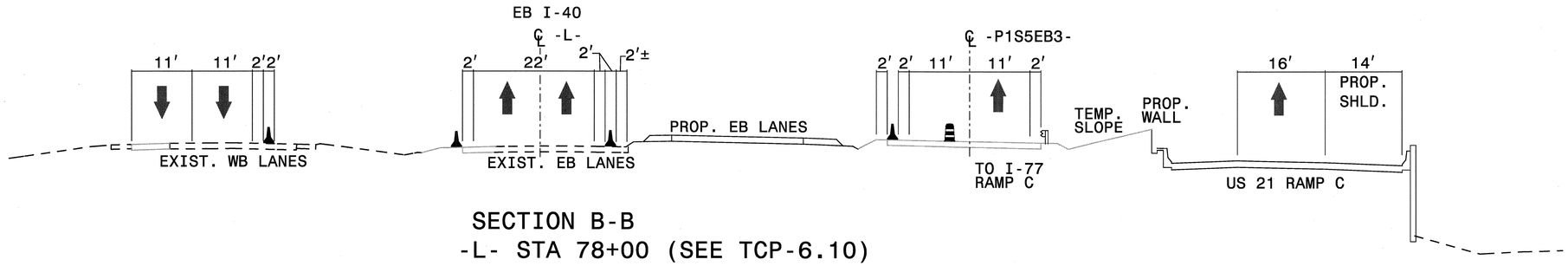
NC License No: P-0258

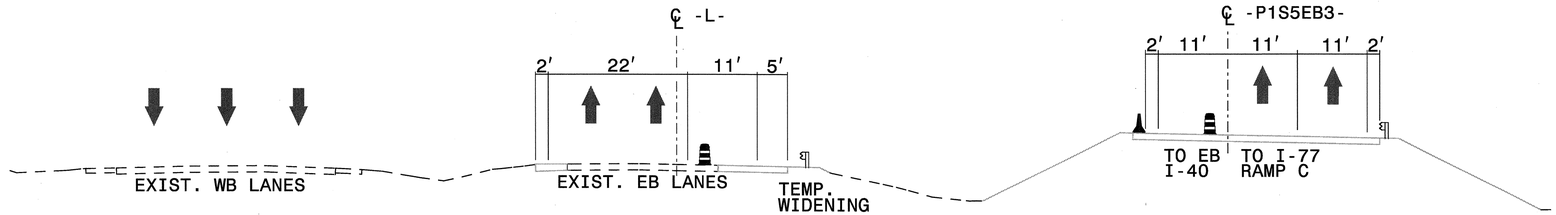
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.4



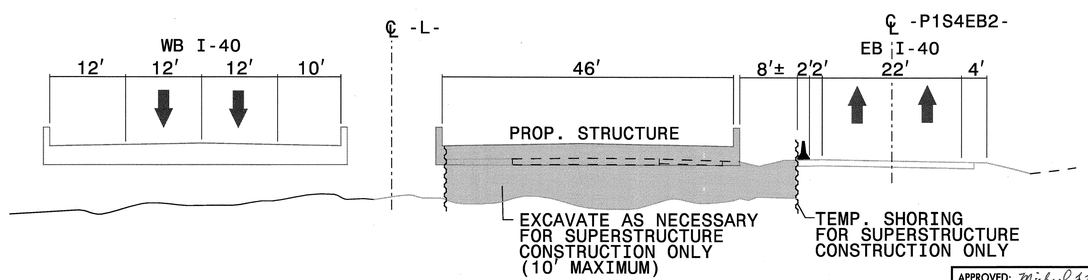
SECTION A-A
-L- STA 33+00 (SEE TCP-6.7)



SECTION B-B
-L- STA 78+00 (SEE TCP-6.10)



SECTION C-C
-L- STA 108+00 (SEE TCP-6.12)



SECTION D-D
-L- STA 140+00 (SEE TCP-6.15)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 SECTIONS

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

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

REVISIONS	
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10/12/2011
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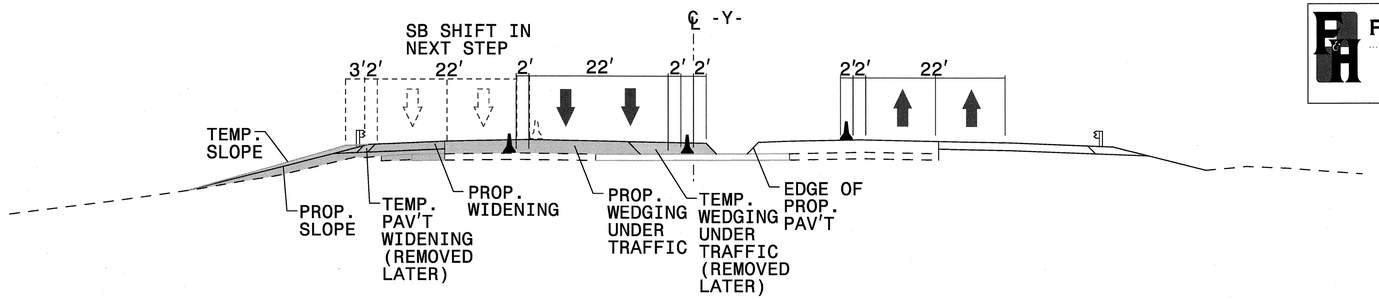
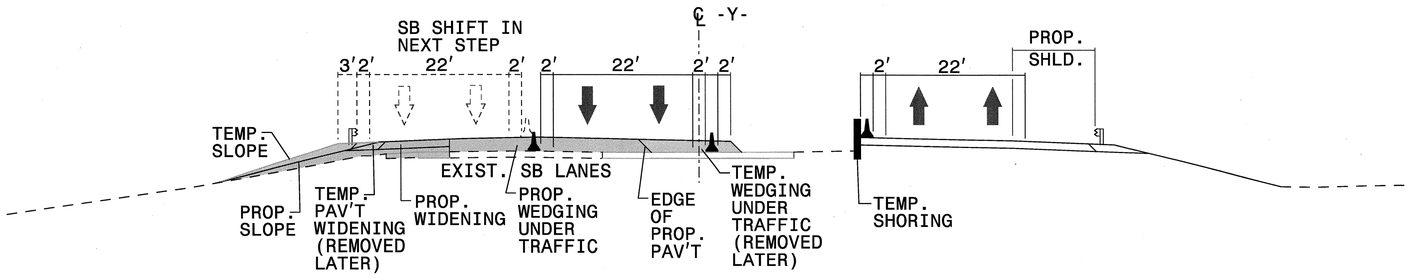
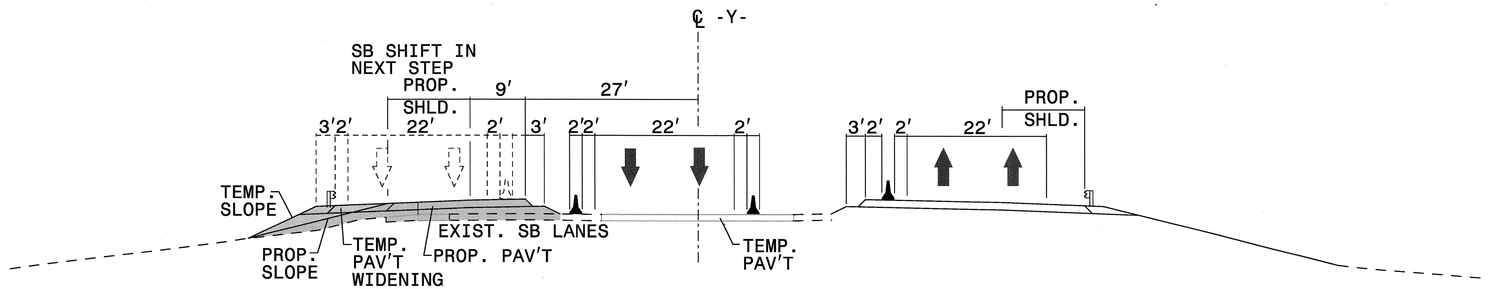
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.5



SECTION E-E
-Y- STA 147+50 (SEE TCP-6.17)



SECTION F-F
-Y- STA 148+00 (SEE TCP-6.17)



SECTION G-G
-Y- STA 149+00 (SEE TCP-6.17)

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 SECTIONS

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
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CONSULTING ENGINEERS
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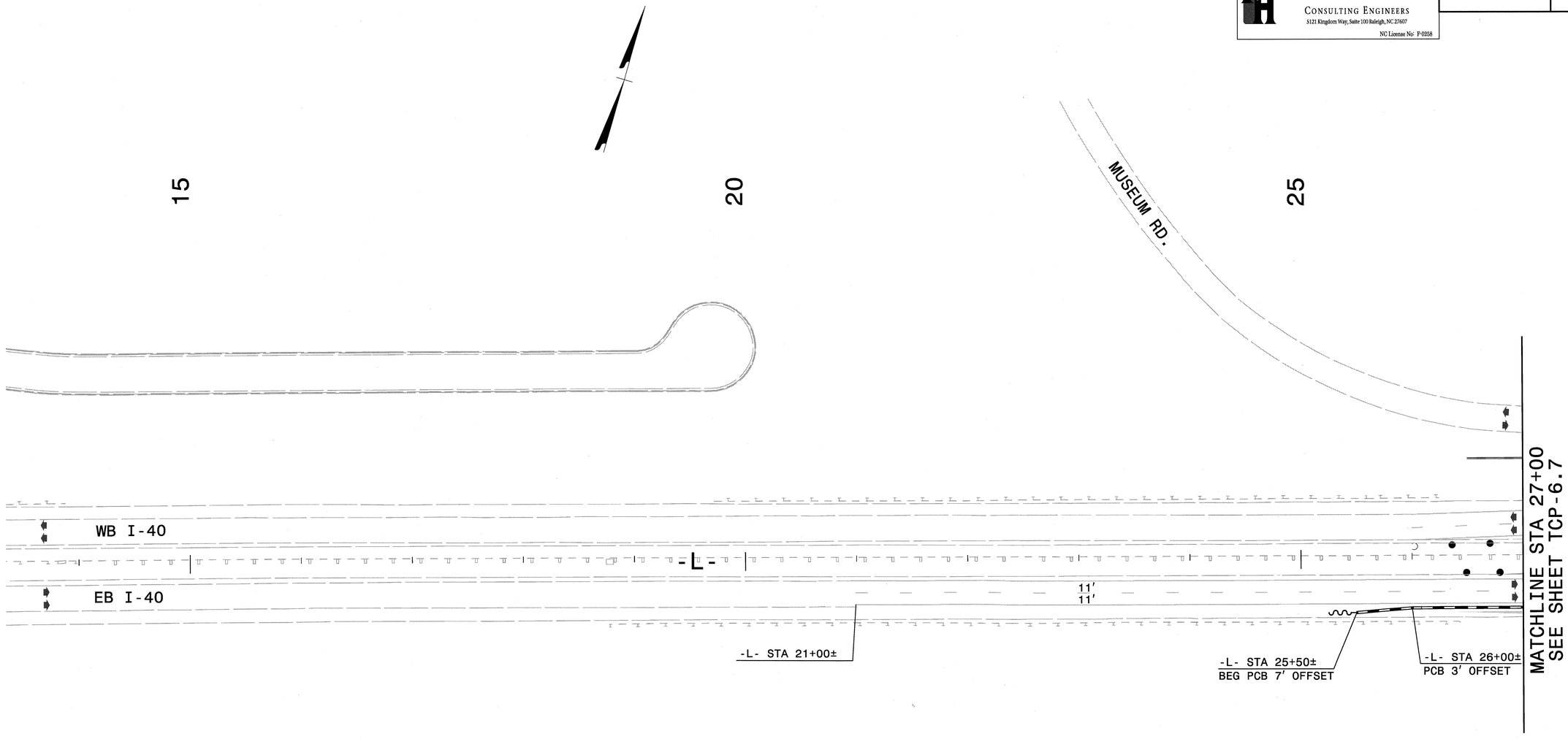
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.6



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
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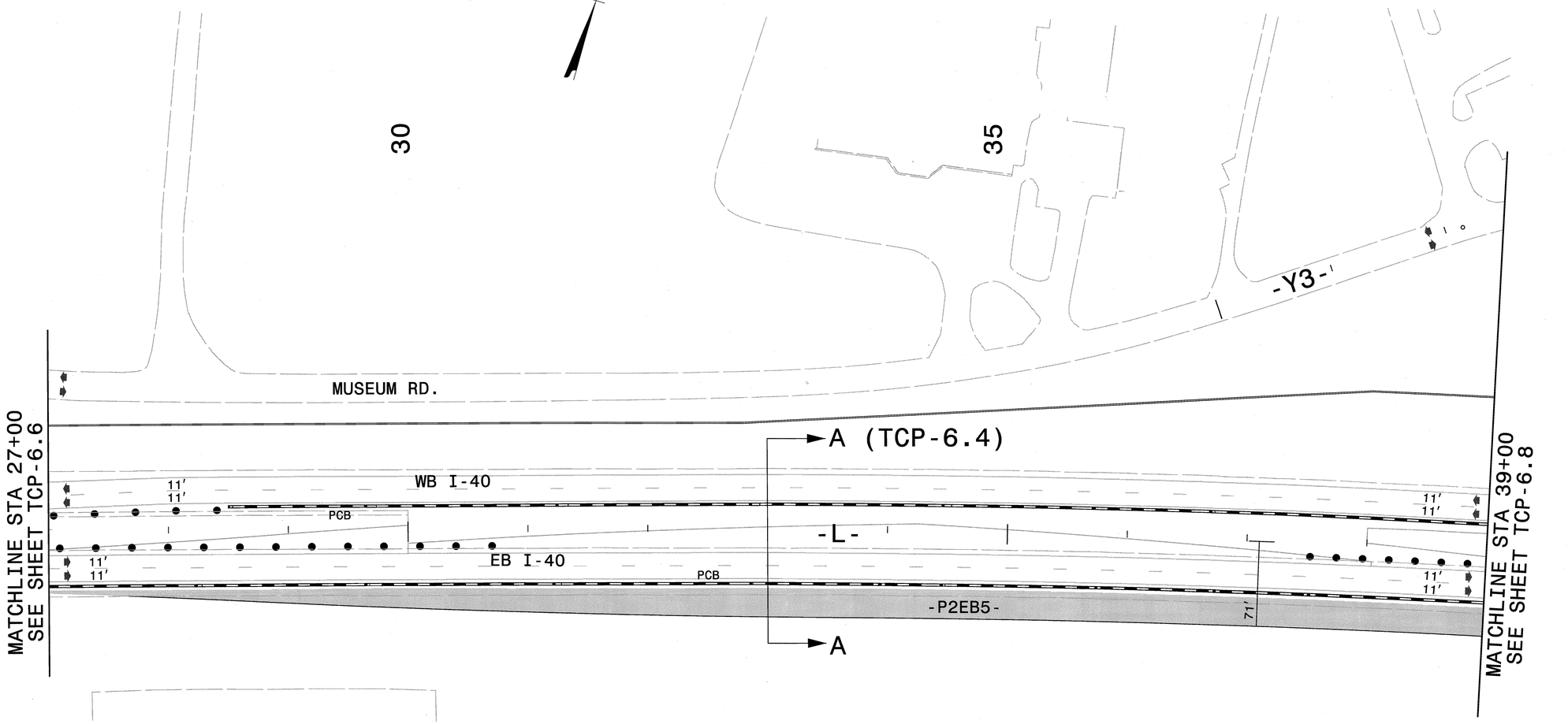
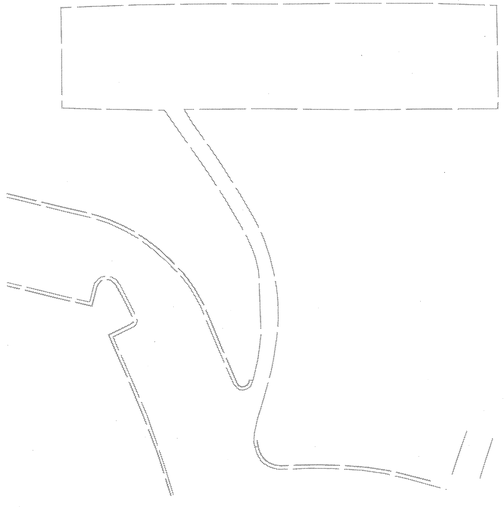
Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-6.7





LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

DIVISION OF HIGHWAYS

REVISIONS	
CADD FILE	

10/12/2011
P:\I3819\traffic\trafficcontrol\tcp\00%_dd\I3819a_tc_tcp_pi_s6_det_02.dgn

Florence & Hutcheson
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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.8

40

-Y3-

MUSEUM RD.

45

-Y3A-

50

GAITHER RD. SR 1965

MATCHLINE STA 39+00
SEE SHEET TCP-6.7

-Y1-

WB I-40

11'
11'

PCB
PCB

-L-

EB I-40

11'
11'
11'
11'

71'

-P2EB5-

-L- STA 49+13±

11'
11'
11'
11'
16'

MATCHLINE STA 53+00
SEE SHEET TCP-6.9

RADIO RD. SR 2003

-Y1A-

BST
CONC
CONC

N. CAROLINA AVE.

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

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

REVISIONS

CADD FILE

10/12/2011
R:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pl_s6_det_103.dgn

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.9

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pl_s6_det_104.dgn

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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.10

70

75

80

-Y8-

GAITHER RD. SR 1965

-Y3A-

RAMP B

-LCDWB-

B (SEE TCP-6.4)

WB I-40

EB I-40

-L-

PCB

PCB

-P1S5EB3-

TEMP. G/R

-Y4RPC-

-Y4RPC- STA 19+35±

PA PB PC PD

11′ 11′ 2′ 11′ 11′ 11′ 11′ 11′ 11′ 11′ 11′ 16′ 16′ 12′

MATCHLINE STA 67+00
SEE SHEET TCP-6.9

MATCHLINE STA 81+00
SEE SHEET TCP-6.11

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

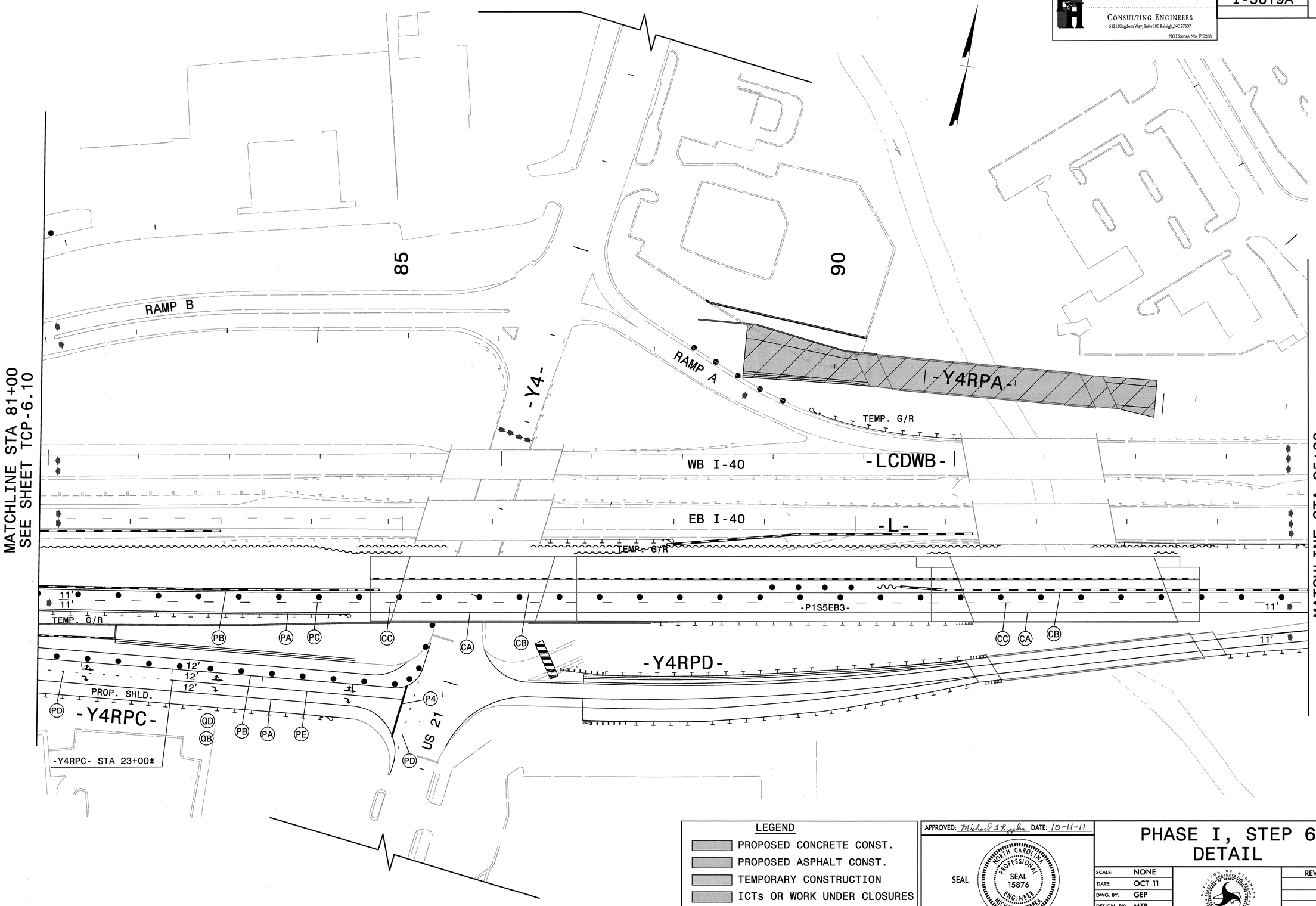
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
I:\3819\traffic\traffiocontrol\tcp\100% dd\I3819a_tc_tcp_pi_s6_det_105.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-6.11



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pi_s6_det_l06.dgn

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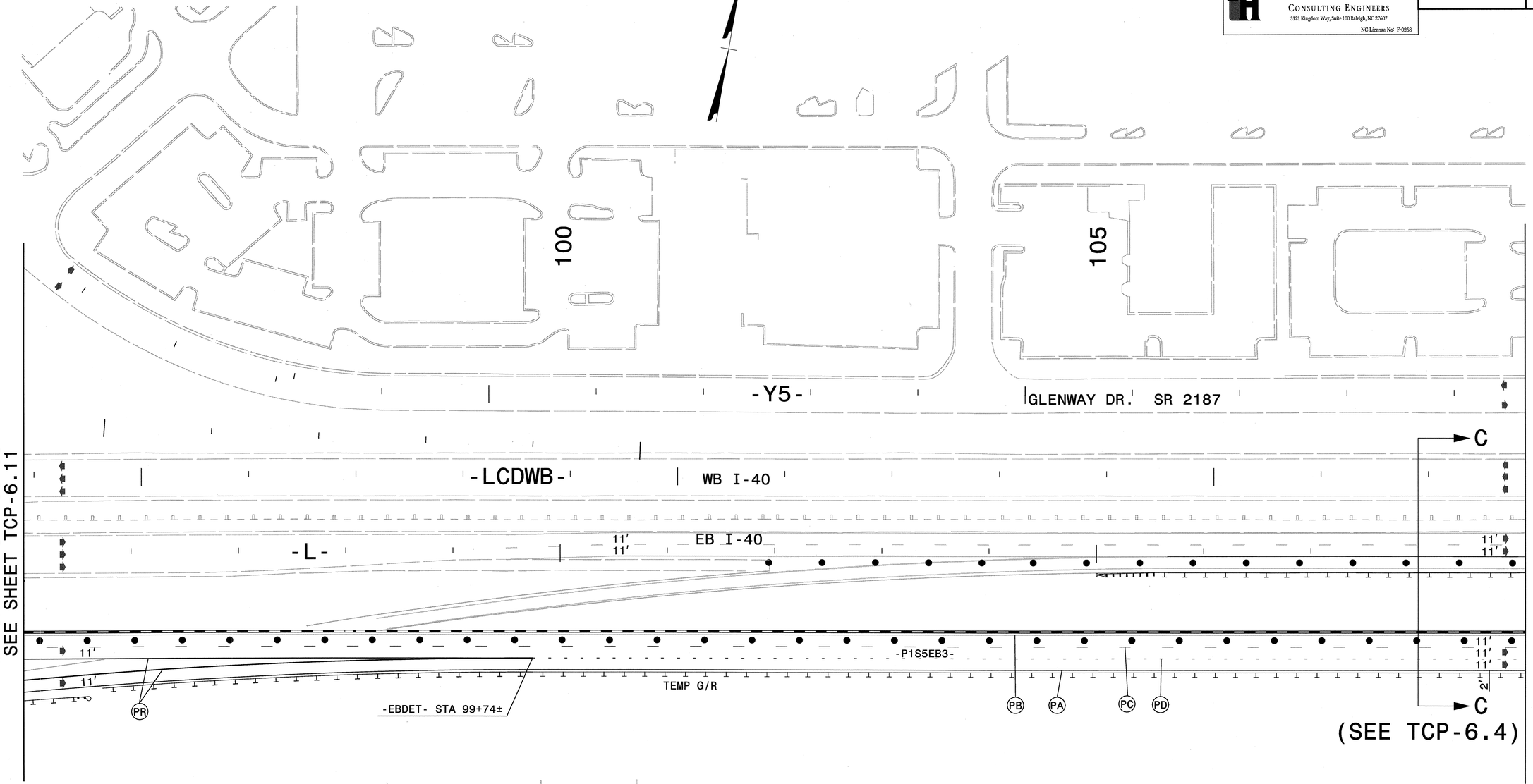
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.12



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
c:\i3819\traffic\trafficcontrol\tcp\100% ddi\i3819a_tc_tcp_pi_s6_det_107.dgn

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CONSULTING ENGINEERS
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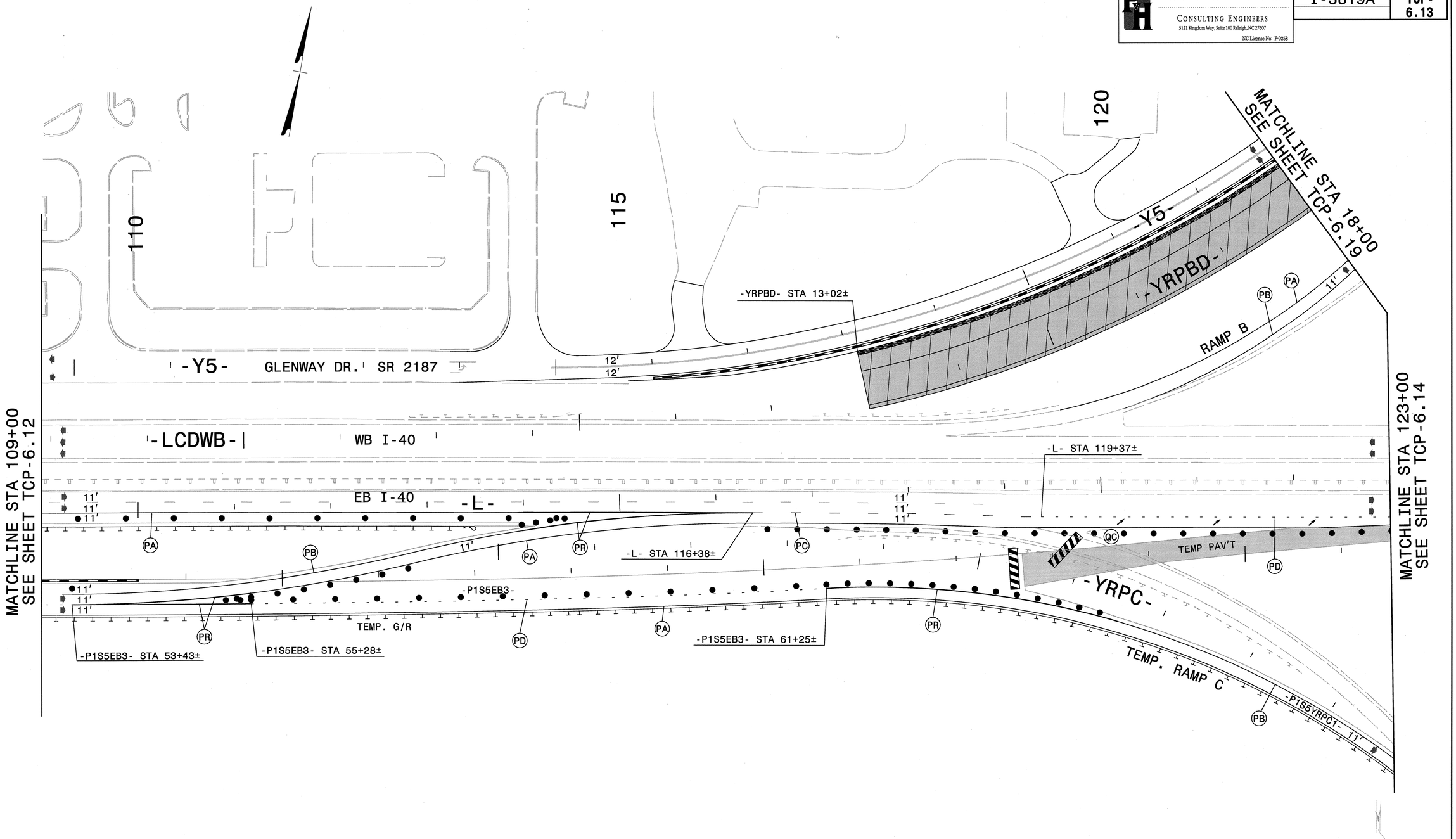
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.13



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

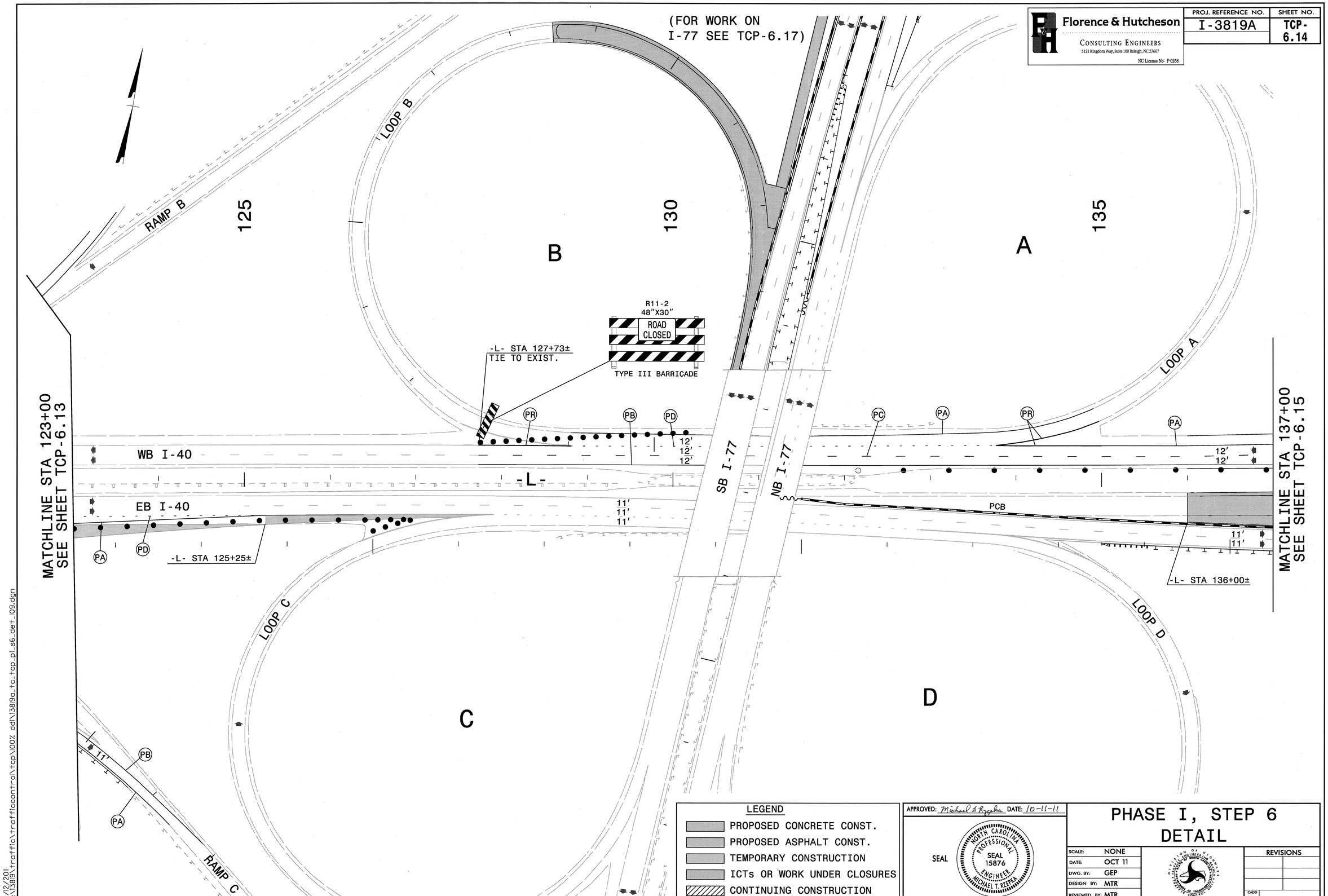
PHASE I, STEP 6 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pl_s6_det_l08.dgn



(FOR WORK ON
I-77 SEE TCP-6.17)
Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-6.14
RAMP B
LOOP B
125
130
135
B
A
R11-2
48"X30"
ROAD
CLOSED
TYPE III BARRICADE
-L- STA 127+73±
TIE TO EXIST.
LOOP A
MATCHLINE STA 123+00
SEE SHEET TCP-6.13
MATCHLINE STA 137+00
SEE SHEET TCP-6.15
WB I-40
EB I-40
-L-
SB I-77
NB I-77
PCB
-L- STA 125+25±
-L- STA 136+00±
LOOP C
LOOP D
C
D
RAMP C
PA
PB
PC
PD
PR
12'
11'
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE I, STEP 6
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pl_s6_det_l09.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-6.15

-YRPA-

MATCHLINE SEE THIS SHEET

MATCHLINE STA 34+00 SEE SHEET TCP-6.17

-YRPBD-

-YRPAB-

-YRPAB- STA 27+00± BACK OF GORE

MATCHLINE SEE THIS SHEET

140

145

150

RAMP A

-YRPAB-

D

-L- STA 144+00±

WEDGE UNDER LANE CLOSURES

PA PC CA CC CB PB PA PR

MATCHLINE STA 137+00 SEE SHEET TCP-6.14

12′ 12′

WB I-40

-L-

MATCHLINE STA 151+00 SEE SHEET TCP-6.16

12′ 12′

PCB

-P1S4EB2-

11′ 11′

EB I-40

-L- STA 147+00±

-L- STA 150+00±

D (SEE TCP-6.4)

18 QUANTITY = 1630 SQ. FT.
TEMPORARY SHORING
-L- STA 139+00± TO STA 140+63±
18′ LT OF -P1S4EB2-
(SEE SHEET TCP-6.21)

-YRPBD-

16′

-YRPD-

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

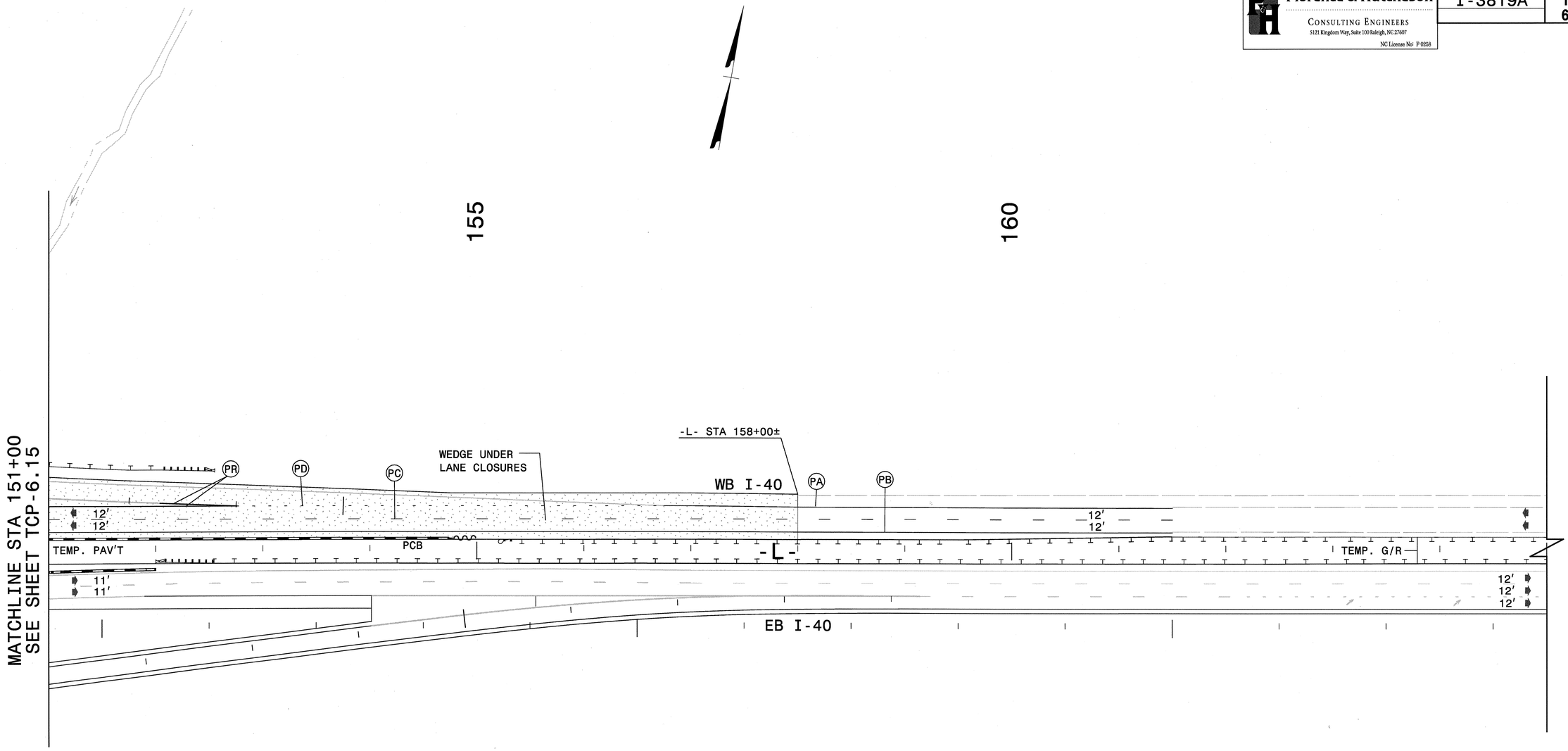
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
I:\3819\traffic\trafficcontrol\tcp\100% dd\I3819a_tc_tcp_p1_s6_det_110.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-6.16



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

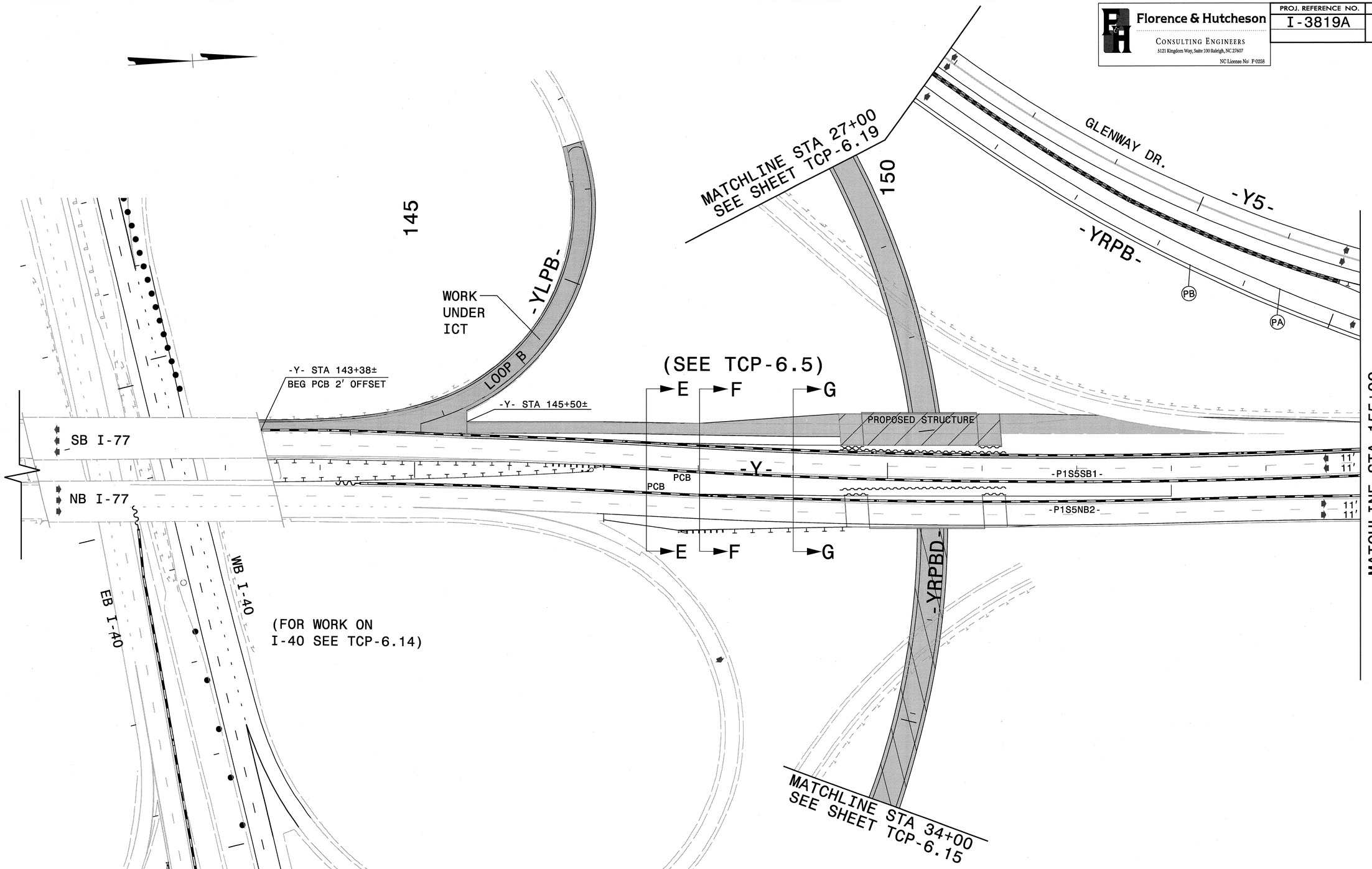
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS	
CADD FILE	

10/12/2011
r:\13819\traffic\trafficcontrol\top\00%_dd\I3819a_tc_top_pi_s6_det_III.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-6.17



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
R:\13819\traffic\trafficcontrol\tcp\007; dd\13819a_tc_tcp_pi_s6_det_y02.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-6.18

160

165

GLENWAY DR. SR 2187

-Y5-

-YRPB-

-Y- STA 156+84±

-Y- STA 158+00±
PCB 2' OFFSET

-Y- STA 158+50±
END PCB 6' OFFSET

PR

PD

PA

SB I-77

11'
11'

PCB

PCB

-Y-

11'
11'

11'
11'

NB I-77

-YRPA-

MATCHLINE STA 155+00
SEE SHEET TCP-6.17

LEGEND	
	PROPOSED CONCRETE CONST.
	PROPOSED ASPHALT CONST.
	TEMPORARY CONSTRUCTION
	ICTs OR WORK UNDER CLOSURES
	CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\traffic control\tcp\100% ddl\3819a_tc_tcp_pi_s6_det_y03.dgn

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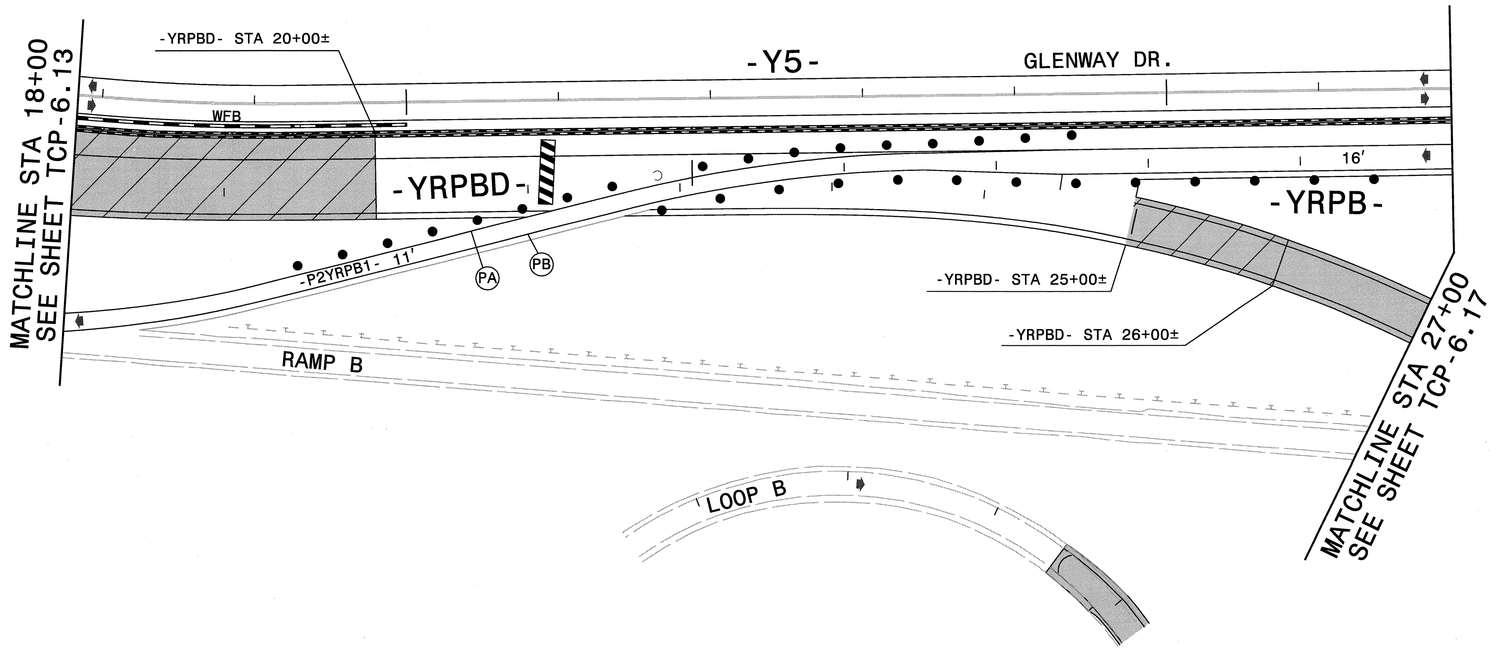
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.19

20

25



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE I, STEP 6 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\00% dd\3819a_tc_tcp_pl_s6_det_yrpbd01.dgn

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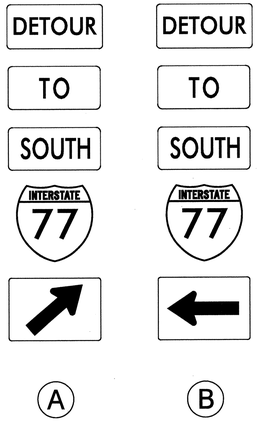
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.20



MESSAGE NO. 1	MESSAGE NO. 2
LOOP TO I-77 S CLOSED	DETOUR USE EXIT 151

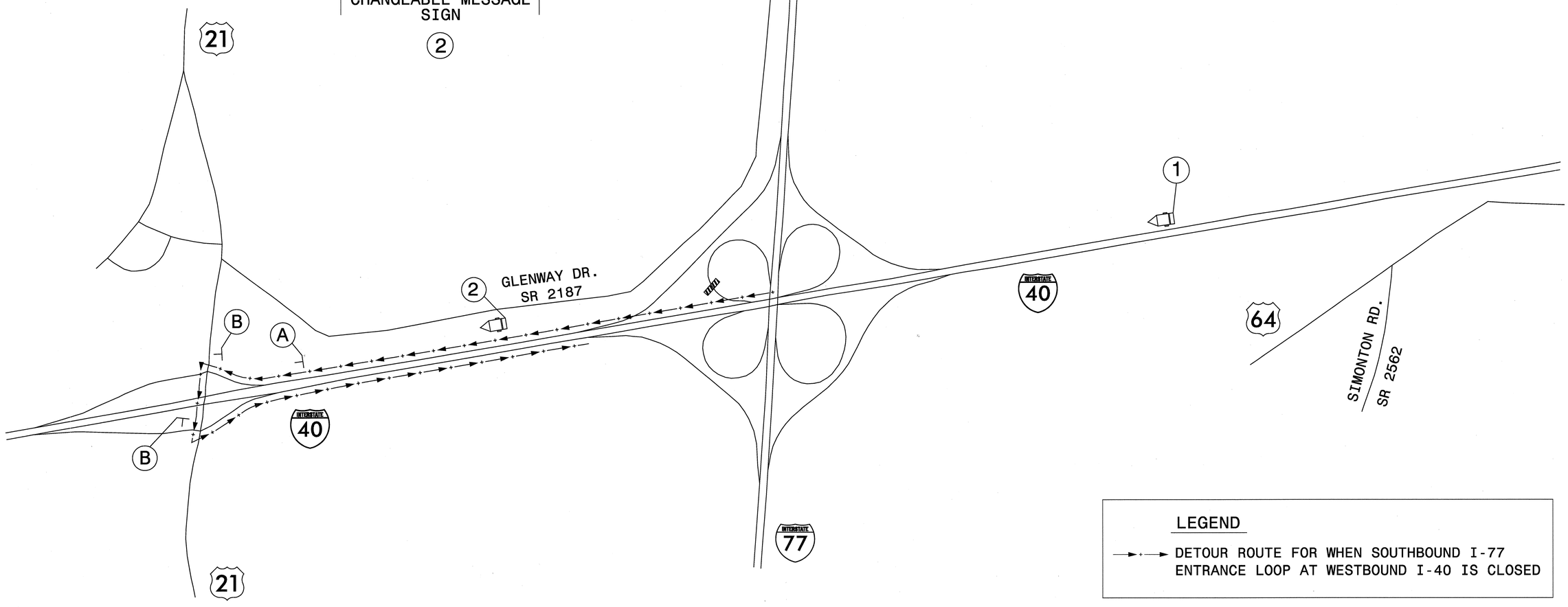
CHANGEABLE MESSAGE SIGN

1

MESSAGE NO. 1
DETOUR I-77 S NXT EXIT

CHANGEABLE MESSAGE SIGN

2



LEGEND

DETOUR ROUTE FOR WHEN SOUTHBOUND I-77 ENTRANCE LOOP AT WESTBOUND I-40 IS CLOSED

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE I, STEP 6
DETOUR FOR I-77 LOOP B CLOSURE

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
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10/12/2011
R:\3819\traffic\trafficcontrol\tcp\007. ddl\3819a_tc_tcp_pl_s6_detour_I77_lp_b.dgn

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0358

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-6.21

TEMPORARY SHORING NOTES

TEMPORARY SHORING NO. 18 (SEE SHEET TCP-6.15)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 139+00± -L- TO STATION 140+63± -L-, 15′ LEFT OF -P1S4EB2-.

DESIGN TEMPORARY SHORING FROM STATION 139+00± -L- TO STATION 140+63± -L-, 15′ LEFT OF -P1S4EB2-, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT γ = 120 LB/CF
FRICTION ANGLE φ = 30 DEGREES
COHESION C = 0 LB/SF

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 139+00± -L- TO STATION 140+63± -L-, 15′ LEFT OF -P1S4EB2-. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 139+00± -L- TO STATION 140+63± -L-, 15′ LEFT OF -P1S4EB2-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 12-16-11 AND SEALED BY A PROFESSIONAL ENGINEER, ERIC N. WILLIAMS, PE, LICENSE #026962.

APPROVED: Michael T Kiepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KIEPKA

TEMPORARY SHORING NOTES

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

DIVISION OF HIGHWAYS ENGINEERING BRANCH TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

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1/4/2012
P:\3819\traffic\trafficcontrol\tcp\100% ddt\3819a_tc_tcp_tempshoringnotes.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.1

PHASE II

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING FOR EB I-40 WEST OF I-77 (SEE TCP-7.6 THRU TCP-7.14):

- ALONG EB I-40 OUTSIDE LANE, REMOVE PCB FROM WESTERN PROJECT LIMIT TO -L- STA 33+00± AND ALONG -P1S3EB1- FROM -L- STA 46+00± TO STA 53+50±
- REMOVE DRUMS FROM -P1S5EB3- MEDIAN LANE
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -P2EB5- AND TIE TO EB I-40 AND ON -P1S5EB3- NEAR I-77 RAMP C
- SHIFT EB I-40 TRAFFIC TO -P2EB5- AND -P1S5EB3-
- CLOSE TEMPORARY US 21 RAMP D TIE FROM -P1S5EB3- TO EB I-40 NEAR -L- STA 114+00±
- INSTALL PCB ALONG -P1S5EB3- MEDIAN LANE FROM -L- STA 110+00± TO STA 129+50±

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING FOR EB I-40 EAST OF I-77 (SEE TCP-7.14 THRU TCP-7.16):

- REMOVE PCB ALONG -P1S4EB2- MEDIAN LANE
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON PROPOSED EB I-40 AND TIE TO EXISTING
- SHIFT EB I-40 TRAFFIC TO PROPOSED EB I-40 (11′ LANES) AND WEDGE UNDER TRAFFIC FROM -L- STA 144+00± TO STA 155+00±
- INSTALL PCB ALONG EB I-40 OUTSIDE LANE FROM -L- STA 134+50± TO STA 150+00±

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING ON I-77 NORTH OF I-40 (SEE TCP-7.17 & 7.18):

- REMOVE PCB ALONG SB I-77 OUTSIDE LANE (-P1S5SB1-)
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS FOR -P2SB2- AND TIE TO EXISTING.
- SHIFT SB I-77 TRAFFIC TO -P2SB2-
- INSTALL/RESET PCB ALONG SB I-77 MEDIAN LANE (-P2SB2-)

BEHIND BARRIER, CONSTRUCT MEDIAN I-40 CROSSOVER PAVEMENT (-P3S1WB2-) AND PROPOSED WB I-40 MEDIAN SHOULDER FROM STA 26+00± TO STA 27+00± (SEE TCP-7.6 & 7.7).

USING RSD 1101.02 (SHEET 3 OF 15), INSTALL PCB ALONG WB I-40 AT THE FOLLOWING LOCATIONS (SEE TCP-7.11 THRU TCP-7.14):

-L- STA 92+75± TO STA 99+00±, MEDIAN LANE
-L- STA 117+00± TO STA 132+00±, MEDIAN LANE
-L- STA 119+30± TO STA 123+50±, OUTSIDE LANE

BEHIND BARRIER AND EXISTING MEDIAN GUIDERAIL, CONSTRUCT THE I-40 MEDIAN CROSSOVER PAVEMENT -P3S1WB3-, -P3S1Y4RPA- & -P3S1YRPB2- (SEE TCP-7.11 THRU TCP-7.14).

AWAY FROM TRAFFIC, CONSTRUCT THE FOLLOWING TEMPORARY (SEE TCP-7.12 & 7.13):

- MEDIAN SHOULDER WIDENING ALONG EXISTING EB I-40 BETWEEN -P3S1Y4RPA- AND -P3S1YRPB2-
- OUTSIDE SHOULDER STRENGHTENING ALONG EXISTING EB I-40 FROM -L- STA 97+00± TO STA 102+00±

BEHIND BARRIER, CONSTRUCT PROPOSED EB I-40 OUTSIDE SHOULDER FROM PROPOSED EB I-40 STRUCTURE OVER -YRPBD- TO -L- STA 144+00±. REMOVE -P1S4EB2- TEMPORARY PAVEMENT (SEE TCP-7.14 & 7.15).

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -YRPBD- FROM WB I-40 STRUCTURE TO -YRPBD- STA 44+00± AND REMAINING PORTION UNDER I-77 STRUCTURE (SEE TCP-7.15 & 7.17).

BEHIND BARRIER, BEGIN CONSTRUCTION OF REMAINING CENTER PORTION OF PROPOSED I-77 STRUCTURE OVER -YRPBD- AND REMAINING ROADWAY APPROACHES FROM -Y- STA 144+90± TO STA 159+90±. REMOVE TEMPORARY MEDIAN PAVEMENT (SEE TCP-7.17 & 7.18).

COMPLETE CONSTRUCTION OF -Y8-, INCLUDING PROPOSED STRUCTURE, FROM -Y3A- TO -Y8- STA 22+17± BEGUN EARLIER.

WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK ON -Y4-, -Y5A- AND -Y5AA- BELOW IN 45 CONSECUTIVE DAYS (SEE INTERMEDIATE CONTRACT TIME AND SPECIAL PROVISIONS).

USING RSD 1101.03 (SHEET 2 OF 15), CLOSE SUNSET HILL RD. (-Y5A-) FROM PUMP STATION RD. TO US 21 (SEE TCP-7.19 & TCP-7.20 FOR DETOUR ROUTE).

AWAY FROM TRAFFIC, CONSTRUCT PROPOSED -Y5A- (SUNSET HILL RD.) AND -Y8- FROM -Y8- STA 22+17± TO -Y5A- (SEE TCP-7.19).

USING RSD 1101.02 (SHEET 1 & 3 OF 15), CONSTRUCT THE FOLLOWING PROPOSED:

-Y5AA- FROM US 21 TO -Y5AA- STA 16+11±
-Y4- FROM BRIDGE OVER FOURTH CREEK TO -Y4- STA 40+80±

PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON THE FOLLOWING (SEE TCP-8.10 & 8.15 FOR MARKINGS):

-Y4- FROM BRIDGE OVER FOURTH CREEK TO -Y4- STA 40+80±
-Y5A-
-Y5AA- FROM US 21 TO -Y5AA- STA 16+11±
-Y8-

COMPLETE THE FOLLOWING (SEE TCP-8.10 & 8.15):

- REMOVE ROAD CLOSURE AND REOPEN SUNSET HILL RD. TO PROPOSED TRAFFIC PATTERN.
- SHIFT TRAFFIC TO -Y4- AND -Y5AA- PROPOSED PATTERNS.
- OPEN -Y8- TO TRAFFIC.
- CLOSE ACCESS FROM GAITHER RD. TO US 21 RAMP B AND INSTALL PROPOSED GUARDRAIL ACROSS OPENING.

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II PHASING

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

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

REVISIONS

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1/4/2012
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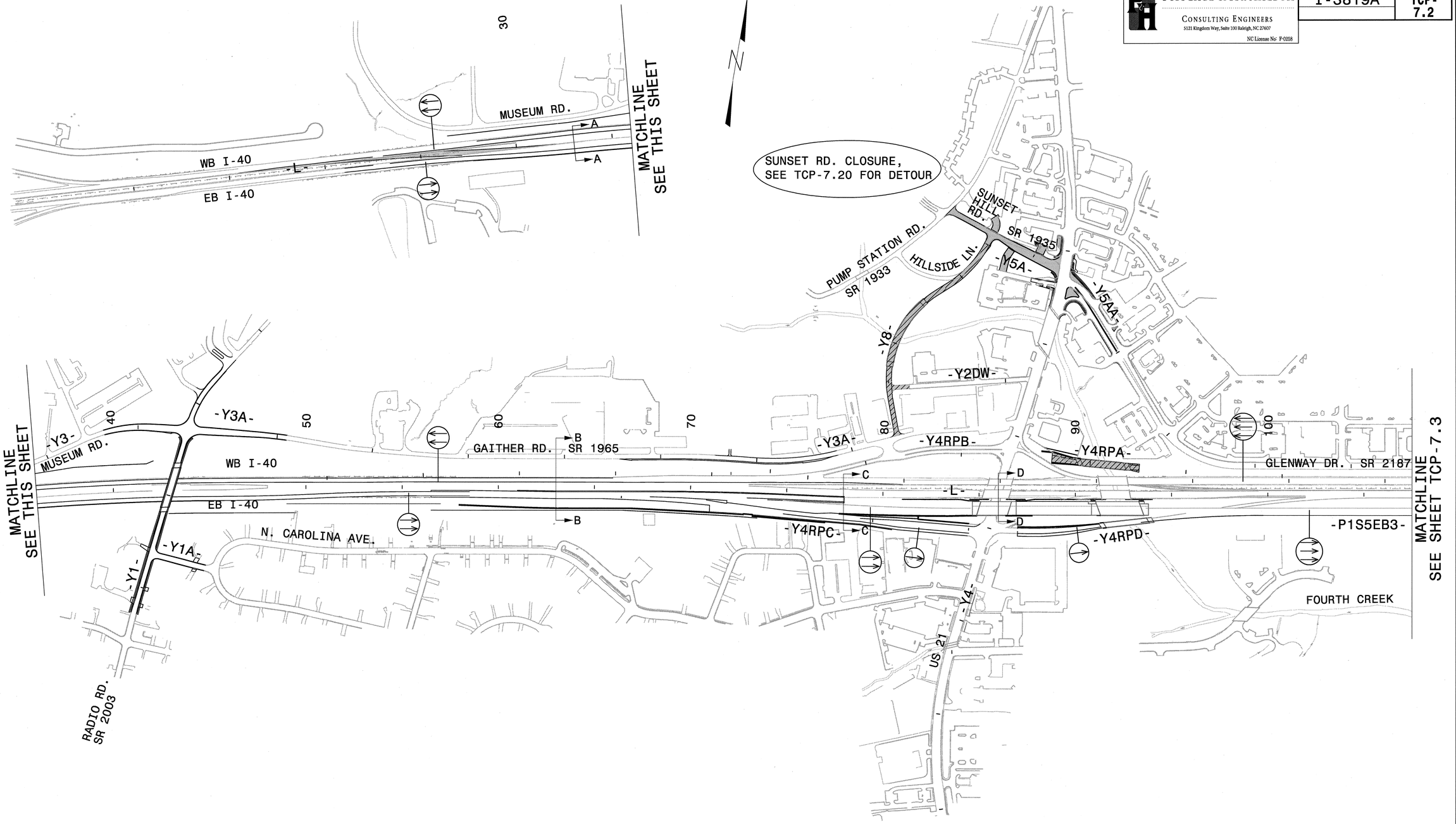
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.2



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

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

PHASE II OVERVIEW
SHEET 1 OF 2

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
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10/12/2011
R:\13819_traffic\trafficcontrol\tcp\00% ddl\13819a_tc_tcp_p1_ovw_a.dgn

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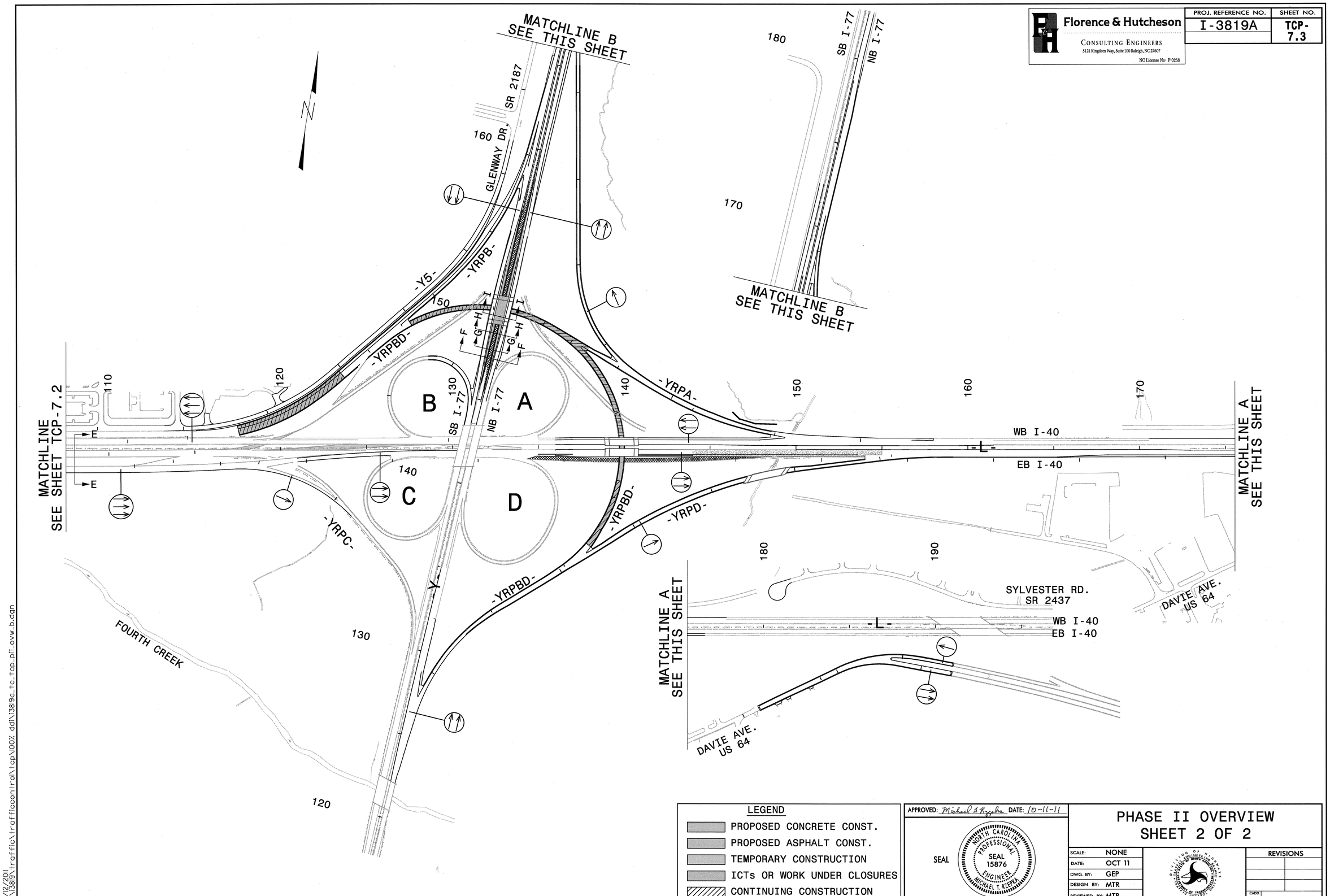
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-7.3



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II OVERVIEW
SHEET 2 OF 2

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

REVISIONS

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10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pll_ovw_b.dgn

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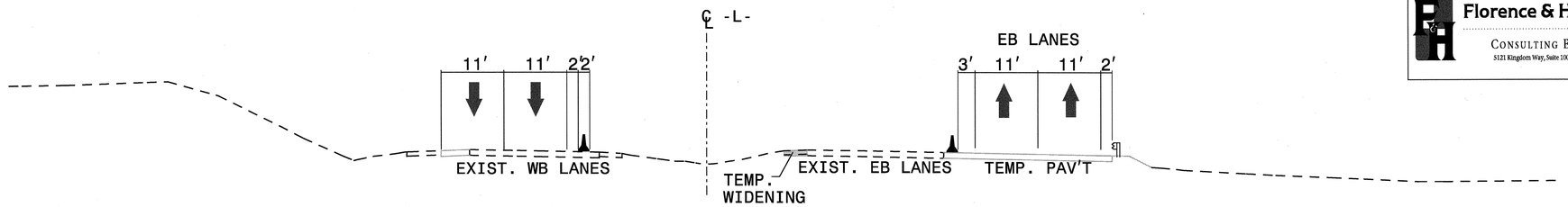
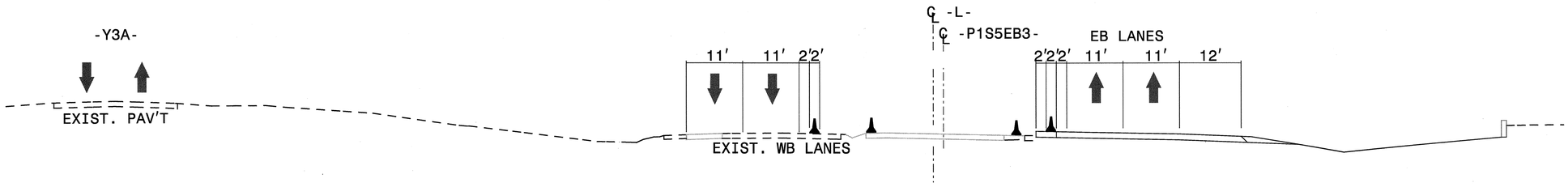
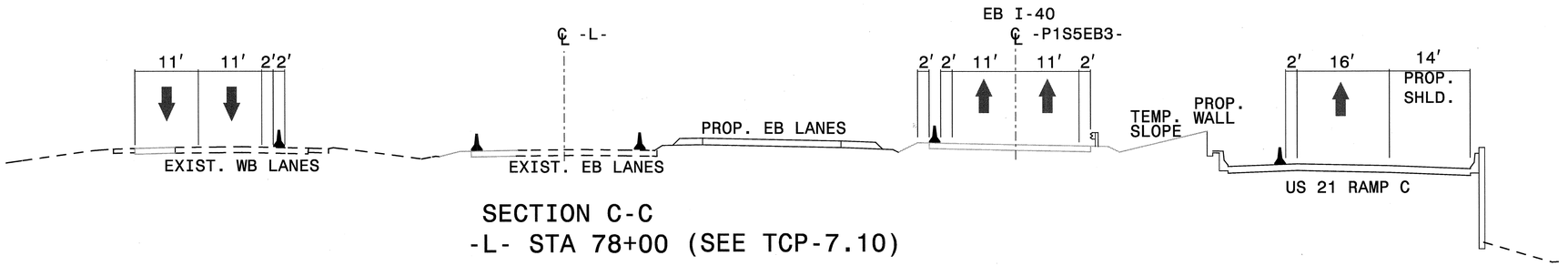
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.4



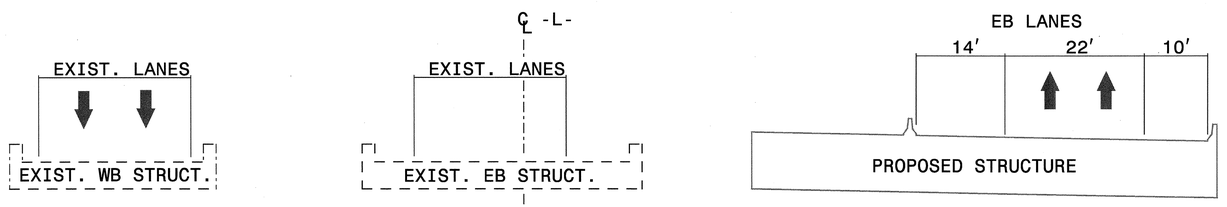
SECTION A-A
-L- STA 33+00 (SEE TCP-7.7)



SECTION B-B
STA 63+00 (SEE TCP-7.9)



SECTION C-C
-L- STA 78+00 (SEE TCP-7.10)



(SEE TCP-7.11)

SECTION D-D
-L- STA 86+00

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. REPKA

PHASE II SECTIONS

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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10/12/2011
R:\3819S\traffic\trafficcontrol\tcp\100% dd\I3819a_tc_tcp_sections.dgn

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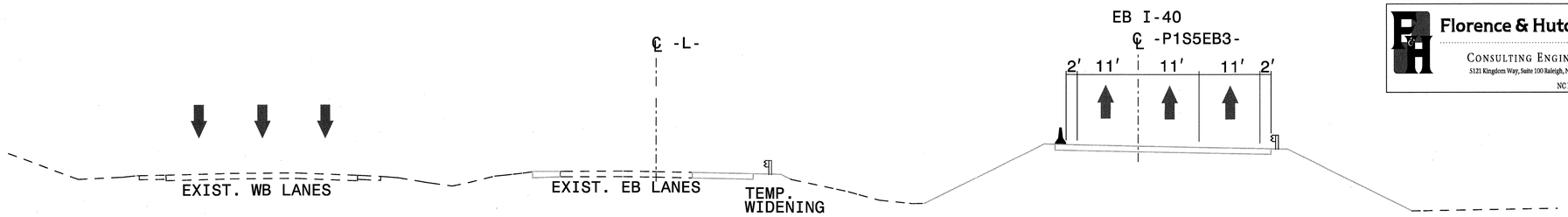
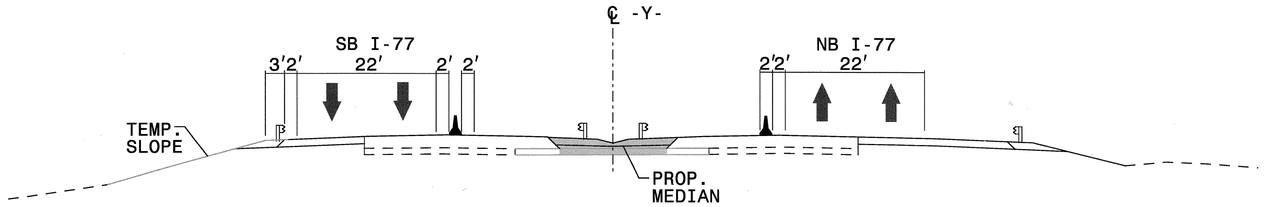
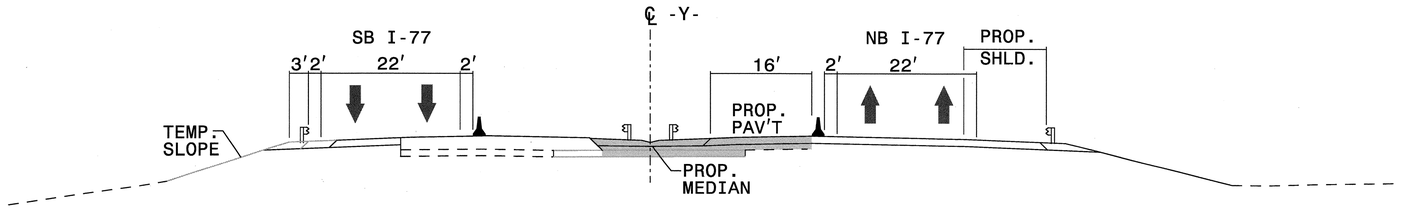
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.5



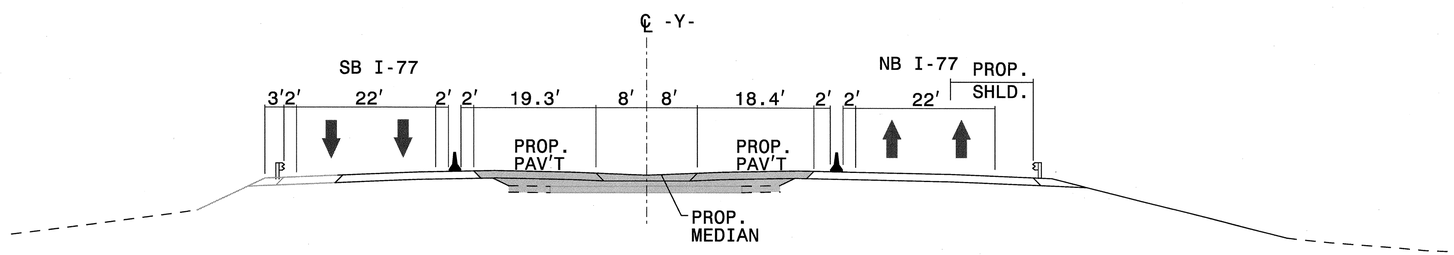
SECTION E-E
-L- STA 108+00 (SEE TCP-7.12)



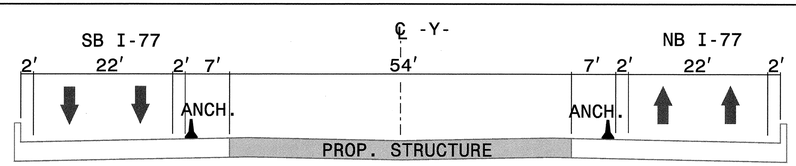
SECTION F-F
-Y- STA 147+50 (SEE TCP-7.17)



SECTION G-G
-Y- STA 148+00 (SEE TCP-7.17)



SECTION H-H
-Y- STA 149+00 (SEE TCP-7.17)



SECTION I-I
-Y- STA 150+00 (SEE TCP-7.17)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II SECTIONS

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\traffic control\tcp\100% ddi\13819a_tc_tcp_sections.dgn

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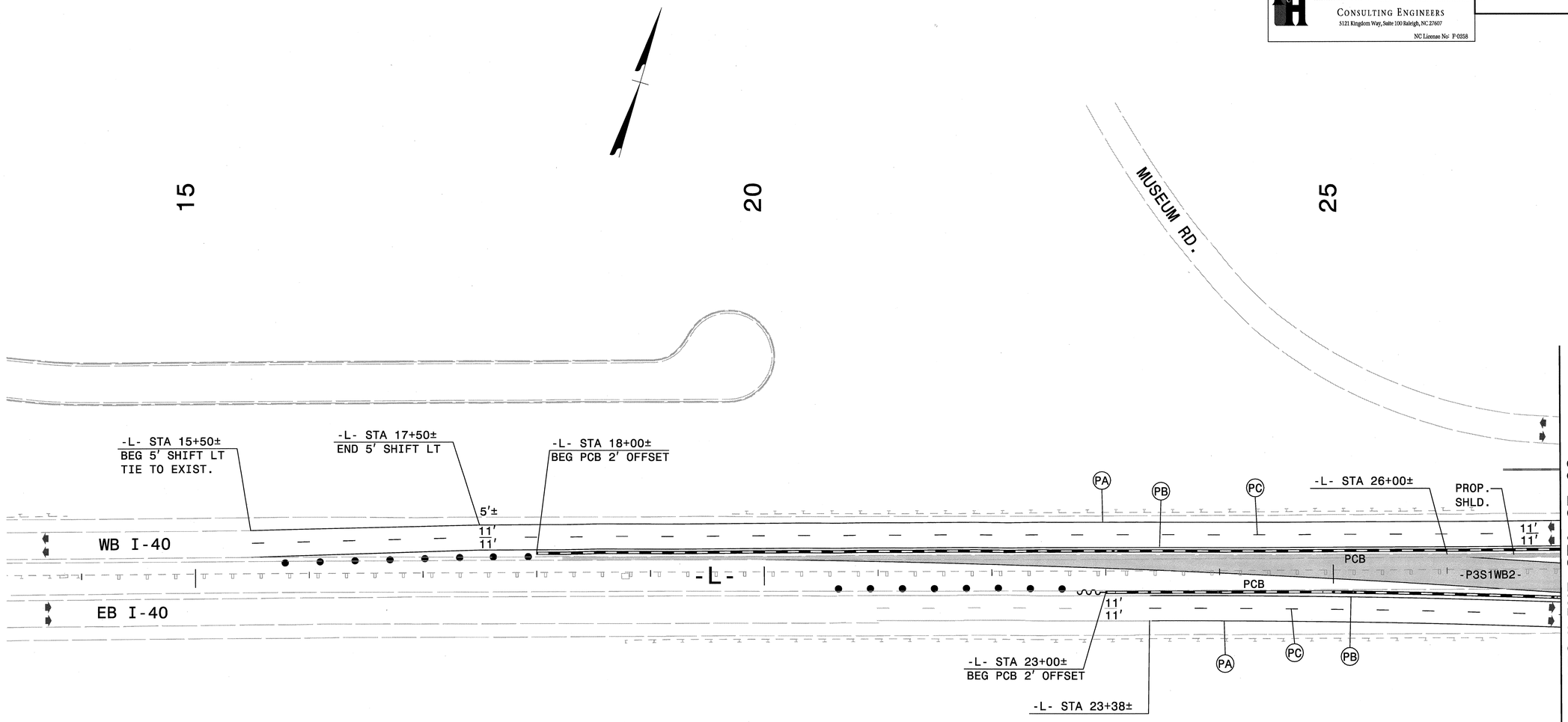
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.6



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

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

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

REVISIONS

CADD FILE

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R-2\13819\traffic\trafficcontrol\tcp\00% ddi\13819a_tc_tcp_p1_det_101.dgn

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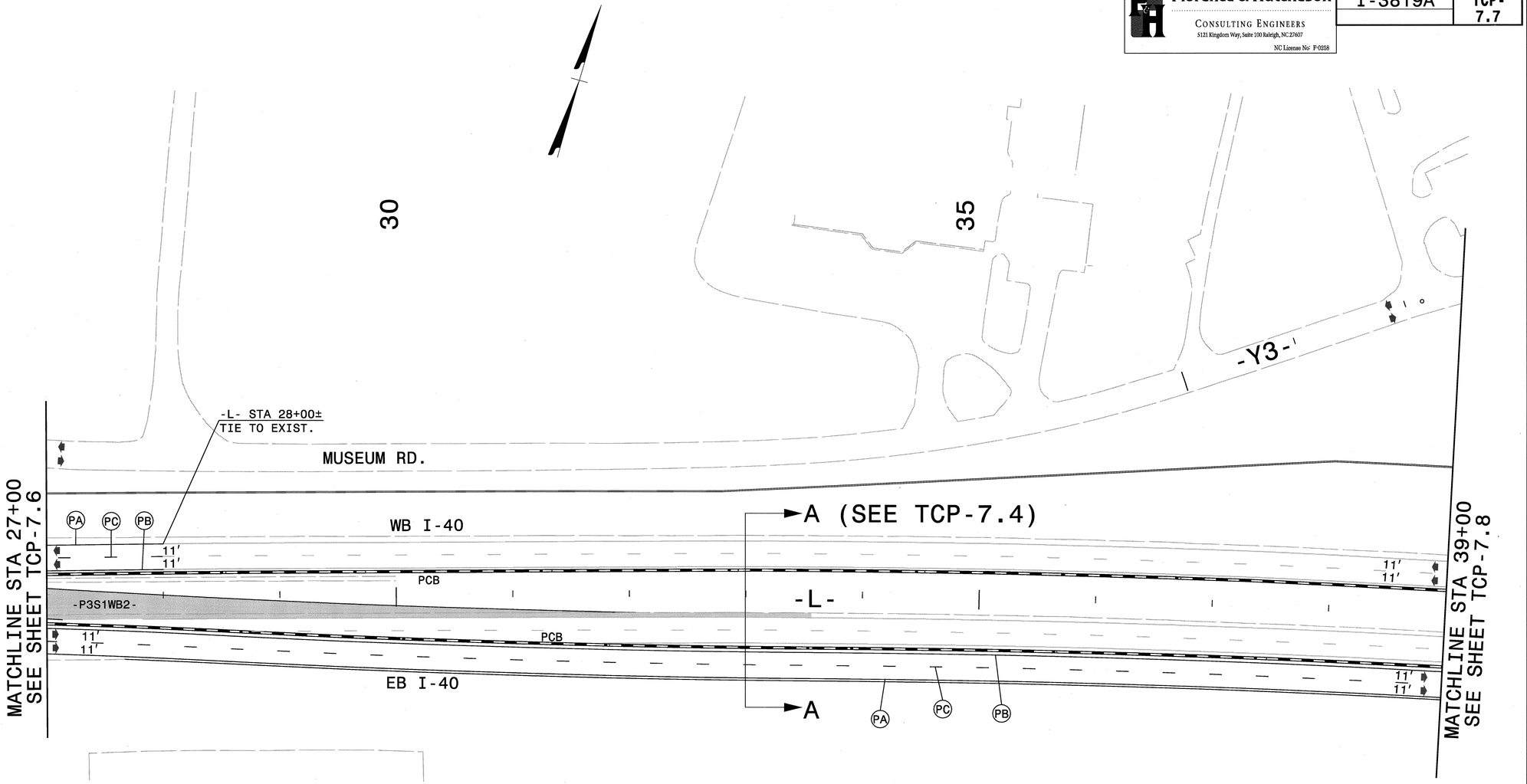
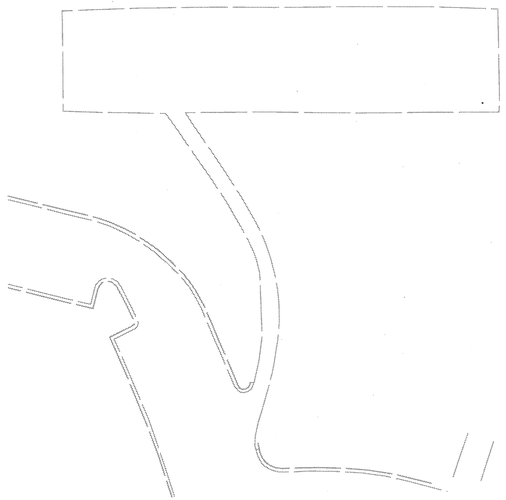
	I-3819A	TCP-7.7





LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

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

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

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\trafficcontrol\top\100% dd\13819a_tc_top_pll_def_102.dgn

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PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.8

40

-Y3-

MUSEUM RD.

45

-Y3A-

50

GAITHER RD. SR 1965

-Y1-

MATCHLINE STA 39+00
SEE SHEET TCP-7.7

MATCHLINE STA 53+00
SEE SHEET TCP-7.9

WB I-40

11'
11'

PCB

-L-

PCB

11'
11'
2'

EB I-40

PA
PC
PB

RADIO RD. SR 2003

-Y1A-

BST

CONC

CONC

N. CAROLINA AVE.

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

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

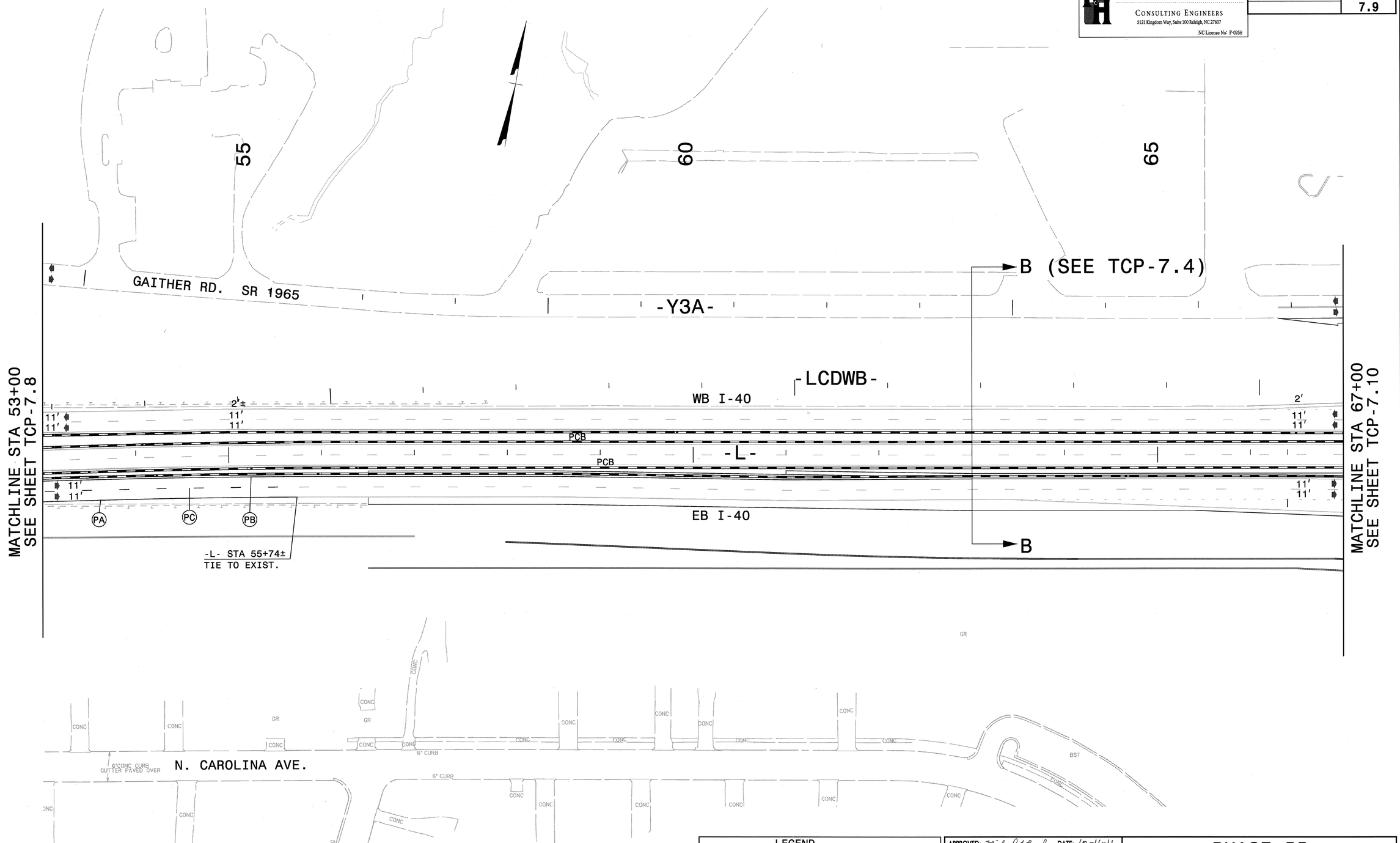
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER

REVISIONS

CADD FILE

10/2/2011
P:\13819\traffic\trafficcontrol\tcp\00%_dd\13819a_tc_tcp_pll_det_03.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-7.9



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pll_det_104.dgn

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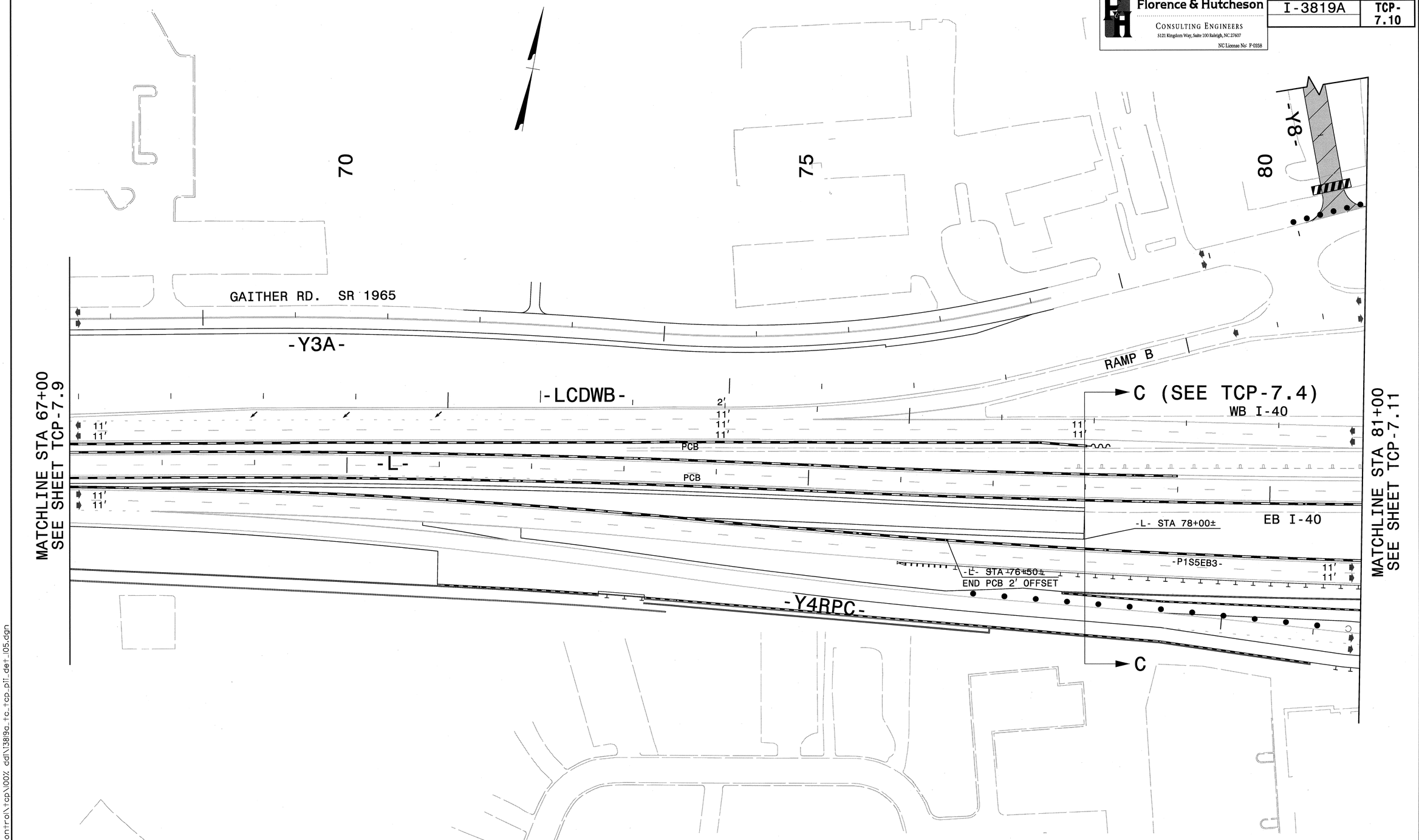
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.10



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

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

REVISIONS

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10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pii_det_105.dgn

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PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.11

MATCHLINE STA 32+50
SEE SHEET TCP-7.19

MATCHLINE STA 81+00
SEE SHEET TCP-7.10

MATCHLINE STA 95+00
SEE SHEET TCP-7.12

85

90

RAMP B

RAMP A

-Y4-

D (SEE TCP-7.4)

-Y4RPA-

-L- STA 92+75±
BEG PCB 2' OFFSET

-P3S1Y4RPA-

WB I-40

-LCDWB-

EB I-40

-L-

11'
11'

-P1S5EB3-

11'
11'

D

-Y4RPD-

12'
12'

PROP. SHLD.

-Y4RPC-

US 21

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 15876
ENGINEER
MICHAEL T. RZEPKA

PHASE II DETAIL

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

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS

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10/12/2011
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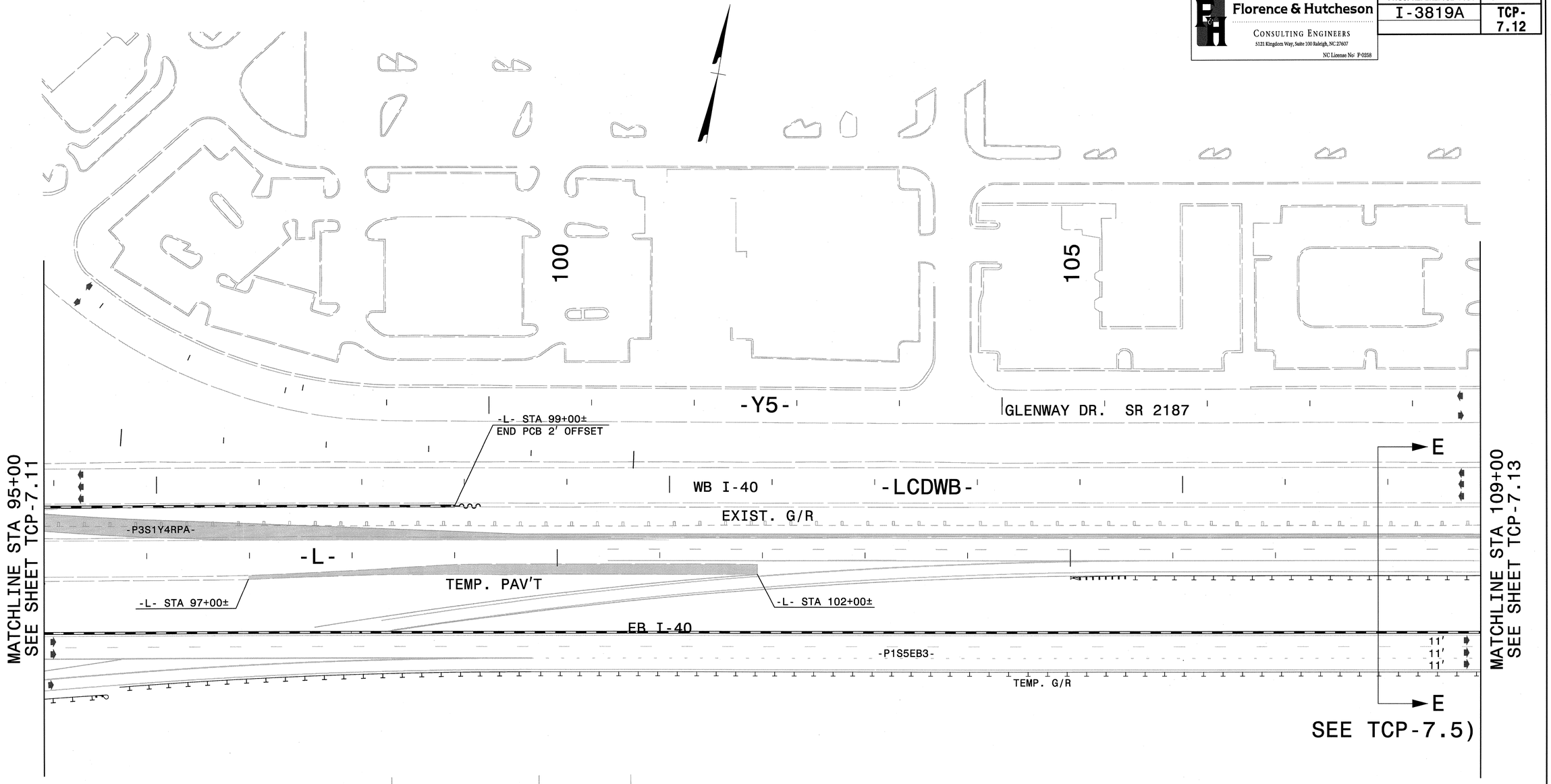

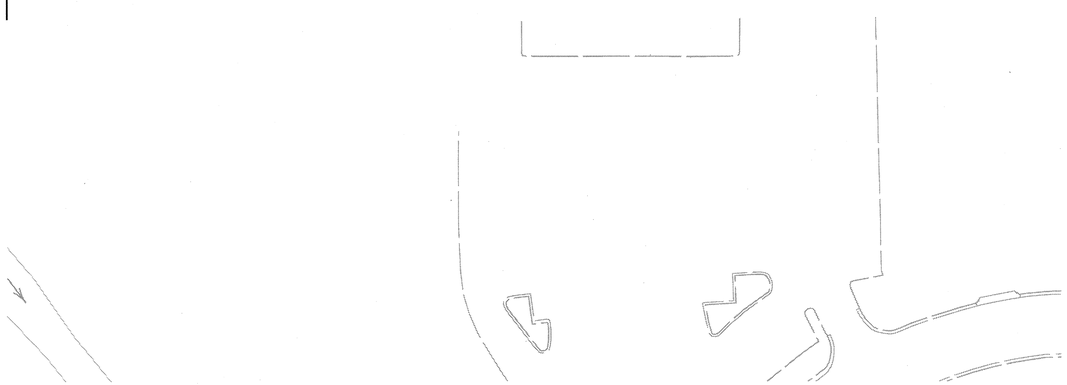

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pii_det_107.dgn

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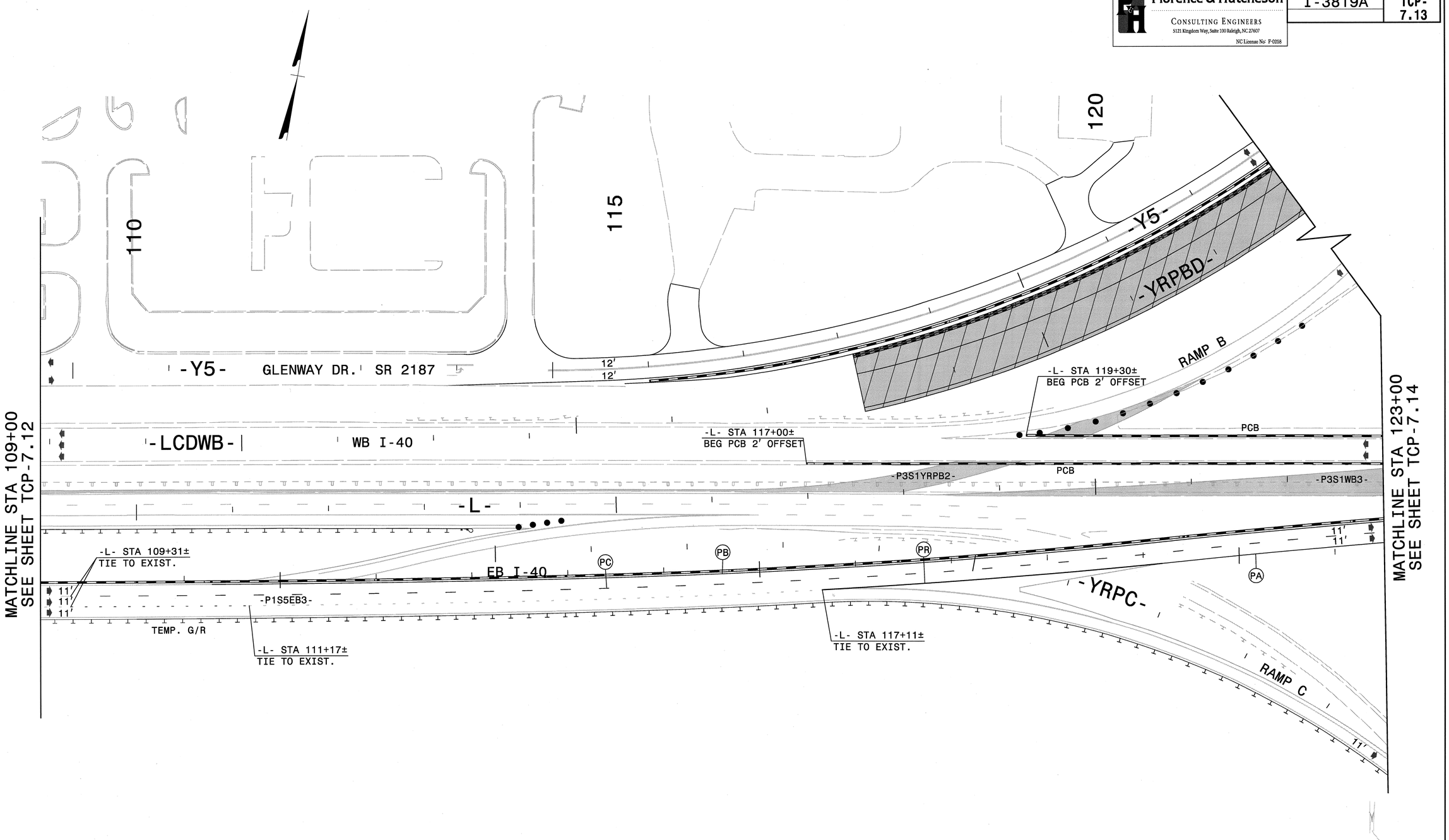
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.13



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

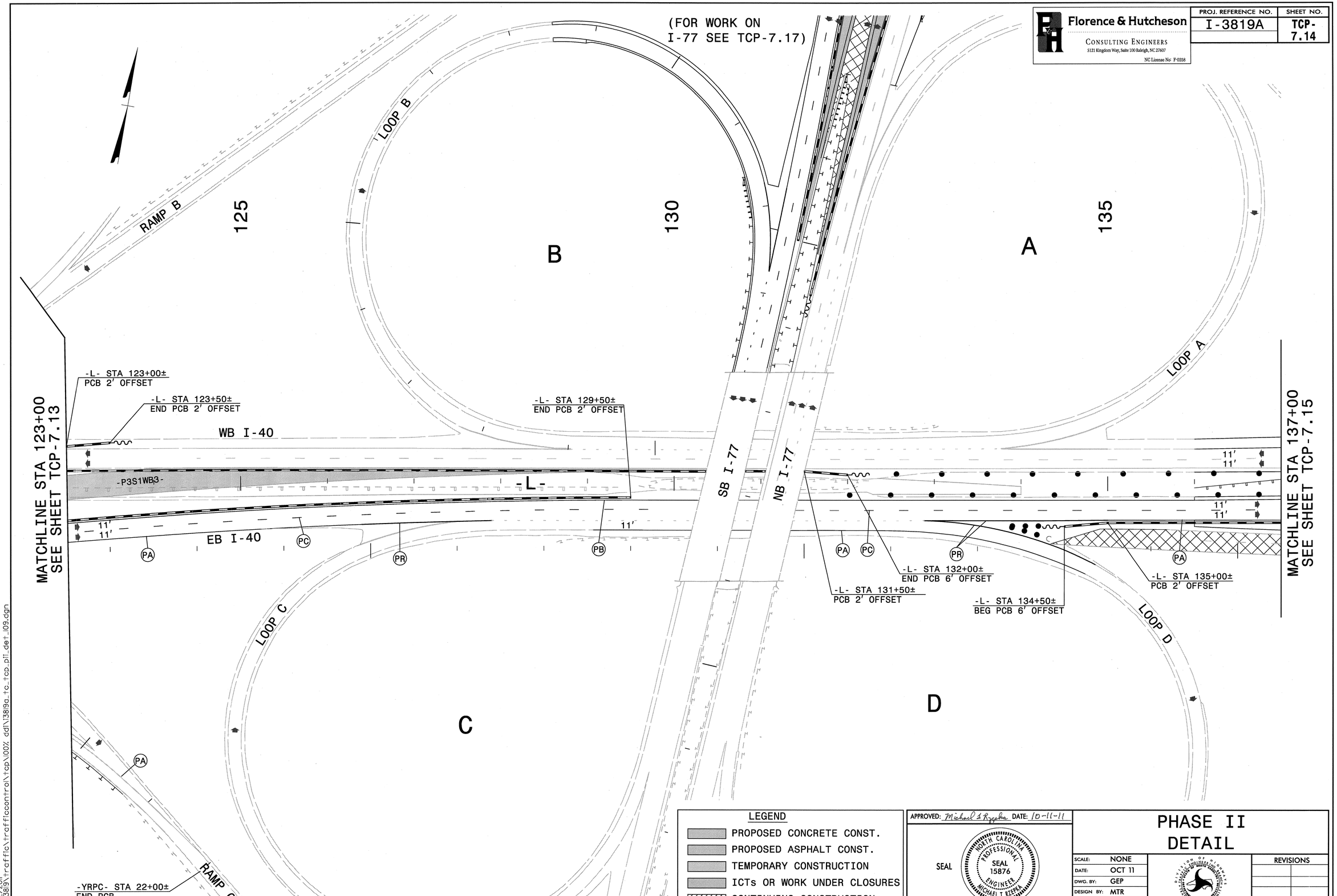
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
c:\i3819\traffic\trafficcontrol\tcp\100% ddl\i3819a_tc_tcp_pii_det_108.dgn



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PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.14

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pii_det_109.dgn

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.15

MATCHLINE SEE THIS SHEET

-YRPA-

MATCHLINE STA 34+00 SEE SHEET TCP-7.17

-YRPBD-

-YRPAB-

MATCHLINE SEE THIS SHEET

140

145

150

-YRPAB-

MATCHLINE STA 137+00 SEE SHEET TCP-7.14

12′ 12′

WB I-40

-L-

12′ 12′

11′ 11′

EB I-40

11′ 11′

PCB

PA

CA

CC

CB

PB

PC

PA

-L- STA 137+00±

-L- STA 138+00±

-L- STA 144+00±

WEDGE UNDER LANE CLOSURES

-L- STA 150+00±
END PCB 2′ OFFSET

MATCHLINE STA 151+00 SEE SHEET TCP-7.16

-YRPBD-

-YRPBD- STA 44+00±

-YRPD-

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

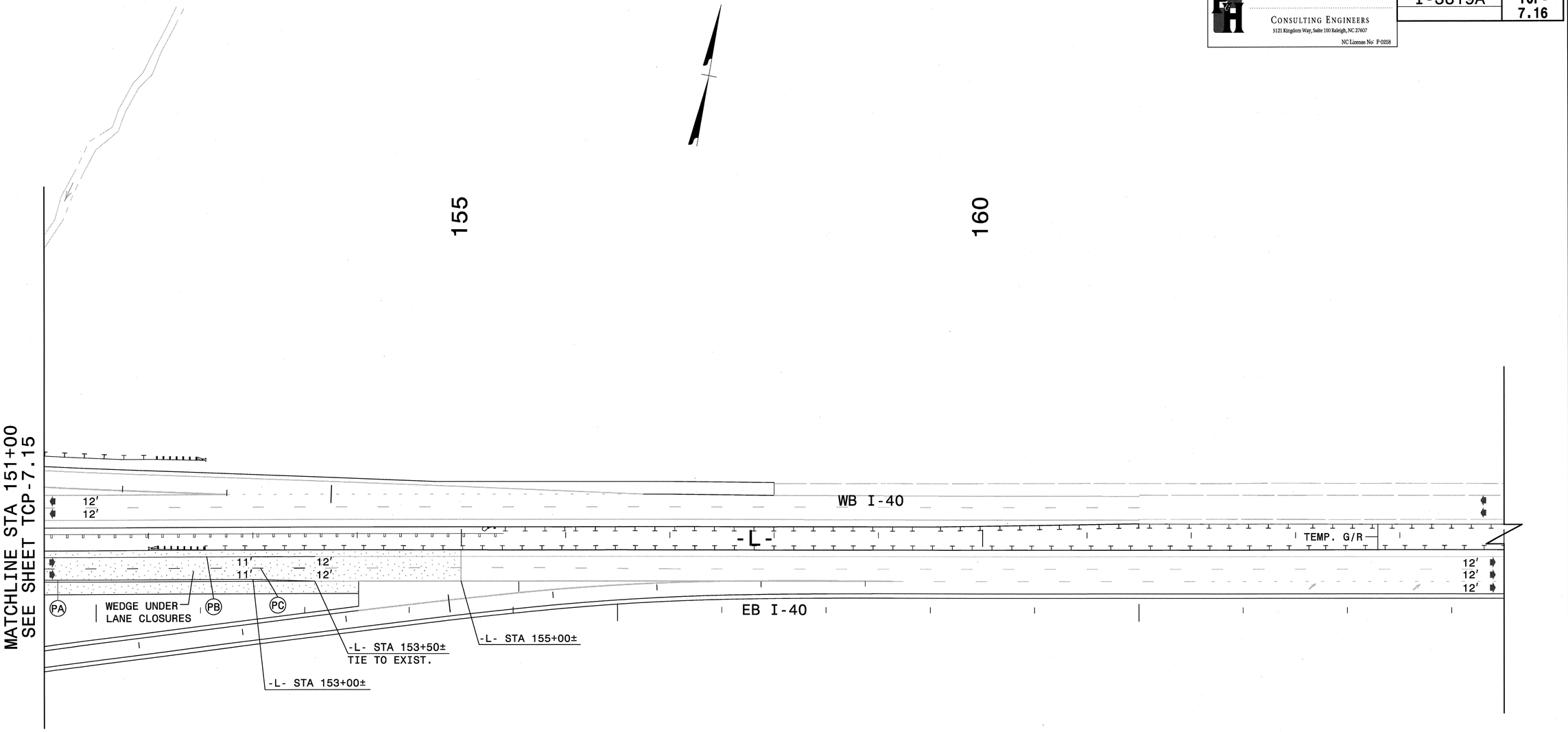
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

REVISIONS

CADD FILE

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\00?_dd\3819a_tc_tcp_pii_det_110.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-7.16



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

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

REVISIONS

CADD FILE

10/12/2011
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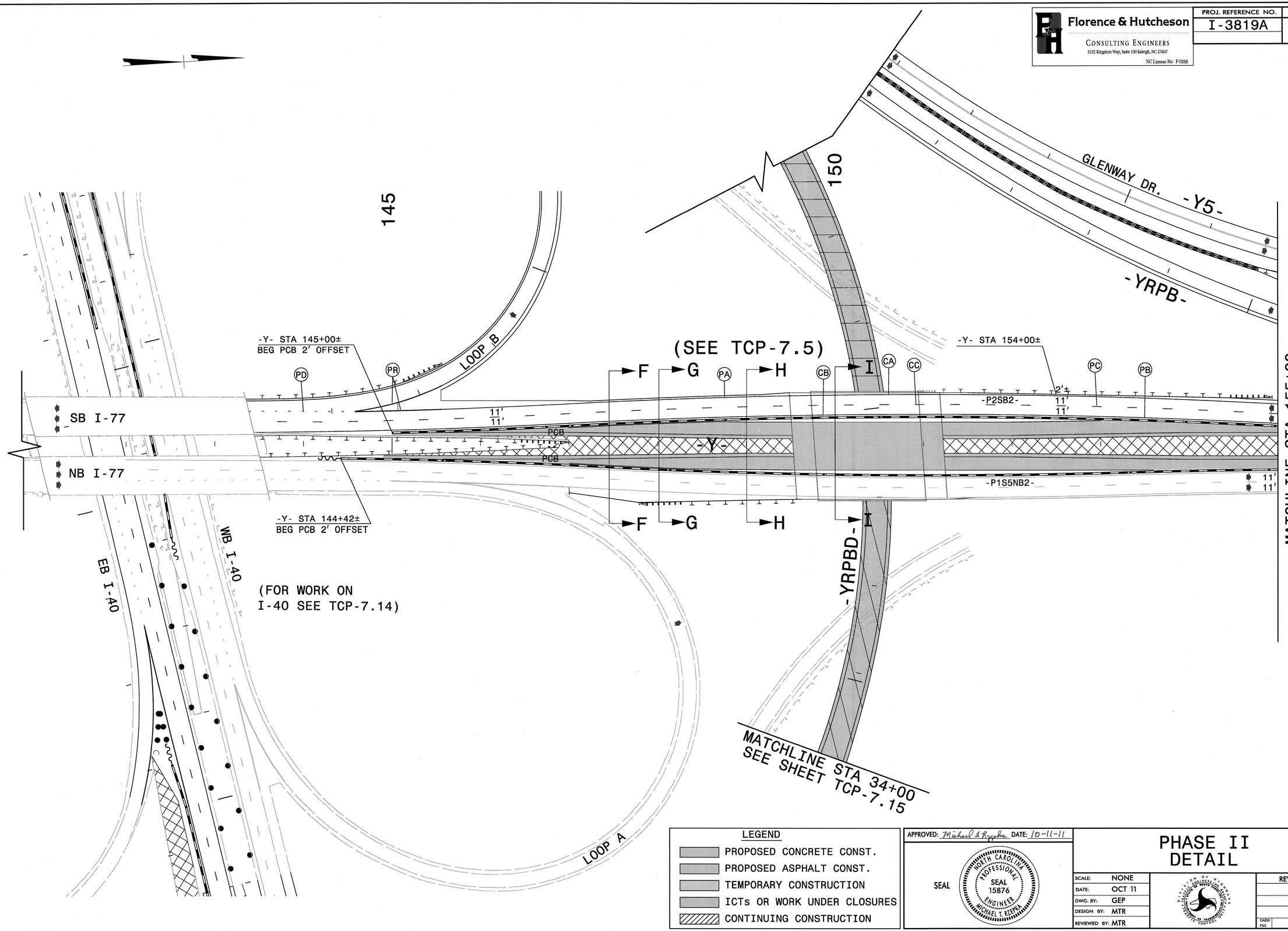
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.17



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE II DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.18

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. REPKA

PHASE II DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL

REVISIONS	
CADD FILE	

10/12/2011
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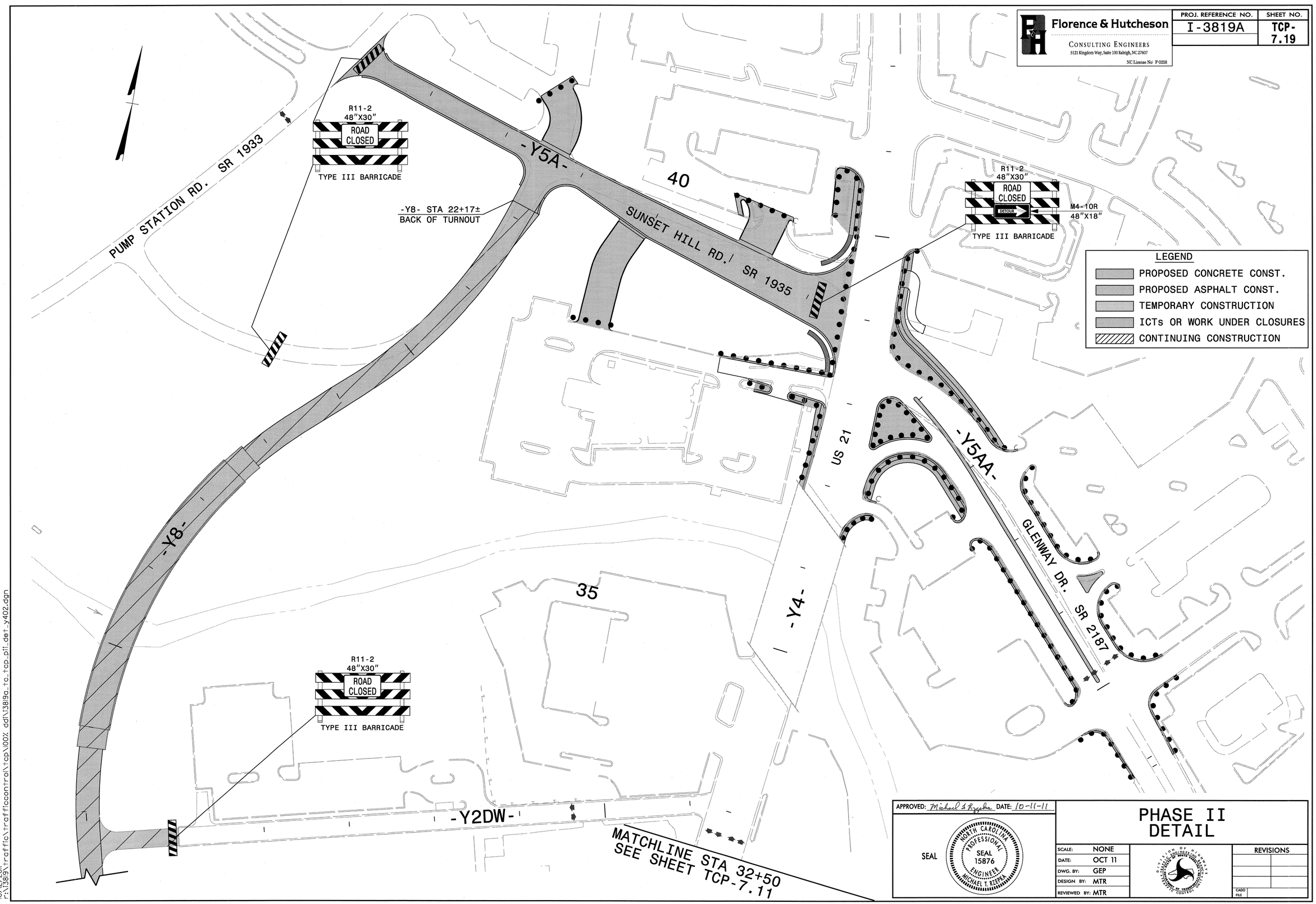

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NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-7.19
R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE
PUMP STATION RD. SR 1933
-Y5A-
40
-Y8- STA 22+17±
BACK OF TURNOUT
SUNSET HILL RD. SR 1935
R11-2
48"X30"
ROAD CLOSED
DETOUR
M4-10R
48"X18"
TYPE III BARRICADE
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
US 21
-Y5AA-
GLENWAY DR. SR 2187
-Y8-
35
-Y4-
R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE
-Y2DW-
MATCHLINE STA 32+50
SEE SHEET TCP-7.11
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE II
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pil_det_y402.dgn

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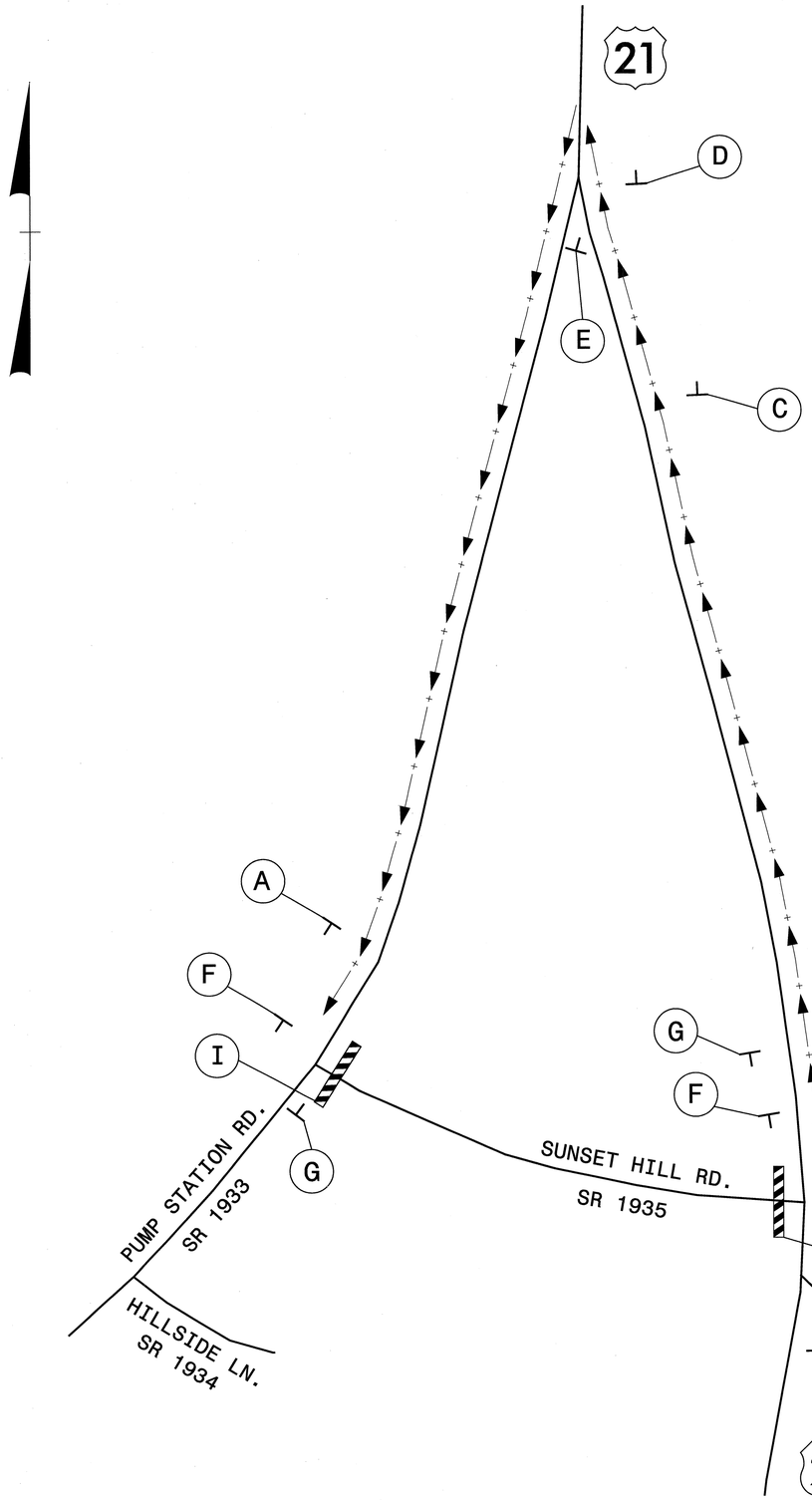
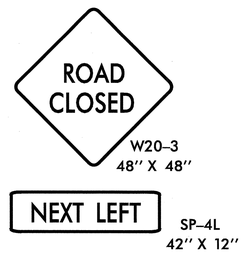
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-7.20





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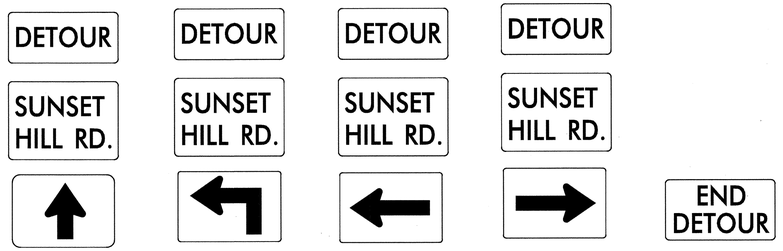
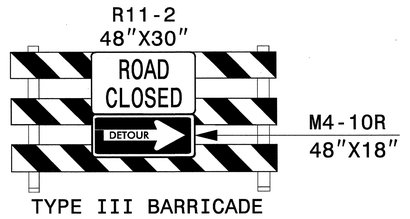


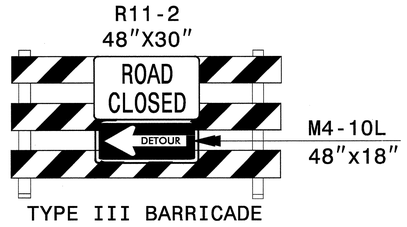
B C D E F

G



TYPE III BARRICADE

H



TYPE III BARRICADE

I

LEGEND

DETOUR ROUTE FOR WHEN SUNSET HILL RD. (-Y5A-) IS CLOSED

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE II
DETOUR FOR
SUNSET HILL RD. CLOSURE

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

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

REVISIONS	
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10/12/2011
I-3819\traffic\trafficcontrol\tcp\100% dd\I3819a_tc_tcp_p1_detour_sunset_hill_rd.dgn

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-8.1

PHASE III, STEP 1

STEP 1

USING RSD 1101.02 (SHEETS 3, 9 & 10 OF 15), COMPLETE THE FOLLOWING FOR WB I-40 WEST OF I-77 (SEE TCP-8.6 THRU TCP-8.14):

- REMOVE PCB ALONG EXISTING WB I-40 AT -P3S1WB2-, -P3S1Y4RPA-, -P3S1YRPB2- & -P3S1WB3-. INSTALL/RESET PCB ALONG -P3S1WB2-, EXISTING EB I-40, -P1S3EB1- & -P3S1WB3- AS SHOWN.
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -P3S1WB2-, -P3S1WB3-,
- -P3S1Y4RPA- & -P3S1YRPB2- AND TIE TO EXISTING. RESTRIPE EXISTING EB I-40 & -P1S3EB1- FOR WB TRAFFIC.
- SHIFT WB I-40 TRAFFIC TO -P3S1WB2-, EXISTING EB I-40, -P1S3EB1- & P3S1WB3- (11' LANES)
- OPEN -P3S1Y4RPA- & -P3S1YRPB2- TO RAMP TRAFFIC
- PLACE DRUMS IN EXISTING I-40 MEDIAN LANE AND PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS FOR TEMPORARY GORE AT -L- STA 25+00±. OPEN TO TRAFFIC FROM US 21 RAMP B
- INSTALL REMAINING PCB ALONG -P3S1Y4RPA- & -P3S1YRPB2-

USING RSD 1101.02 (SHEET 9 OF 15), INSTALL/RESET PCB IN EXISTING WB I-40 MEDIAN LANE FROM -L- STA 59+00± TO STA 76+00± (SEE TCP-8.9 & 8.10).

BEHIND BARRIER AND DRUMS, CONSTRUCT -P3S1Y4RPB1-. REMOVE EXISTING ISLAND ON US 21 RAMP B AS SHOWN (SEE TCP-8.9 THRU TCP-8.11).

BEHIND BARRIER, BEGIN CONSTRUCTION OF PROPOSED -LCDWB-, BARRIER AND -L- OUTSIDE SHOULDER FROM -L- STA 80+00± TO PROPOSED STRUCTURE OVER US 21 (SEE TCP-8.10 & 8.11).

BEHIND BARRIER, BEGIN CONSTRUCTION OF LEFT PORTION OF PROPOSED STRUCTURE OVER US 21 (SEE TCP-8.11).

USING RSD 1101.02 (SHEET 1 OF 15), COMPLETE THE FOLLOWING ON GLENWAY DR. (SEE TCP-8.12 & 8.13):

- INSTALL WFB ALONG GLENWAY DR. FROM -Y5- STA 20+66± TO STA 41+00± AND TIE TO EXISTING
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -Y5- FROM STA 20+66± TO STA 41+00± AND SHIFT TRAFFIC TO PATTERN SHOWN

BEHIND BARRIER, BEGIN CONSTRUCTION OF THE FOLLOWING PROPOSED BETWEEN US 21 AND I-77 (SEE TCP-8.11 THRU TCP-8.13):

-Y4RPA- STA 10+00± TO STA 17+44±
-LCDWB- FROM -L- STA 96+00± TO -YRPBD- INCLUDING RETAINING WALL AND SINGLE-FACED BARRIERS
WB I-40 OUTSIDE SHOULDER FROM -L- STA 99+00± TO STA 116+74±
-YRPBD- FROM -LCDWB- TO -YRPBD- STA 13+00±

USING RSD 1101.02 (SHEETS 7 & 10 OF 15), CONSTRUCT TEMPORARY WIDENING OF EXISTING US 21 RAMP A (SEE TCP-8.11).

APPROVED: Michael T. Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1
PHASING

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

REVISIONS

CADD FILE

1/4/2012
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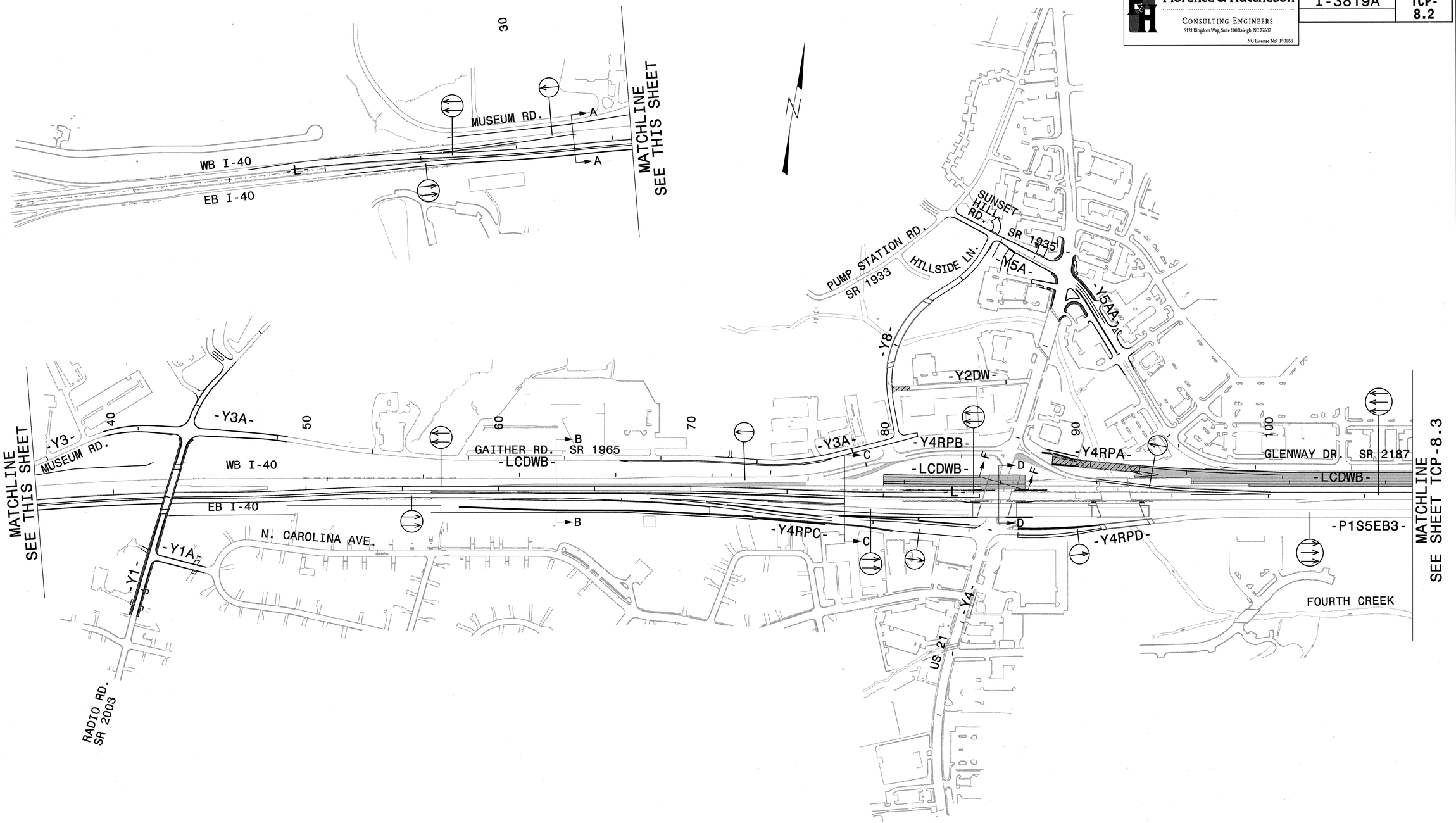
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-8.2



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 OVERVIEW
SHEET 1 OF 2

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

REVISIONS

CADD FILE

10/12/2011
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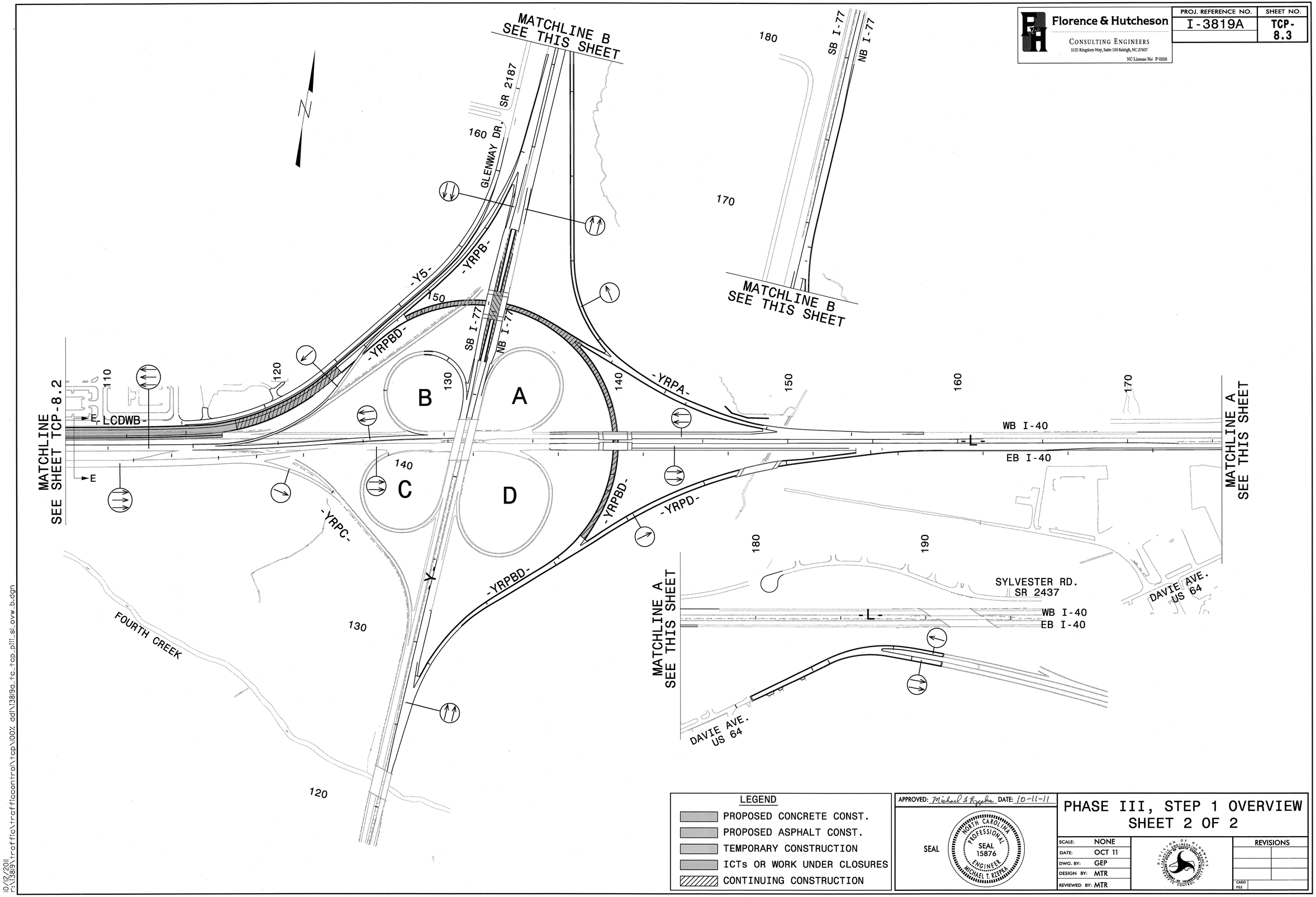

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-8.3

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 OVERVIEW
SHEET 2 OF 2

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pii_sl_ovw_b.dgn

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CONSULTING ENGINEERS
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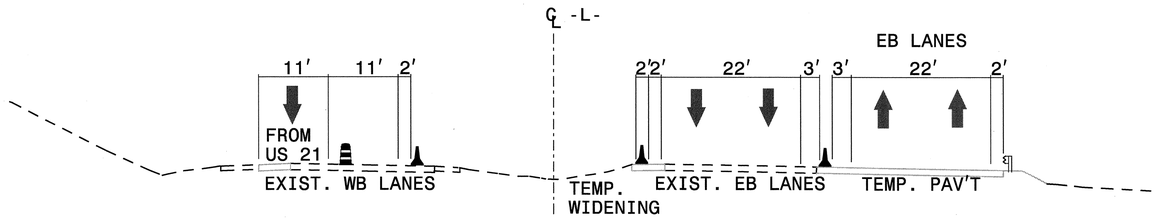
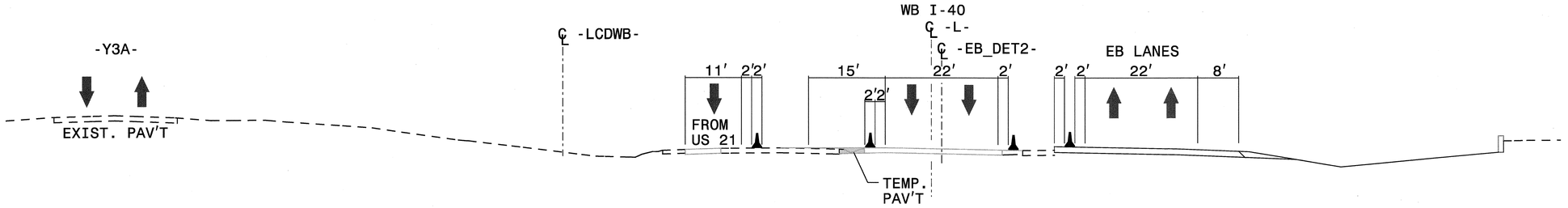
NC License No: F-0258

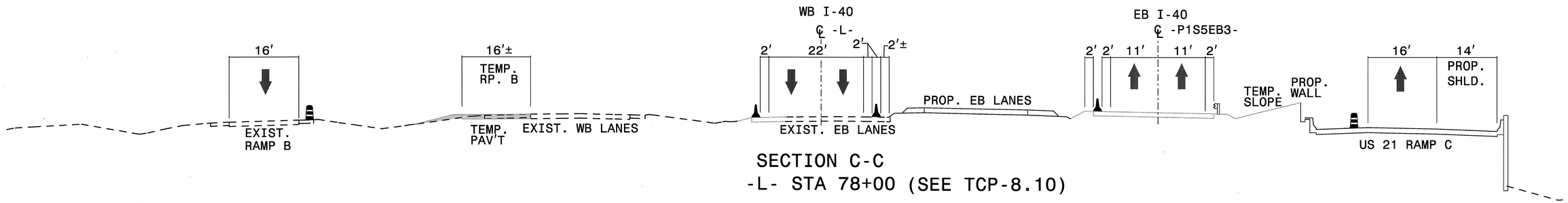
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-8.4



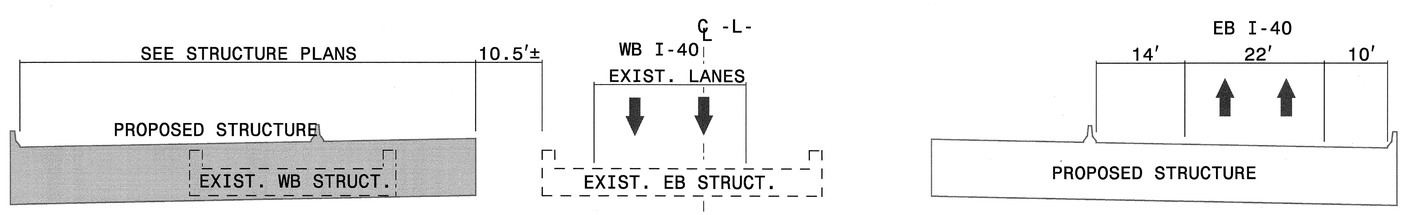
SECTION A-A
-L- STA 33+00 (SEE TCP-8.7)



SECTION B-B
-L- STA 63+00 (SEE TCP-8.9)



SECTION C-C
-L- STA 78+00 (SEE TCP-8.10)



SECTION D-D
-L- STA 86+00 (SEE TCP-8.11)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 SECTIONS

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS

CADD FILE

10/12/2011
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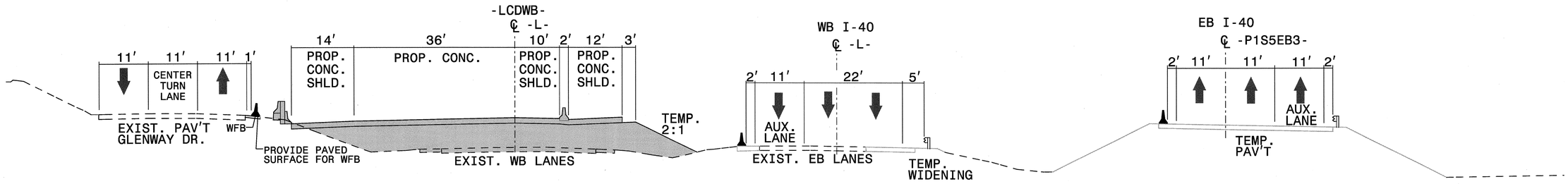
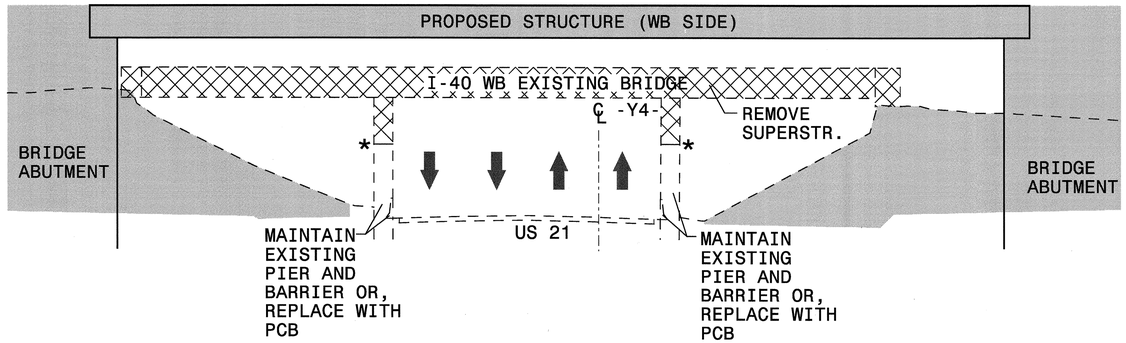
	I-3819A	TCP-8.5



SECTION E-E
-L- STA 108+00 (SEE TCP-8.12)



SECTION F-F
-Y4- STA 27+50 (SEE TCP-8.11)

*IF UTILIZING EXISTING BARRIER DURING CONSTRUCTION, REMOVE ENOUGH OF EXISTING COLUMNS TO ALLOW WORKING ROOM BUT MAINTAIN PIER/BARRIER INTEGRITY ALONG US 21

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 SECTIONS

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

REVISIONS

CADD FILE

10/12/2011
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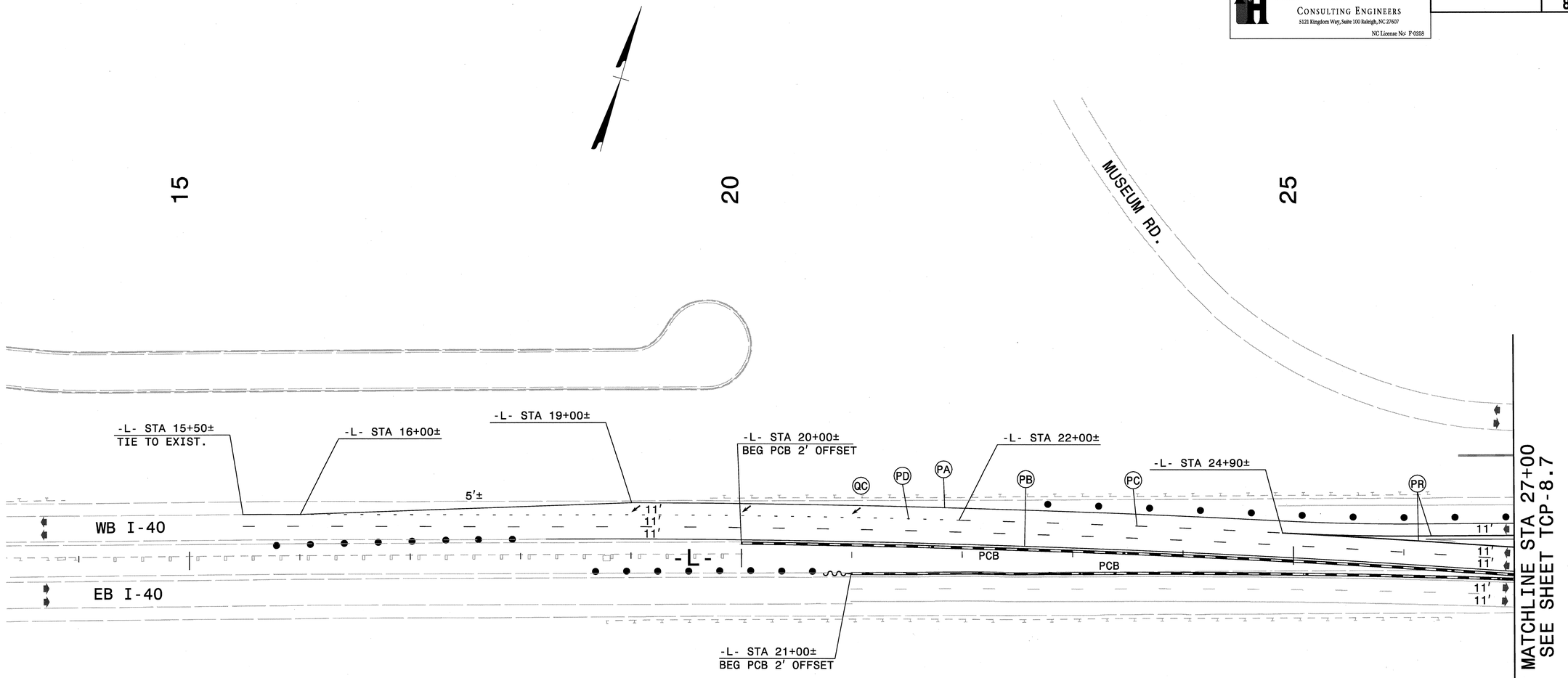
	I-3819A	TCP-8.6



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

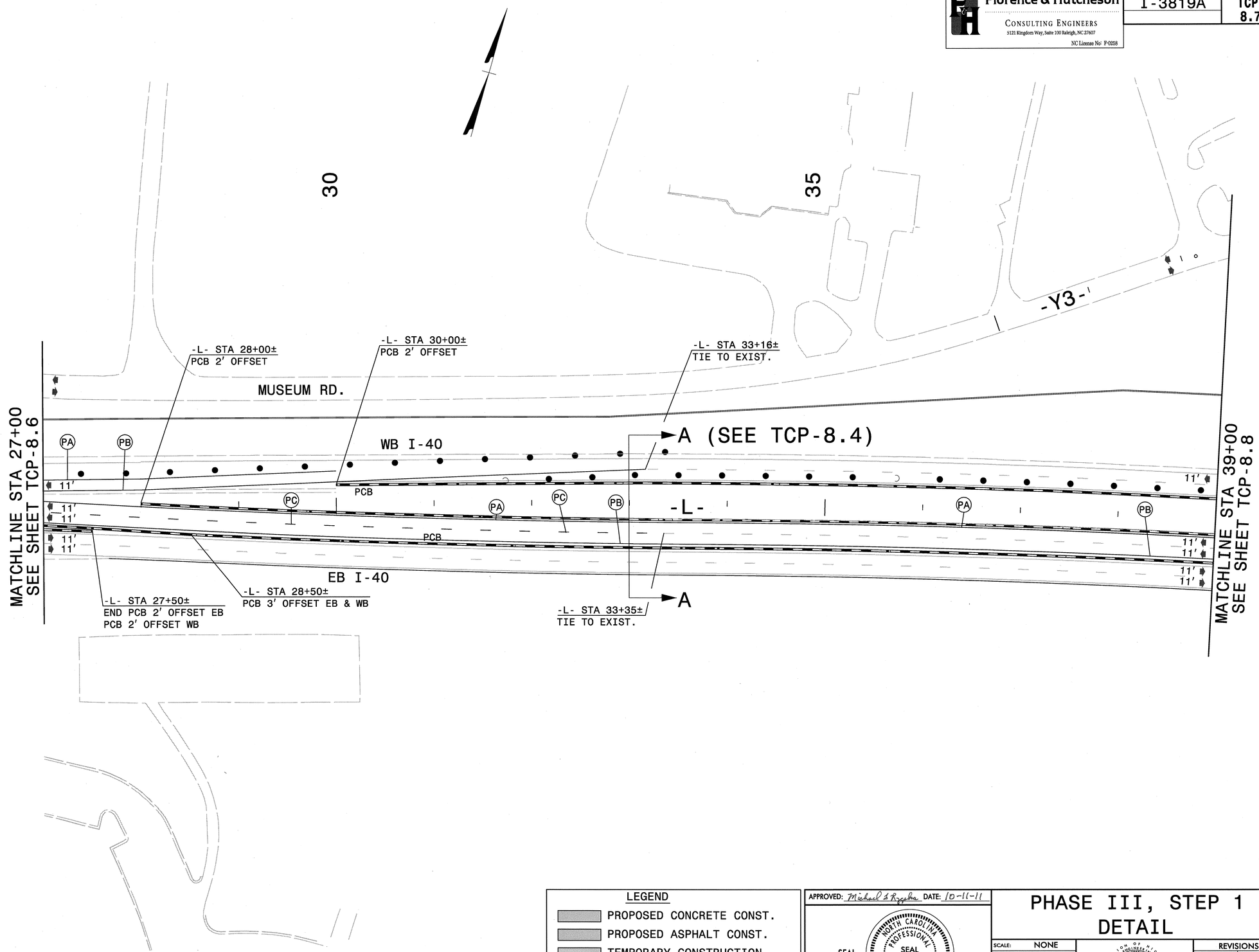
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
P:\3819\traffic\trafficcontrol\tcp\00%_dd\I3819a_tc_tcp_pll_sl_det_101.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-8.7



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pill_sl_det_102.dgn

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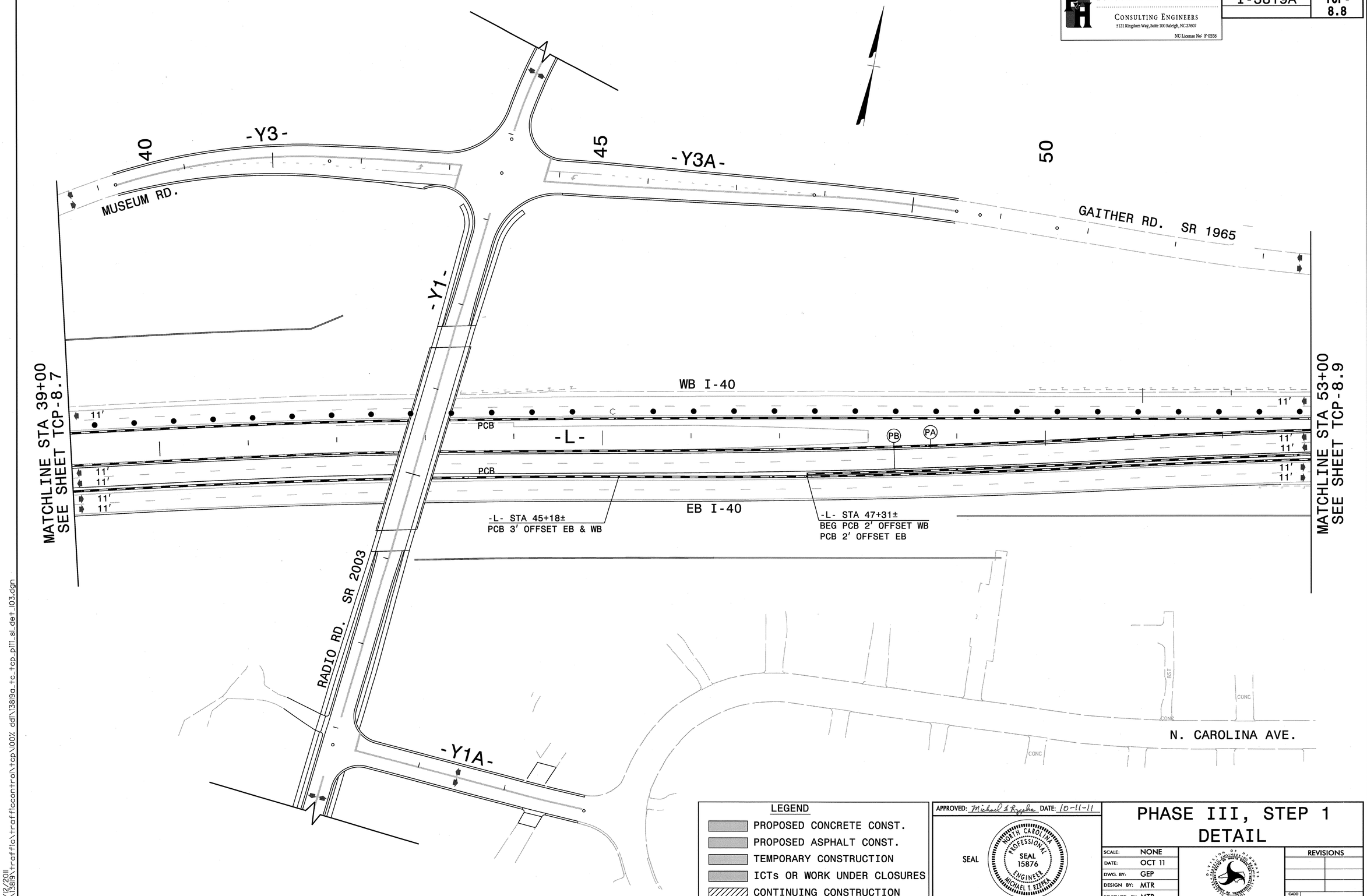
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-8.8



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pill_sl_det_103.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-8.9

55

60

65

GAITHER RD. SR 1965

-Y3A-

B (SEE TCP-8.4)

-L- STA 59+00±
BEG PCB 2' OFFSET
END PCB 13' OFFSET

-LCDWB-

WB I-40

PCB

-P3S1Y4RPB1-

PCB

-L-

11'
11'
11'
11'

11'
11'
11'
11'

PA

PB

EB I-40

B

MATCHLINE STA 53+00
SEE SHEET TCP-8.8

MATCHLINE STA 67+00
SEE SHEET TCP-8.10

GR

CONC

6" CURB

6"CONC CURB
GUTTER PAVED OVER

N. CAROLINA AVE.

BST

30" C&G

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\100% dd\i3819a_tc_tcp_p1l_sl_det_l04.dgn

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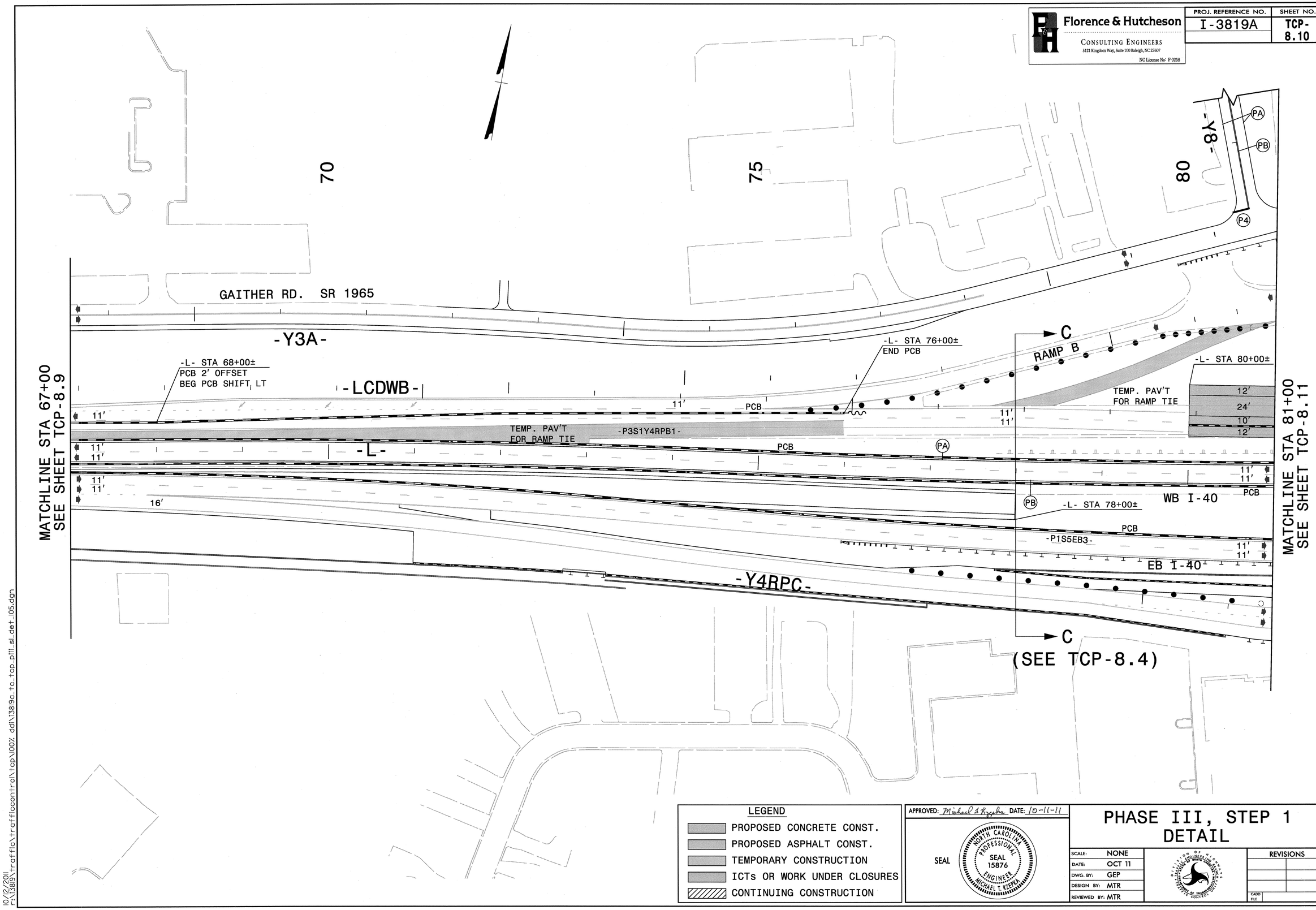
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-8.10



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

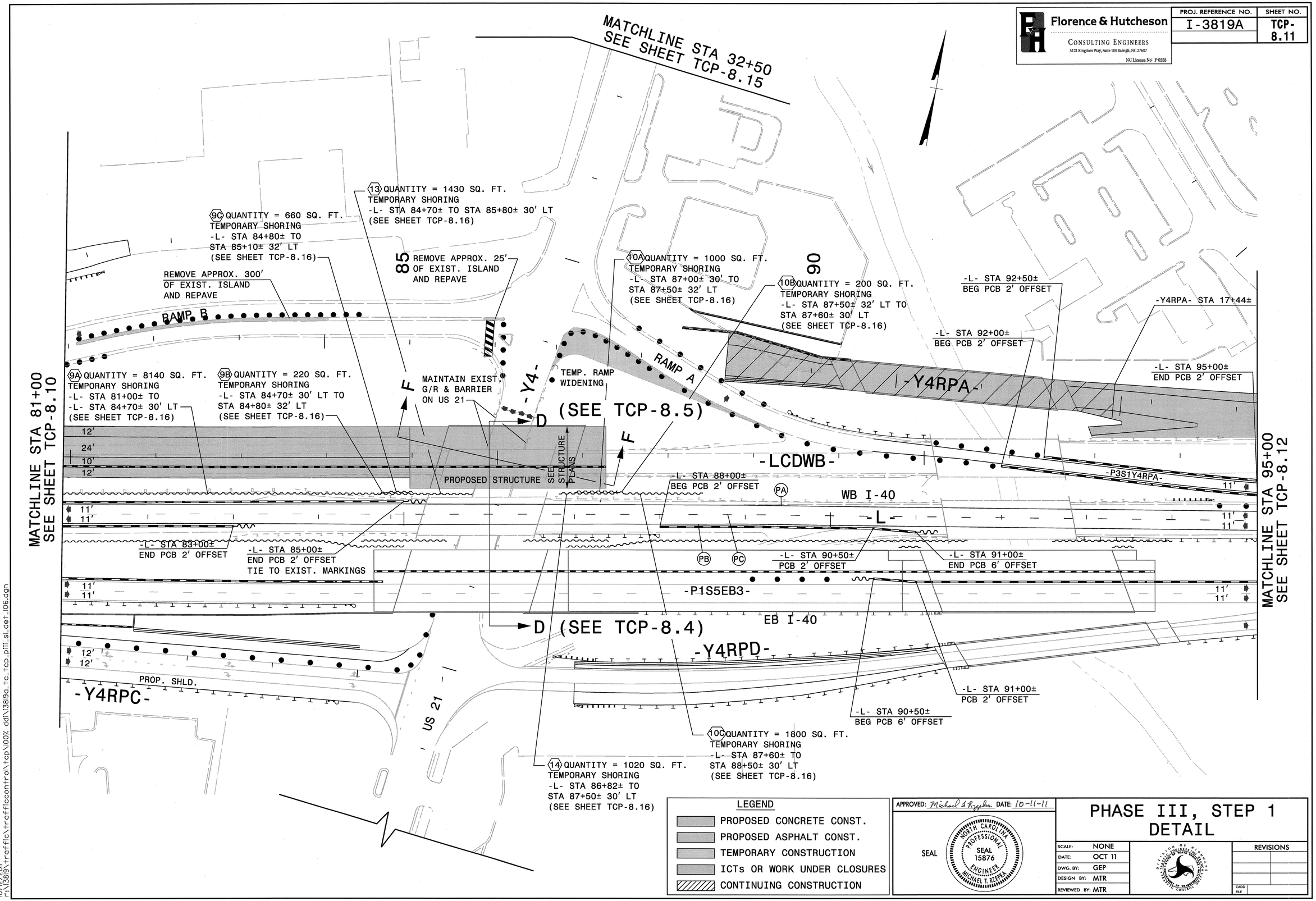
PHASE III, STEP 1 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pii_sl_det_105.dgn



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5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-8.11
MATCHLINE STA 32+50
SEE SHEET TCP-8.15
MATCHLINE STA 81+00
SEE SHEET TCP-8.10
MATCHLINE STA 95+00
SEE SHEET TCP-8.12
13 QUANTITY = 1430 SQ. FT.
TEMPORARY SHORING
-L- STA 84+70± TO STA 85+80± 30' LT
(SEE SHEET TCP-8.16)
9C QUANTITY = 660 SQ. FT.
TEMPORARY SHORING
-L- STA 84+80± TO
STA 85+10± 32' LT
(SEE SHEET TCP-8.16)
REMOVE APPROX. 300'
OF EXIST. ISLAND
AND REPAVE
85
REMOVE APPROX. 25'
OF EXIST. ISLAND
AND REPAVE
10A QUANTITY = 1000 SQ. FT.
TEMPORARY SHORING
-L- STA 87+00± 30' TO
STA 87+50± 32' LT
(SEE SHEET TCP-8.16)
90
10B QUANTITY = 200 SQ. FT.
TEMPORARY SHORING
-L- STA 87+50± 32' LT TO
STA 87+60± 30' LT
(SEE SHEET TCP-8.16)
-L- STA 92+50±
BEG PCB 2' OFFSET
-Y4RPA- STA 17+44±
-L- STA 92+00±
BEG PCB 2' OFFSET
-L- STA 95+00±
END PCB 2' OFFSET
RAMP B
RAMP A
-Y4RPA-
9A QUANTITY = 8140 SQ. FT.
TEMPORARY SHORING
-L- STA 81+00± TO
-L- STA 84+70± 30' LT
(SEE SHEET TCP-8.16)
9B QUANTITY = 220 SQ. FT.
TEMPORARY SHORING
-L- STA 84+70± 30' LT TO
STA 84+80± 32' LT
(SEE SHEET TCP-8.16)
MAINTAIN EXIST.
G/R & BARRIER
ON US 21
-Y4-
TEMP. RAMP
WIDENING
(SEE TCP-8.5)
D
F
12'
24'
10'
12'
PROPOSED STRUCTURE
SEE STRUCTURE PLANS
-LCDWB-
-L- STA 88+00±
BEG PCB 2' OFFSET
PA
WB I-40
-P3S1Y4RPA-
11'
11'
-L-
-L- STA 83+00±
END PCB 2' OFFSET
-L- STA 85+00±
END PCB 2' OFFSET
TIE TO EXIST. MARKINGS
PB
PC
-L- STA 90+50±
PCB 2' OFFSET
-L- STA 91+00±
END PCB 6' OFFSET
-P1S5EB3-
EB I-40
D (SEE TCP-8.4)
-Y4RPD-
PROP. SHLD.
-Y4RPC-
US 21
-L- STA 91+00±
PCB 2' OFFSET
-L- STA 90+50±
BEG PCB 6' OFFSET
10C QUANTITY = 1800 SQ. FT.
TEMPORARY SHORING
-L- STA 87+60± TO
STA 88+50± 30' LT
(SEE SHEET TCP-8.16)
14 QUANTITY = 1020 SQ. FT.
TEMPORARY SHORING
-L- STA 86+82± TO
STA 87+50± 30' LT
(SEE SHEET TCP-8.16)
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE III, STEP 1
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pii_sl_det_106.dgn

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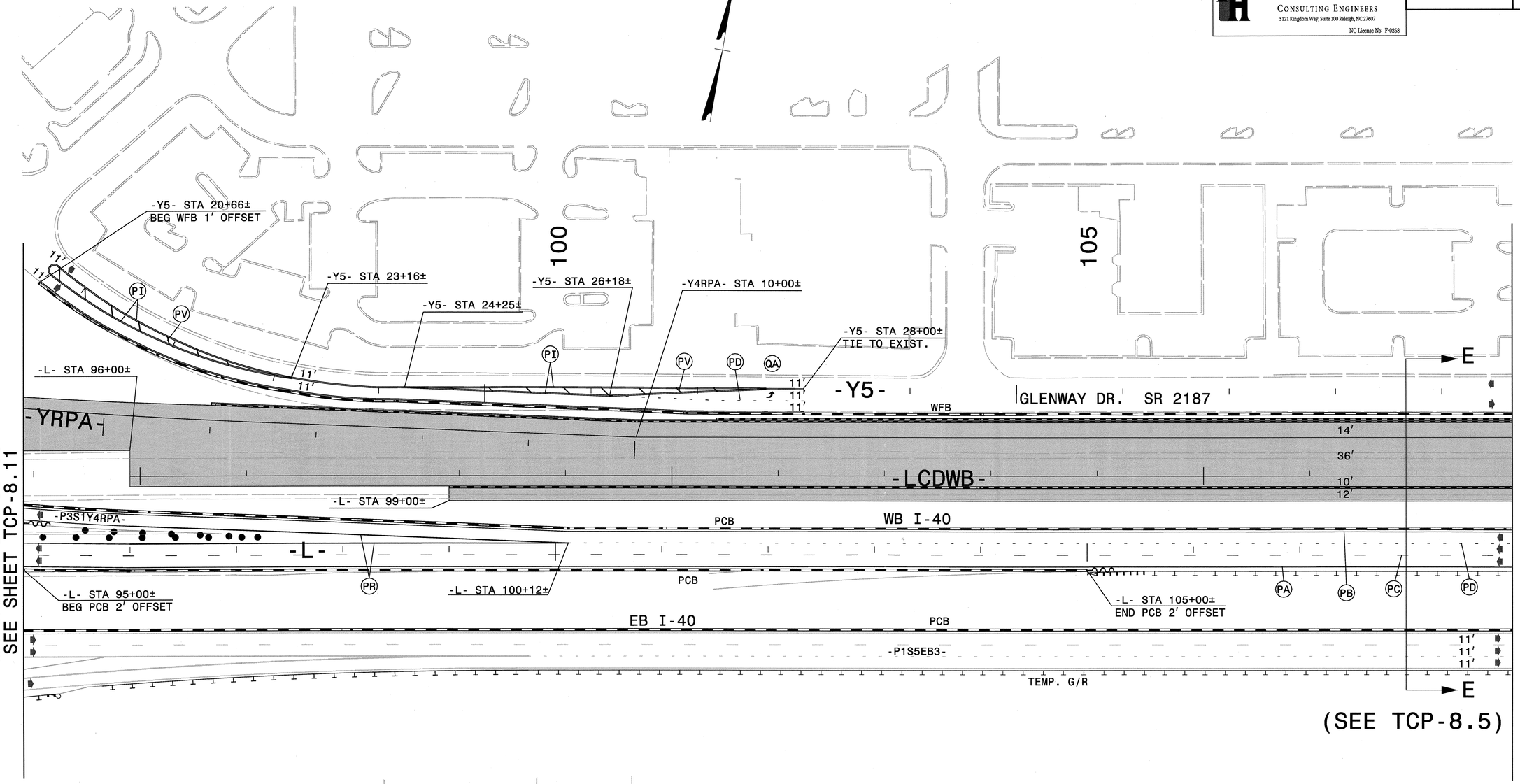
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-8.12



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
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C:\I3819\traffic\traffic control\tcp\00% ddi\I3819a_tc_tcp_pIII_sl_det_107.dgn

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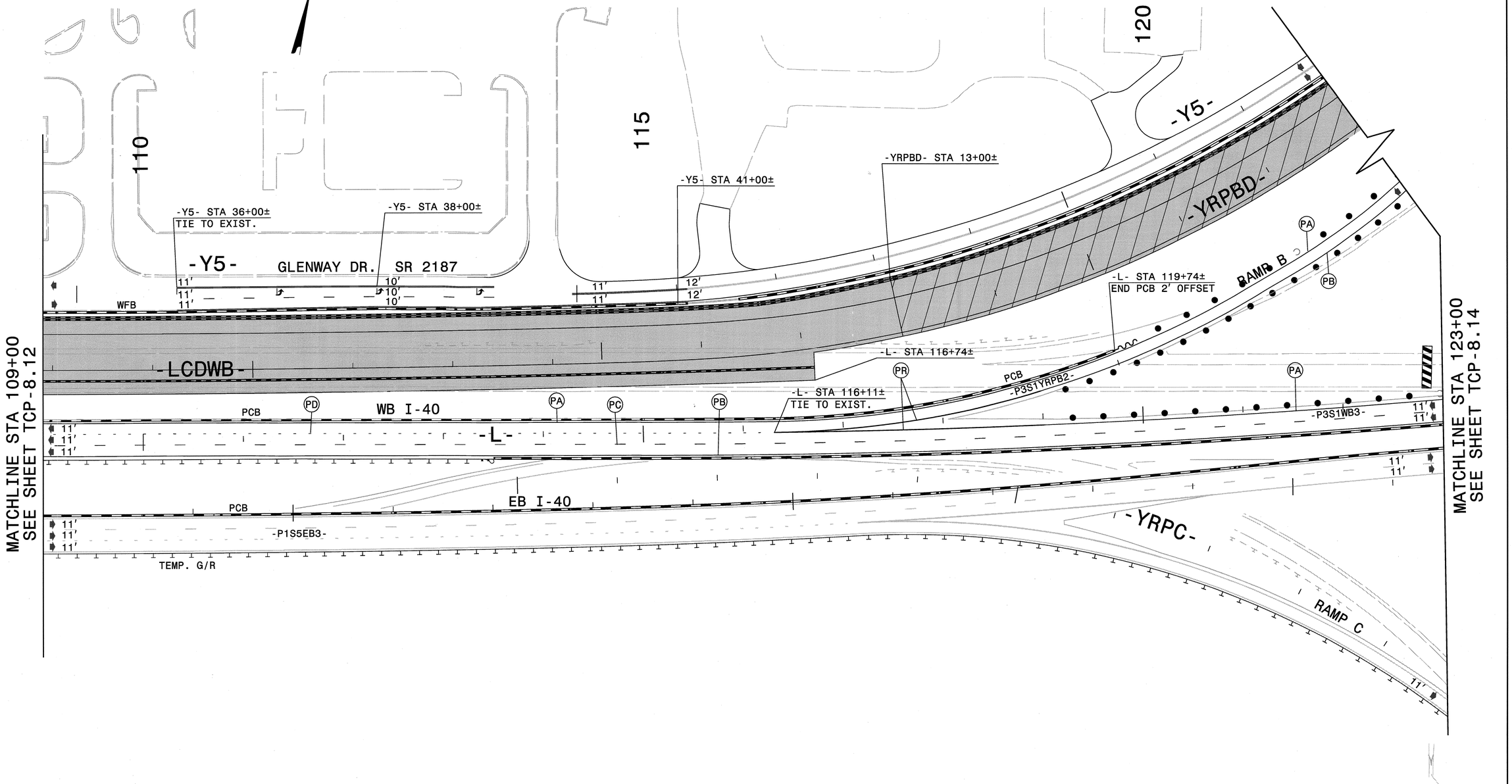
	I-3819A	TCP-8.13



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzycha DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

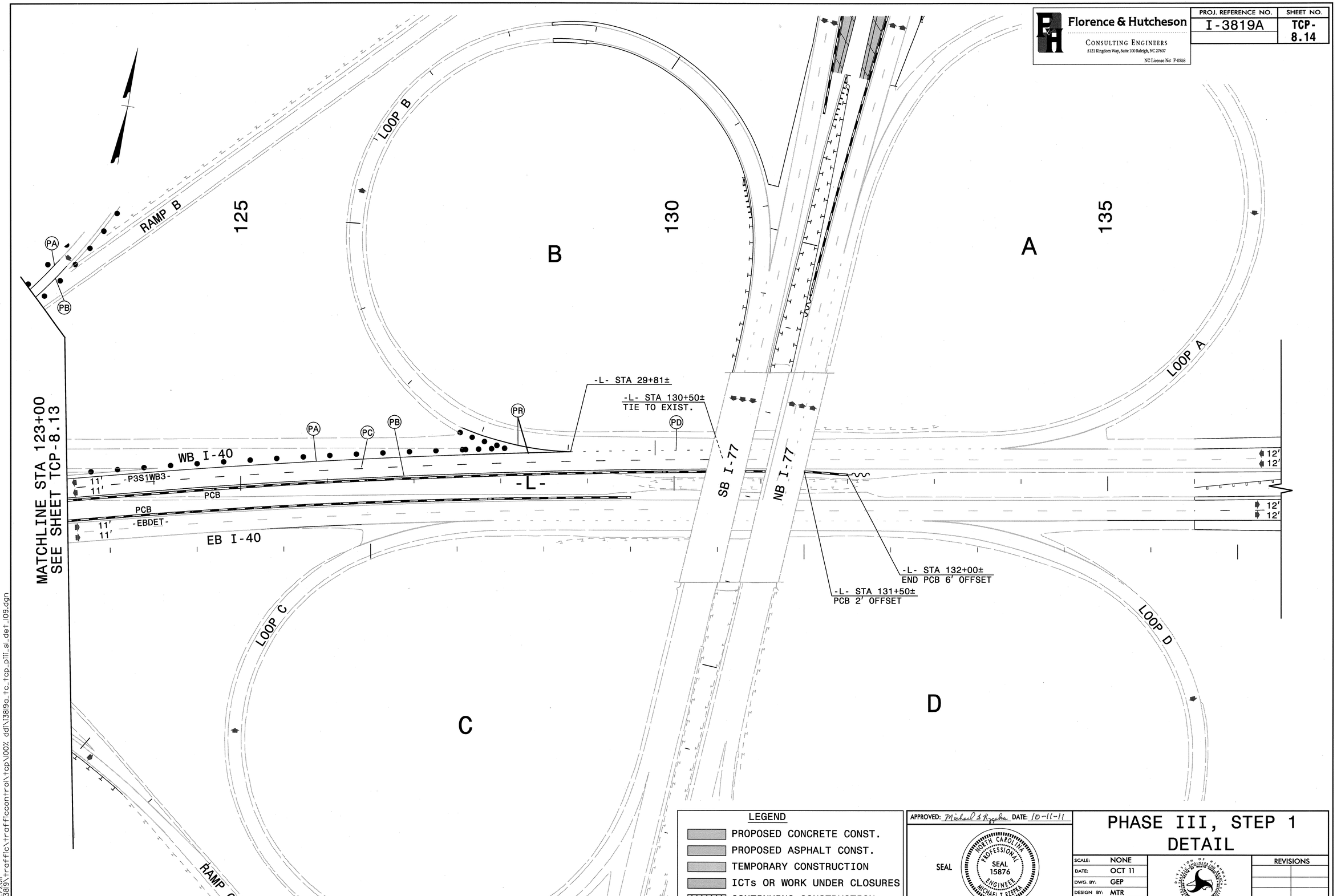
PHASE III, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
c:\3819\traffic\trafficcontrol\top\002_ddl\3819a_to_top_p111_sl_det_108.dgn



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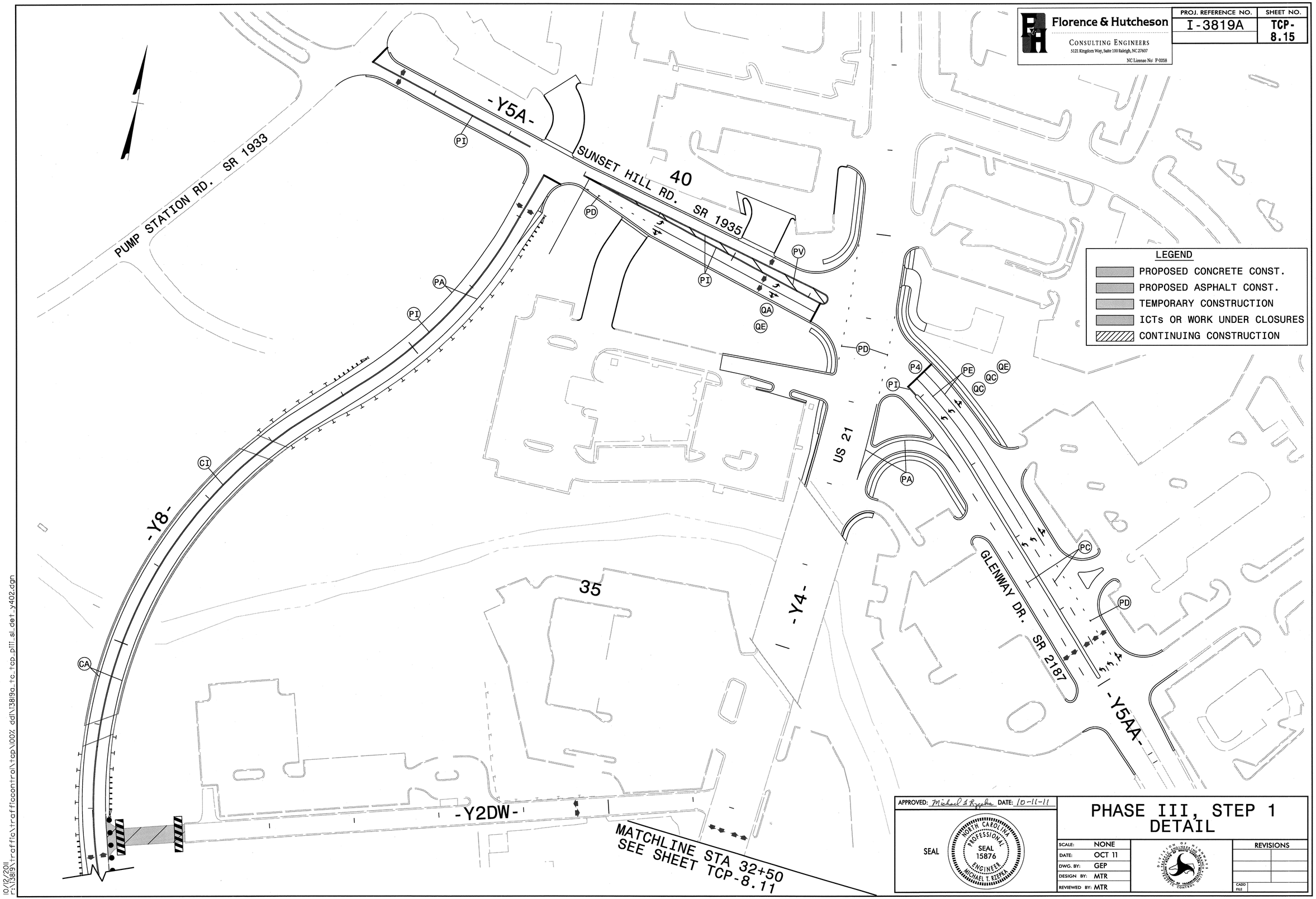
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-8.14
MATCHLINE STA 123+00
SEE SHEET TCP-8.13
RAMP B
LOOP B
125
130
135
B
A
LOOP A
PA
PB
PC
PR
PD
-L- STA 29+81±
-L- STA 130+50±
TIE TO EXIST.
WB I-40
-P3S1WB3-
11'
11'
PCB
-L-
PCB
-EBDET-
11'
11'
EB I-40
SB I-77
NB I-77
12'
12'
12'
12'
-L- STA 132+00±
END PCB 6' OFFSET
-L- STA 131+50±
PCB 2' OFFSET
LOOP C
LOOP D
C
D
RAMP C
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE III, STEP 1
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pii_sl_det_109.dgn



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5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-8.15
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
PUMP STATION RD. SR 1933
SUNSET HILL RD. SR 1935
-Y5A-
40
-Y8-
35
-Y4-
US 21
GLENWAY DR. SR 2187
-Y5AA-
-Y2DW-
MATCHLINE STA 32+50
SEE SHEET TCP-8.11
PI
PD
PA
PV
QA
QE
CI
CA
P4
PE
QC
PC
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE III, STEP 1
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% dd\13819a_tc_tcp_pii_sl_det_y402.dgn

TEMPORARY SHORING NOTES

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NC License No: F-0268

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-8.16

TEMPORARY SHORING NO. 9A (SEE SHEET TCP-8.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 81+00± -L- TO STATION 84+70± -L-, 30′ LEFT.

DESIGN TEMPORARY SHORING FROM STATION 81+00± -L- TO STATION 84+70± -L-, 30′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 81+00± -L- TO STATION 84+70± -L-, 30′ LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 81+00± -L- TO STATION 84+70± -L-, 30′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 9B (SEE SHEET TCP-8.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 84+70± -L- TO STATION 84+80± -L-, 30′ LEFT TO 32′ LEFT.

DESIGN TEMPORARY SHORING FROM STATION 84+70± -L- TO STATION 84+80± -L-, 30′ LEFT TO 32′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 84+70± -L- TO STATION 84+80± -L-, 30* LEFT TO 32′ LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 84+70± -L- TO STATION 84+80± -L-, 30′ LEFT TO 32′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 9C (SEE SHEET TCP-8.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 84+80± -L-TO STATION 85+10± -L-, 32′ LEFT.

DESIGN TEMPORARY SHORING FROM STATION 84+80± -L-TO STATION 85+10± -L-, 32′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR*S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 84+80± -L-TO STATION 85+10± -L-, 32′ LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 84+80± -L-TO STATION 85+10± -L-, 32′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 10A (SEE SHEET TCP-8.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 87+00± -L- TO STATION 87+50± -L-, 32′ LEFT.

DESIGN TEMPORARY SHORING FROM STATION 87+00± -L- TO STATION 87+50± -L-, 32′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 87+00± -L- TO STATION 87+50± -L-, 32′ LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 87+00± -L- TO STATION 87+50± -L-, 32′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 10B (SEE SHEET TCP-8.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 87+50± -L- TO STATION 87+60± -L-, 32′ LEFT TO 30* LEFT.

DESIGN TEMPORARY SHORING FROM STATION 87+50± -L- TO STATION 87+60± -L-, 32′ LEFT TO 30′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR*S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 87+50± -L- TO STATION 87+60± -L-, 32′ LEFT TO 30′ LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 87+50± -L- TO STATION 87+60± -L-, 32′ LEFT TO 30′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

TEMPORARY SHORING NO. 10C (SEE SHEET TCP-8.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 87+60± -L- TO STATION 88+50± -L-, 30′ LEFT.

DESIGN TEMPORARY SHORING FROM STATION 87+60± -L- TO STATION 88+50± -L-, 30′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 87+60± -L- TO STATION 88+50± -L-, 30′ LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

TEMPORARY SHORING NO. 10C CON'T. (SEE SHEET TCP-8.11)

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 87+60± -L- TO STATION 88+50± -L-, 30′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

TEMPORARY SHORING NO. 13 (SEE SHEET TCP-8.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 84+70± -L- TO STATION 85+80± -L-, 30′ LEFT.

DESIGN TEMPORARY SHORING FROM STATION 84+70± -L- TO STATION 85+80± -L-, 30′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 84+70± -L- TO STATION 85+80± -L-, 30′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 14 (SEE SHEET TCP-8.11)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 86+82± -L- TO STATION 87+50± -L-, 30* LEFT.

DESIGN TEMPORARY SHORING FROM STATION 86+82± -L- TO STATION 87+50± -L-, 30* LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 86+82± -L- TO STATION 87+50± -L-, 30* LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 12-16-11 AND SEALED BY A PROFESSIONAL ENGINEER, ERIC N. WILLIAMS, PE, LICENSE #026962.

APPROVED: Michael T Kiepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. KIEPKA

TEMPORARY SHORING NOTES

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

DIVISION OF HIGHWAYS ENGINEERING UNIT TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL

REVISIONS

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1/4/2012
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CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-9.1

PHASE III, STEP 2

STEP 2

USING RSD 1101.02 (SHEETS 3 & 9 OF 15), COMPLETE THE FOLLOWING FOR US 21 RAMP B TRAFFIC (SEE TCP-9.8 THRU TCP-9.10):

- REMOVE AND INSTALL/RESET PCB ALONG WB I-40 OUTSIDE LANE AT -P3S1Y4RPB1-
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON -P3S1Y4RPB1- AND TIE TO EXISTING
- SHIFT US 21 RAMP B TRAFFIC TO -P3S1Y4RPB1-

USING RSD 1101.02 (SHEET 10 OF 15), COMPLETE THE FOLLOWING FOR US 21 RAMP A (SEE TCP-9.10):

- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AND SHIFT TRAFFIC TO US 21 RAMP A TEMPORARY WIDENING
- INSTALL PCB ALONG US 21 RAMPS OUTSIDE LANE AS SHOWN

BEHIND BARRIER, CONSTRUCT THE FOLLOWING PROPOSED (SEE TCP-9.5 THRU TCP-9.9):

WB I-40 FROM -L- STA 26+00± TO STA 55+19±
WB I-40 OUTSIDE SHOULDER FROM -L- STA 55+19± TO -LCDWB- STA 31+00±
-LCDWB- FROM WB I-40 TO -LCDWB- STA 31+00± (INCLUDING BARRIER)
-LCDWB- PORTION FROM -LCDWB- STA 31+00± TO STA 36+00±
-Y4RPB- FROM -LCDWB- TO -Y4RPB- STA 16+50± (TIE TO RAMP B)

BEHIND BARRIER AND USING RSD 1101.02 (SHEET 7 OF 15), CONSTRUCT PROPOSED RIGHT PORTION OF -Y4RPA- FROM US 21 TO -Y4RPA- STA 21+00± (SEE TCP-9.10).

COMPLETE THE FOLLOWING CONSTRUCTION BEGUN EARLIER:

-Y4RPA- STA 17+44± TO STA 21+00±, INCLUDING STRUCTURE
-Y4RPA- STA 10+00± TO STA 17+44±
-LCDWB- FROM -L- STA 96+00± TO -YRPBD- INCLUDING RETAINING WALL AND SINGLE-FACED BARRIERS
WB I-40 OUTSIDE SHOULDER FROM -L- STA 99+00± TO STA 116+74±
-YRPBD- FROM -LCDWB- TO -YRPBD- STA 20+00±
-YRPBD- STA 25+00± TO STA 48+15±
REMAINING CENTER PORTION OF PROPOSED I-77 STRUCTURE OVER -YRPBD- AND REMAINING ROADWAY APPROACHES FROM -Y- STA 144+90± TO STA 159+90

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 2 PHASING

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

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1/4/2012
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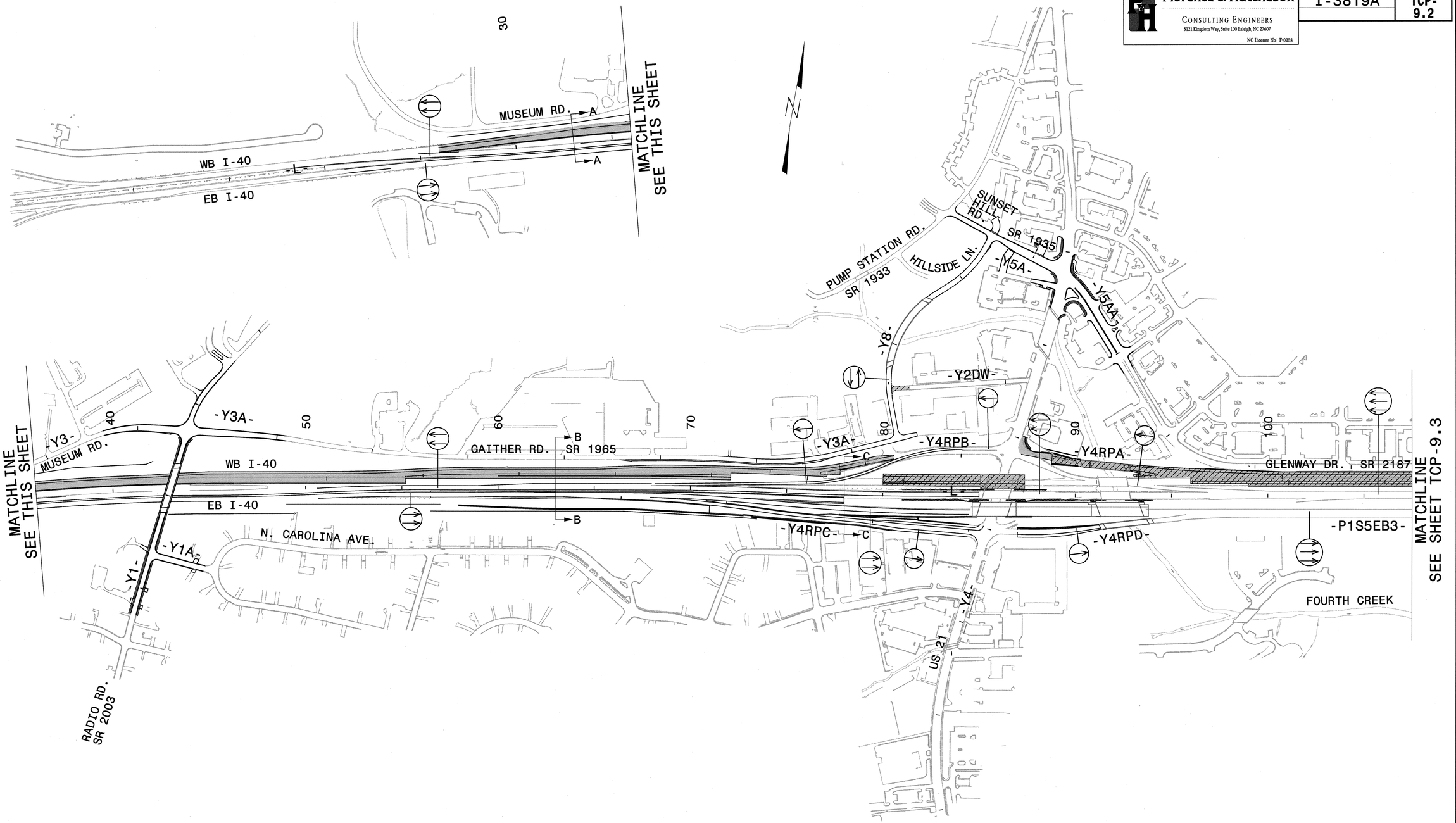

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 2 OVERVIEW
SHEET 1 OF 2

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

REVISIONS

CADD FILE

10/12/2011
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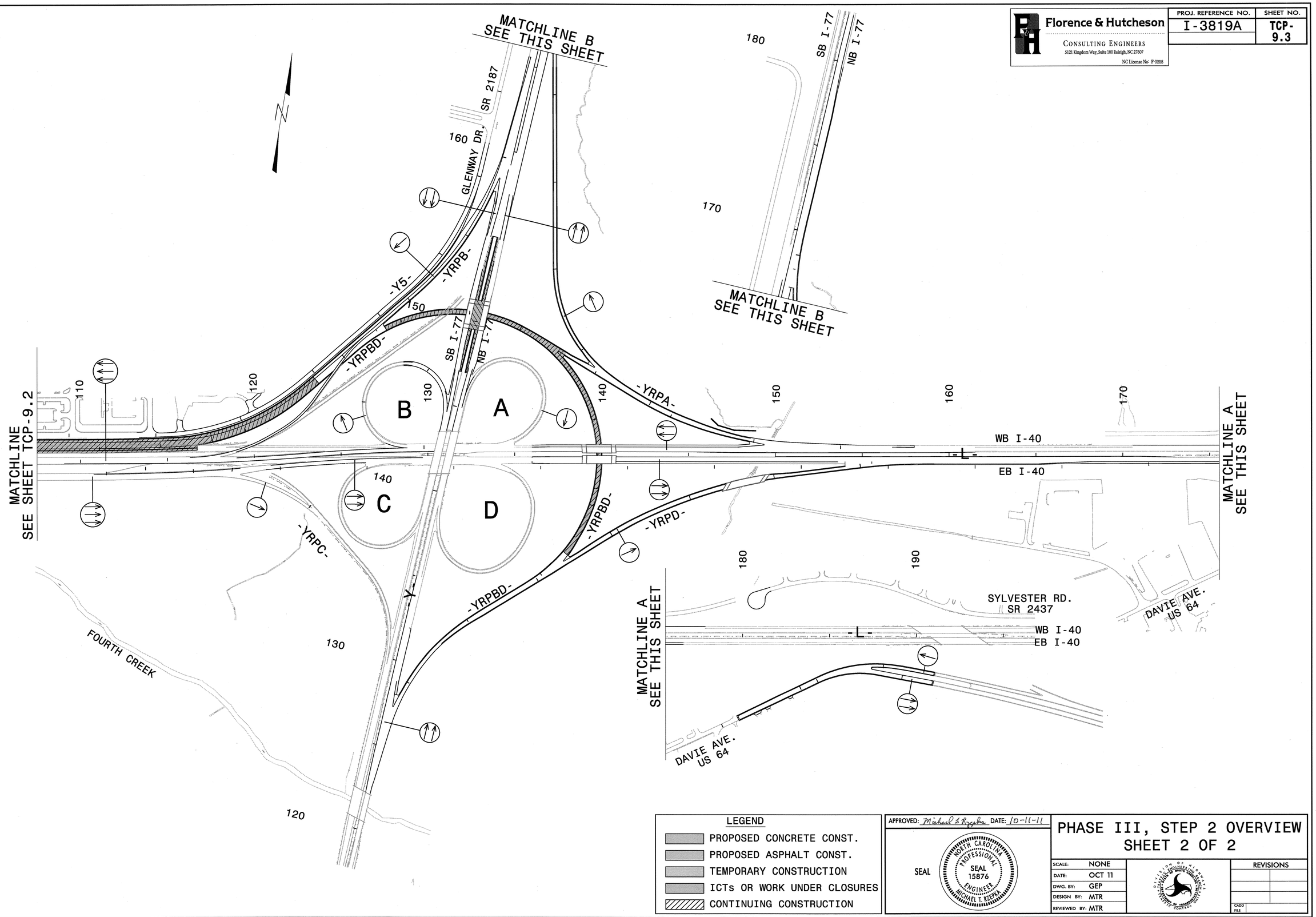
Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-9.3



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 2 OVERVIEW SHEET 2 OF 2

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
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10/12/2011
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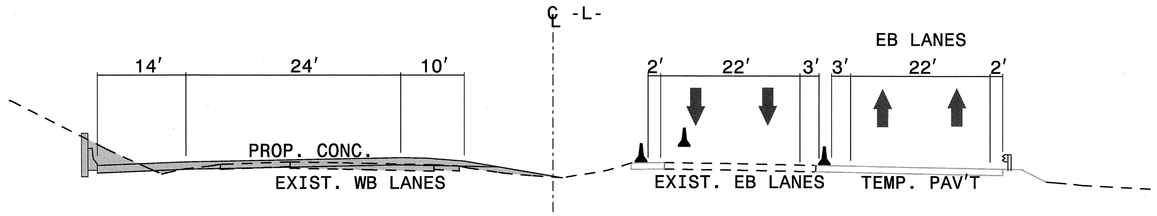
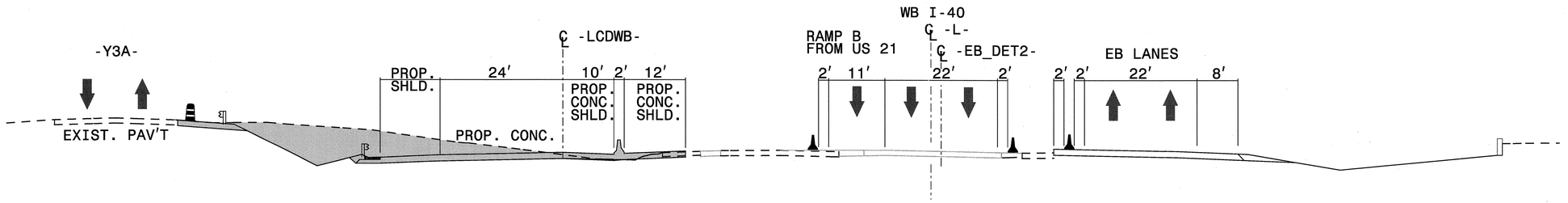
NC License No: P-0258

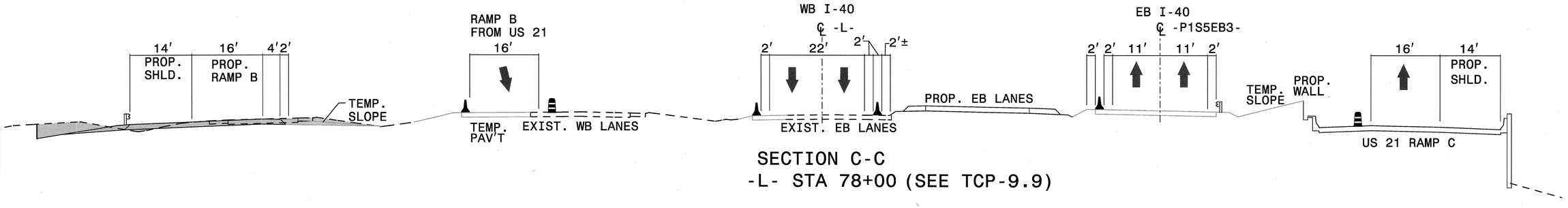
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-9.4



SECTION A-A
-L- STA 33+00 (SEE TCP-9.6)



SECTION B-B
-L- STA 63+00 (SEE TCP-9.8)



SECTION C-C
-L- STA 78+00 (SEE TCP-9.9)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 2 SECTIONS

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
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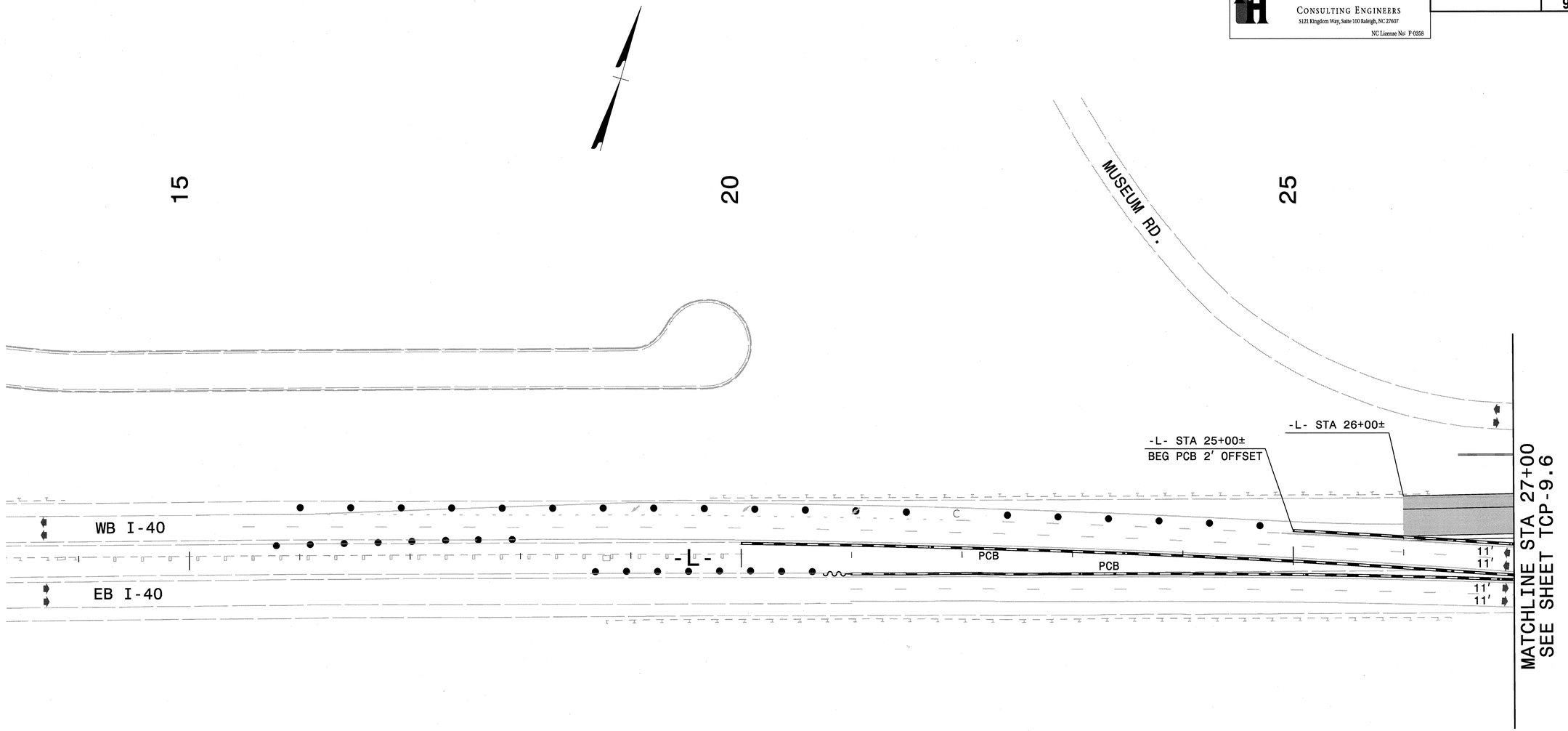
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-9.5



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/2/2011
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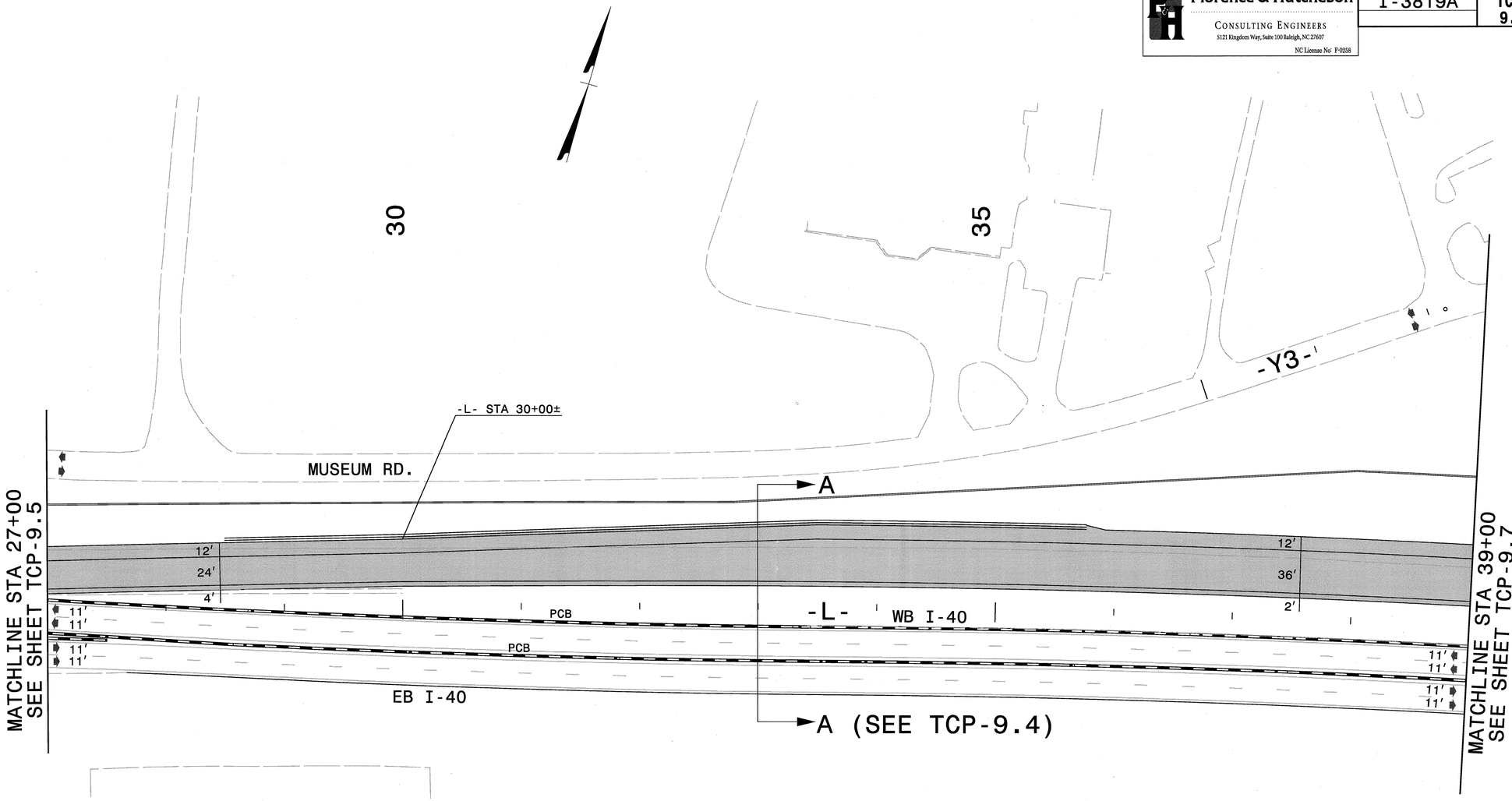
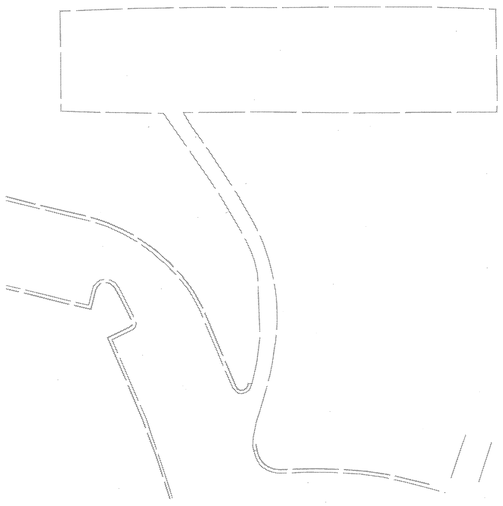
Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	I-3819A	TCP-9.6





LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE III, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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10/12/2011
P:\13819\traffic\trafficcontrol\tcp\100% ddi\3819a_tc_tcp_p3_s2_det_102.dgn

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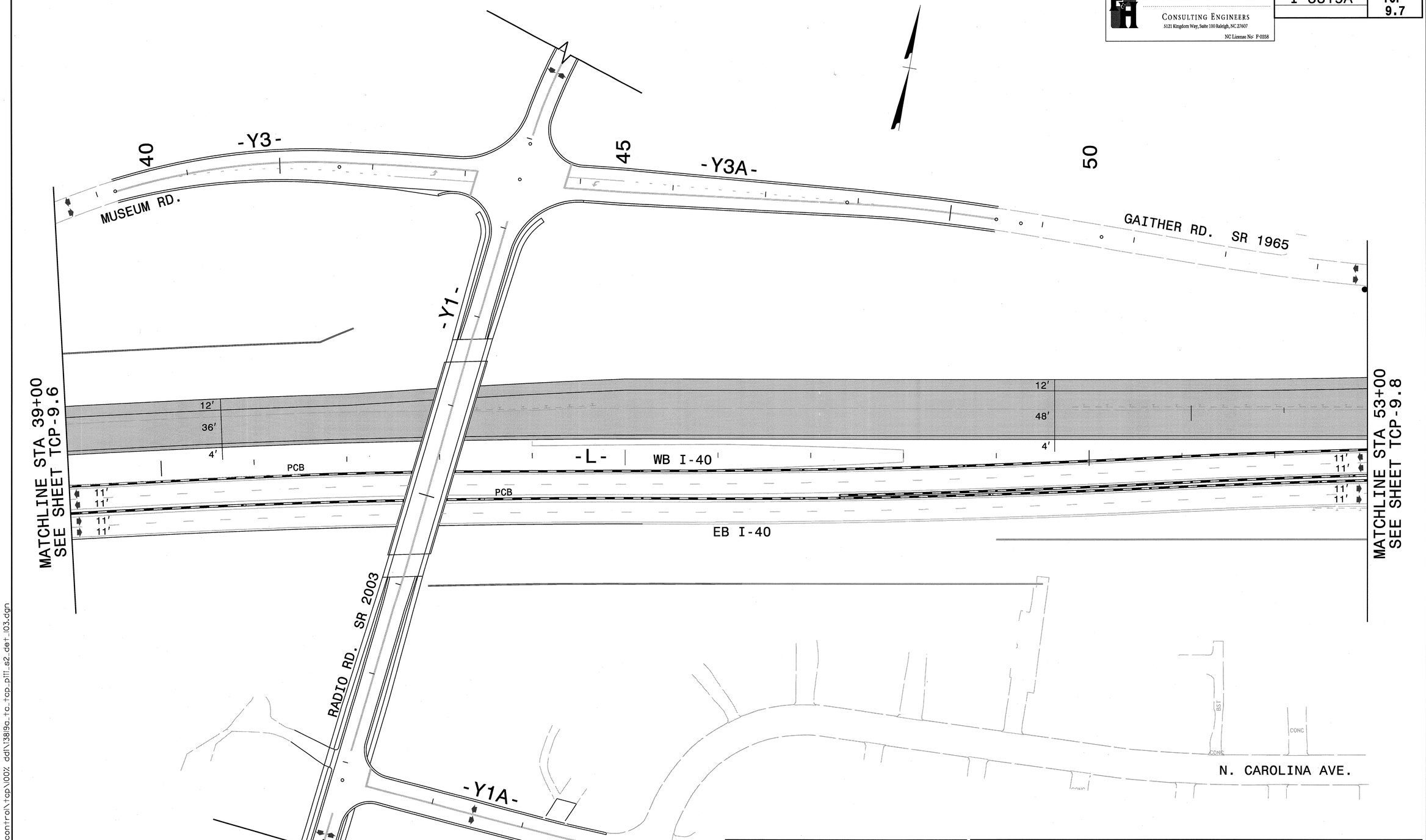
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-9.7



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 2 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pill_s2_det_103.dgn

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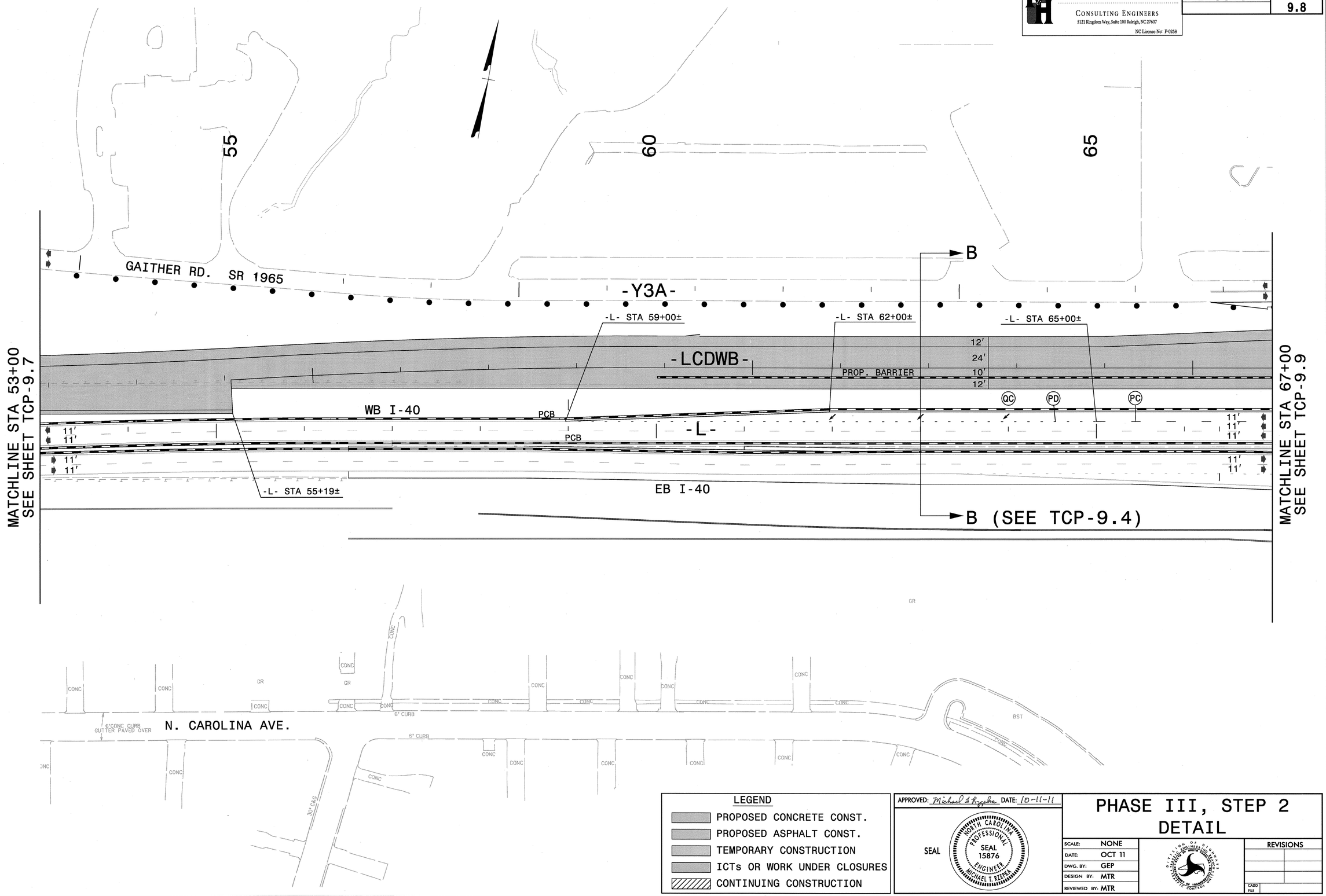
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-9.8



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 2 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pill_s2_det_104.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-9.9

70

75

80

-Y8-

GAITHER RD. SR 1965

-LCDWB- STA 31+00±

-LCDWB- STA 36+00±

-L- STA 74+00±
BEG PCB 2' OFFSET

-Y4RPB- STA 13+64±
BACK OF GORE

-Y4RPB- STA 16+50±

C

-Y3A-

12'
36'
10'
12'

-LCDWB-

PROP. BARRIER

12'
24'

11'

-L- STA 80+00±

12'
24'
10'
12'

PC

-L- STA 68+00±

PR

PA

PB

PCB

-L- STA 78+00±
BEG PCB 2' OFFSET

-L-

11'
11'

PCB

11'
11'

16'

WB I-40

PCB

-L- STA 78+00±

PCB

11'
11'

EB I-40

-Y4RPC-

C (SEE TCP-9.4)

MATCHLINE STA 67+00
SEE SHEET TCP-9.8

MATCHLINE STA 81+00
SEE SHEET TCP-9.10

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
P:\I3819\traffic\trafficcontrol\tcp\00% ddt\I3819a_tc_tcp_p1l_s2_det_105.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-9.10

MATCHLINE STA 81+00
SEE SHEET TCP-9.9

-Y4RPB- STA 18+00±
END PCB 2' OFFSET

-Y4RPB-

-Y4RPB- STA 18+50±
PCB 2' OFFSET

-Y4RPB- STA 20+00±
END PCB 22' OFFSET

PA PB

85

-Y4-

MAINTAIN EXIST.
G/R & BARRIER
ON US 21

12'
24'
10'
12'

PROPOSED STRUCTURE

-Y4RPA- STA 23+65±
END PCB 2' OFFSET

-Y4RPA- STA 22+00±

-Y4RPA- STA 22+00±

90

-Y4RPA- STA 21+45±
BEG PCB 2' OFFSET

P4 PE QE QA

14' 10' 10' 14'
PCB

-Y4RPA-

-LCDWB-

11'
11'

WB I-40

-L-

11'
11'

11'
11'

-P1S5EB3-

EB I-40

11'
11'

12'
12'

PROP. SHLD.

-Y4RPC-

-Y4RPD-

US 21

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 2 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS

CADD FILE

10/12/2011
P:\I3819\traffic\trafficcontrol\tcp\00?_ddI3819a_tc_tcp_p1l_s2_det_06.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.1

PHASE III, STEP 3

STEP 3

USING RSD 1101.02 (SHEETS 3 & 9 OF 15), COMPLETE THE FOLLOWING FOR US 21 RAMP B TRAFFIC (SEE TCP-10.5 THRU 10.10):

- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON PROPOSED WB I-40, -LCDWB- AND -Y4RPB- WEST OF US 21 AS SHOWN
- SHIFT US 21 RAMP B TRAFFIC TO PROPOSED -Y4RPB-, -LCDWB- AND WB I-40
- INSTALL/RESET PCB ALONG -P1S3EB1- OUTSIDE LANE FROM -L- STA 59+00± TO STA 74+00±
- INSTALL/RESET PCB ALONG PROPOSED -Y4RPB- AS SHOWN

AWAY FROM TRAFFIC OR BEHIND DRUMS, COMPLETE THE FOLLOWING TRAFFIC SHIFTS FOR ACCESS TO US 21 ONLY (SEE TCP-10.10 THRU 10.16):

- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON RIGHT PORTION OF -Y4RPA-, -YRPBD-, -YRPAB- AND -LCDWB- EAST OF US 21
- INSTALL PCB ALONG -Y4RPA-, -LCDWB- AND -YRPBD- AS SHOWN
- OPEN RIGHT PORTION OF -Y4RPA-, -LCDWB- EAST OF US 21, -YRPBD- AND -YRPAB- TO TRAFFIC FOR US 21
- SHIFT -YRPB- TRAFFIC TO -LCDWB- (ACCESS TO US 21 ONLY). FOR SB I-77 ACCESS TO WB I-40 SEE TCP-10.17 FOR DETOUR ROUTE.
- RESIGN LOOP A FOR ACCESS TO WB I-40 ONLY

USING RSD 1101.02 (SHEETS 3 OF 15), COMPLETE THE FOLLOWING (SEE TCP-10.3):

- REMOVE PCB ALONG NB & SB I-77 MEDIAN LANES NORTH OF I-40
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS FOR FINAL PATTERN (SEE FINAL PM PLANS FOR LOCATIONS)
- SHIFT NB & SB I-77 TRAFFIC TO FINAL PATTERN NORTH OF I-40

BEHIND BARRIER, CONSTRUCT REMAINING PROPOSED WB I-40 OUTSIDE SHOULDER AND -LCDWB- PORTION FROM -LCDWB- STA 31+00± TO -L- STA 80+00± (SEE TCP-10.9).

BEHIND DRUMS AND USING RSD 1101.02 (SHEET 7 OF 15), CONSTRUCT REMAINING -Y4RPB- FROM STA 16+50± TO STA 21+50± WITH TEMPORARY TIE TO EXISTING US 21 (SEE TCP-10.9 & 10.10).

BEHIND BARRIER, CONSTRUCT THE FOLLOWING PROPOSED (SEE TCP-10.10 & 10.11):

- RIGHT PORTION OF STRUCTURE OVER FOURTH CREEK
- -LCDWB- AND WB I-40 OUTSIDE SHOULDER FROM THE STRUCTURE OVER US 21 AND THE STRUCTURE OVER FOURTH CREEK
- REMAINING -LCDWB- FROM THE STRUCTURE OVER FOURTH CREEK TO -L- STA 96+00±
- WB I-40 OUTSIDE SHOULDER FROM THE STRUCTURE OVER FOURTH CREEK TO -L- STA 99+00±

BEHIND BARRIER AND RSD 1101.02 (SHEET 7 OF 15), CONSTRUCT REMAINING LEFT PORTION OF -Y4RPA- FROM US 21 TO -Y4RPA- STA 22+00± (SEE TCP-10.10).

USING RSD 1101.02 (SHEET 1 OF 15), REMOVE WFB ALONG GLENWAY DR. CONSTRUCT PROPOSED SHOULDER WIDENING INCLUDING GUARDRAIL AND CURB & GUTTER ALONG -Y5- FROM STA 19+68± TO STA 40+75± (SEE TCP-10.10 THRU 10.12).

BEHIND BARRIER, CONSTRUCT TEMPORARY WB I-40 CONNECTOR -P4WB3- BETWEEN -YRPBD- AND EXISTING WB I-40 (SEE TCP-10.12 & 10.13).

COMPLETE THE FOLLOWING PROPOSED CONSTRUCTION BEGUN EARLIER:

-LCDWB-, BARRIER AND -L- OUTSIDE SHOULDER FROM -L- STA 80+00± TO PROPOSED STRUCTURE OVER US 21
LEFT PORTION OF STRUCTURE OVER US 21
TEMPORARY TIE BETWEEN -Y8- AND -Y2DW-

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 PHASING

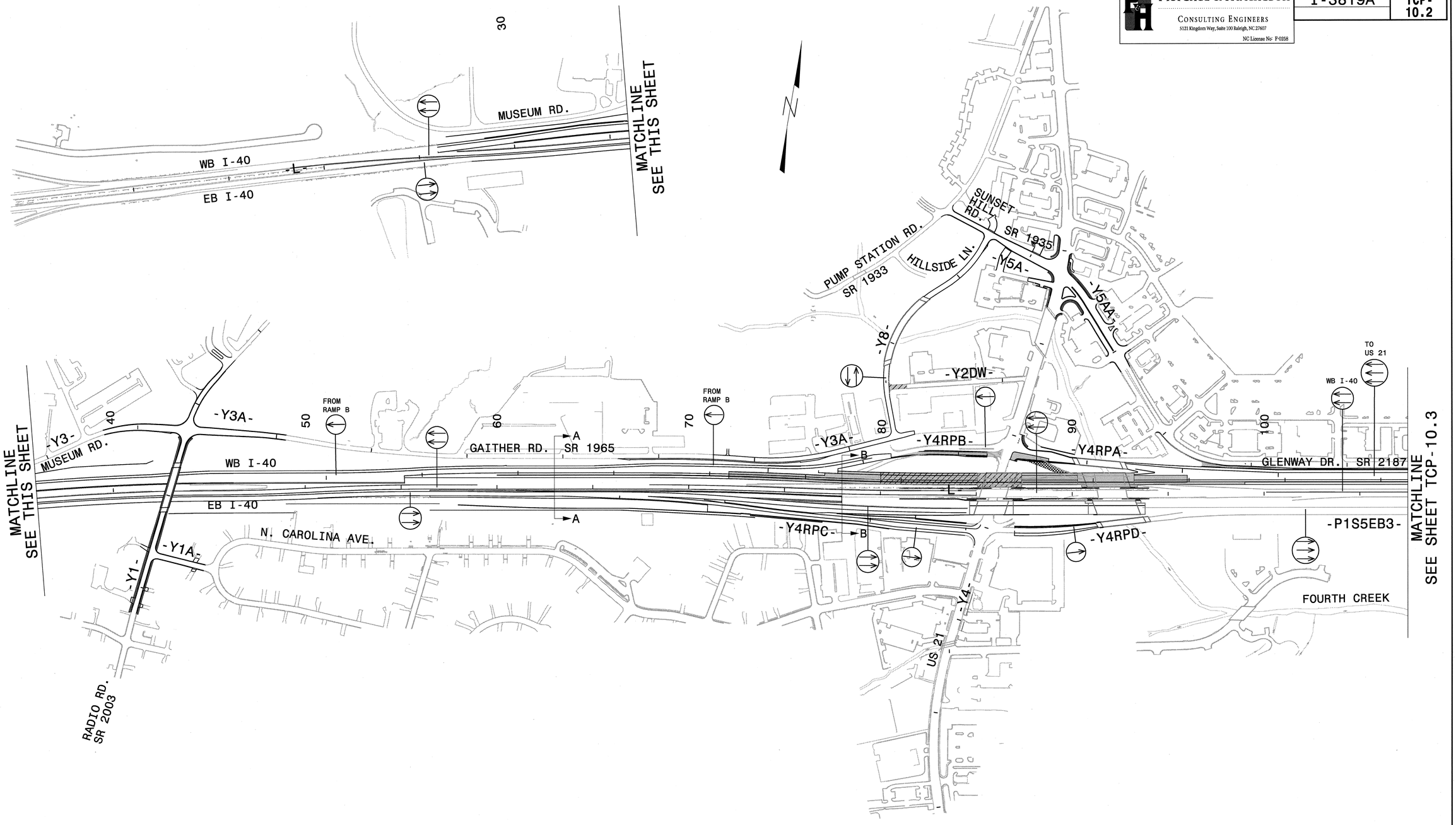
SCALE:	NONE
DATE:	JAN 12
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

1/4/2012
R:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_phasing.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-10.2



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

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

PHASE III, STEP 3 OVERVIEW SHEET 1 OF 2

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
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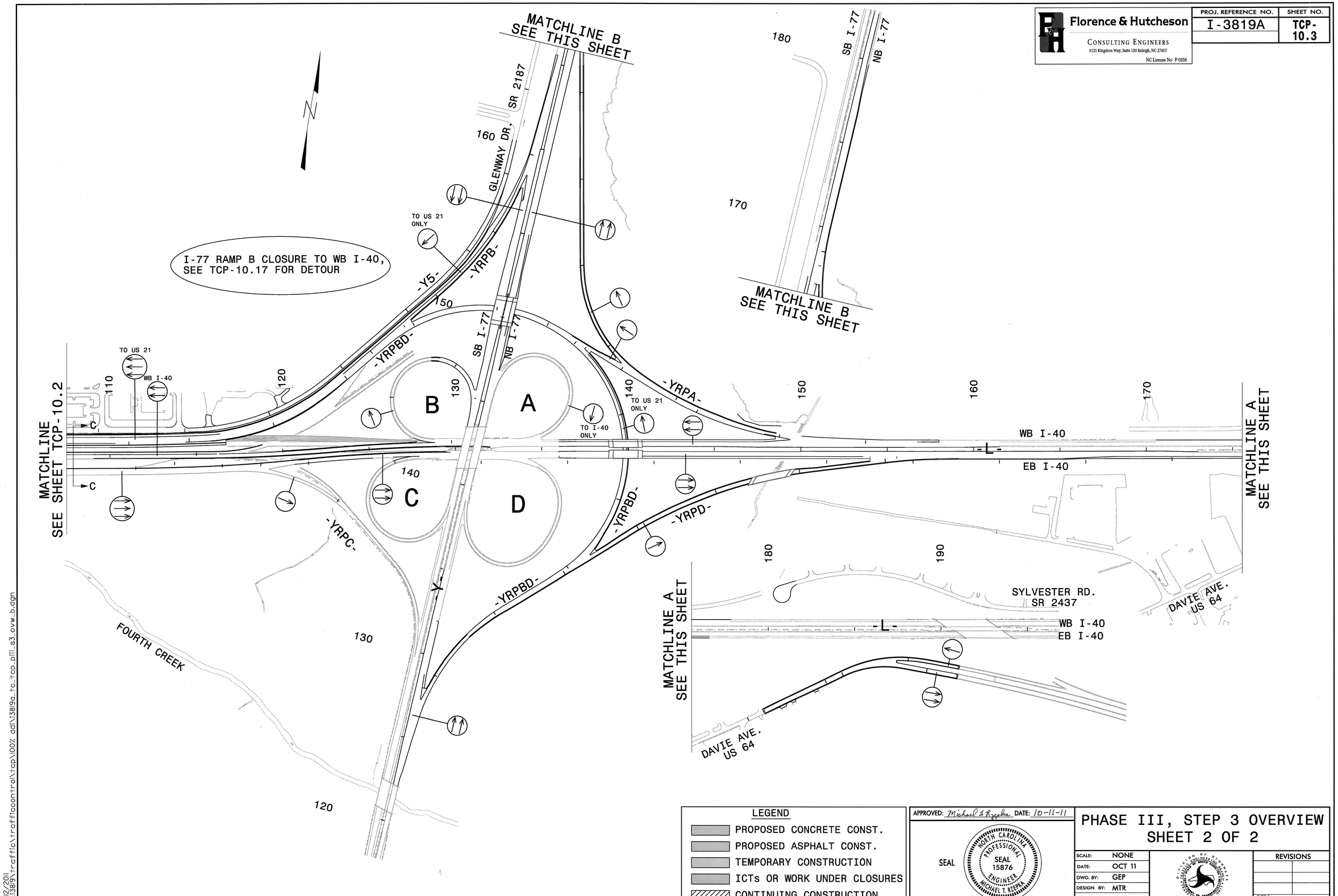

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5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-10.3
MATCHLINE B SEE THIS SHEET
MATCHLINE B SEE THIS SHEET
MATCHLINE SEE SHEET TCP-10.2
MATCHLINE A SEE THIS SHEET
MATCHLINE A SEE THIS SHEET
I-77 RAMP B CLOSURE TO WB I-40, SEE TCP-10.17 FOR DETOUR
GLENWAY DR. SR 2187
SB I-77
NB I-77
TO US 21 ONLY
TO US 21
WB I-40
TO I-40 ONLY
-Y5-
-YRPB-
-YRPBD-
-YRPA-
-YRPC-
-YRPD-
-Y-
-L-
WB I-40
EB I-40
SYLVESTER RD. SR 2437
DAVIE AVE. US 64
FOURTH CREEK
A
B
C
D
110
120
130
140
150
160
170
180
190
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE III, STEP 3 OVERVIEW
SHEET 2 OF 2
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pii_s3_ovw_b.dgn

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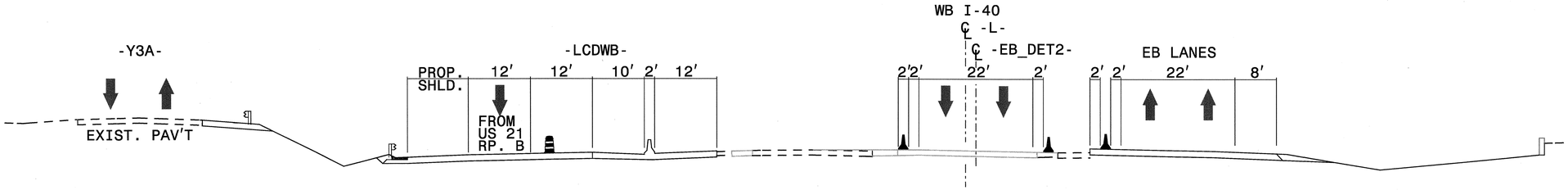
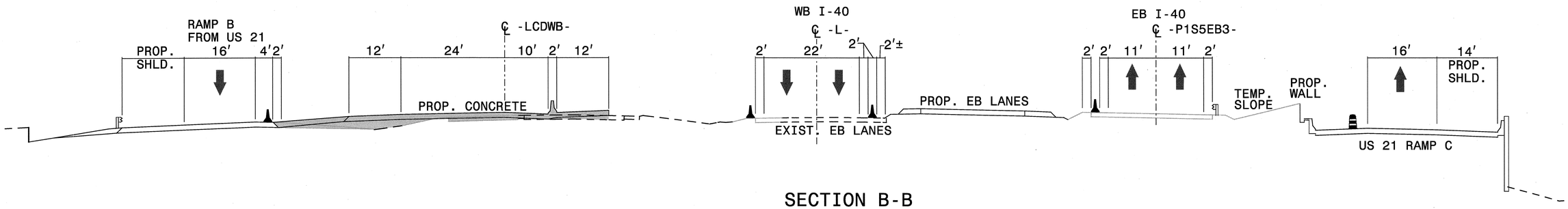
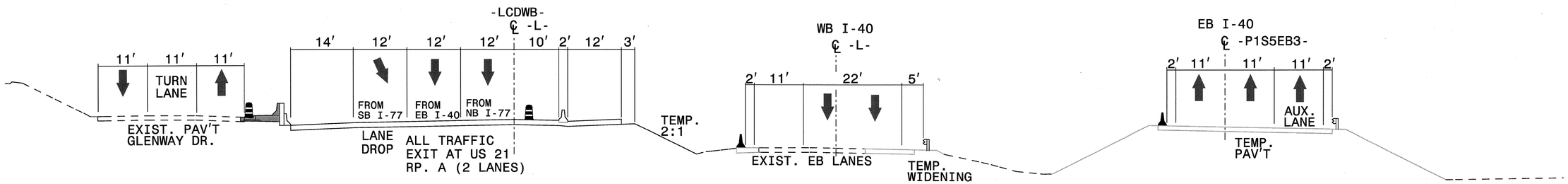
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.4



SECTION A-A
-L- STA 63+00 (SEE TCP-10.8)



SECTION B-B
-L- STA 78+00 (SEE TCP-10.9)



SECTION C-C
-L- STA 108+00 (SEE TCP-10.11)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 SECTIONS

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

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r:\13819\traffic\trafficcontrol\tcp\i00x dd\13819a_tc_tcp_sections.dgn

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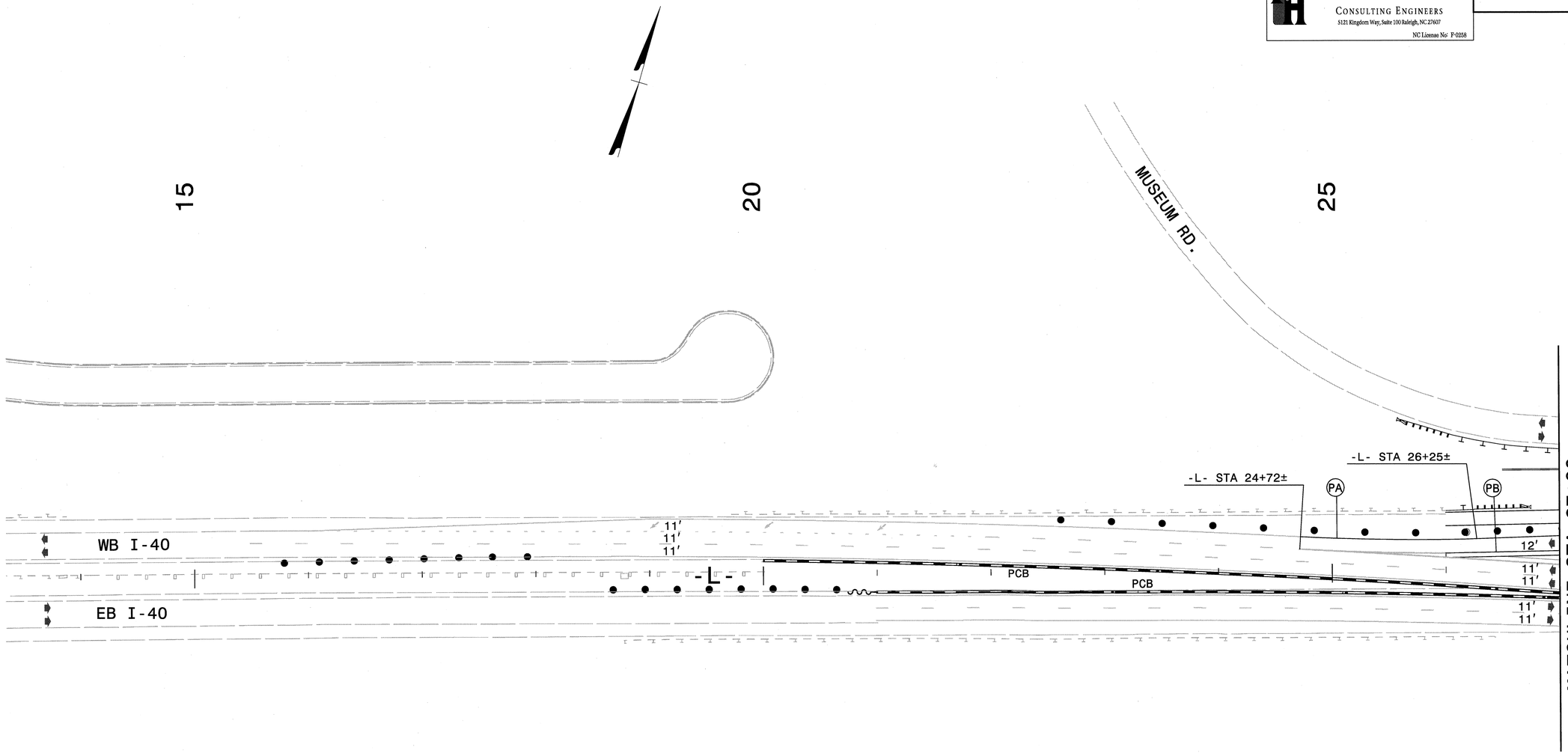
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.5



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

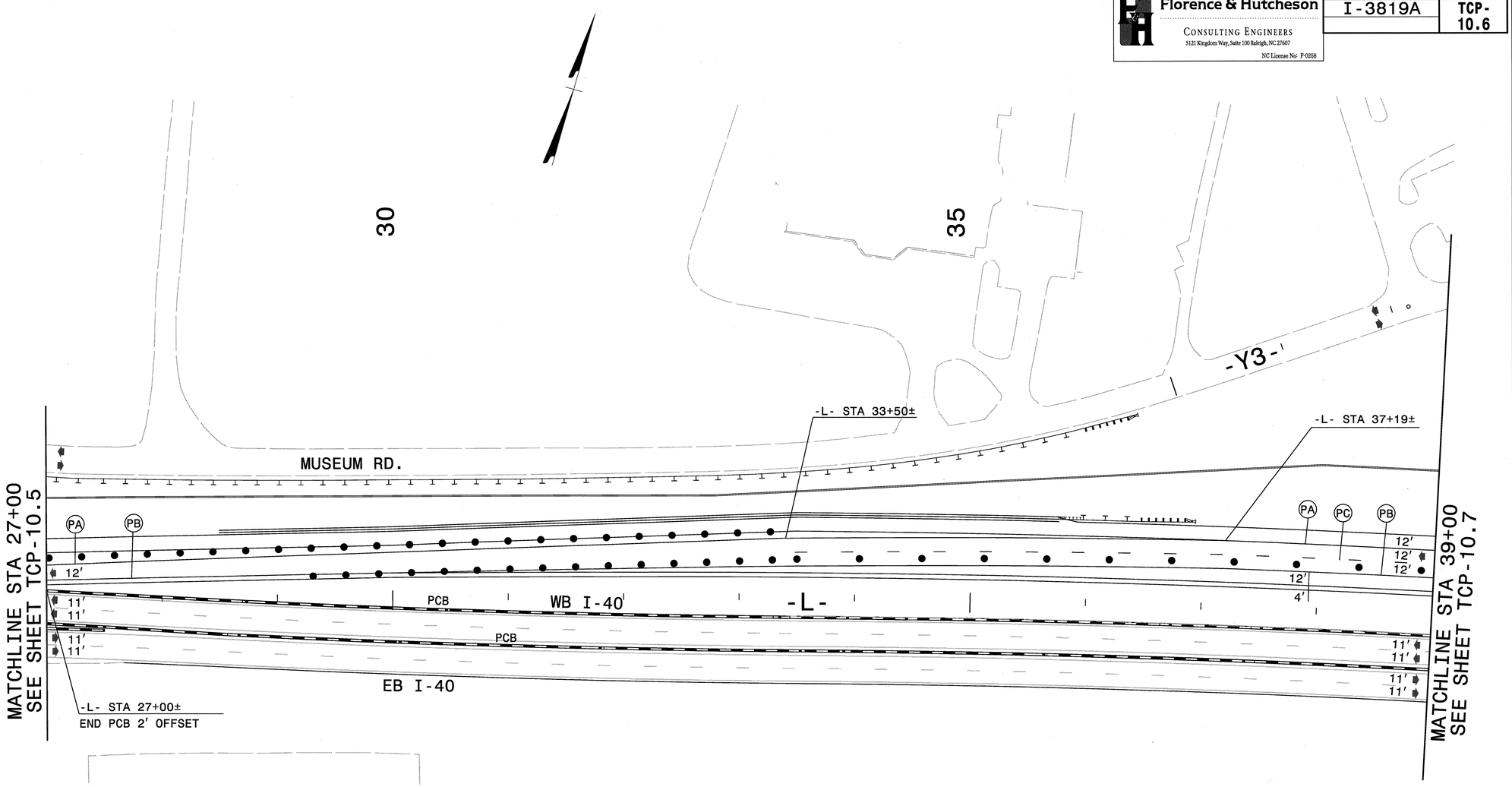
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pii1_s3_det_101.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-10.6



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEERING DESIGN UNIT

REVISIONS	
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10/12/2011
P:\I3819\traffic\trafficcontrol\tcp\00%_ddI\I3819a_tc_tcp_pIII_s3_det_02.dgn

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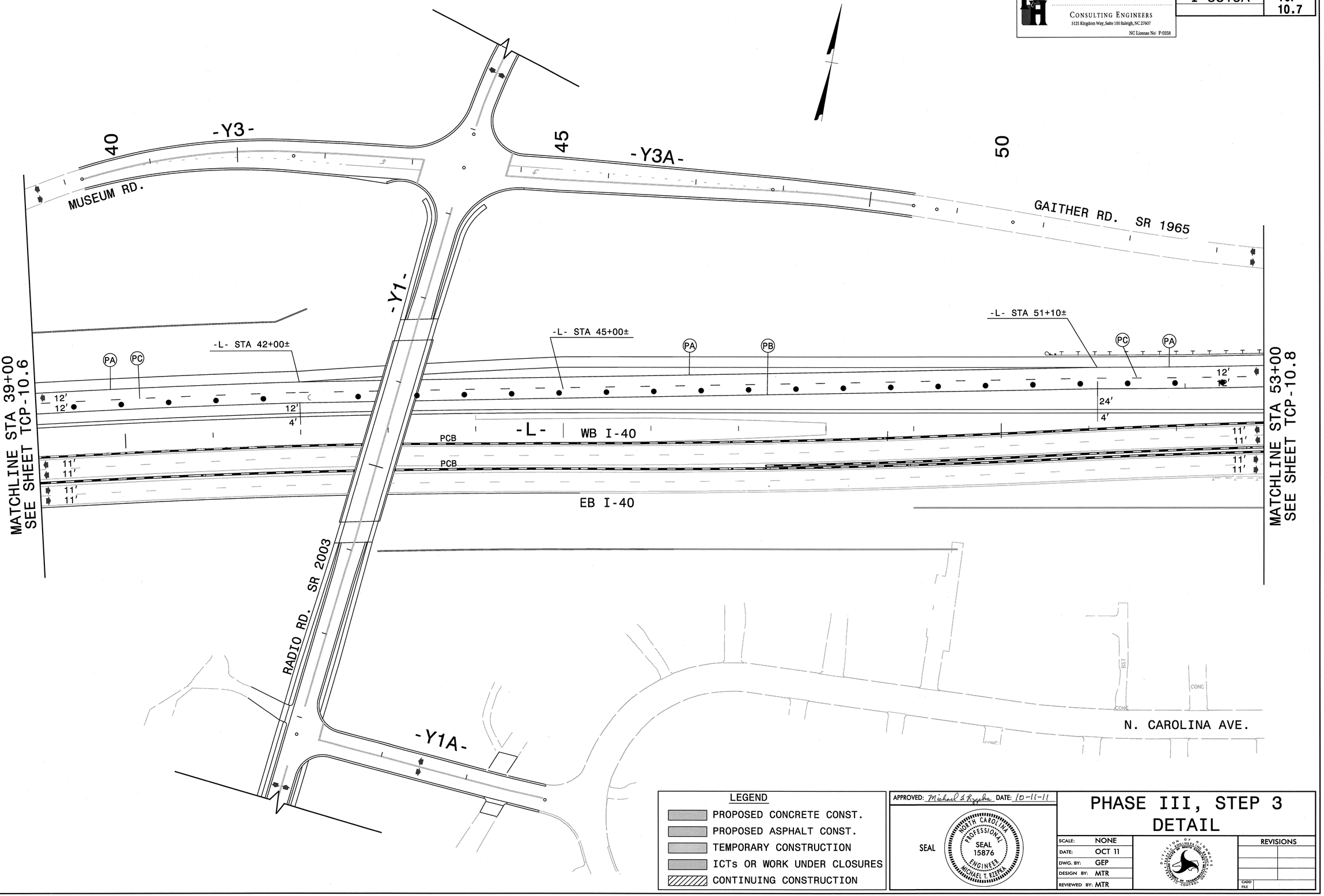
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.7



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\traffiocontrol\tcp\100% dd\3819a_tc_tcp_pIII_s3_det_103.dgn

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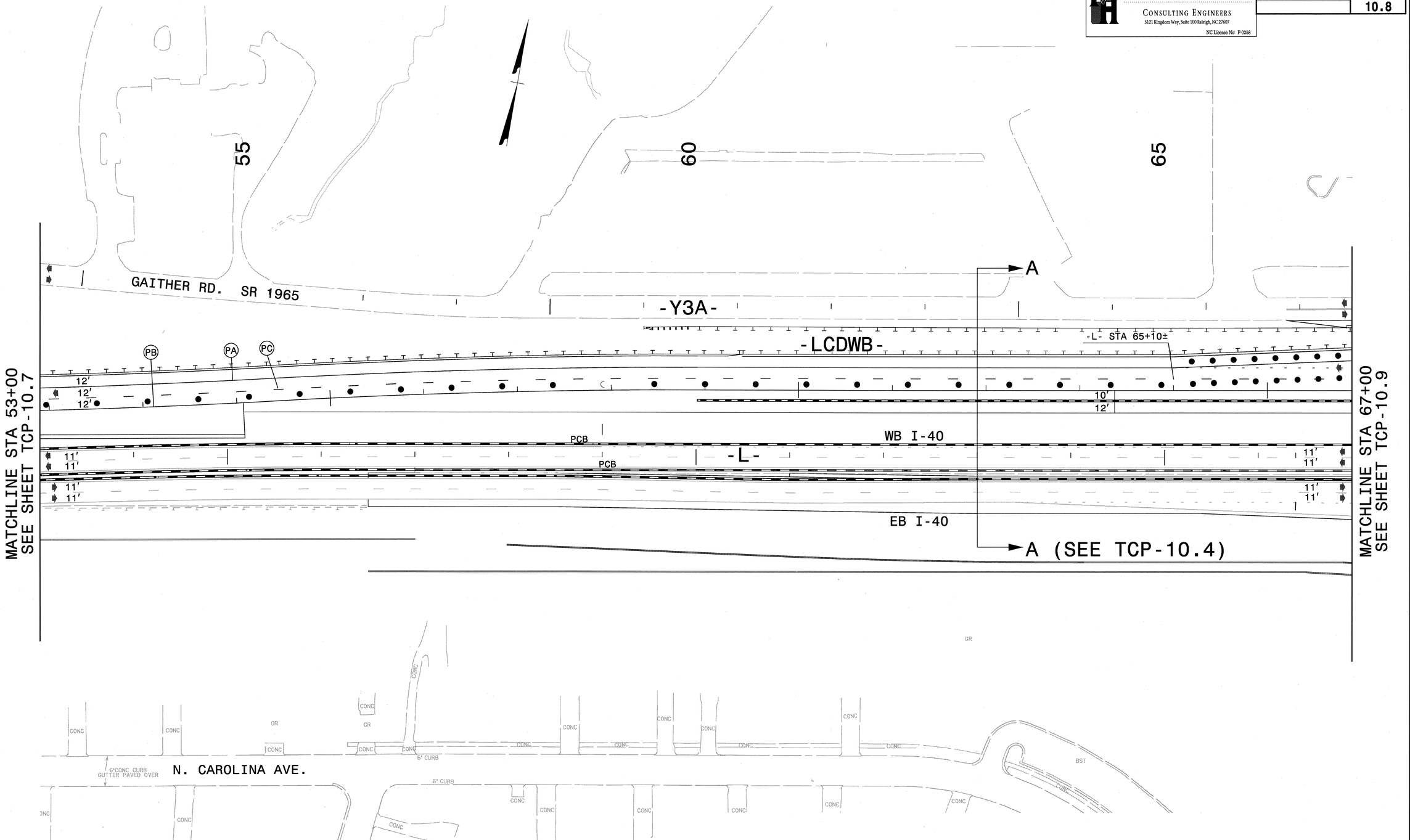
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.8



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pll_s3_det_104.dgn

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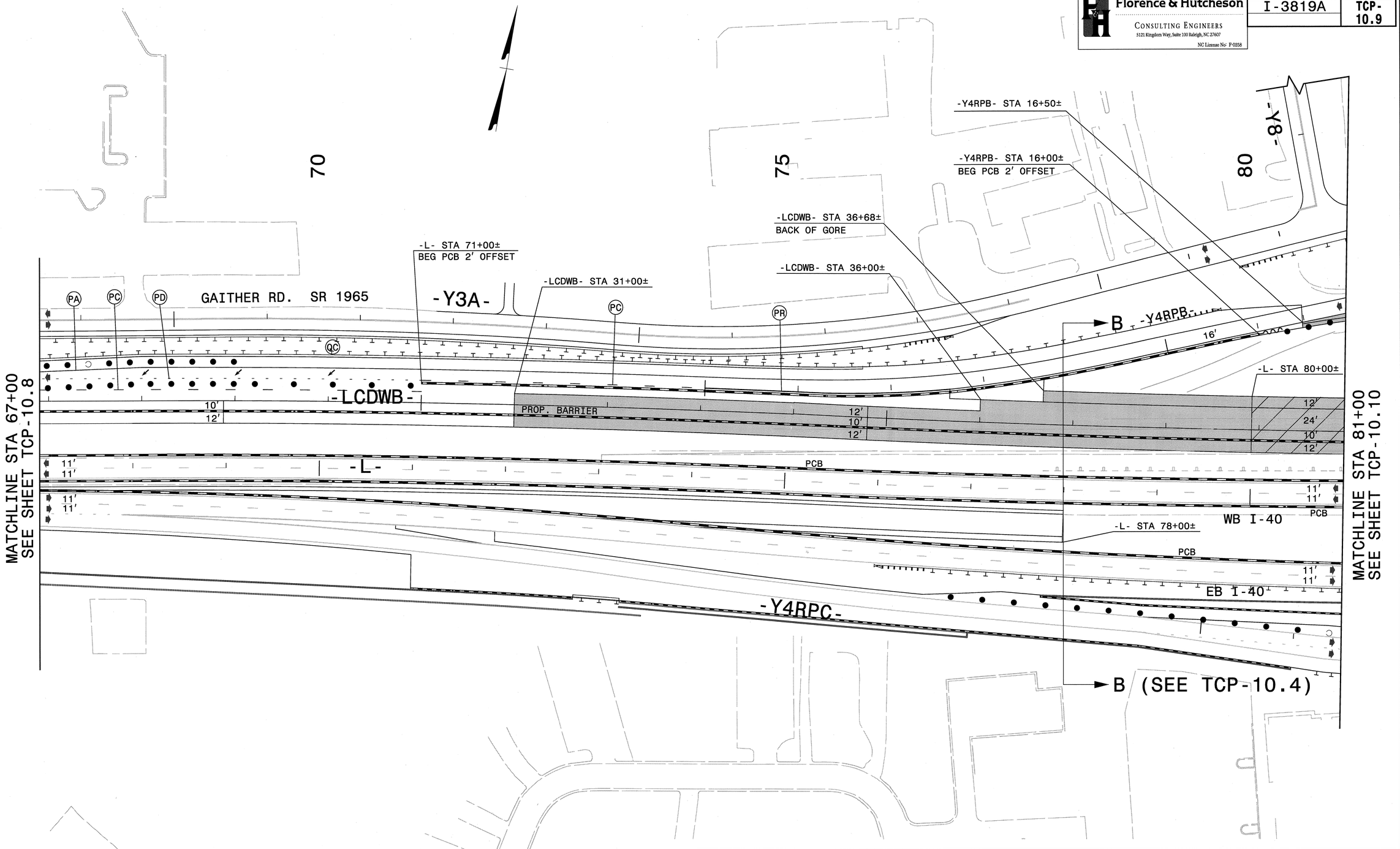
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.9



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pii_s3_det_105.dgn

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PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.10

MATCHLINE STA 81+00
SEE SHEET TCP-10.9

-Y4RPB- STA 21+50±

-Y4RPB-

TEMP. TIE

-Y4-

-Y4RPA- STA 23+60±
END PCB 1' OFFSET

-Y4RPA- STA 22+00±

-Y4RPA- STA 20+90±

-Y4RPA-

-Y5- STA 19+75±

(12) QUANTITY = 750 SQ. FT.
TEMPORARY SHORING
-L- STA 92+50± TO STA 94+00± 30' LT
(SEE SHEET TCP-10.18)

PROPOSED STRUCTURE

-LCDWB-

PROPOSED STRUCTURE

PROP. BARRIER

SEE STRUCTURE PLANS

WB I-40

-L-

-P1S5EB3-

EB I-40

-Y4RPD-

PROP. SHLD.

-Y4RPC-

US 21

MATCHLINE STA 95+00
SEE SHEET TCP-10.11

(16) QUANTITY = 175 SQ. FT.
TEMPORARY SHORING
-L- STA 93+02± TO STA 93+27± 32' LT
(SEE SHEET TCP-10.18)

(11) QUANTITY = 3480 SQ. FT.
TEMPORARY SHORING
-L- STA 88+50± TO STA 91+40± 30' LT
(SEE SHEET TCP-10.18)

(15) QUANTITY = 275 SQ. FT.
TEMPORARY SHORING
-L- STA 90+52± TO STA 90+77± 32' LT
(SEE SHEET TCP-10.18)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
P:\I3819\traffic\trafficcontrol\tcp\I00Z_ddI3819a_tc_tcp_pIII_s3_det_I06.dgn

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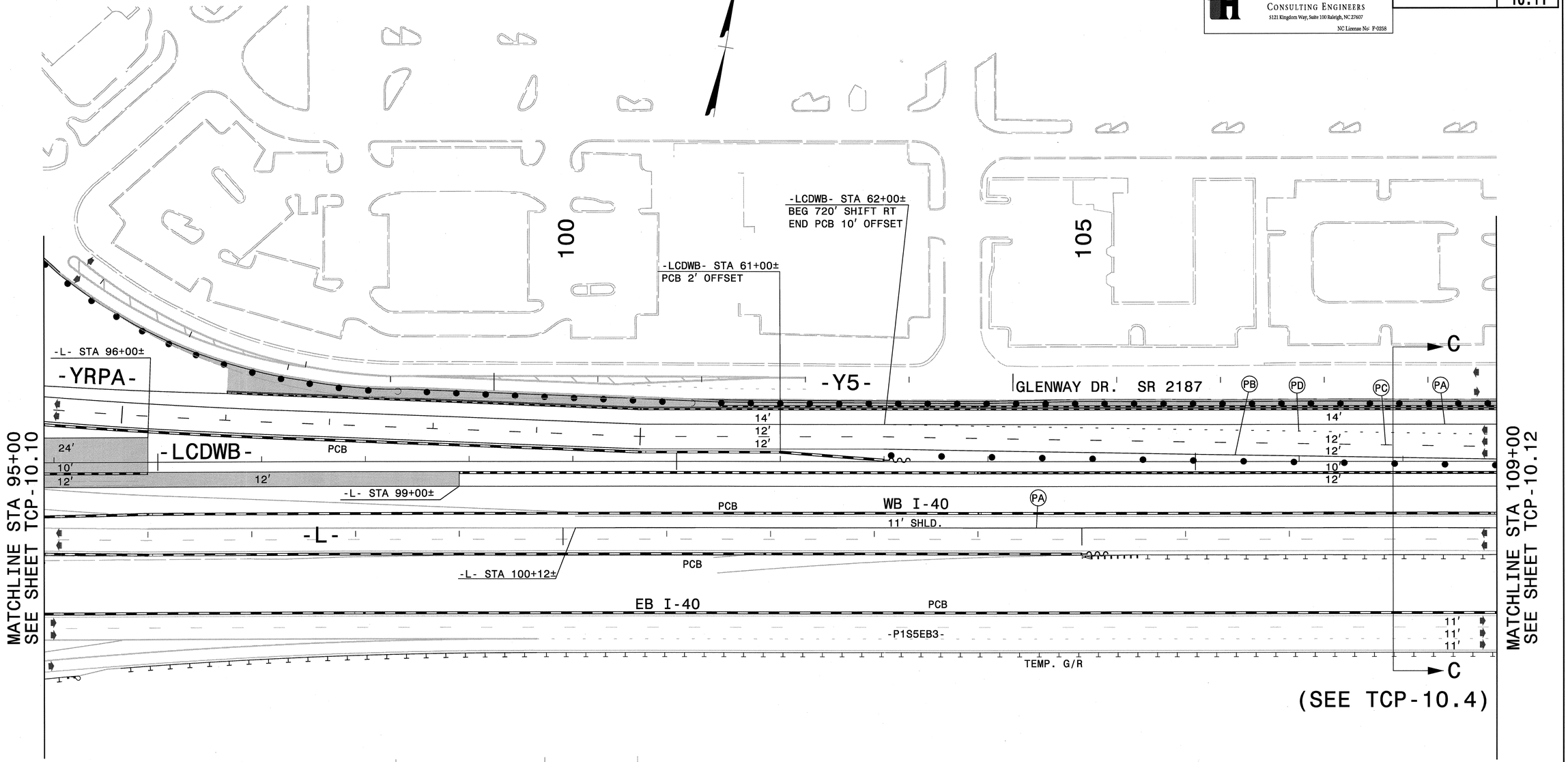
NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.11



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
P:\I3819\traffic\trafficcontrol\tcp\00%_dd\I3819a_tc_tcp_pll_s3_det_07.dgn

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CONSULTING ENGINEERS
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PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.12

110
115
120

MATCHLINE STA 109+00
SEE SHEET TCP-10.11

MATCHLINE STA 18+00
SEE SHEET TCP-10.16

MATCHLINE STA 123+00
SEE SHEET TCP-10.13

-LCDWB- STA 69+20±
END 720' SHIFT RT

-YRPBD- STA 10+00±

-YRPBD- STA 10+50±

-Y5- STA 40+75±

-YRPBD- STA 11+30±
BEG PCB 2' OFFSET

-YRPBD- STA 12+00±

-L- STA 120+00±
BEG PCB 2' OFFSET

-L- STA 116+11±
TIE TO EXIST.

-Y5- GLENWAY DR. SR 2187

-Y5-

-YRPBD-

RAMP B

-LCDWB-

-P4WB3-

-L-

-P1S5EB3-

-YRPC-

RAMP C

PCB

WB I-40

EB I-40

TEMP. G/R

PA PB PC PD QC

11' 11' 11' 12' 12' 12' 10' 7'

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
c:\i3819\traffic\trafficcontrol\tcp\100% ddl\i3819a_tc_tcp_p3_s3_det_08.dgn

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	I-3819A	TCP-10.13

RAMP B

125

LOOP B

B

130

A

135

LOOP A

MATCHLINE STA 123+00
SEE SHEET TCP-10.12

-P4WB3-

WB I-40

11'
11'

-L-

PCB

11'
11'

EB I-40

SB I-77

NB I-77

12'
12'

12'
12'

MATCHLINE STA 137+00
SEE SHEET TCP-10.14

LOOP C

C

LOOP D

D

RAMP C

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS
TRAFFIC ENGINEERING BRANCH
TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
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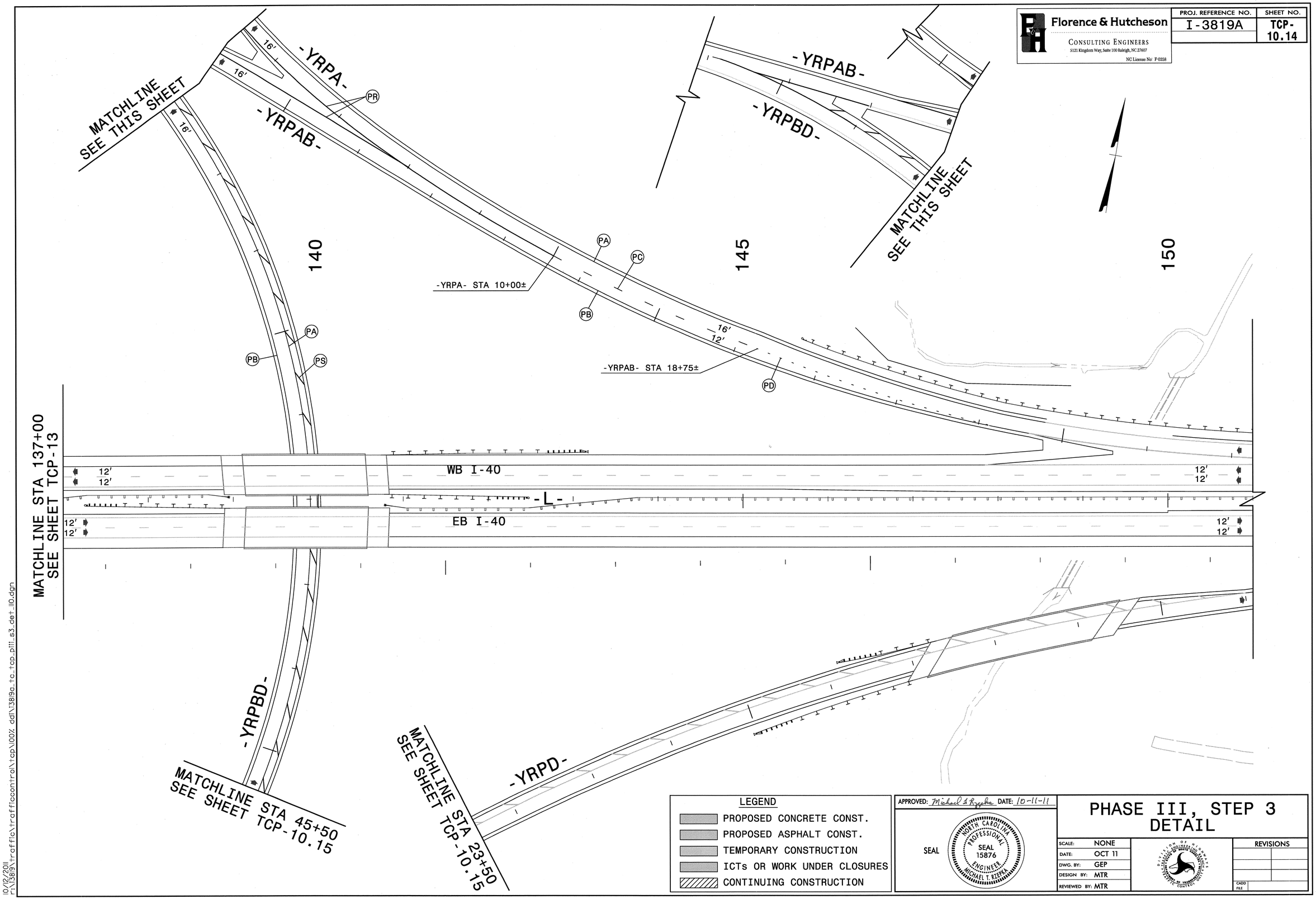
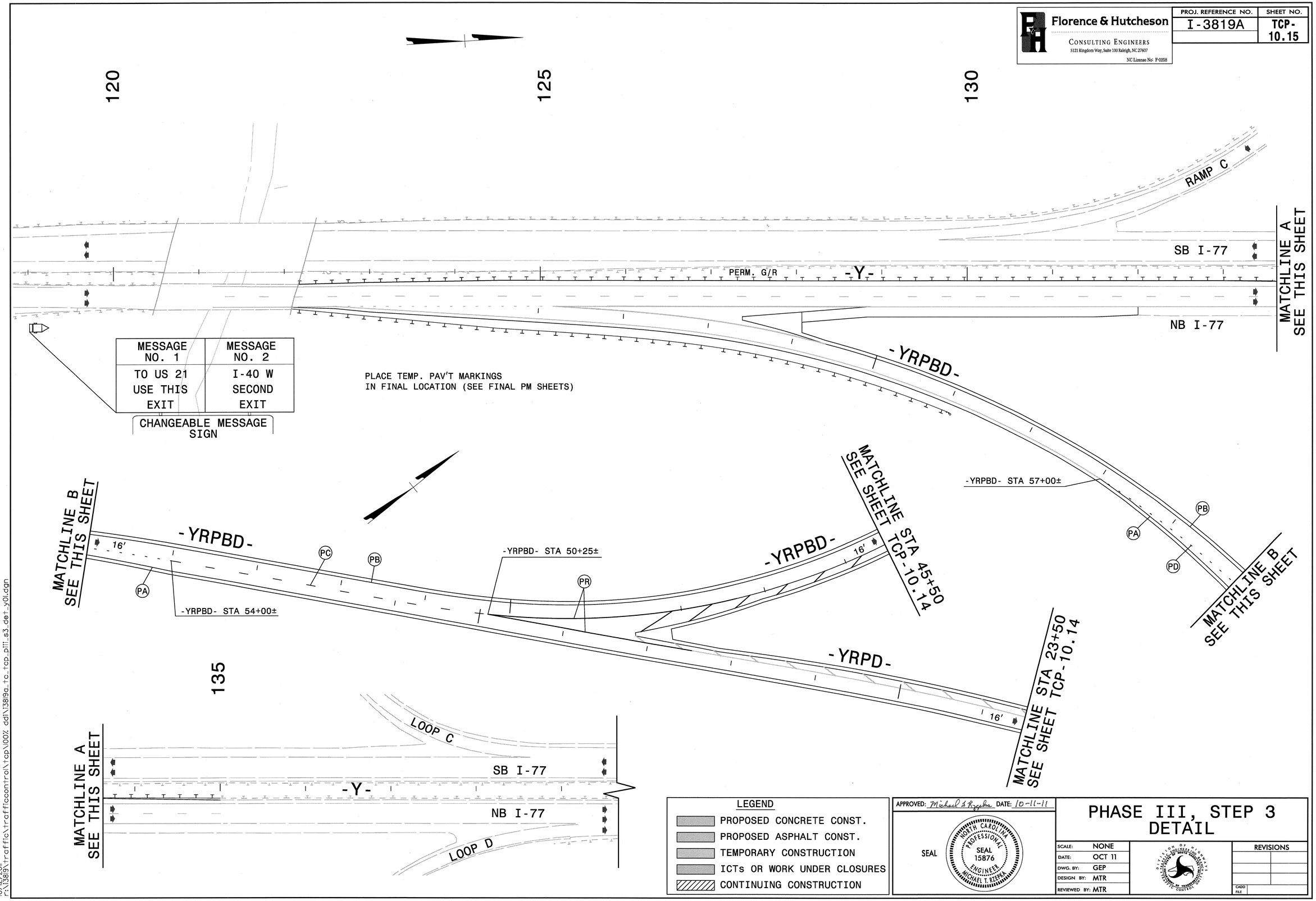


Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-10.14
MATCHLINE SEE THIS SHEET
-YRPA-
-YRPAB-
-YRPBD-
-YRPD-
16'
12'
PA
PB
PC
PD
PR
PS
140
145
150
-YRPA- STA 10+00±
-YRPAB- STA 18+75±
WB I-40
EB I-40
-L-
MATCHLINE STA 137+00 SEE SHEET TCP-13
MATCHLINE STA 45+50 SEE SHEET TCP-10.15
MATCHLINE STA 23+50 SEE SHEET TCP-10.15
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael S Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE III, STEP 3 DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pill_s3_det_110.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-10.15



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pii_s3_det_y01.dgn

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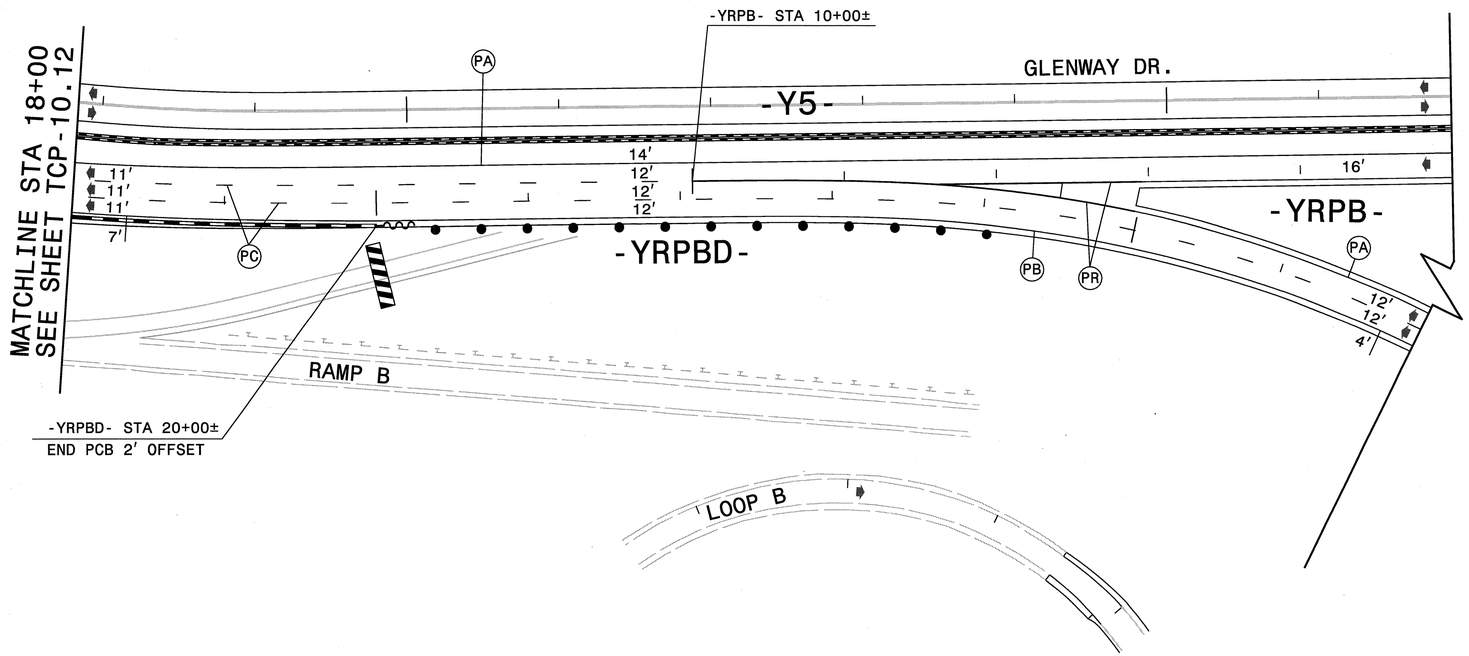
	I-3819A	TCP-10.16

20

25



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3 DETAIL

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
c:\i3819\traffic\trafficcontrol\tcp\00% ddl\i3819a_tc_tcp_p3_s3_det_yrpbd01.dgn

MESSAGE NO. 1	MESSAGE NO. 2
RAMP TO I-40 W CLOSED	USE EXIT 51A

CHANGEABLE MESSAGE SIGN

(1)

MESSAGE NO. 1	MESSAGE NO. 2
TO US 21	USE THIS EXIT

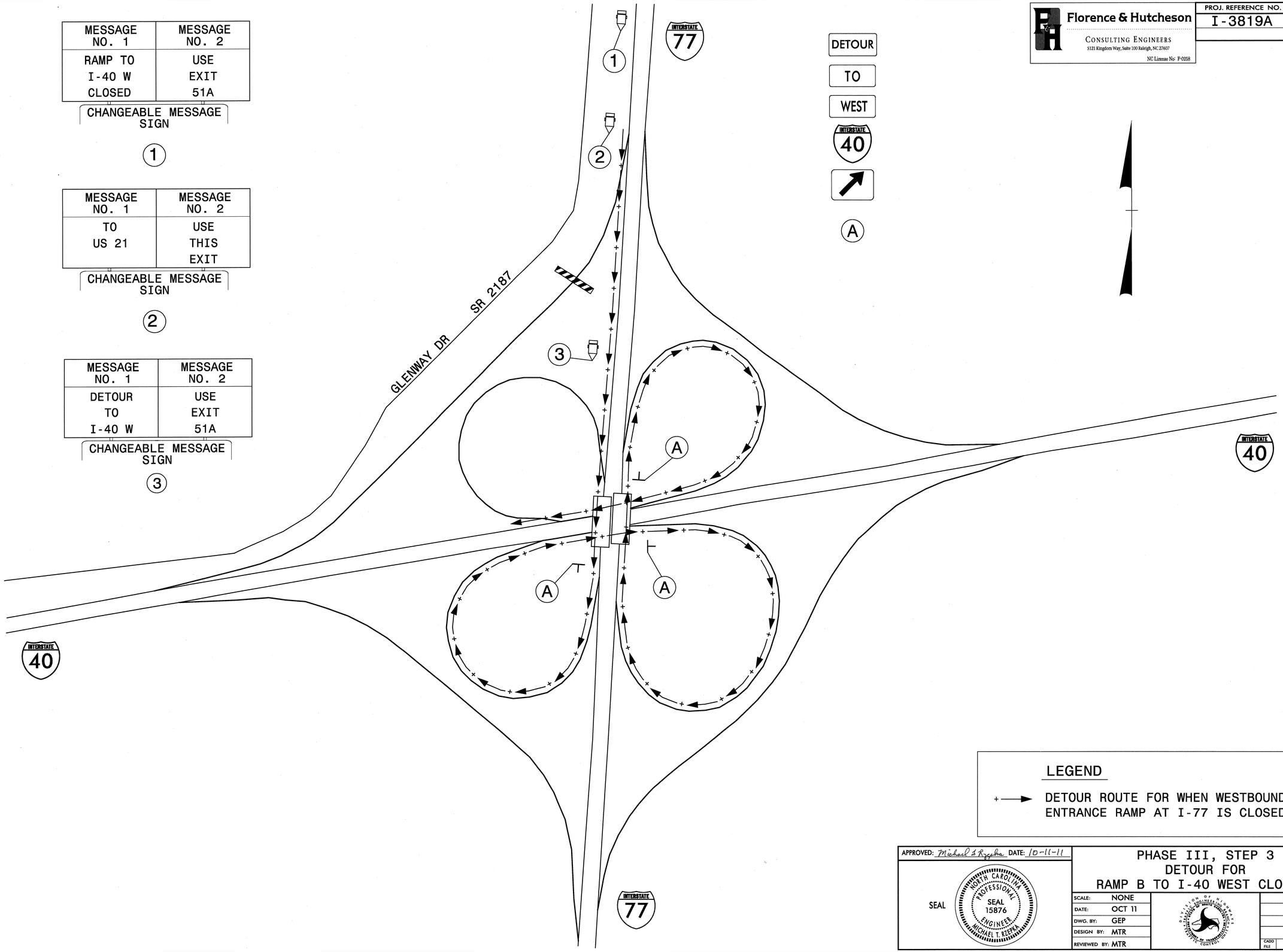
CHANGEABLE MESSAGE SIGN

(2)

MESSAGE NO. 1	MESSAGE NO. 2
DETOUR TO I-40 W	USE EXIT 51A

CHANGEABLE MESSAGE SIGN

(3)



LEGEND

+ ⟶ DETOUR ROUTE FOR WHEN WESTBOUND I-40 ENTRANCE RAMP AT I-77 IS CLOSED

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PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.17

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE III, STEP 3
DETOUR FOR
RAMP B TO I-40 WEST CLOSURE

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
R:\3819\traffic\trafficcontrol\tcp\00% dd\13819a_tc_tcp_p111_s3_detour_177_rp_b_to_140.dgn

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NC License No: F-0858

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-10.18

TEMPORARY SHORING NOTES

TEMPORARY SHORING NO. 11 (SEE SHEET TCP-10.10)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 88+50± -L- TO STATION 91+40± -L-, 30′ LEFT.

DESIGN TEMPORARY SHORING FROM STATION 88+50± -L- TO STATION 91+40± -L-, 30′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 88+50± -L- TO STATION 91+40± -L-, 30′ LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 88+50± -L- TO STATION 91+40± -L-, 30′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

TEMPORARY SHORING NO. 12 (SEE SHEET TCP-10.10)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 92+50± -L- TO STATION 94+00± -L-, 30′ LEFT.

DESIGN TEMPORARY SHORING FROM STATION 92+50± -L- TO STATION 94+00± -L-, 30′ LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 92+50± -L- TO STATION 94+00± -L-, 30′ LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 92+50± -L- TO STATION 94+00± -L-, 30′ LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

TEMPORARY SHORING NO. 15 (SEE SHEET TCP-10.10)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 90+52± -L- TO STATION 90+77± -L-, 32* LEFT.

DESIGN TEMPORARY SHORING FROM STATION 90+52± -L- TO STATION 90+77± -L-, 32* LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR*S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 90+52± -L- TO STATION 90+77± -L-, 32* LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 90+52± -L- TO STATION 90+77± -L-, 32* LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

TEMPORARY SHORING NO. 16 (SEE SHEET TCP-10.10)

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 93+02± -L- TO STATION 93+27± -L-, 32* LEFT.

DESIGN TEMPORARY SHORING FROM STATION 93+02± -L- TO STATION 93+27± -L-, 32* LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:
- UNIT WEIGHT γ = 120 LB/CF
- FRICTION ANGLE φ = 30 DEGREES
- COHESION C = 0 LB/SF
- GROUNDWATER ELEVATION = UNAVAILABLE

AT THE CONTRACTOR*S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 93+02± -L- TO STATION 93+27± -L-, 32* LEFT. SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

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

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 93+02± -L- TO STATION 93+27± -L-, 32* LEFT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON 12-16-11 AND SEALED BY A PROFESSIONAL ENGINEER, ERIC N. WILLIAMS, PE, LICENSE #026962.

APPROVED: Michael T Rzepka DATE: 1-4-12

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

TEMPORARY SHORING NOTES

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

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

REVISIONS

CADD FILE

1/4/2012
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CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: P-0358

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-11.1

PHASE IV, STEP 1

STEP 1

BEHIND BARRIER AND USING RSD 1101.02 (SHEETS 4 & 9 OF 15), COMPLETE THE FOLLOWING SHIFT FOR WB I-40 WEST OF I-77 (SEE TCP-11.6 THRU 11.17):

- REMOVE PCB AS NECESSARY TO SHIFT WB I-40 TRAFFIC TO -P4WB3-, -LCDWB- AND WB I-40. REMOVE PCB FROM -Y4RPA-
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON PROPOSED WB I-40, -LCDWB-, -P4WB3-, -Y4RPA- LEFT PORTION & REMAINING -Y4RPB- AS SHOWN
- SHIFT WB I-40 TO -P4WB3-, -LCDWB- AND PROPOSED WB I-40
- REMOVE -YRPB- DETOUR TO WB I-40 AND SHIFT NB I-77 ACCESS TO US 21 TO -YRPBD-
- CLOSE EXISTING LOOP A AND CONNECTOR PORTION OF -YRPAB- TO -YRPBD-
- INSTALL/RESET PCB ALONG -P4WB3- AND -LCDWB- MEDIAN LANES AS SHOWN

BEHIND BARRIER, CONSTRUCT THE FOLLOWING PROPOSED (SEE TCP-11.9 THRU 11.14):

- REMAINING CENTER PORTIONS OF -L- STRUCTURES OVER US 21 AND FOURTH CREEK
- WB I-40 FROM -L- STA 55+19± TO STA 126+00± (PARTIAL OUTSIDE SHOULDER FROM STA 116+73± TO STA 118+80±)(WEDGE TIE-IN)
- EB I-40 FROM -L- STA 78+00± TO STA 121+50± (PARTIAL OUTSIDE SHOULDER FROM STA 78+00± TO STA 84+57± & STA 115+50± TO STA 121+50±)(WEDGE TIE-IN)

USING RSD 1101.02 (SHEETS 7 OF 15), CONSTRUCT PROPOSED -Y4- WIDENING, INCLUDING PROPOSED RAMP TIES, UP TO EXISTING BRIDGE OVER FOURTH CREEK. AWAY FROM TRAFFIC, PLACE TEMPORARY PAVEMENT MARKINGS ON WIDENED SECTION FOR PHASE IV, STEP 2 PATTERN (SEE TCP-11.11, 11.18 & 11.19)(SEE SHEETS TMP-12.4 THRU 12.6 FOR MARKINGS).

BEHIND BARRIER, BEGIN CONSTRUCTION OF PROPOSED -YRPC- FROM -P1S5EB3- TO EXISTING RAMP C (SEE TCP-11.13 & 11.14).

WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK ON -Y2DW- BELOW IN 90 CONSECUTIVE DAYS (SEE INTERMEDIATE CONTRACT TIME AND SPECIAL PROVISIONS).

CLOSE -Y2DW- ACCESS TO US 21 (SEE TCP-11.19 & 11.20 FOR DETOUR ROUTE) AND OPEN TEMPORARY TIE BETWEEN -Y8- AND -Y2DW-.

AWAY FROM TRAFFIC, CONSTRUCT PROPOSED -Y2DW-. PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS (SEE TCP-11.19).

REMOVE ROAD CLOSURE AND REOPEN -Y2DW- TO TRAFFIC. CLOSE TEMPORARY TIE BETWEEN -Y8- AND -Y2DW-.

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE IV, STEP 1
PHASING

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS

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1/4/2012
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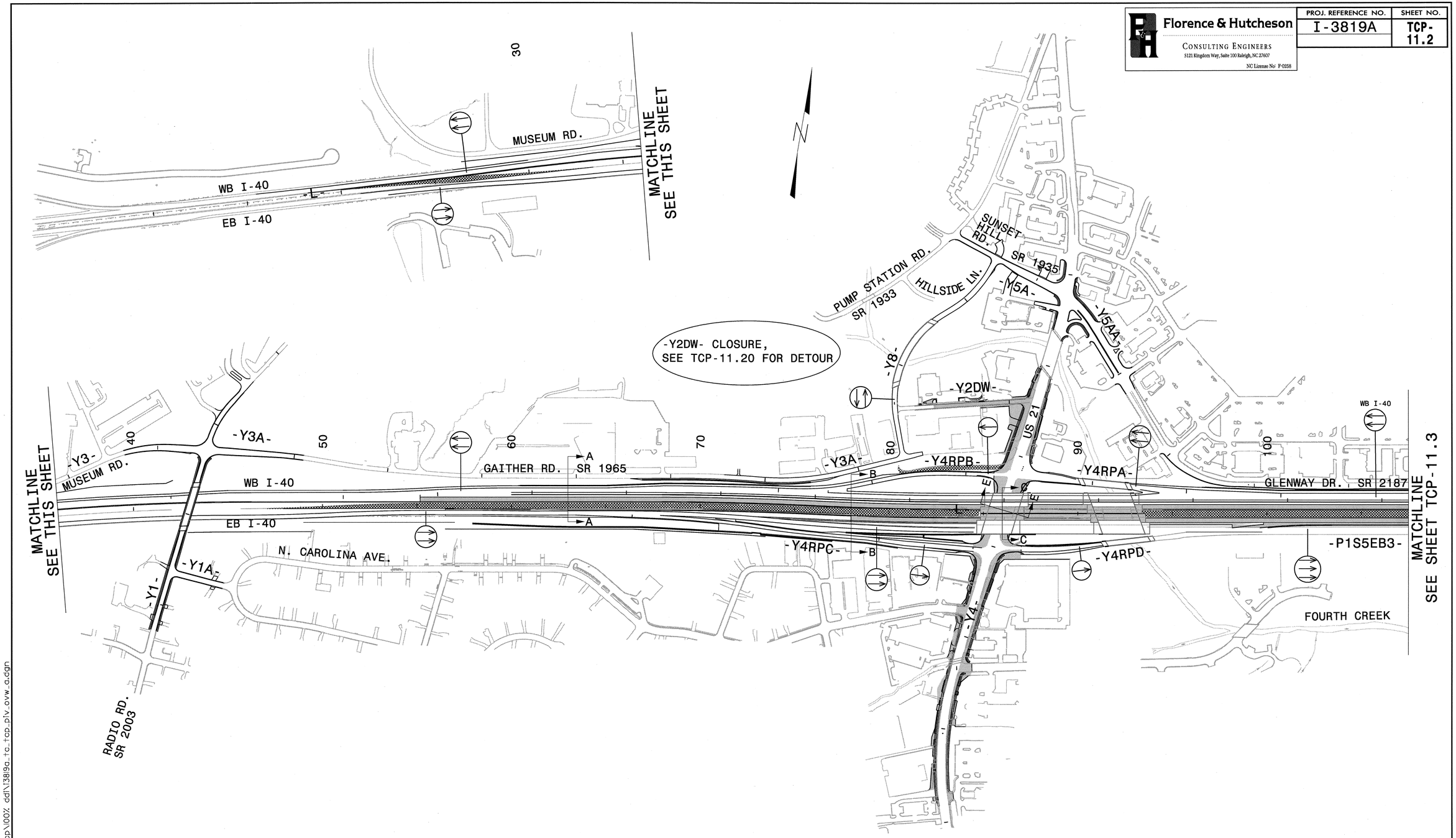
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-11.2



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 OVERVIEW
SHEET 1 OF 2

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

REVISIONS

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10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_piv_ovw_a.dgn

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	I-3819A	TCP-11.3

MATCHLINE B SEE THIS SHEET

MATCHLINE B SEE THIS SHEET

MATCHLINE TCP-11.2 SEE THIS SHEET

MATCHLINE A SEE THIS SHEET

MATCHLINE A SEE THIS SHEET

N

SR 2187

GLENWAY DR.

SB I-77

NB I-77

-Y5-

-YRPB-

-YRPBD-

-YRPA-

-YRPC-

-YRPD-

WB I-40

EB I-40

CLOSED

A

B

C

D

FOURTH CREEK

SYLVESTER RD.
SR 2437

DAVIE AVE.
US 64

110 120 130 140 150 160 170 180 190

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. REZEPKA

PHASE IV, STEP 1 OVERVIEW SHEET 2 OF 2

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
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10/12/2011
I:\3819S\traffic\trafficcontrol\tcp\100% ddl\3819a_tc_tcp_plv_ovw_b.dgn

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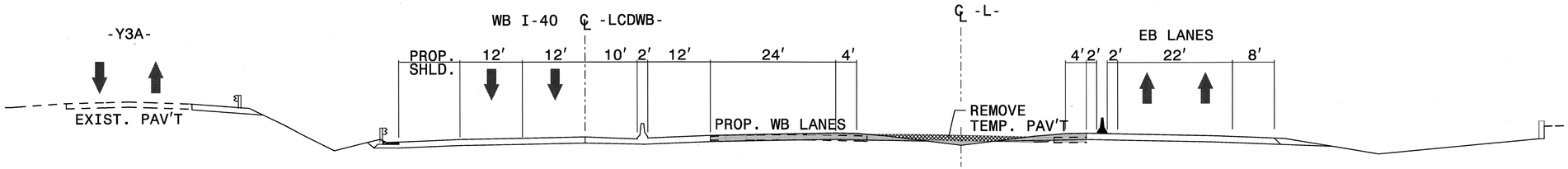
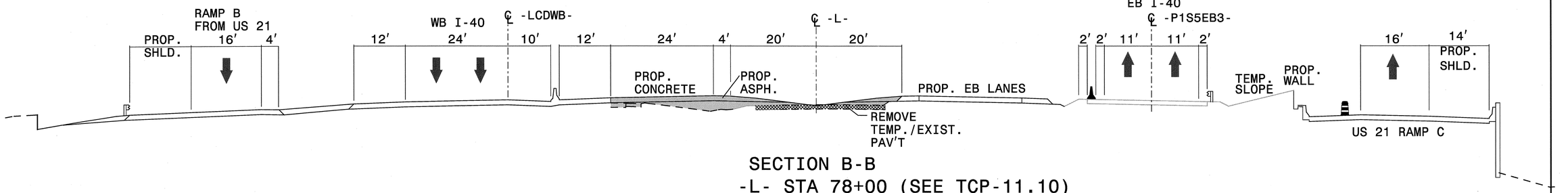
NC License No: P-0258

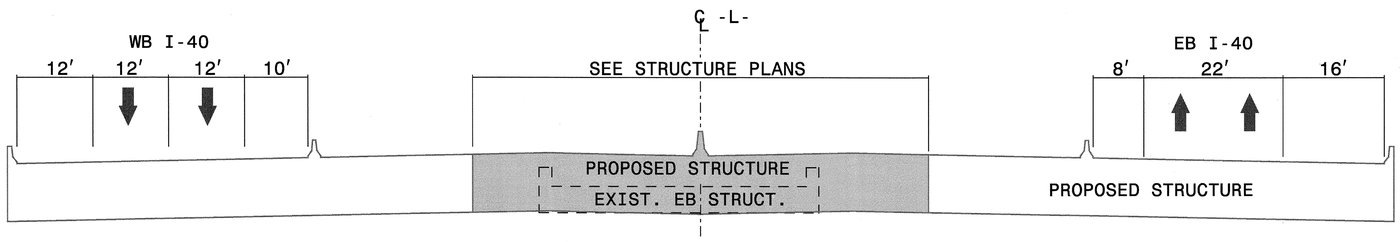
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-11.4



SECTION A-A
-L- STA 63+00 (SEE TCP-11.9)



SECTION B-B
-L- STA 78+00 (SEE TCP-11.10)



SECTION C-C
-L- STA 86+00 (SEE TCP-11.11)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 SECTIONS

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS

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10/12/2011
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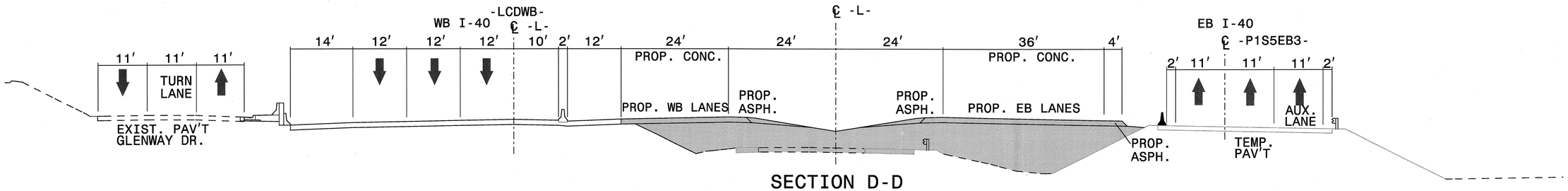
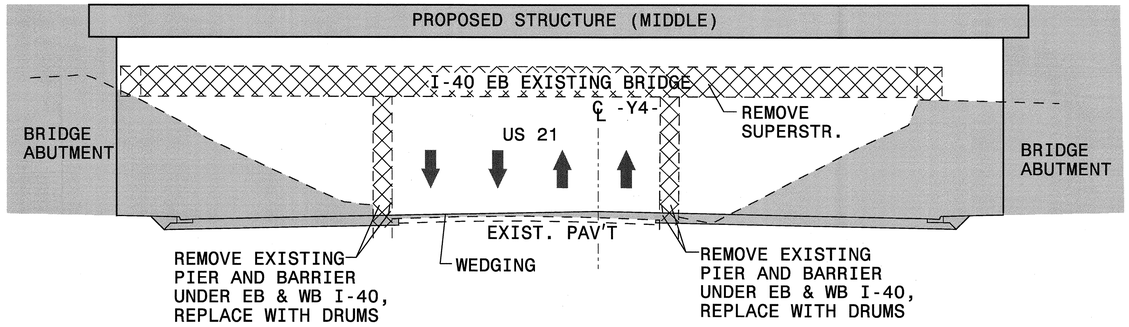
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-11.5



SECTION D-D
-L- STA 108+00 (SEE TCP-11.12)



SECTION E-E
-Y4- STA 27+00 (SEE TCP-11.11)

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

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

PHASE IV, STEP 1 SECTIONS

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

DIVISION OF HIGHWAYS — TRAFFIC ENGINEERING BRANCH — TRAFFIC CONTROL UNIT

REVISIONS	
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10/12/2011
C:\3819\traffic\trafficcontrol\tcp\100% ddi\3819a_tc_tcp_sections.dgn

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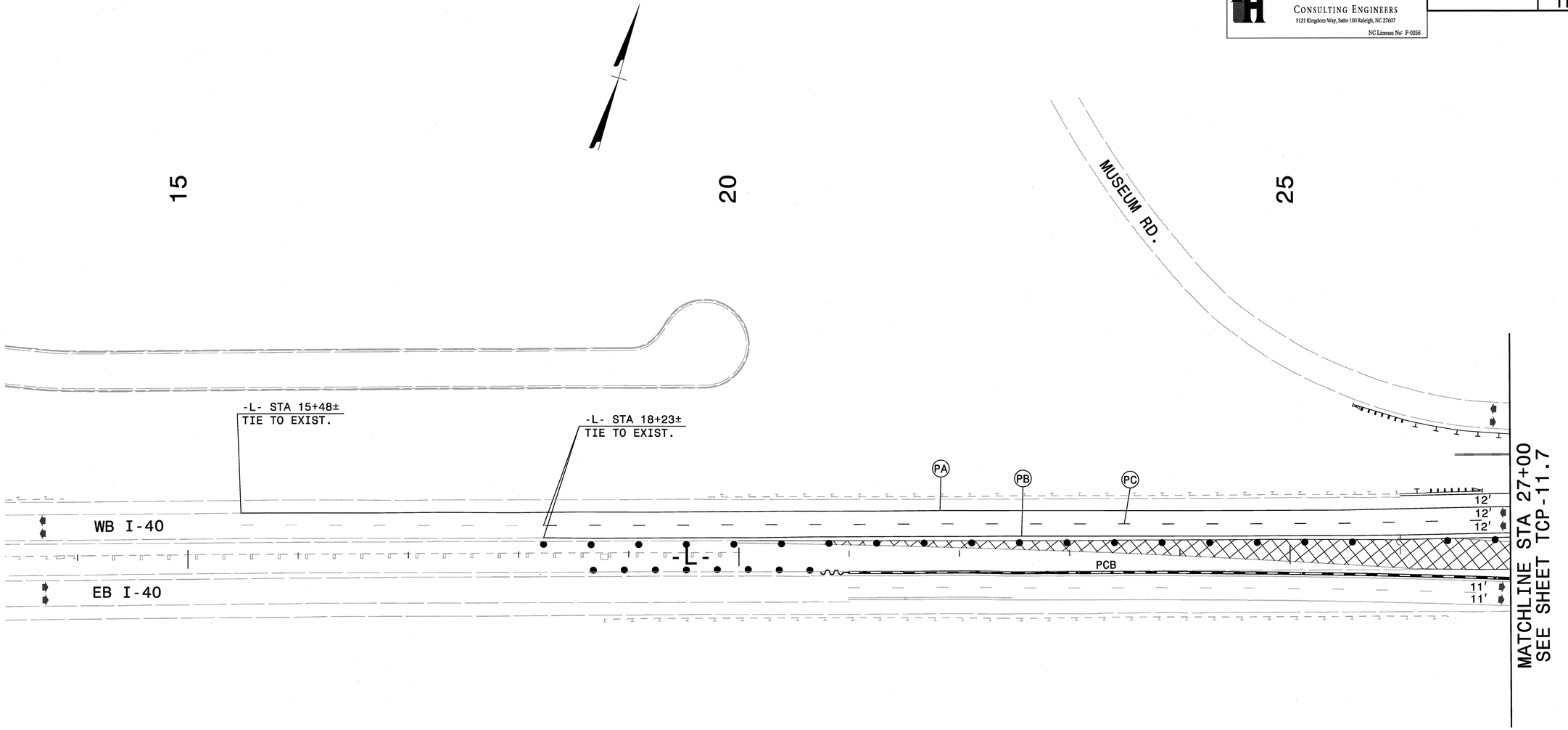

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_piv_det_101.dgn

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CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0288	I-3819A	TCP-11.7

30

35

-L- STA 30+00±

-L- STA 33+50±
TIE TO EXIST.

-Y3-

MUSEUM RD.

-L- STA 37+00±

PB PA PC

12′ 12′ 12′

WB I-40

-L-

12′ 12′ 12′

11′ 11′

PCB

11′ 11′

EB I-40

11′ 11′

MATCHLINE STA 27+00
SEE SHEET TCP-10.6

MATCHLINE STA 39+00
SEE SHEET TCP-11.8

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS	
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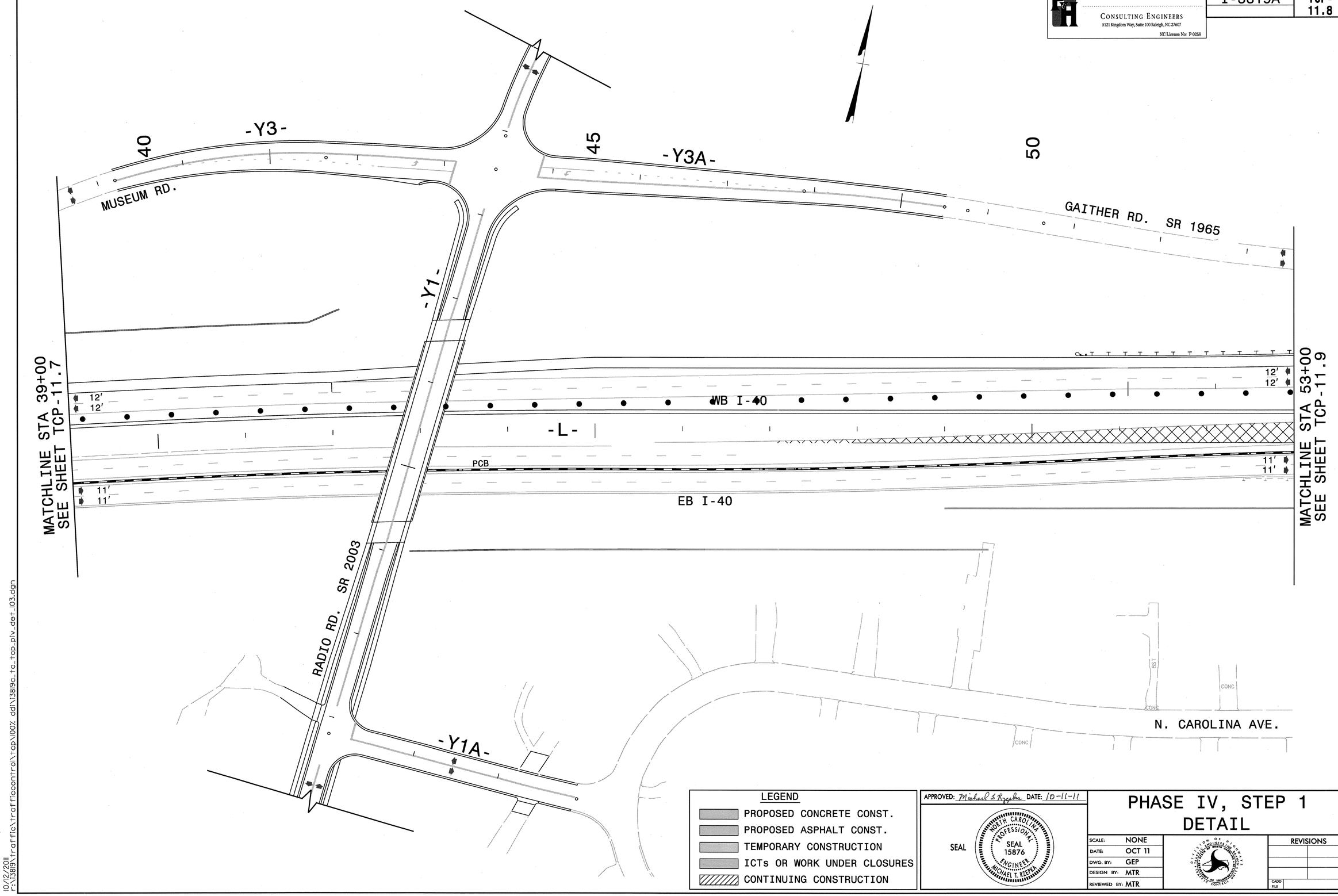
10/12/2011
r:\3819\traffic\trafficcontrol\tcp\002_dd\i3819a_tc_tcp_piv_det_102.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-11.8



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_piv_det_103.dgn

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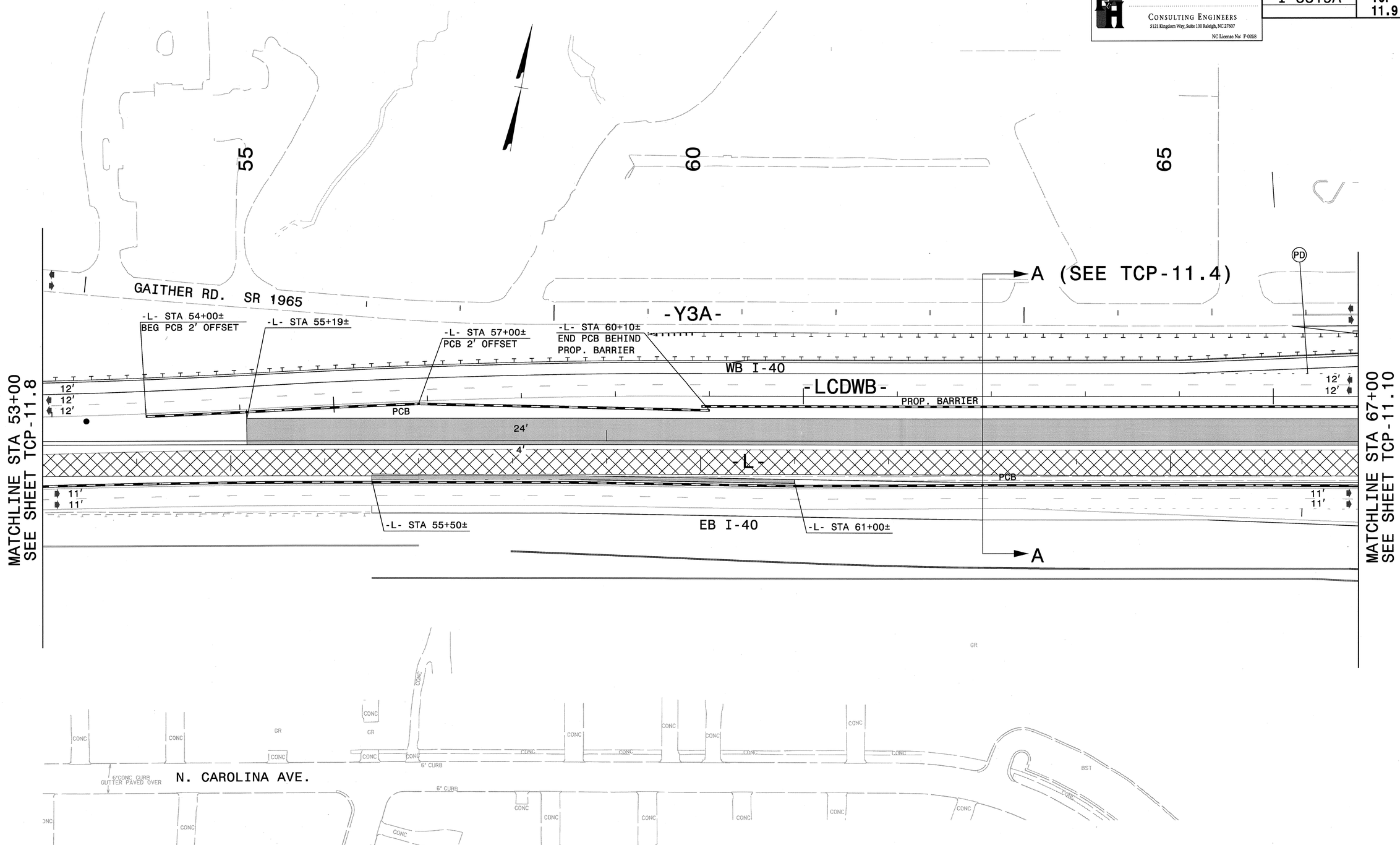

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_plv_det_104.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-11.10

70

75

80

-Y8-

GAITHER RD. SR 1965 -Y3A-

PD

PR

B

RAMP B

PA

PB

PC

12′

12′

12′

10′

12′

-LCDWB-

WB I-40

12′

12′

12′

10′

12′

24′

4′

-L-

11′

11′

16′

-L- STA 78+00±

4′

24′

PCB

6′

11′

11′

EB I-40

RAMP C

B (SEE TCP-11.4)

MATCHLINE STA 67+00
SEE SHEET TCP-11.9

MATCHLINE STA 81+00
SEE SHEET TCP-11.11

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS ENGINEERING BRANCH TRAFFIC ENGINEERING UNIT

REVISIONS	
CADD FILE	

10/12/2011
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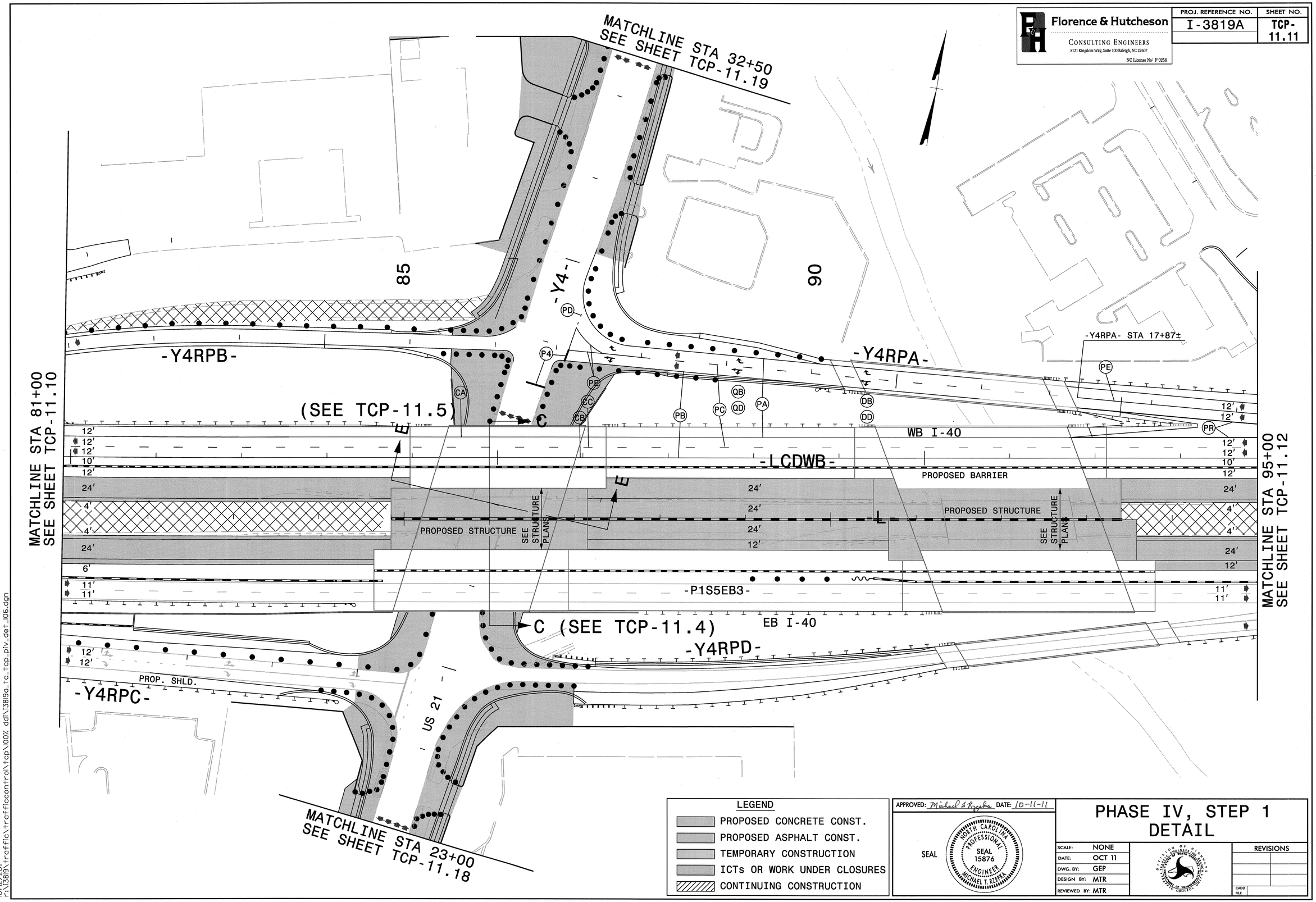

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-11.11
MATCHLINE STA 32+50
SEE SHEET TCP-11.19
MATCHLINE STA 81+00
SEE SHEET TCP-11.10
MATCHLINE STA 95+00
SEE SHEET TCP-11.12
MATCHLINE STA 23+00
SEE SHEET TCP-11.18
85
90
-Y4-
-Y4RPB-
-Y4RPA-
-Y4RPA- STA 17+87±
(SEE TCP-11.5)
WB I-40
-LCDWB-
PROPOSED BARRIER
PROPOSED STRUCTURE
SEE STRUCTURE PLANS
-P1S5EB3-
EB I-40
C (SEE TCP-11.4)
-Y4RPD-
PROP. SHLD.
-Y4RPC-
US 21
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE IV, STEP 1
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_piv_det_106.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-11.12

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
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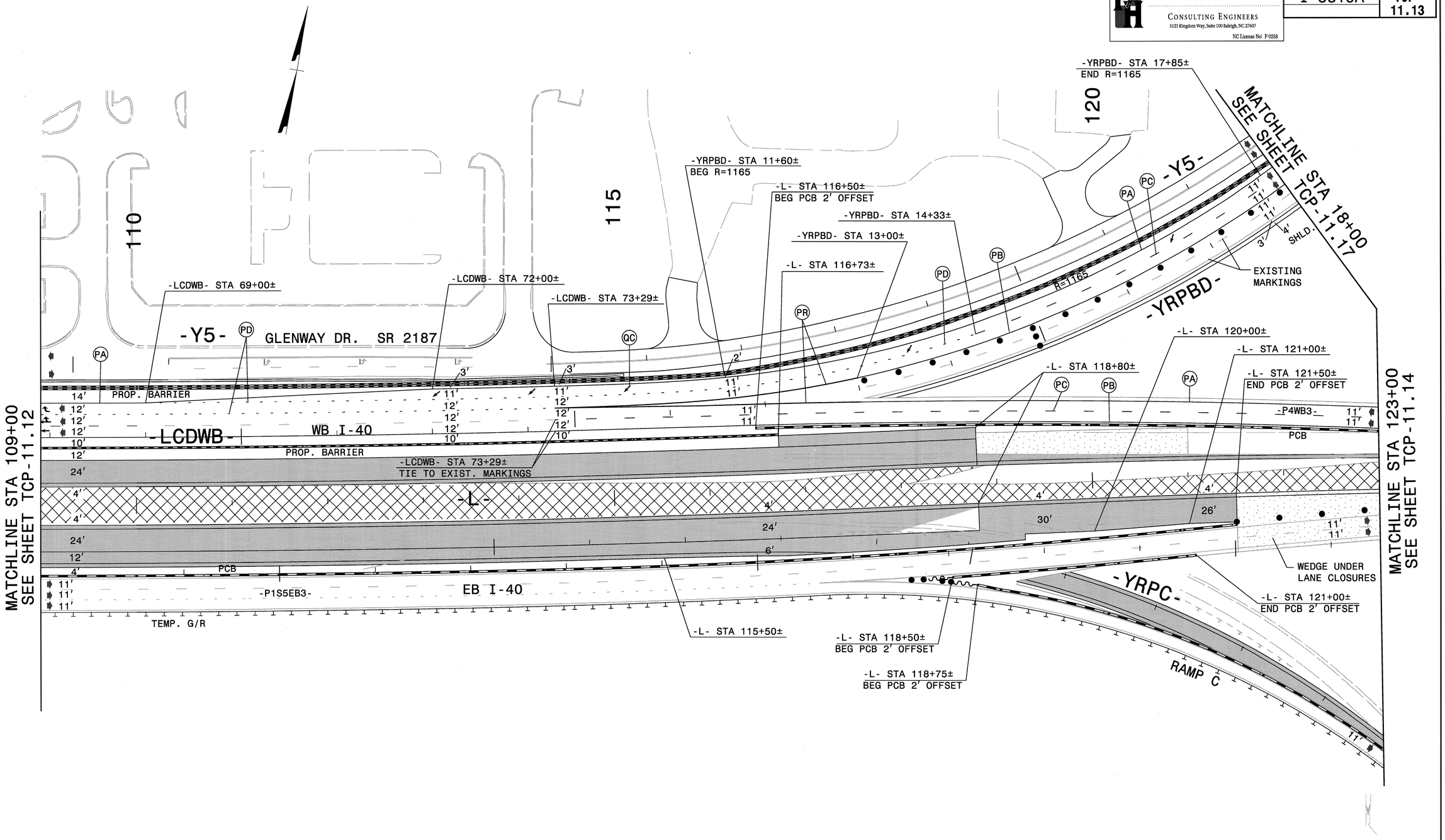
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-11.13



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

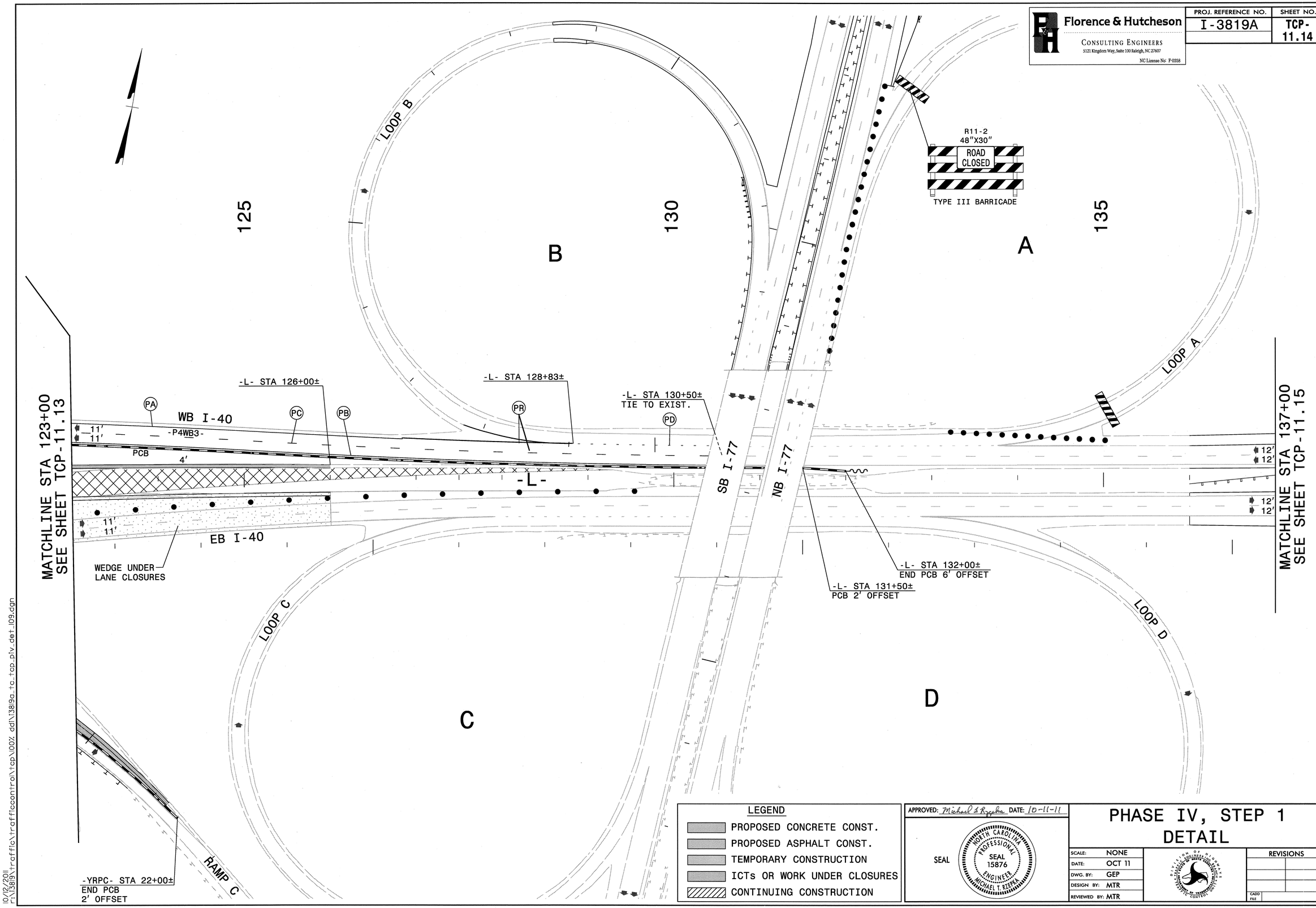
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_plv_det_108.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-11.14



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\100% ddl\3819a_tc_tcp_piv_det_109.dgn

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	I-3819A	TCP-11.15

R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE

MATCHLINE SEE THIS SHEET

-YRPA-

-YRPAB-

MATCHLINE STA 34+00 SEE SHEET TCP-11.16

-YRPAB-

-YRPBD-

MATCHLINE SEE THIS SHEET

140

145

150

CLOSE RAMP AB ACCESS TO RAMP -YRPBD- THIS PHASE

MATCHLINE STA 137+00 SEE SHEET TCP-11.14

WB I-40

12′
12′

-L-

EB I-40

-YRPBD-

-YRPD-

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Ryczka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RYCZKA

PHASE IV, STEP 1 DETAIL

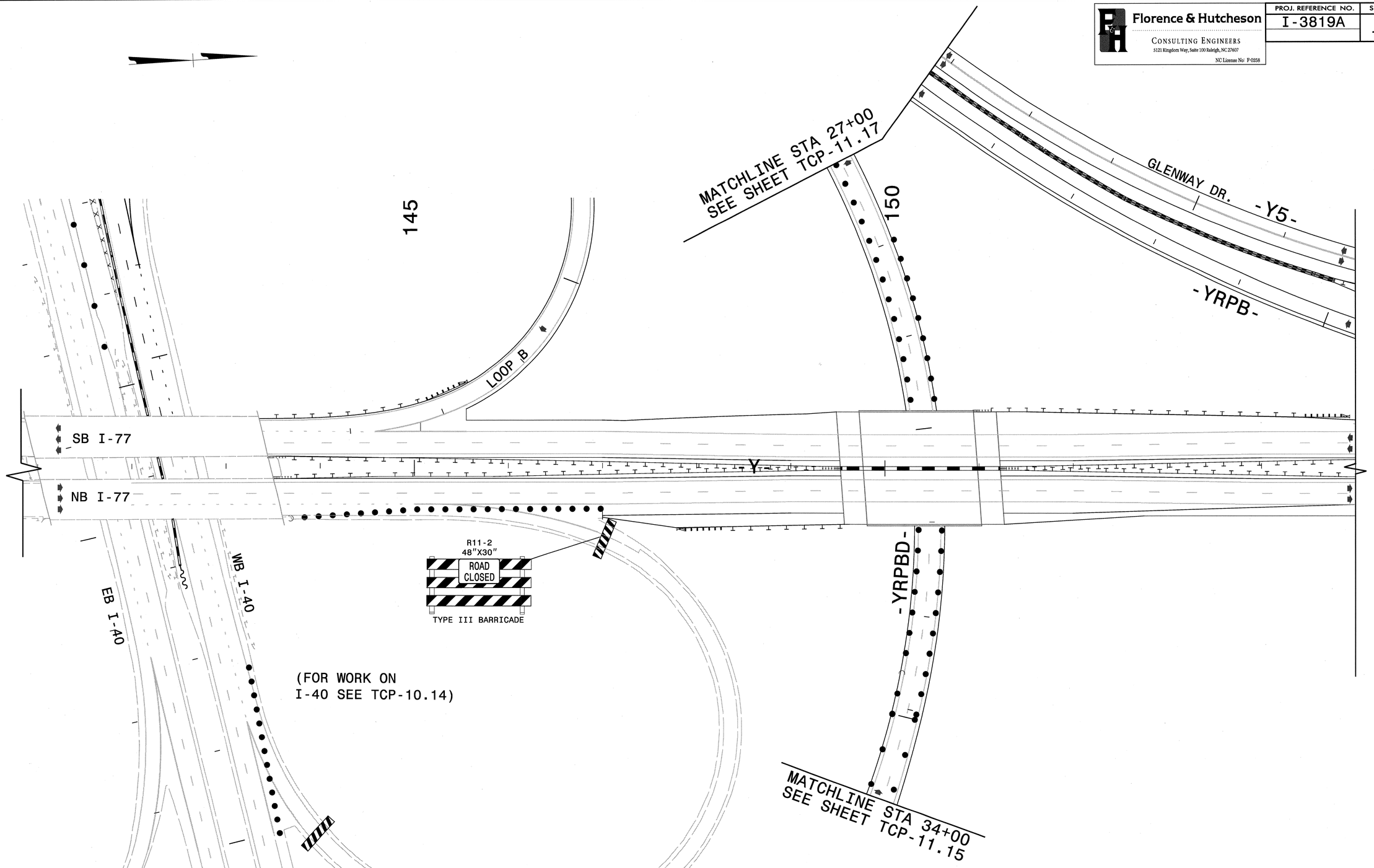
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\100% dd\3819a_tcp_piv_det_110.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	I-3819A	TCP-11.16



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
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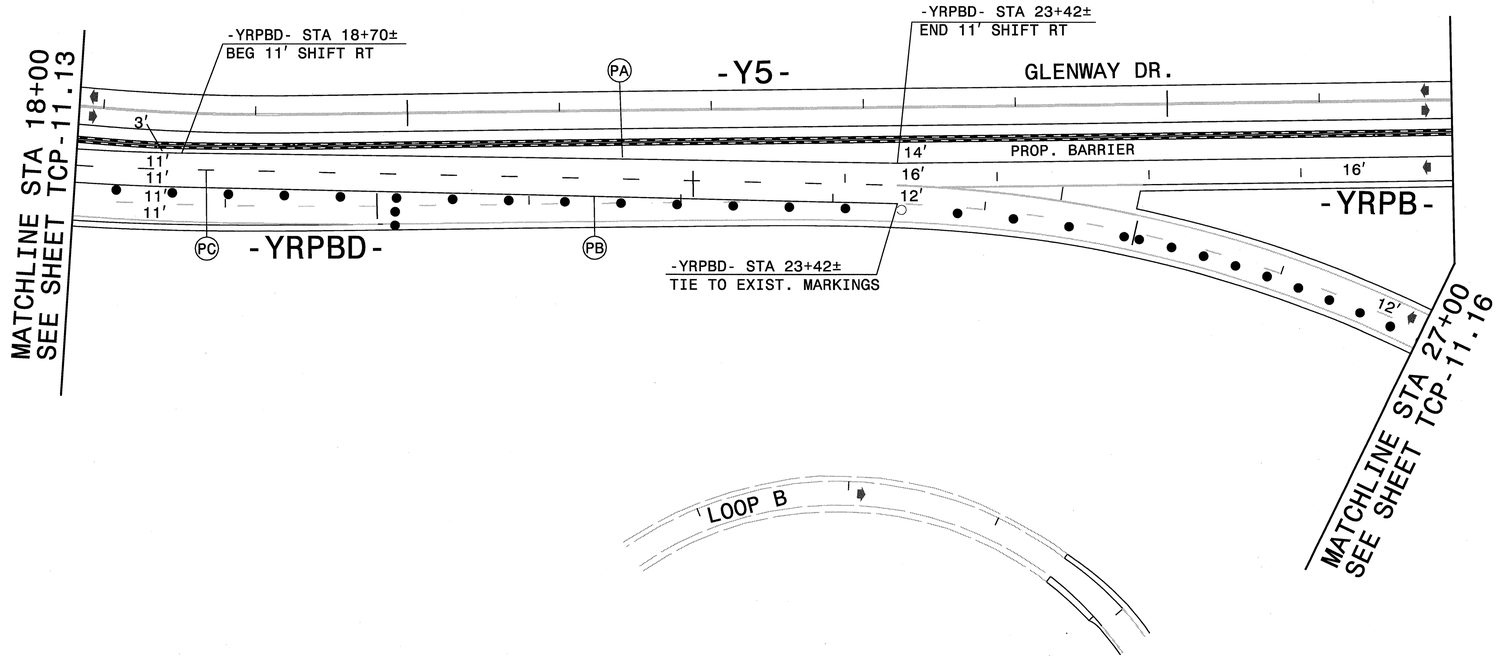
	I-3819A	TCP-11.17

20

25



LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

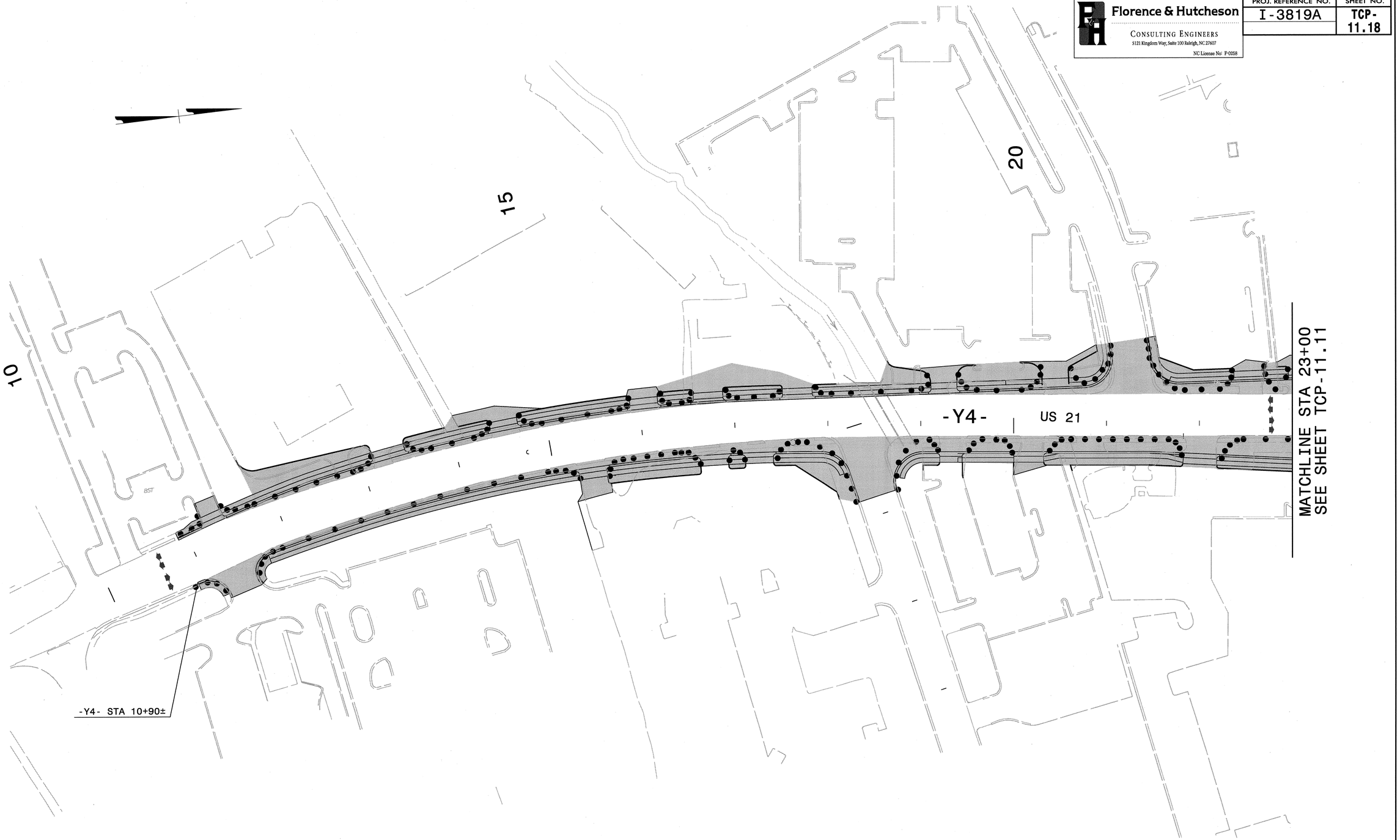
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\00% ddi\3819a_tcp_plv_det_yrpbd01.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-11.18



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
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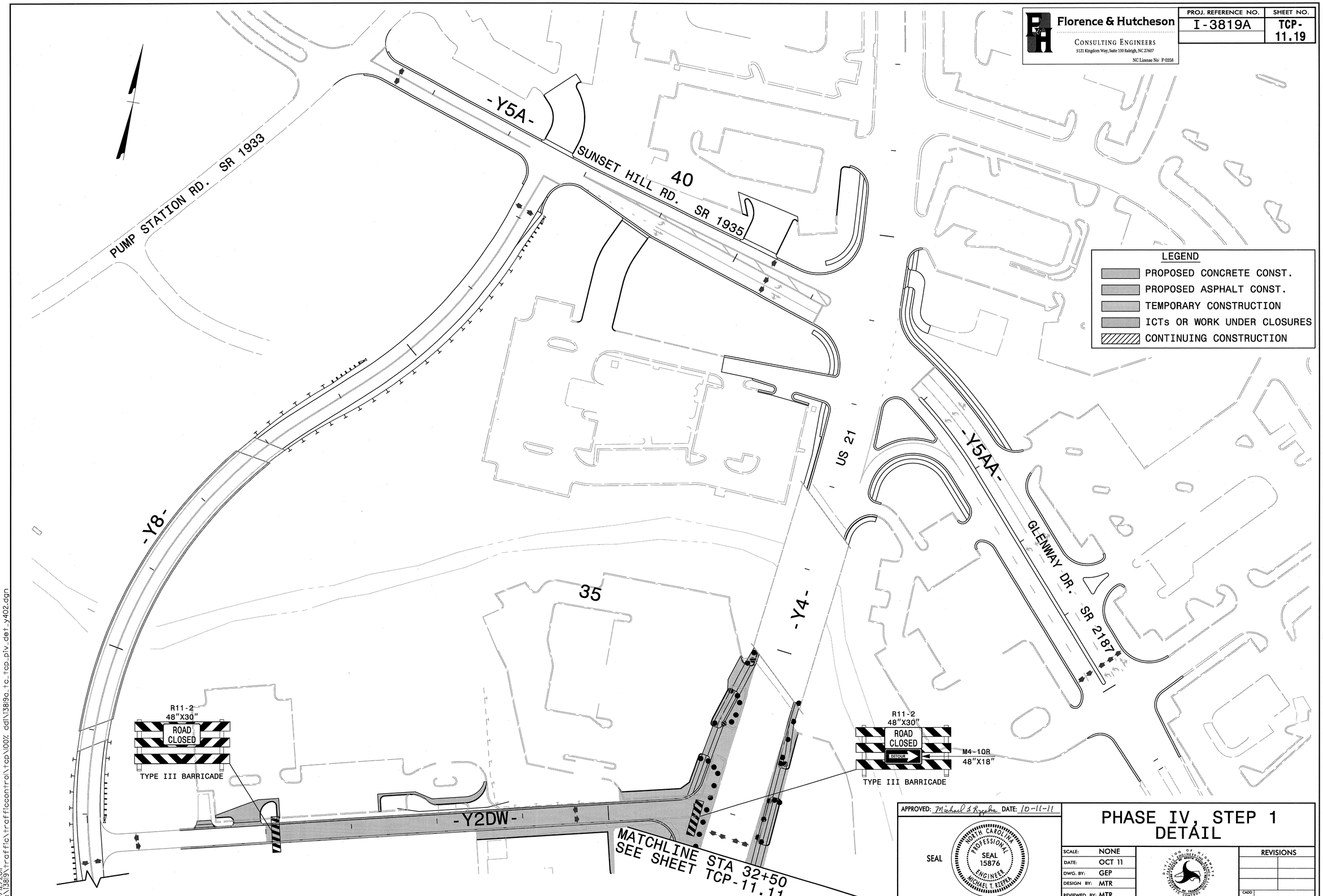

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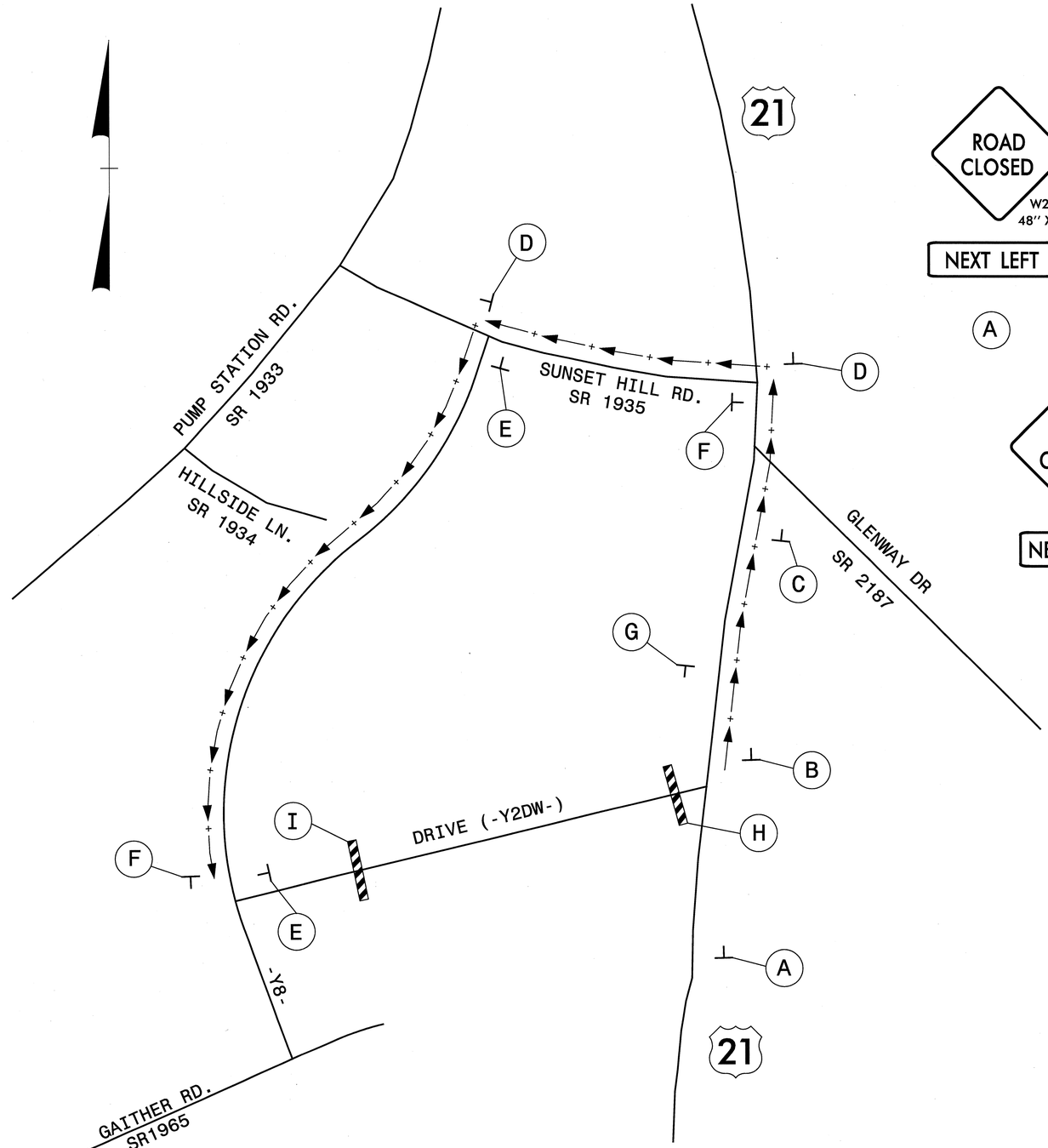
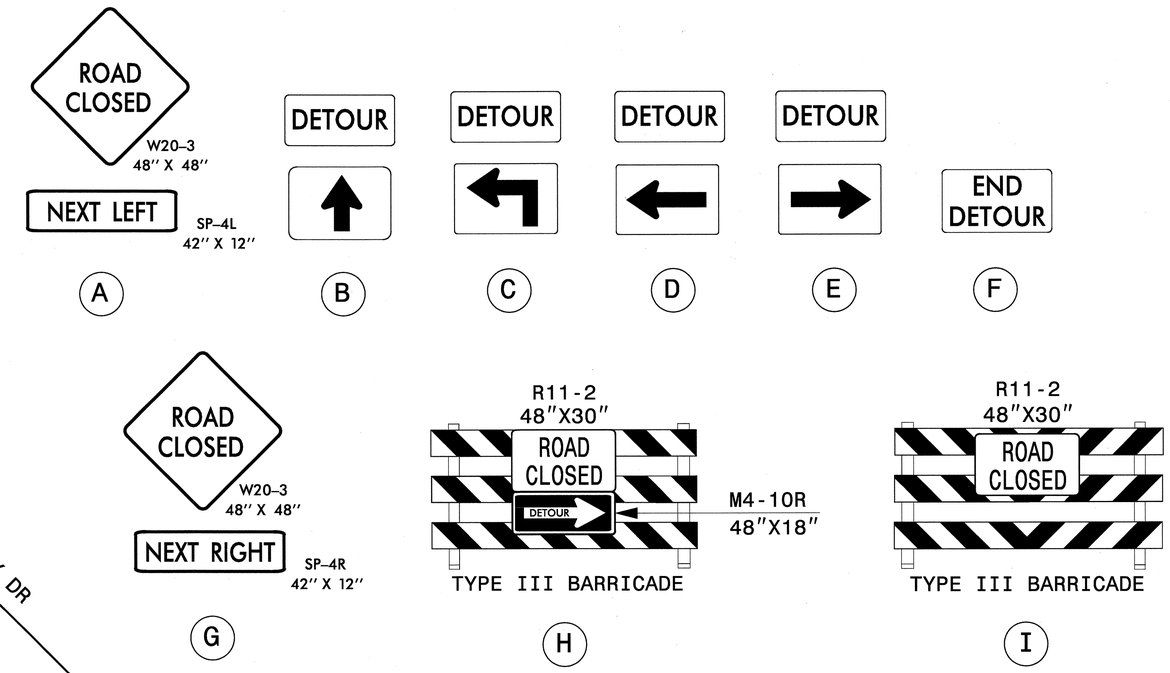
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-11.19
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
PUMP STATION RD. SR 1933
-Y5A-
SUNSET HILL RD. SR 1935
40
US 21
-Y5AA-
GLENWAY DR. SR 2187
-Y8-
35
-Y4-
R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE
R11-2
48"X30"
ROAD CLOSED
DETOUR
M4-10R
48"X18"
TYPE III BARRICADE
-Y2DW-
MATCHLINE STA 32+50
SEE SHEET TCP-11.11
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE IV, STEP 1
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_piv_det_y402.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO. I-3819A	SHEET NO. TCP-11.20





LEGEND

+ → DETOUR ROUTE FOR WHEN DRIVE (-Y2DW-) IS CLOSED

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 1
DETOUR FOR -Y2DW- CLOSURE

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_piv_detour_y2dw.dgn

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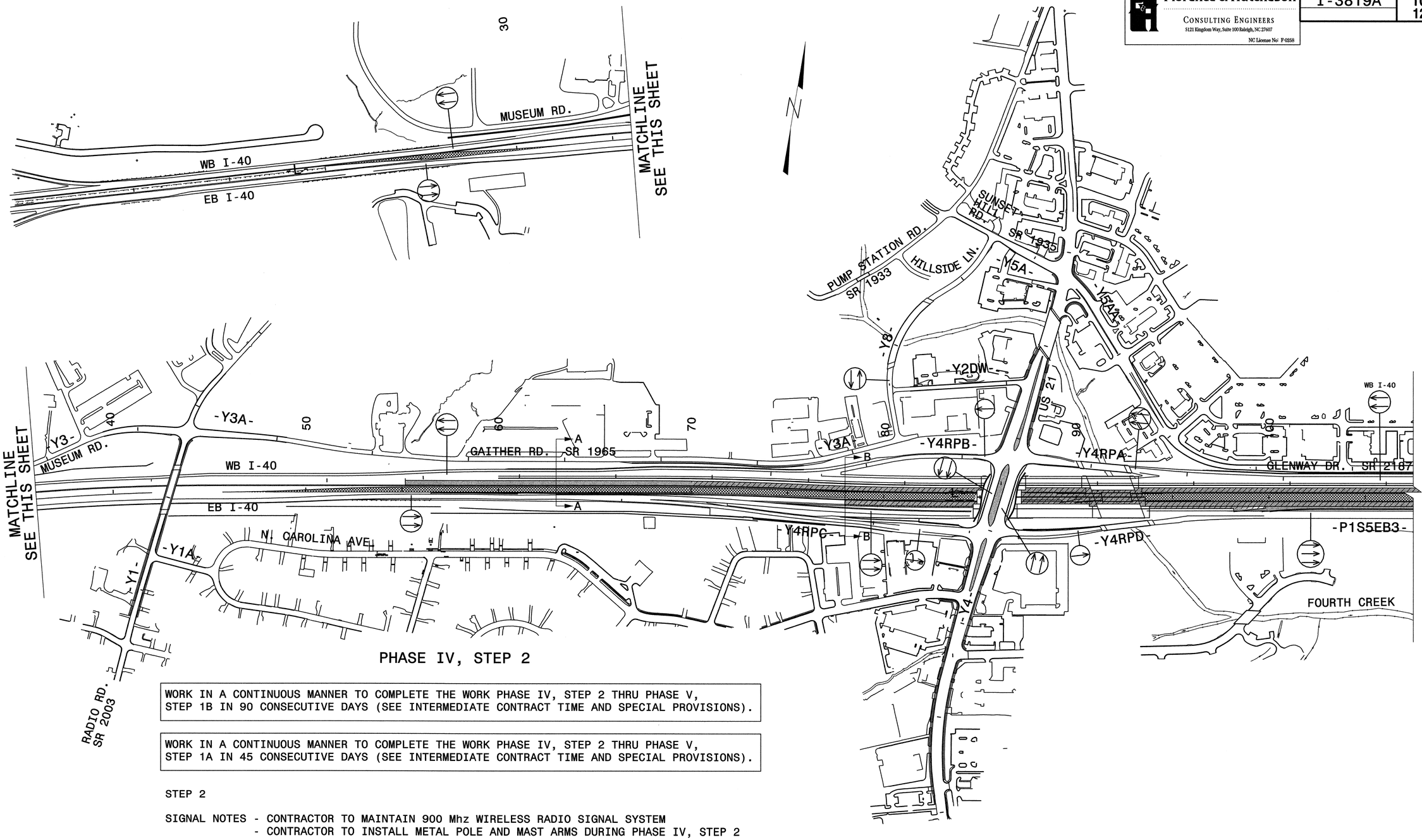
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-12.1



PHASE IV, STEP 2

WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK PHASE IV, STEP 2 THRU PHASE V, STEP 1B IN 90 CONSECUTIVE DAYS (SEE INTERMEDIATE CONTRACT TIME AND SPECIAL PROVISIONS).

WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK PHASE IV, STEP 2 THRU PHASE V, STEP 1A IN 45 CONSECUTIVE DAYS (SEE INTERMEDIATE CONTRACT TIME AND SPECIAL PROVISIONS).

STEP 2

SIGNAL NOTES - CONTRACTOR TO MAINTAIN 900 Mhz WIRELESS RADIO SIGNAL SYSTEM
- CONTRACTOR TO INSTALL METAL POLE AND MAST ARMS DURING PHASE IV, STEP 2

USING RSD 1101.02 (SHEET 3 & 7 OF 15), COMPLETE THE FOLLOWING ON -Y4- (US 21) AT I-40 (SEE SHEETS TMP-12.3 THRU 12.5):

- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS TIE TO EXISTING MARKINGS
- PLACE TRAFFIC ON -Y4- OUTSIDE WIDENING IN PATTERN SHOWN
- ACTIVATE/REVISE TEMPORARY SIGNALS

USING RSD 1101.02 (SHEET 3 OF 15) AND BEHIND DRUMS, CONSTRUCT PROPOSED -Y4- MEDIAN ISLANDS (3 LOCATIONS) INCLUDING MEDIAN SINGLE-FACED BARRIER AND SIGNALS (SEE SHEETS TMP-12.3 THRU 12.5, ROADWAY PLANS AND SIGNAL PLANS).

LEGEND
- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Kozma DATE: 1-4-12

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T KOZMA

PHASE IV, STEP 2 OVERVIEW & PHASING SHEET 1 OF 1

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

REVISIONS

CADD FILE

1/4/2012
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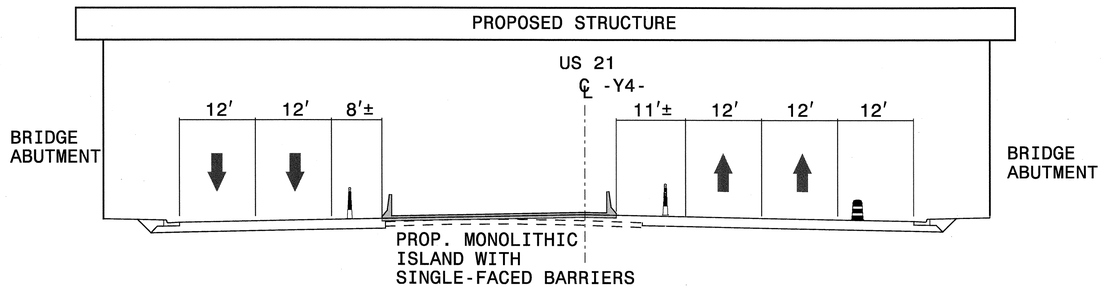
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-12.2



SECTION A-A
-Y4- STA 27+00 (SEE TCP-12.3)

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 2 SECTIONS

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

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10/12/2011
r:\3819\traffic\trafficcontrol\tcp\00% dd\3819a_tc_tcp_sections.dgn

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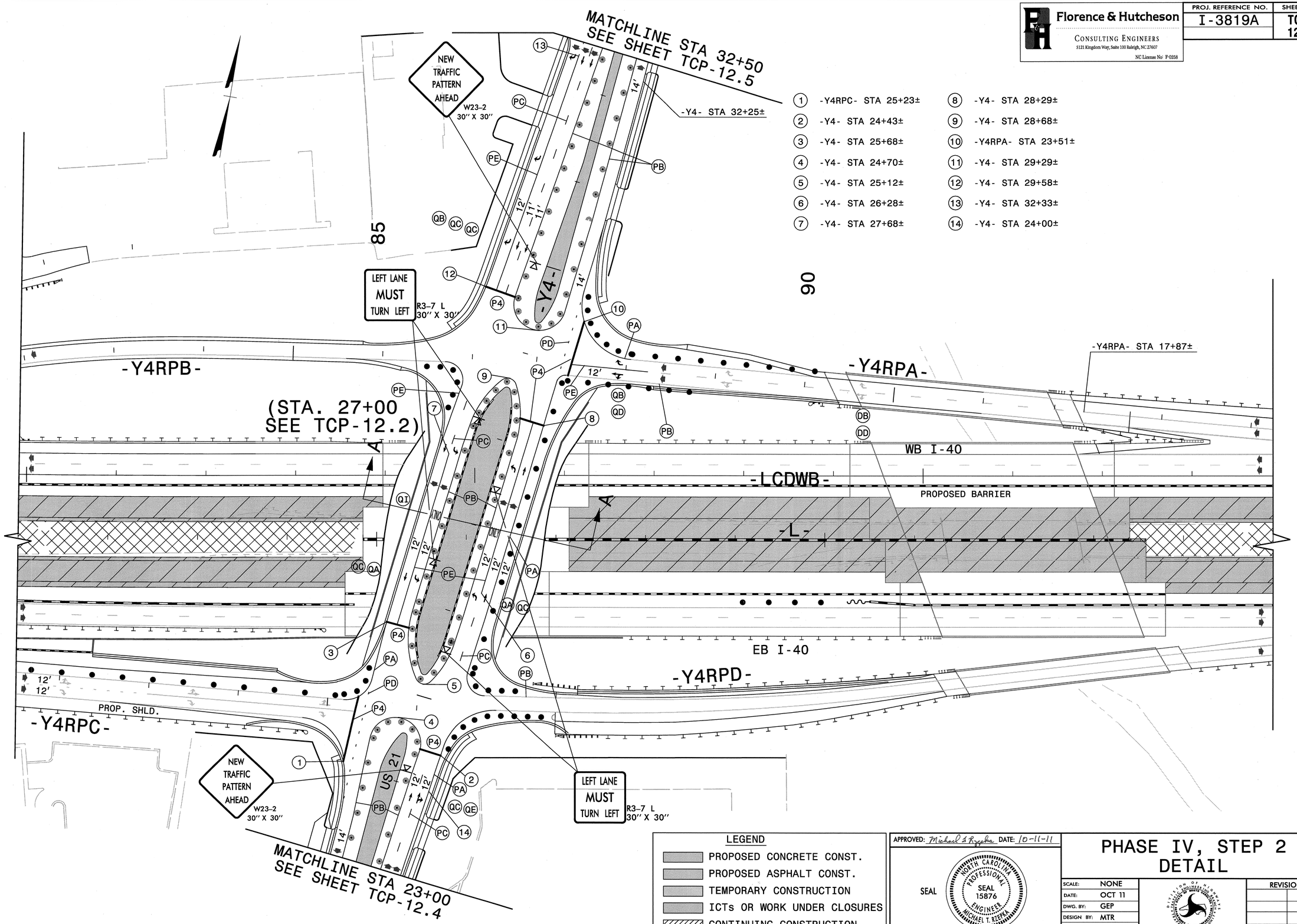
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-12.3



1. -Y4RPC- STA 25+23±
2. -Y4- STA 24+43±
3. -Y4- STA 25+68±
4. -Y4- STA 24+70±
5. -Y4- STA 25+12±
6. -Y4- STA 26+28±
7. -Y4- STA 27+68±
8. -Y4- STA 28+29±
9. -Y4- STA 28+68±
10. -Y4RPA- STA 23+51±
11. -Y4- STA 29+29±
12. -Y4- STA 29+58±
13. -Y4- STA 32+33±
14. -Y4- STA 24+00±

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE IV, STEP 2 DETAIL

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

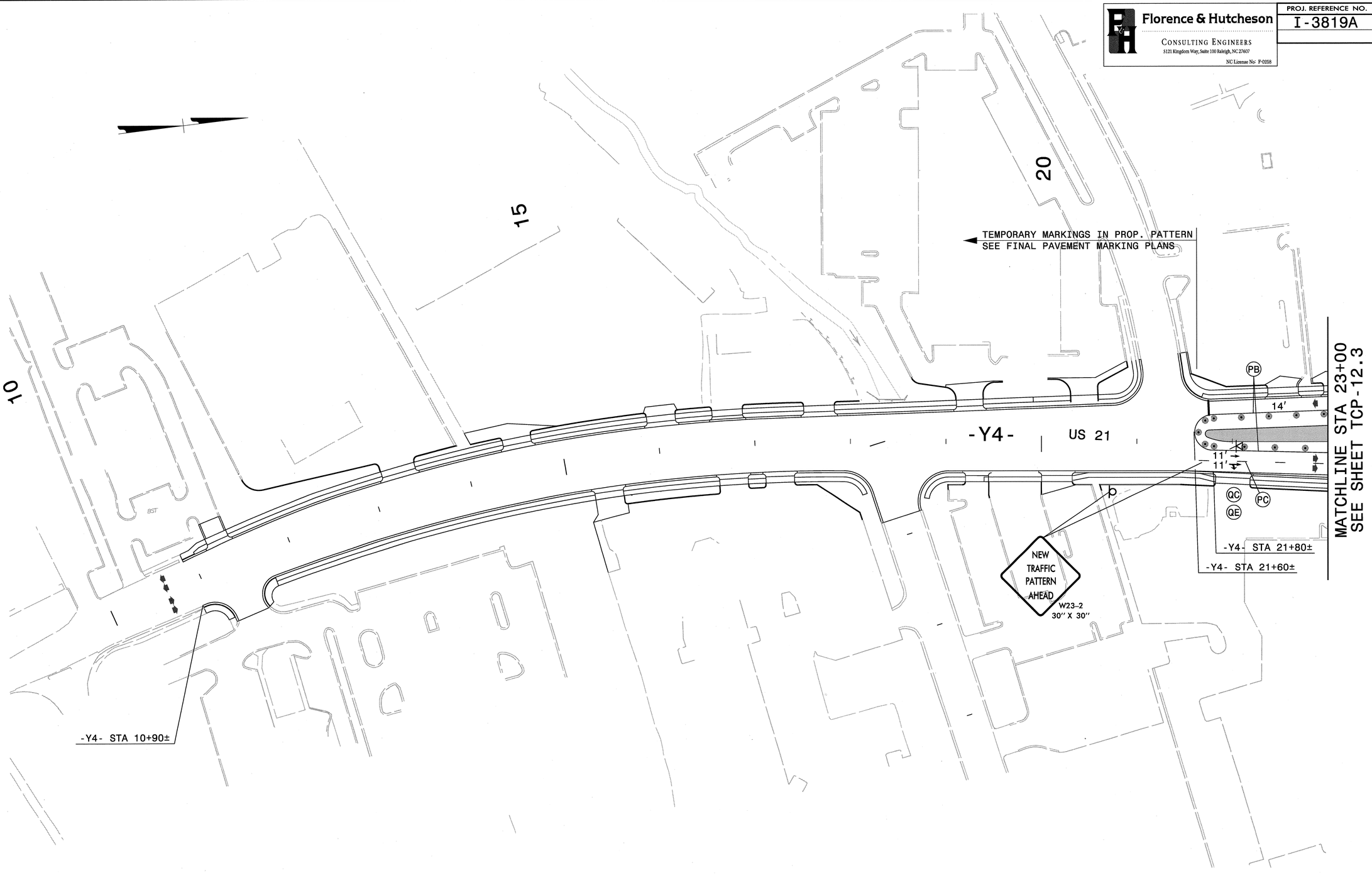
REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_piv_s2_det_106.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-12.4



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

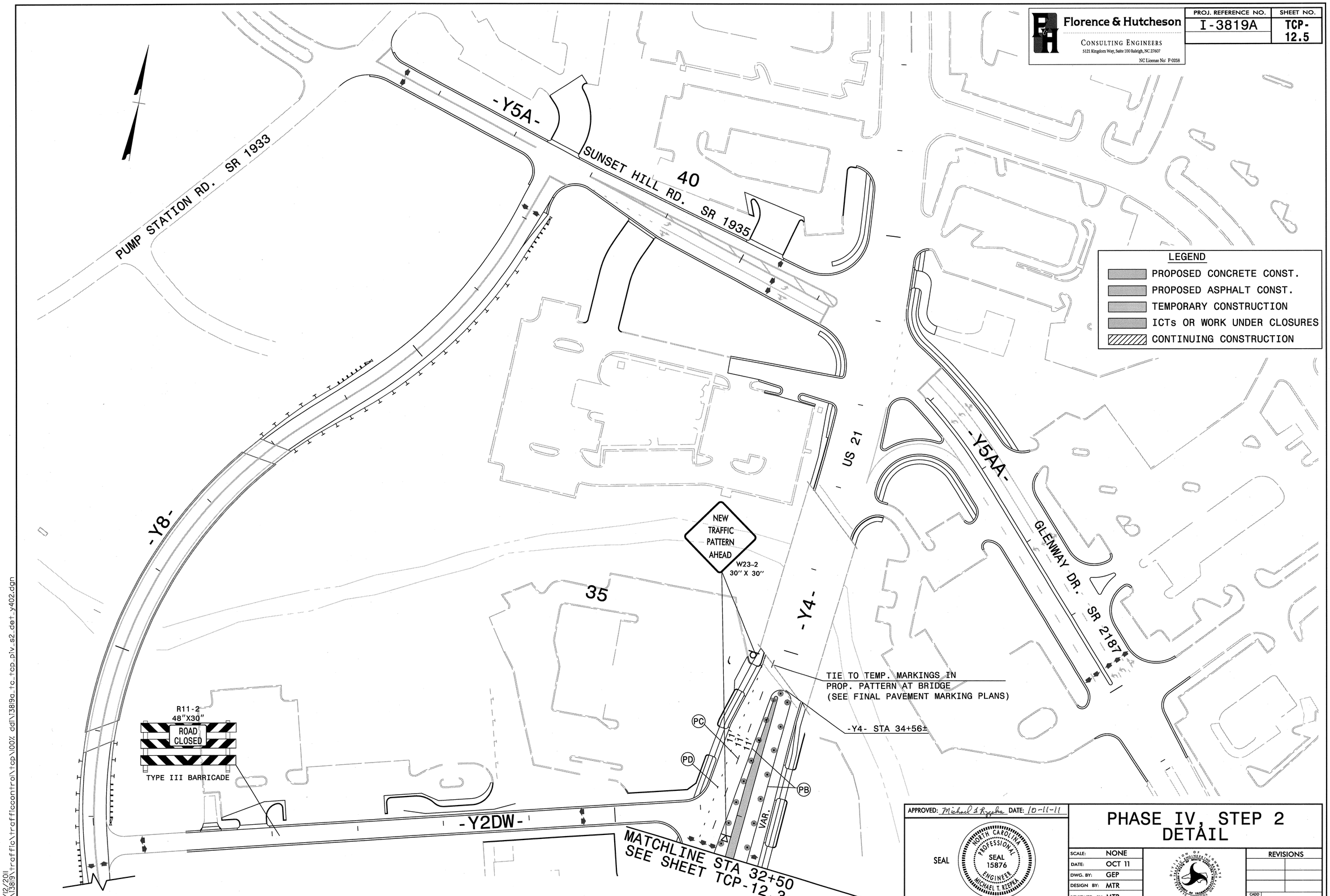
PHASE IV, STEP 2 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_plv_s2_det_y401.dgn



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CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-12.5
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
PUMP STATION RD. SR 1933
-Y5A-
SUNSET HILL RD. SR 1935
40
US 21
-Y5AA-
GLENWAY DR. SR 2187
-Y8-
NEW TRAFFIC PATTERN AHEAD
W23-2
30" X 30"
35
-Y4-
TIE TO TEMP. MARKINGS IN PROP. PATTERN AT BRIDGE (SEE FINAL PAVEMENT MARKING PLANS)
-Y4- STA 34+56±
R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE
PC
PD
PB
VAR.
-Y2DW-
MATCHLINE STA 32+50
SEE SHEET TCP-12.3
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE IV, STEP 2
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_piv_s2_det_y402.dgn

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0358

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-13.1

PHASE V, STEP 1

STEP 1A

USING RSD 1101.02 (SHEET 3 OF 15) AND LAW ENFORCEMENT, COMPLETE THE FOLLOWING ON -Y4- (US 21) AT I-40 (SEE SHEETS TMP-13.10, 13.10A, 13.15 & 13.16):

- REMOVE CONFLICTING MARKINGS AND PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS
- SHIFT -Y4- TRAFFIC TEMPORARY PATTERN SHOWN

STEP 1B

BEHIND DRUMS, CONSTRUCT PROPOSED -Y4- RAMP ISLANDS (4 LOCATIONS) INCLUDING PROPOSED SIGNALS (SEE SHEETS TMP-13.10, 13.15 & 13.16).

USING RSD 1101.02 (SHEET 3 OF 15) AND LAW ENFORCEMENT, COMPLETE THE FOLLOWING ON -Y4- (US 21) AT I-40:

- REMOVE CONFLICTING MARKINGS AND PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS
- SHIFT -Y4- TRAFFIC TO FINAL TRAFFIC PATTERN (SEE FINAL PAVEMENT MARKING PLANS)
- ACTIVATE PROPOSED SIGNALS

NOTE: PHASE V, STEPS 1C MAY BE COMPLETED SIMULTANEOUSLY WITH PHASE V, STEP 1A.

STEP 1C

USING RSD 1101.02 (SHEET 3 OF 15), COMPLETE THE FOLLOWING I-40 SHIFT (SEE TCP-13.5 THRU 13.14):

- REMOVE PCB AS NECESSARY TO SHIFT WB & EB I-40 TRAFFIC
- PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON PROPOSED WB & EB I-40 AND -YRPBD-
- SHIFT EB & WB I-40 TO PROPOSED LANES AS SHOWN
- CLOSE -Y4RPD- ACCESS TO EB I-40 & I-77, SEE TCP-13.17 FOR DETOUR ROUTE (SEE STEP 1D BELOW)
- CLOSE I-77 RAMP C ACCESS FROM EB I-40, SEE TCP-13.18 FOR DETOUR ROUTE (SEE STEP 1D BELOW)
- INSTALL/RESET PCB ALONG WB & EB I-40 AND -YRPBD- ADJACENT TO PAVEMENT REMOVAL AREAS

BEHIND BARRIER, CONSTRUCT THE FOLLOWING PROPOSED (SEE TCP-13.9, 13.10 & 13.14):

- EB I-40 REMAINING OUTSIDE SHOULDER FROM -L- STA 74+00± TO STA 84+57±
- WB I-40 REMAINING OUTSIDE SHOULDER FROM -L- STA 116+73± TO STA 118+80±

BEHIND BARRIER AND AWAY FROM TRAFFIC, BEGIN REMOVAL OF ALL REMAINING TEMPORARY PAVEMENT AND EXISTING I-77 LOOP A (SEE TCP-13.6, TCP-13.7 AND TCP-13.9 THRU TCP-13.13)

WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN STEP 1D IN 72 CONSECUTIVE HOURS (SEE INTERMEDIATE CONTRACT TIME AND SPECIAL PROVISIONS).

STEP 1D

CLOSE -Y4RPD- & I-77 RAMP C (SEE DETOURS, TCP-13.17 AND TCP-13.18) AND USING RSD 1101.02 (SHEET 3 OF 15), CONSTRUCT PROPOSED -Y4RPD- TIE TO PROPOSED EB I-40 (SEE TCP-13.11).

PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON PROPOSED -Y4RPD- AND AUXILIARY LANE AND TIE TO EXISTING.

BEHIND BARRIER, CONSTRUCT PROPOSED -YRPC- TIE FROM PROPOSED EB I-40 TO PROPOSED -YRPC- CONSTRUCTION BEGUN IN PHASE IV (SEE TCP-13.12).

COMPLETE PROPOSED -YRPC- FROM -P1S5EB3- TO EXISTING RAMP C.

RESET PCB ALONG OUTSIDE FROM EB I-40 FULL AUXILIARY LANE TO I-77 EXISTING RAMP C.

PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON PROPOSED EB I-40 AUXILIARY LANE AND -YRPC- AND TIE TO EXISTING.

OPEN -Y4RPD- ACCESS TO EB I-40 AND -YRPC- ACCESS FROM EB I-40.

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 PHASING

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

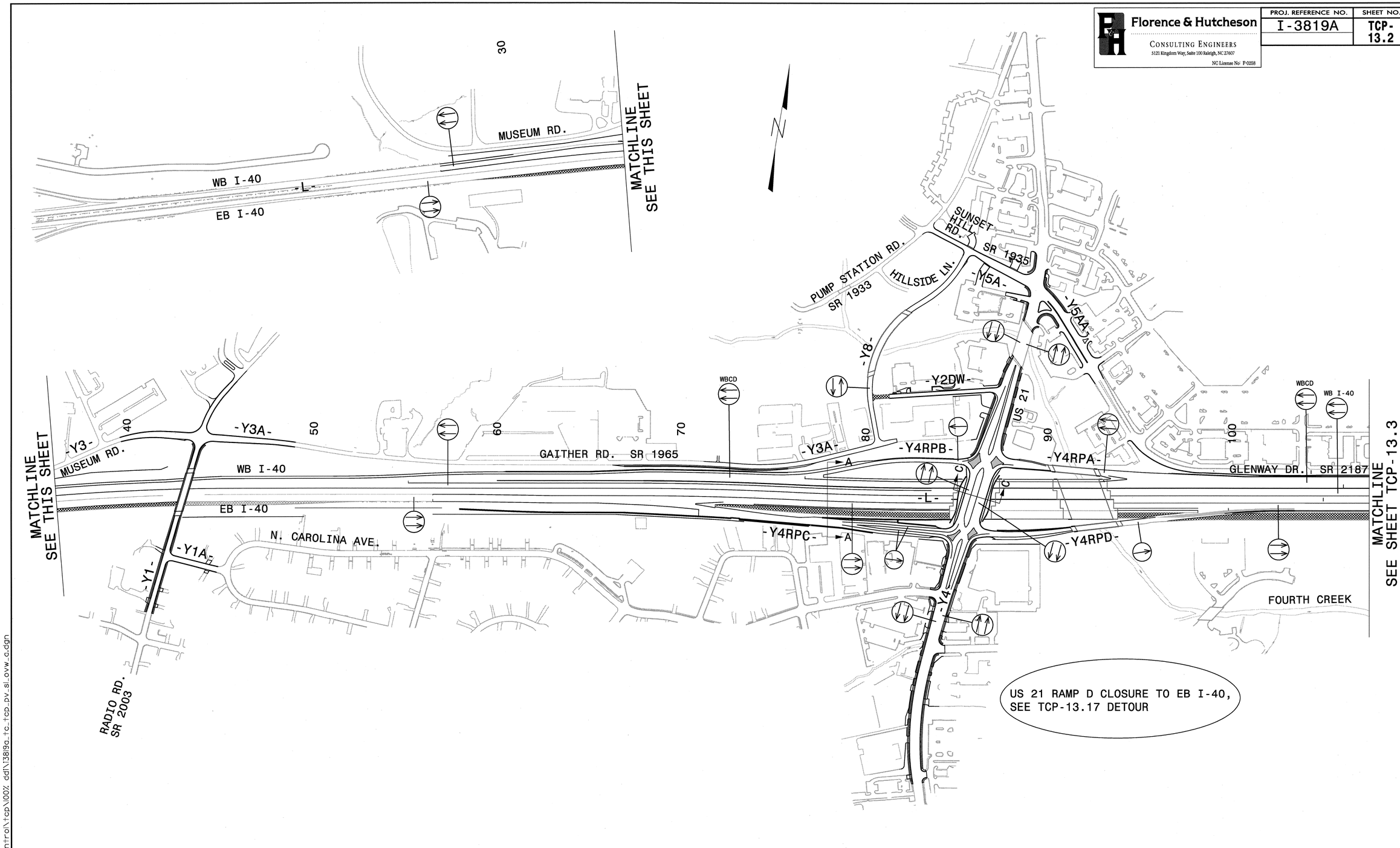
REVISIONS

CADD FILE

1/30/2012
R:\3819\Traffic\TrafficControl\TCP\I00% dd\I3819a_tc_tcp_phasing.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-13.2



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

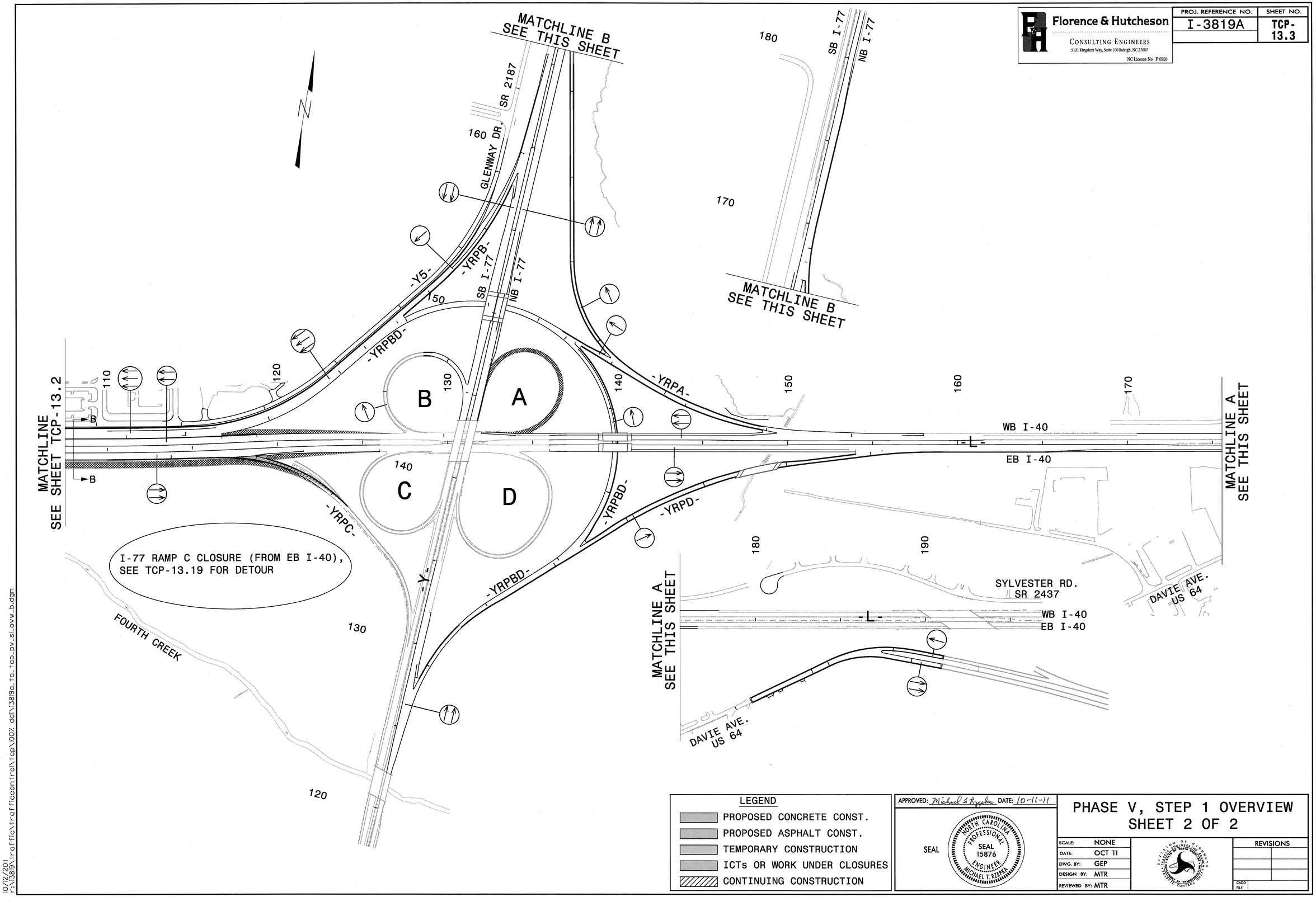
PHASE V, STEP 1 OVERVIEW
SHEET 1 OF 2

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

REVISIONS

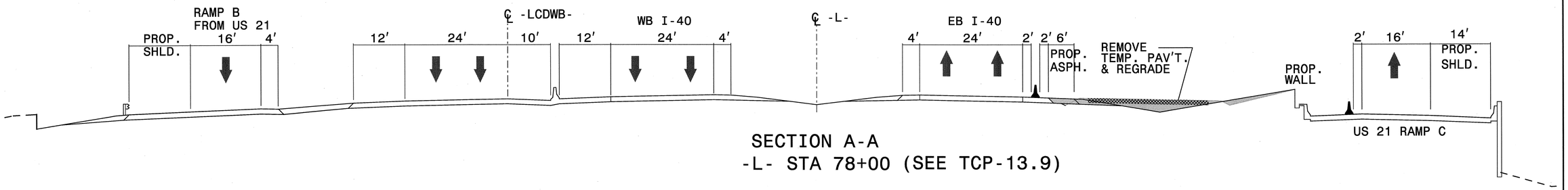
CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% dd\13819a_tc_tcp_pv_sl_ovw_a.dgn

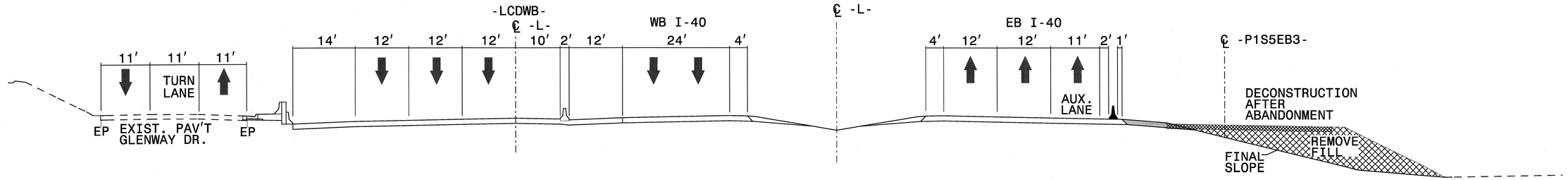


Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-13.3
MATCHLINE B SEE THIS SHEET
MATCHLINE B SEE THIS SHEET
MATCHLINE SEE SHEET TCP-13.2
MATCHLINE A SEE THIS SHEET
MATCHLINE A SEE THIS SHEET
GLENWAY DR. SR 2187
SB I-77
NB I-77
-Y5-
-YRPB-
-YRPBD-
-YRPA-
-YRPC-
-YRPD-
-Y-
-L-
WB I-40
EB I-40
SYLVESTER RD. SR 2437
DAVIE AVE. US 64
FOURTH CREEK
I-77 RAMP C CLOSURE (FROM EB I-40), SEE TCP-13.19 FOR DETOUR
A
B
C
D
110
120
130
140
150
160
170
180
190
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE V, STEP 1 OVERVIEW
SHEET 2 OF 2
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% dd\13819a_tc_tcp_pv_sl_ovw_b.dgn

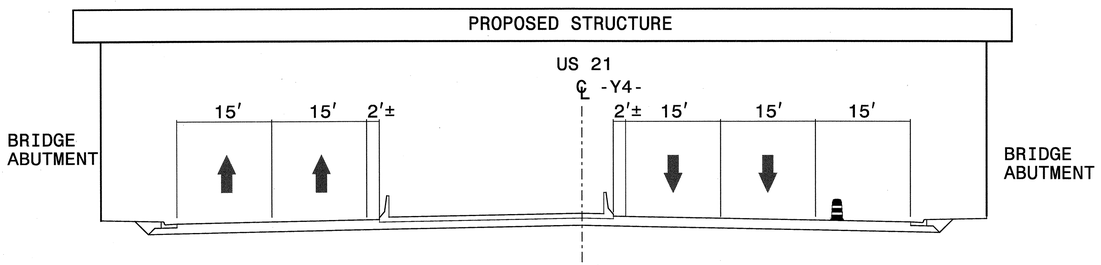
Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO. I-3819A	SHEET NO. TCP-13.4



SECTION A-A
-L- STA 78+00 (SEE TCP-13.9)



SECTION B-B
-L- STA 108+00 (SEE TCP-13.11)



SECTION C-C
-Y4- STA 27+00 (SEE TCP-13.10)

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 SECTIONS

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

REVISIONS

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10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_sections.dgn

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	I-3819A	TCP-13.5

15

20

25

MUSEUM RD.

WB I-40

-L-

EB I-40

-L- STA 26+00±
TIE TO EXIST.

PA

12'
12'
12'

PROP G/R

11'
11'

PA

PB

-L- STA 25+00±
BEG PCB 6' OFFSET

-L- STA 25+50±
PCB 2' OFFSET

EXISTING
SKIPS

MATCHLINE STA 27+00
SEE SHEET TCP-13.6

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 DETAIL

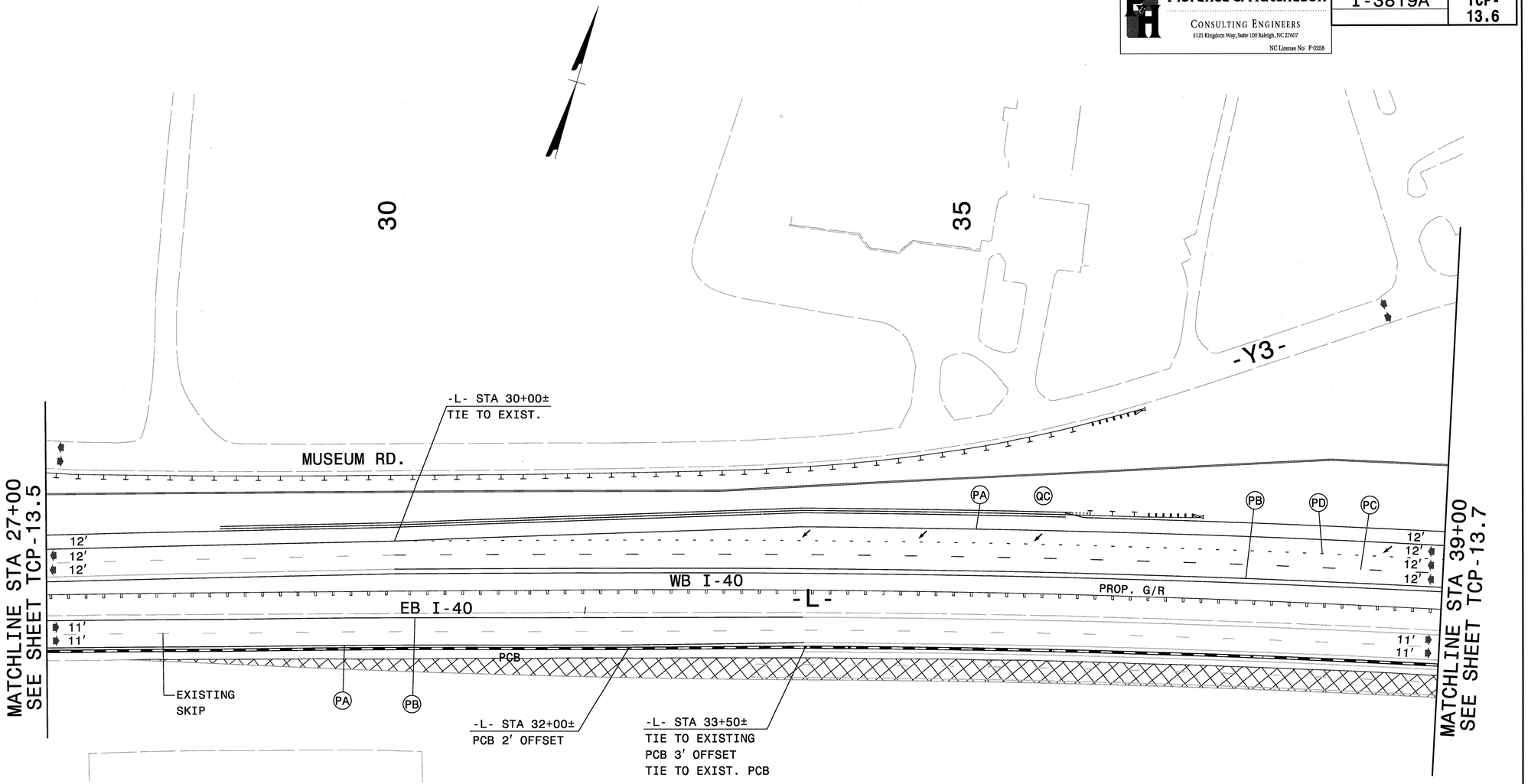
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
P:\3819\traffic\trafficcontrol\top\00% ddl\3819a_tc_tcp_pv_sl_det_101.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-13.6



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 DETAIL

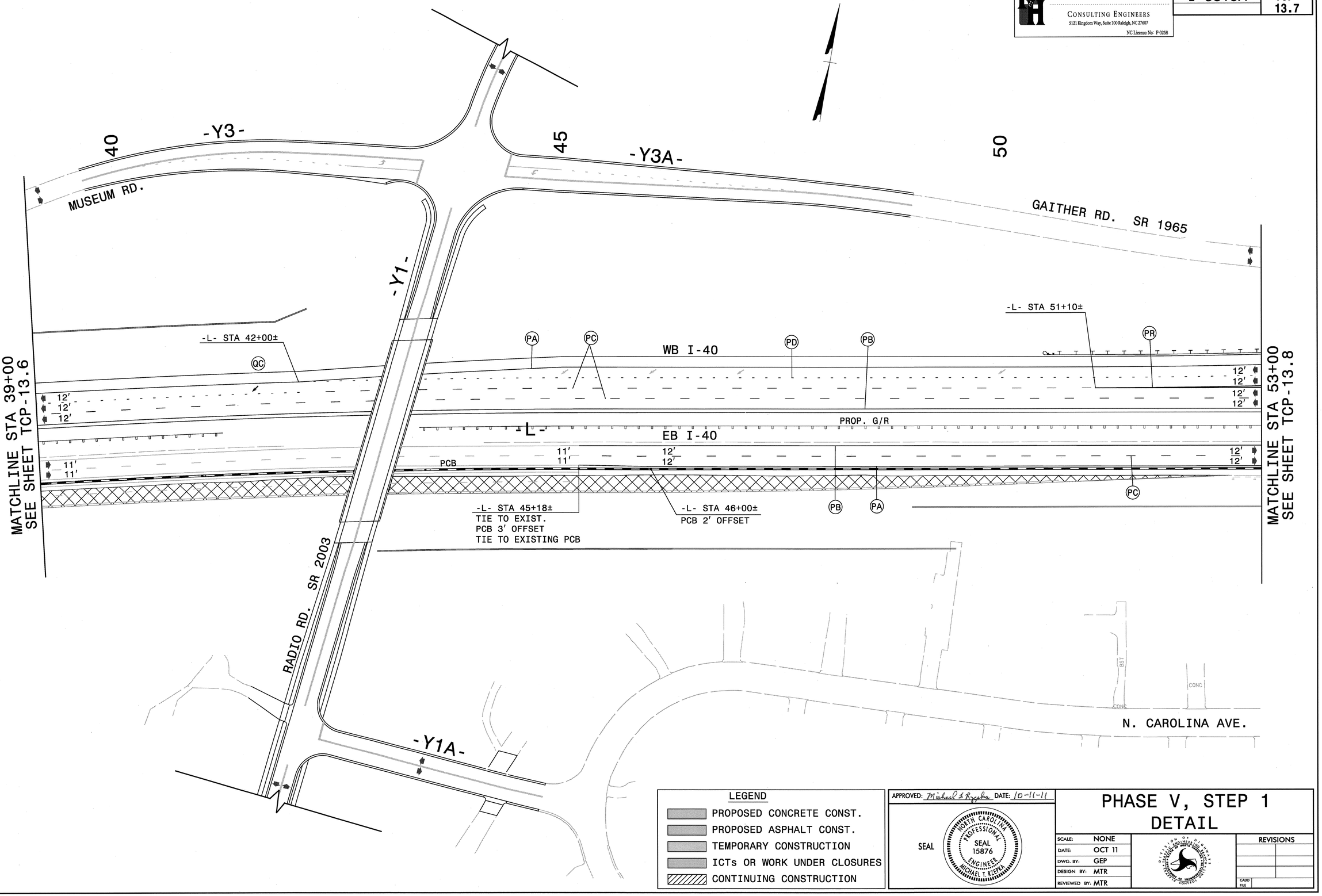
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
P:\3819S\traffic\trafficcontrol\tcp\I00X dd\I3819a_tc_tcp_pv_sl_det_I02.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO. I-3819A	SHEET NO. TCP-13.7



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddi\13819a_tc_tcp_pv_sl_det_103.dgn

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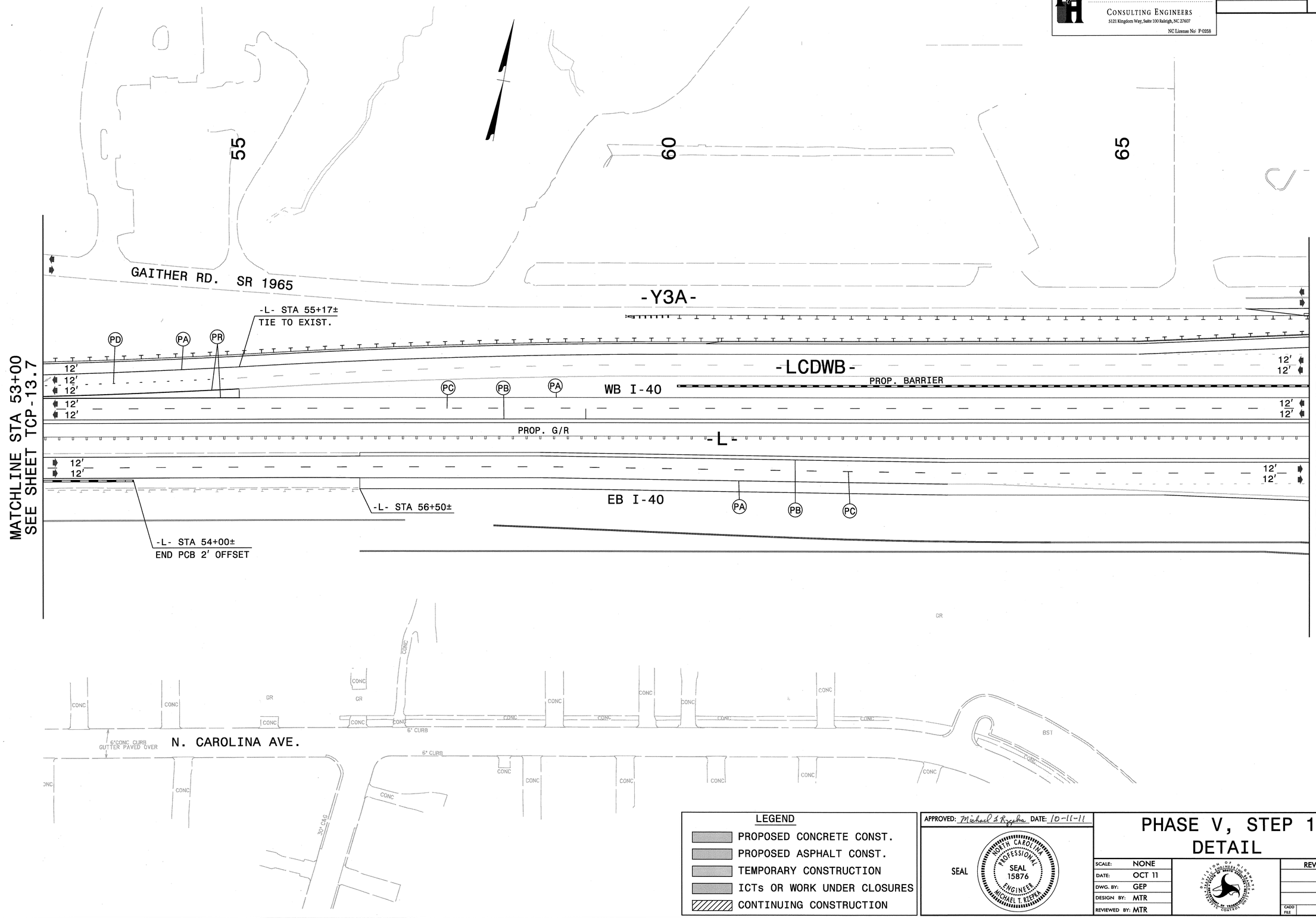
NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-13.8



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1
DETAIL

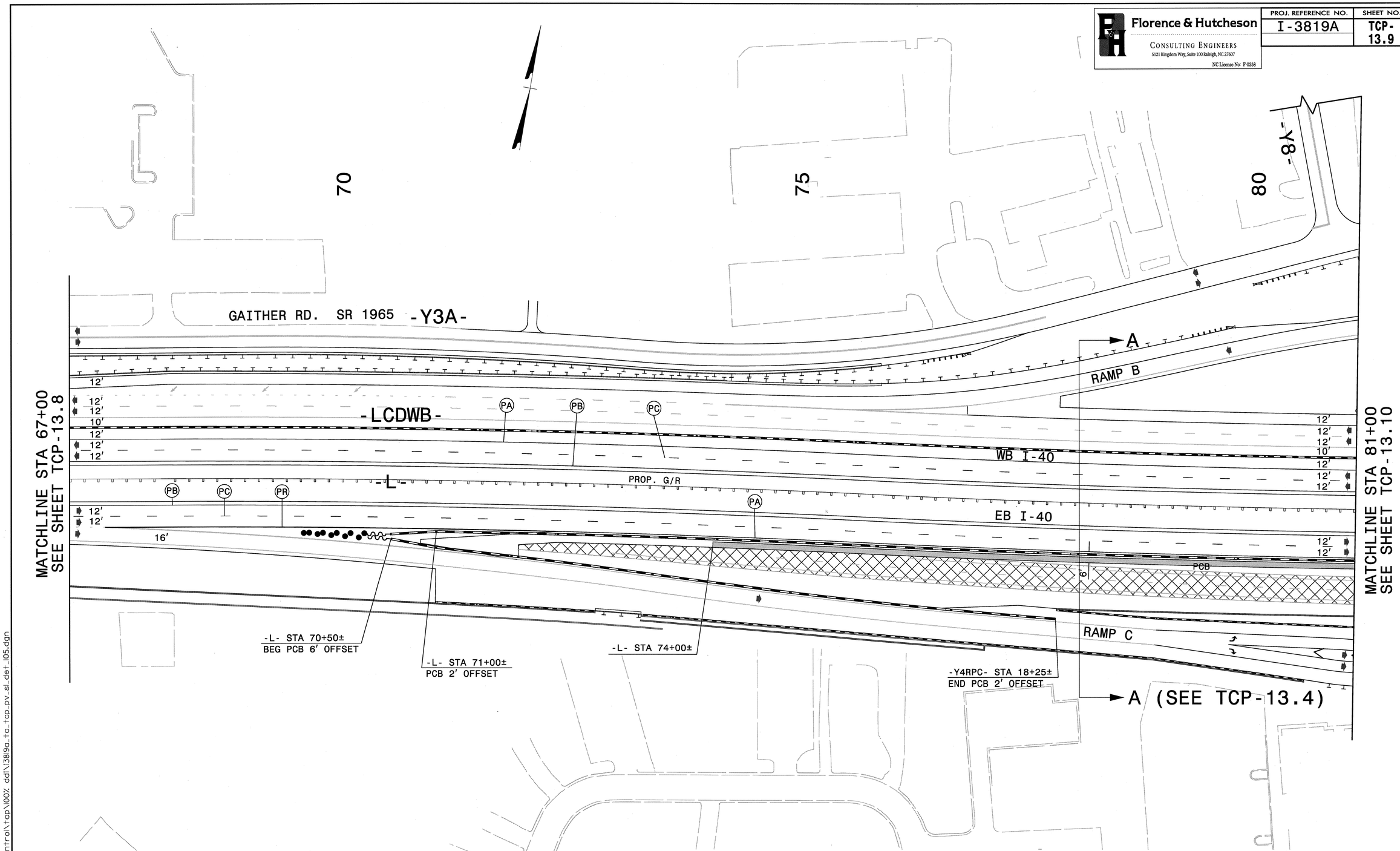
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pv_sl_det_104.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-13.9



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 DETAIL

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

REVISIONS

CADD FILE

10/12/2011
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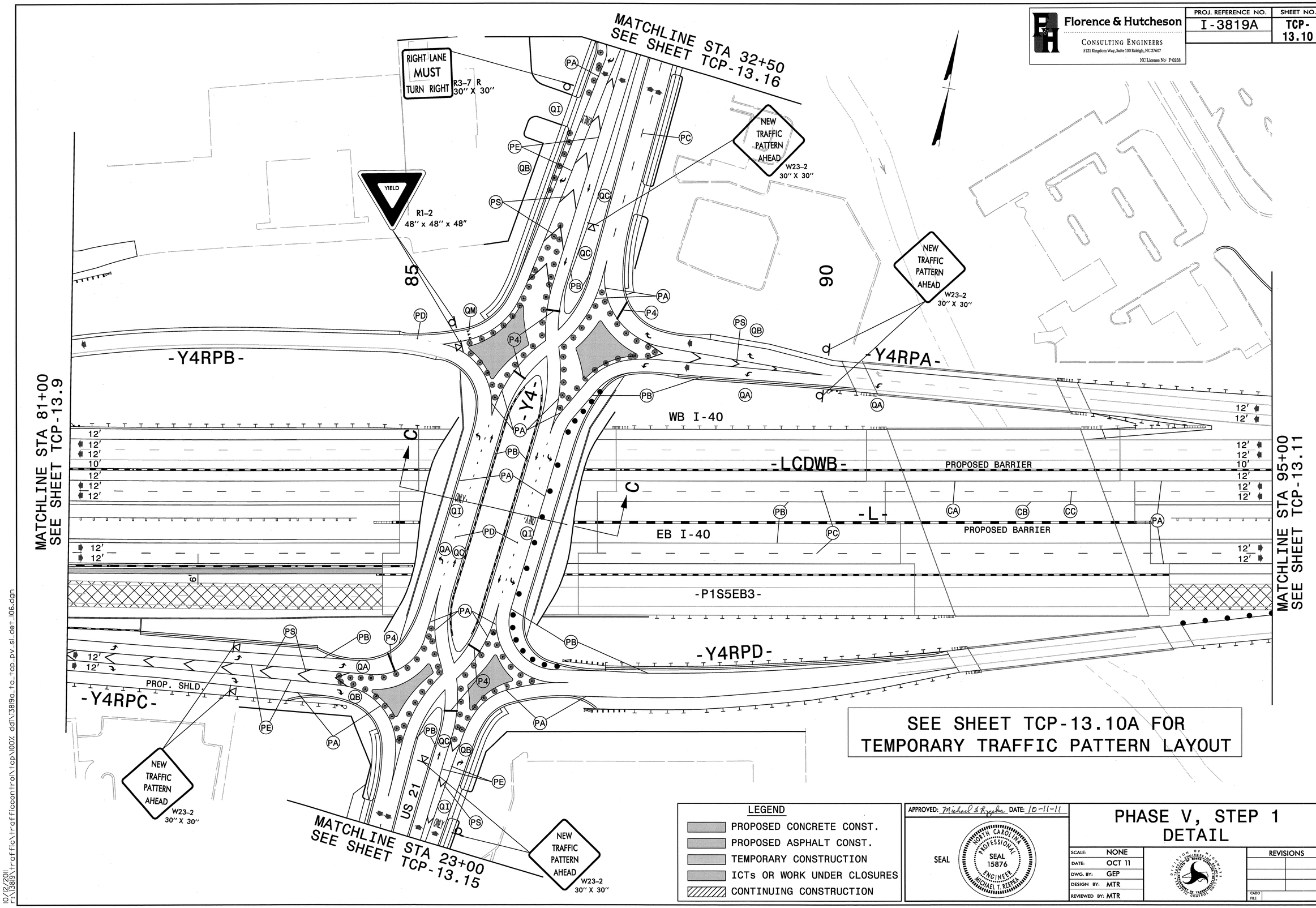

Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0258
PROJ. REFERENCE NO.
I-3819A
SHEET NO.
TCP-13.10
MATCHLINE STA 32+50
SEE SHEET TCP-13.16
RIGHT LANE MUST TURN RIGHT
R3-7 R
30" X 30"
YIELD
R1-2
48" x 48" x 48"
NEW TRAFFIC PATTERN AHEAD
W23-2
30" X 30"
85
90
-Y4RPB-
-Y4RPA-
-Y4-
WB I-40
-LCDWB-
PROPOSED BARRIER
-L-
EB I-40
-P1S5EB3-
-Y4RPD-
-Y4RPC-
PROP. SHLD.
US 21
MATCHLINE STA 81+00
SEE SHEET TCP-13.9
MATCHLINE STA 95+00
SEE SHEET TCP-13.11
MATCHLINE STA 23+00
SEE SHEET TCP-13.15
SEE SHEET TCP-13.10A FOR
TEMPORARY TRAFFIC PATTERN LAYOUT
LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION
APPROVED: Michael T. Rzepka DATE: 10-11-11
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA
PHASE V, STEP 1
DETAIL
SCALE: NONE
DATE: OCT 11
DWG. BY: GEP
DESIGN BY: MTR
REVIEWED BY: MTR
REVISIONS
CADD FILE
10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pv_sl_det_l06.dgn

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NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-13.10A

-Y4RPC- STA 20+15±

-Y4- STA 24+00±

-Y4- STA 23+38±

-Y4- STA 21+77±
TIE TO TEMP. MARKINGS
PROP. PATTERN
(SEE FINAL PAV'T MARKING PLANS)

-Y4RPD- STA 23+31±
TIE TO TEMP. MARKINGS
PROP. PATTERN

-Y4- STA 29+60±

-Y4- STA 32+34±

-Y4- STA 33+20±

-Y4- STA 30+63±

-Y4- STA 32+25±

TIE TO TEMP. MARKINGS IN
PROP. PATTERN AT BRIDGE
(SEE FINAL PAVT MARKING PLANS)

-Y4RPA- STA 20+90±
TIE TO EXIST. MARKINGS

US 21

-Y4-

25

30

35

1	R=71′	13	-Y4- STA 24+77±	24	-SPUR_Y4CLT- STA 10+55±
2	R=215′	14	-Y4- STA 25+10±	25	-Y4_NB- STA 16+75±
3	R=60′	15	-Y4- STA 25+89±	26	-Y4_SB- STA 18+28±
4	R=150′				
5	R=55′				
6	R=150′				

7	R=150′	16	-Y4- STA 27+98±	27	-Y4_NB- STA 20+88±
8	R=200′	17	-Y4- STA 28+83±	28	-Y4- STA 29+35±
9	R=200′	18	-Y4- STA 29+15±	29	-SPUR_Y4ART- STA 11+14±
10	R=150′	19	-Y4- STA 30+09±		
11	R=80′	20	-Y4RPA- STA 22+68±		
12	R=60′	21	-Y4RPA- STA 22+90±		
		22	-Y4RPA- STA 28+29±		
		23	-Y4RPA- STA 28+67±		

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

PHASE V, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
I:\3819\traffic\trafficcontrol\tcp\100% dd\3819a_tc_tcp_pv_sl_det_06.icyout.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-13.11

MATCHLINE STA 95+00
SEE SHEET TCP-13.10

MATCHLINE STA 109+00
SEE SHEET TCP-13.12

100

105

-YRPA-

-Y5-

GLENWAY DR. SR 2187

B

12′ 12′ 12′ 12′ 10′ 12′ 12′ 12′ 14′ 12′ 12′ 12′ 10′ 12′ 12′ 12′

PROPOSED BARRIER

-LCDWB-

PROPOSED BARRIER

WB I-40

PROP. G/R

-L-

PA PR PA PD PB PC

EB I-40

12′ 12′ 12′ 12′ 12′ 12′

QC

-P1S5B3-

STEP 1D RAMP CLOSURE
AND CONSTRUCTION TIE

-L- STA 103+43±
BEG PCB 2′ OFFSET

B

(SEE TCP-13.4)

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 DETAIL

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

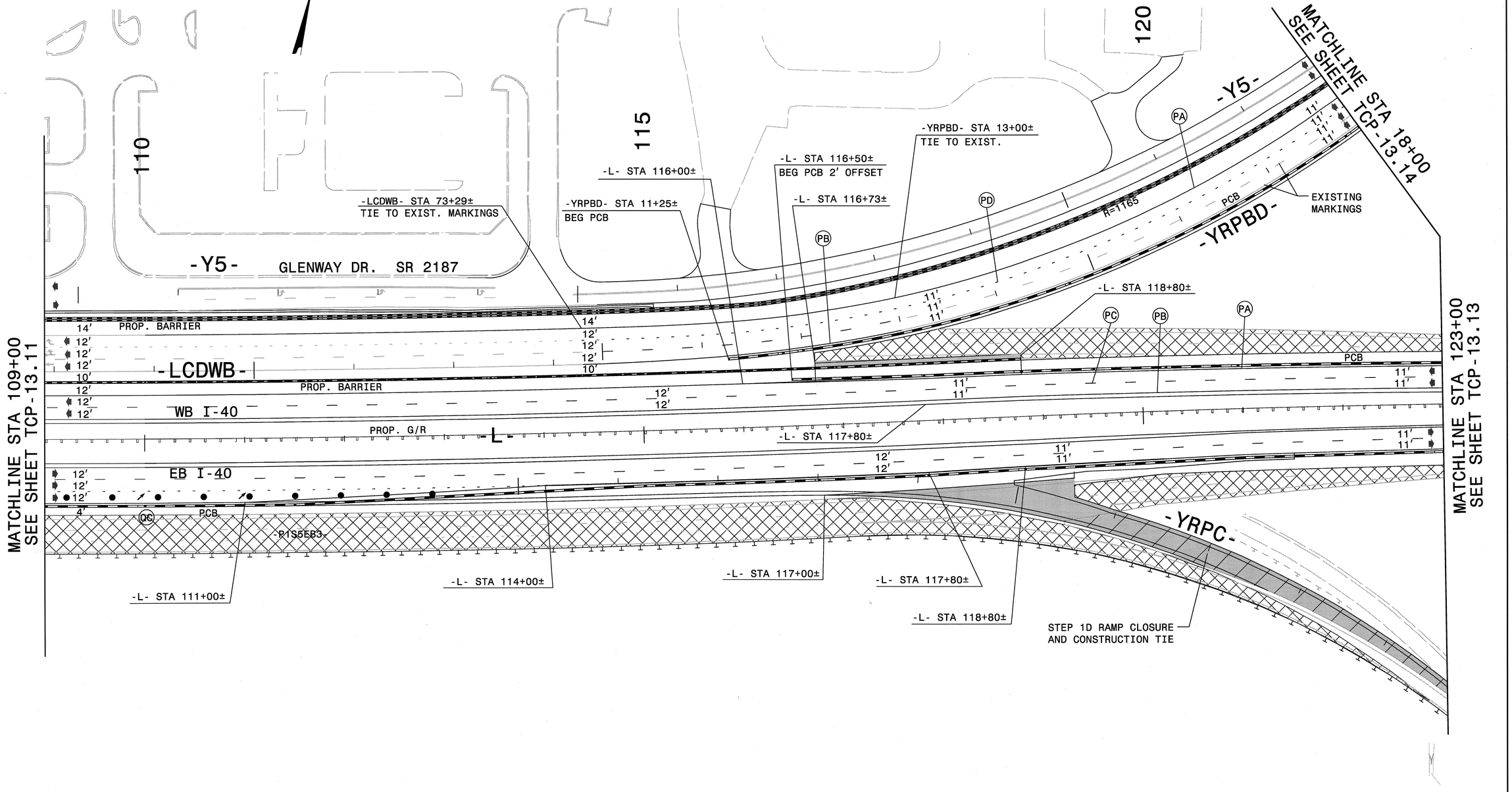
DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
r:\3819\traffic\trafficcontrol\tcp\00% ddl\3819a_tc_tcp_pv_sl_de1_l07.dgn

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-13.12



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

10/12/2011
r:\I3819\traffic\traffiocontrol\tcp\00% ddl\I3819a_tc_tcp_pv_sl_de1_108.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS	I-3819A	TCP-13.13
5121 Kingdom Way, Suite 100 Raleigh, NC 27607		
NC License No: P-0258		

MATCHLINE STA 123+00
SEE SHEET TCP-13.12

LOOP B

LOOP A

LOOP C

LOOP D

RAMP C

125

130

135

A

B

C

D

SB I-77

NB I-77

-L- STA 125+00±

-L- STA 126+00±
PCB 2' OFFSET

-L- STA 126+00±
END PCB 2' OFFSET

-L- STA 127+00±
PCB 2' OFFSET

-L- STA 127+50±
END PCB 6' OFFSET

-L- STA 128+83±

-L- STA 129+70±
TIE TO EXIST.

-L- STA 130+50±
TIE TO EXIST.

PA PB PC PD PR

PCB

11'
11'

12'
12'

EB I-40

WB I-40

PROP. G/R -L-

LEGEND
PROPOSED CONCRETE CONST.
PROPOSED ASPHALT CONST.
TEMPORARY CONSTRUCTION
ICTs OR WORK UNDER CLOSURES
CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 DETAIL

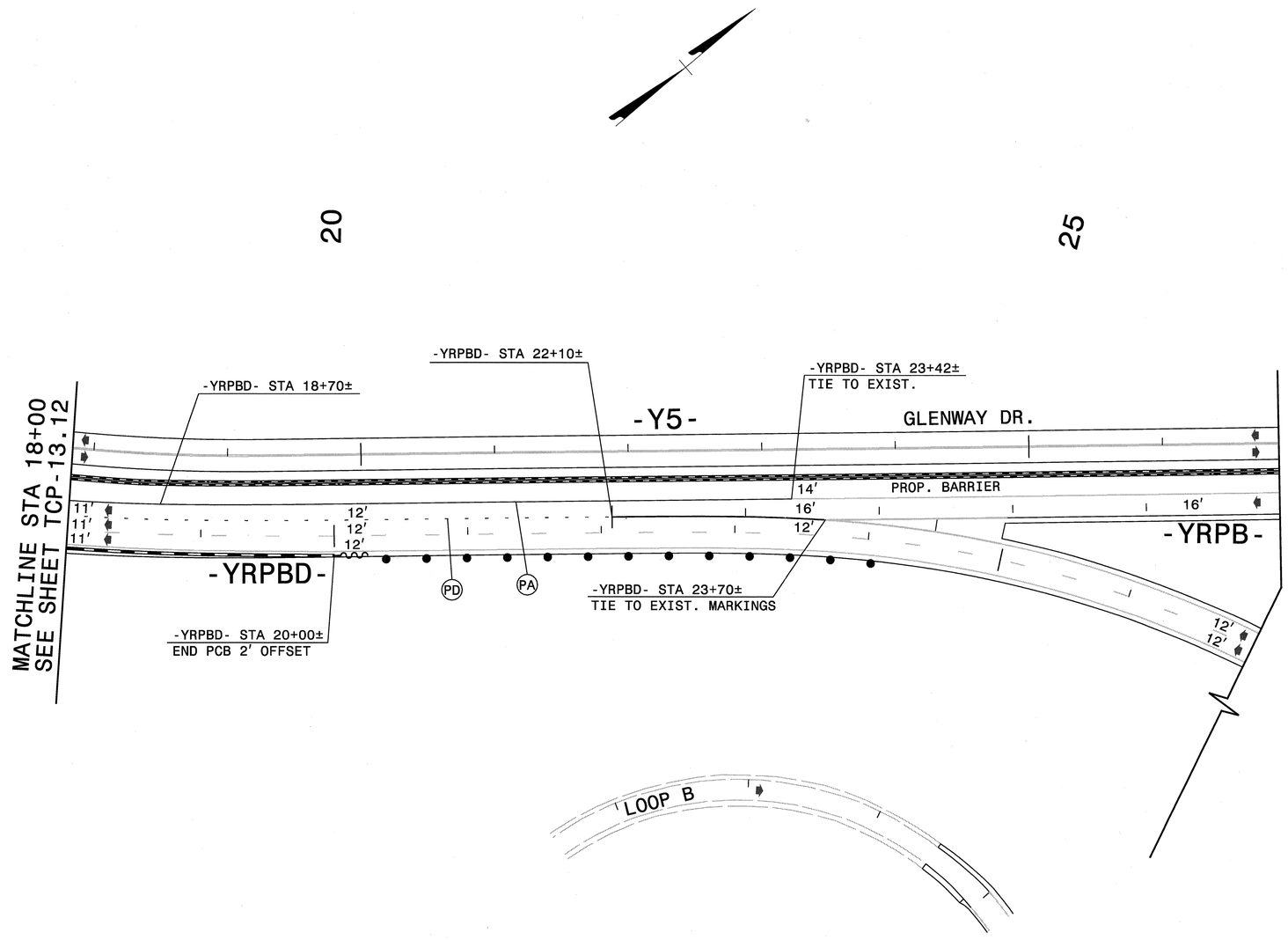
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS	
CADD FILE	

10/12/2011
C:\I3819\traffic\traffiocontrol\tcp\100%_dd\I3819a_tc_tcp_pv_sl_det_09.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	PROJ. REFERENCE NO. I-3819A	SHEET NO. TCP-13.14



LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 DETAIL

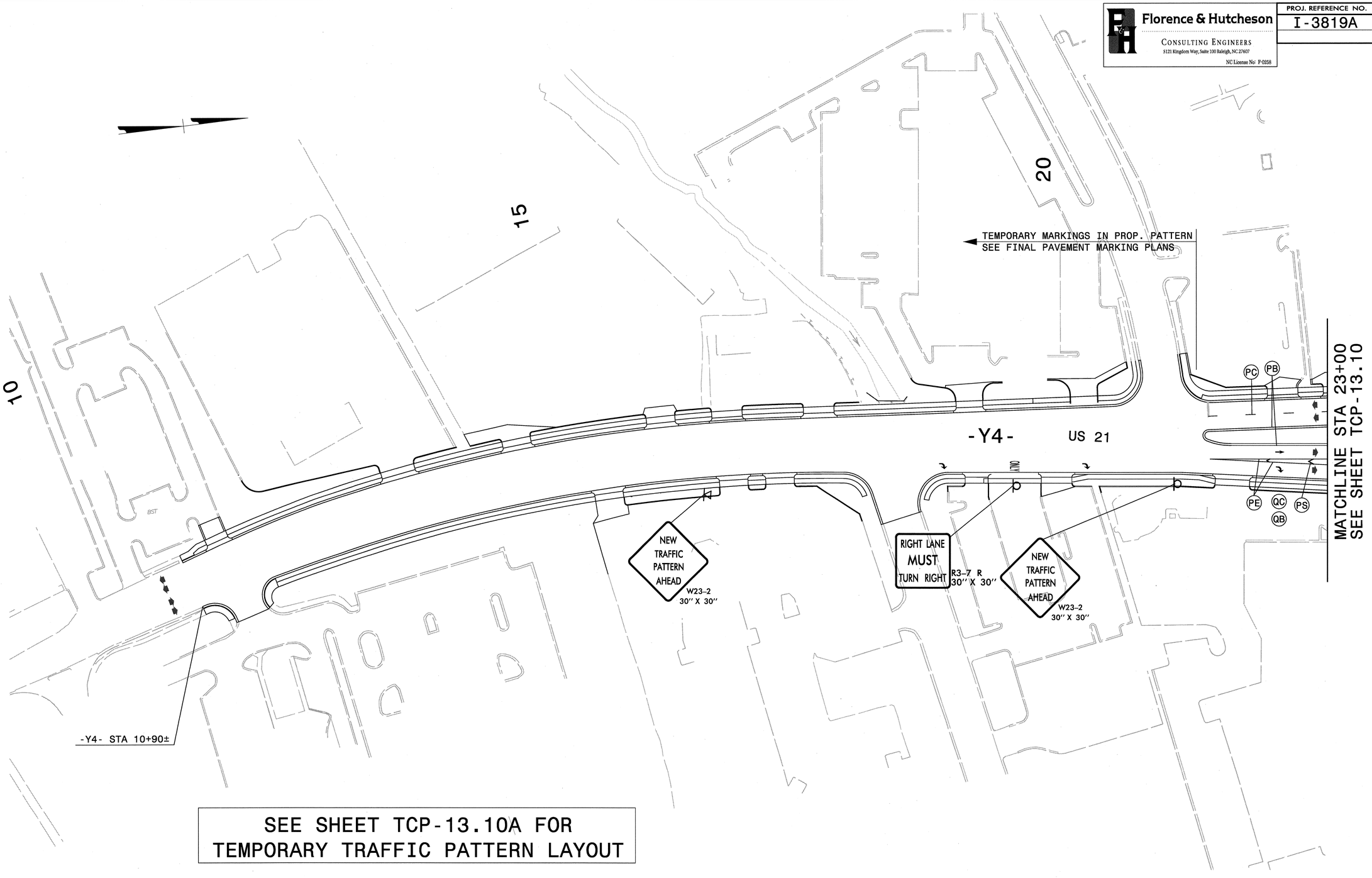
SCALE:	NONE
DATE:	OCT 11
DWG. BY:	GEP
DESIGN BY:	MTR
REVIEWED BY:	MTR

REVISIONS

CADD FILE

10/12/2011
r:\13819\traffic\trafficcontrol\tcp\100% ddl\13819a_tc_tcp_pv_sl_det_yrpbd01.dgn

Florence & Hutcheson	PROJ. REFERENCE NO.	SHEET NO.
CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: F-0258	I-3819A	TCP-13.15



SEE SHEET TCP-13.10A FOR
TEMPORARY TRAFFIC PATTERN LAYOUT

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
c:\i3819\traffic\trafficcontrol\tcp\002_ddi\i3819a_tc_tcp_pv_s1_det_y40i.dgn

Florence & Hutcheson CONSULTING ENGINEERS 5121 Kingdom Way, Suite 100 Raleigh, NC 27607 NC License No: P-0258	PROJ. REFERENCE NO.	SHEET NO.
	I-3819A	TCP-13.16

PUMP STATION RD. SR 1933

-Y5A-

SUNSET HILL RD. SR 1935

40

NEW TRAFFIC PATTERN AHEAD
W23-2
30" X 30"

RIGHT LANE MUST TURN RIGHT
R3-7 R
30" X 30"

US 21

-Y5AA-

GLENWAY DR. SR 2187

-Y8-

SEE SHEET TCP-13.10A FOR
TEMPORARY TRAFFIC PATTERN LAYOUT

35

NEW TRAFFIC PATTERN AHEAD
W23-2
30" X 30"

-Y4-

R11-2
48"X30"
ROAD CLOSED
TYPE III BARRICADE

-Y2DW-

MATCHLINE STA 32+50
SEE SHEET TCP-13.10

QB QC QI PD PE PC PB

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1 DETAIL

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC ENGINEER

REVISIONS	
CADD FILE	

10/12/2011
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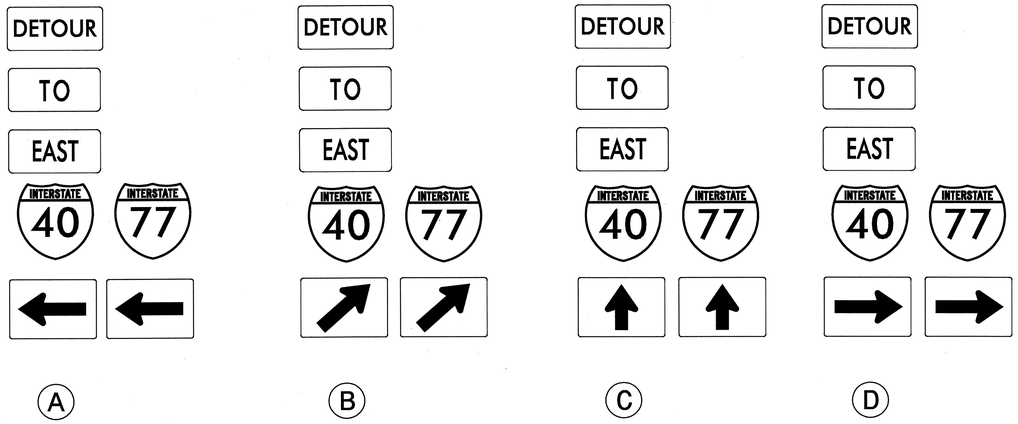
PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-13.17



MESSAGE NO. 1	MESSAGE NO. 2
RAMP TO I40E/I77 CLOSED	DETOUR I-40W NEXT LFT

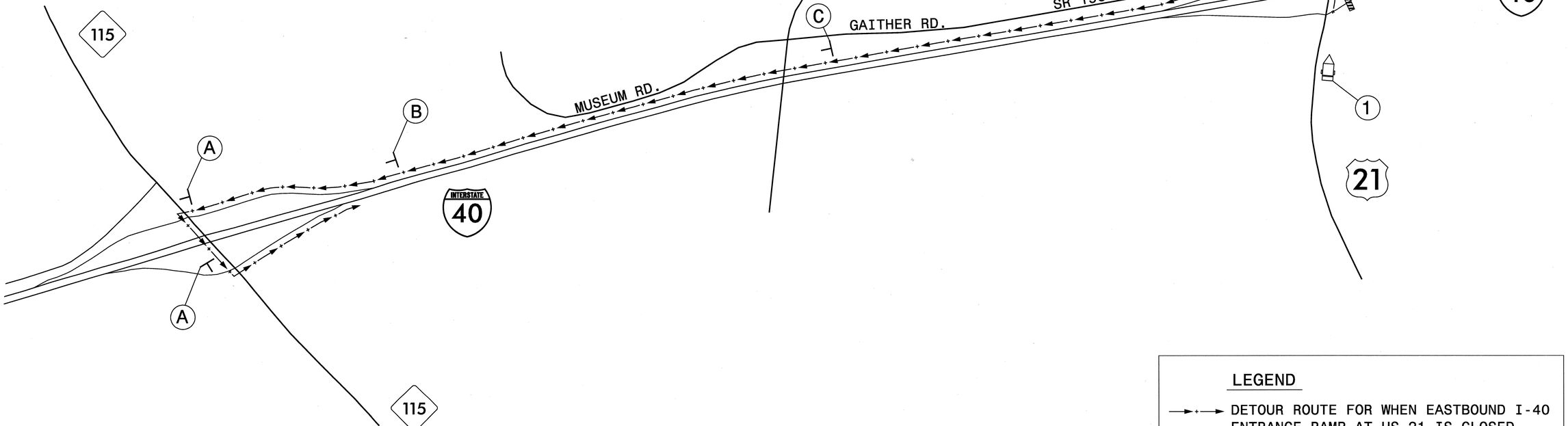
CHANGEABLE MESSAGE SIGN

(1)

MESSAGE NO. 1	MESSAGE NO. 2
RAMP TO I40E/I77 CLOSED	DETOUR I-40W NEXT RT

CHANGEABLE MESSAGE SIGN

(2)



LEGEND

→ DETOUR ROUTE FOR WHEN EASTBOUND I-40 ENTRANCE RAMP AT US 21 IS CLOSED

APPROVED: Michael S Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1
DETOUR FOR
US 21 RAMP D CLOSURE

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
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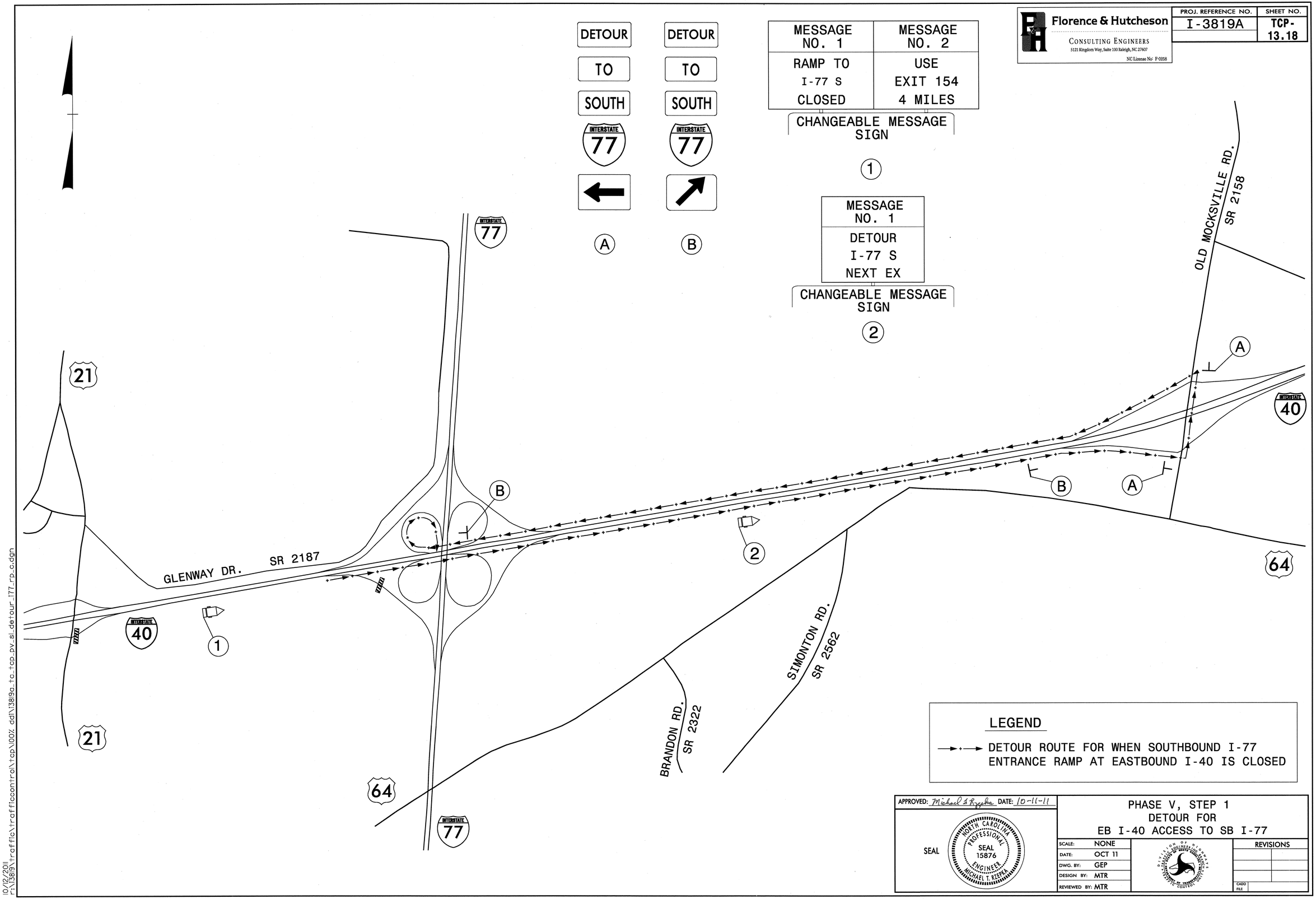

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PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-13.18

APPROVED: Michael T. Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 1
DETOUR FOR
EB I-40 ACCESS TO SB I-77

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

REVISIONS

CADD FILE

10/12/2011
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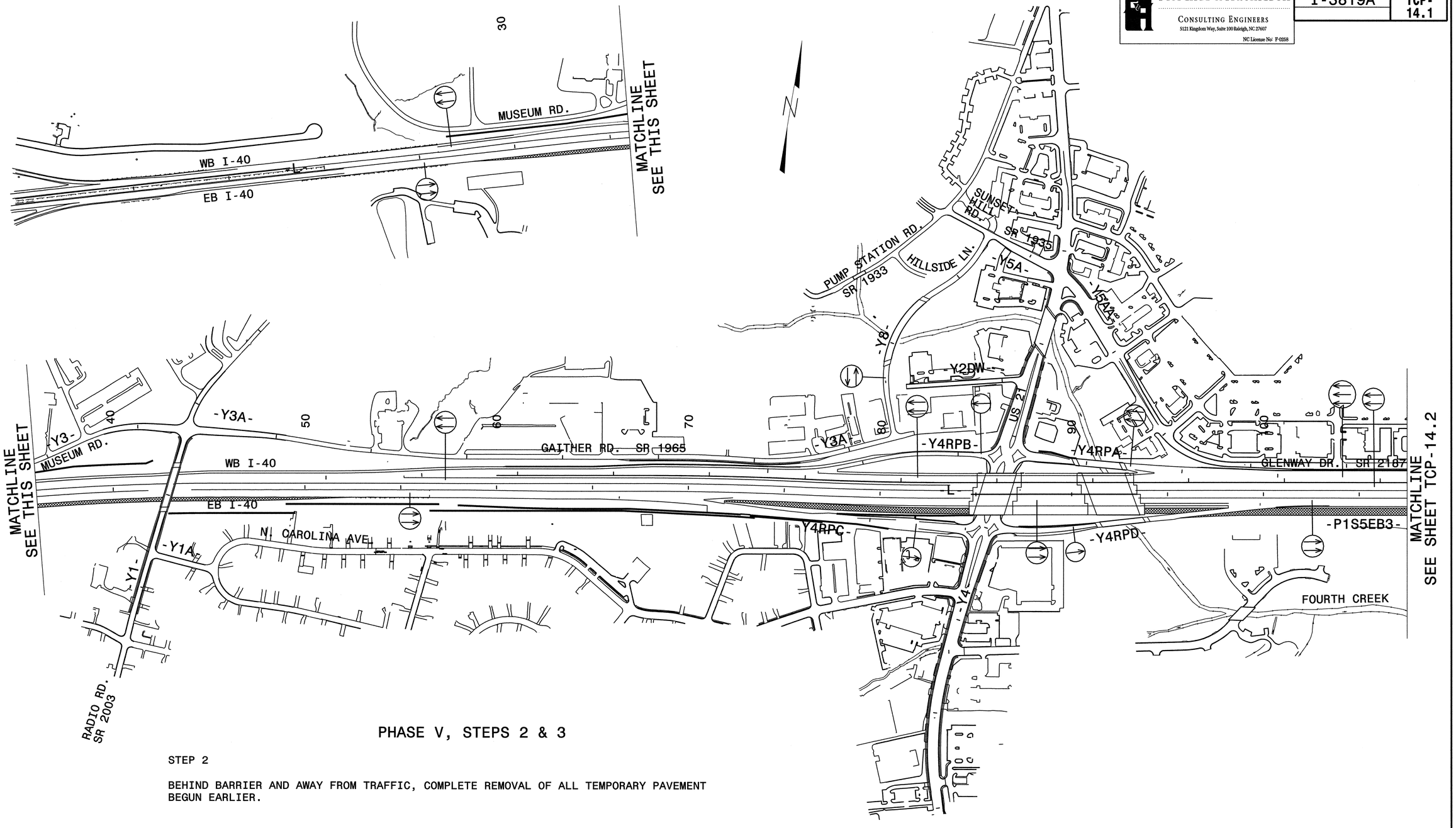
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0268

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-14.1



PHASE V, STEPS 2 & 3

STEP 2

BEHIND BARRIER AND AWAY FROM TRAFFIC, COMPLETE REMOVAL OF ALL TEMPORARY PAVEMENT BEGUN EARLIER.

STEP 3

USING RSD 1101.02 (SHEETS 1, 3, 7, 9 & 10 OF 15), COMPLETE THE FOLLOWING:

- REMOVE REMAINING PCB
- PLACE FINAL LAYER OF SURFACE COURSE (ASPHALT)
- PLACE FINAL PAVEMENT MARKINGS AND MARKERS (SEE FINAL PAVEMENT MARKING PLANS)
- OPEN ALL ROADS TO FINAL PATTERN AND REMOVE REMAINING TRAFFIC CONTROL DEVICES

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 2 OVERVIEW & PHASE V, STEPS 2 & 3 PHASING SHEET 1 OF 2

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS

CADD FILE

1/4/2012
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NC License No: P-0258

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-14.2

MATCHLINE B SEE THIS SHEET

SR 2187

GLENWAY DR.

160

180

170

SB I-77

NB I-77

MATCHLINE B SEE THIS SHEET

-Y5-

-YRPB-

150

-YRPBD-

140

-YRPA-

MATCHLINE SEE SHEET TCP-14.1

110

120

B

130

A

150

160

170

WB I-40

-L-

EB I-40

MATCHLINE A SEE THIS SHEET

140

C

D

-YRPC-

-YRPBD-

-YRPD-

180

190

SYLVESTER RD. SR 2437

DAVIE AVE. US 64

WB I-40

EB I-40

MATCHLINE A SEE THIS SHEET

FOURTH CREEK

130

120

DAVIE AVE. US 64

LEGEND

- PROPOSED CONCRETE CONST.
- PROPOSED ASPHALT CONST.
- TEMPORARY CONSTRUCTION
- ICTs OR WORK UNDER CLOSURES
- CONTINUING CONSTRUCTION

APPROVED: Michael T Rzepka DATE: 10-11-11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

PHASE V, STEP 2 OVERVIEW SHEET 2 OF 2

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH

REVISIONS	
CADD FILE	

10/12/2011
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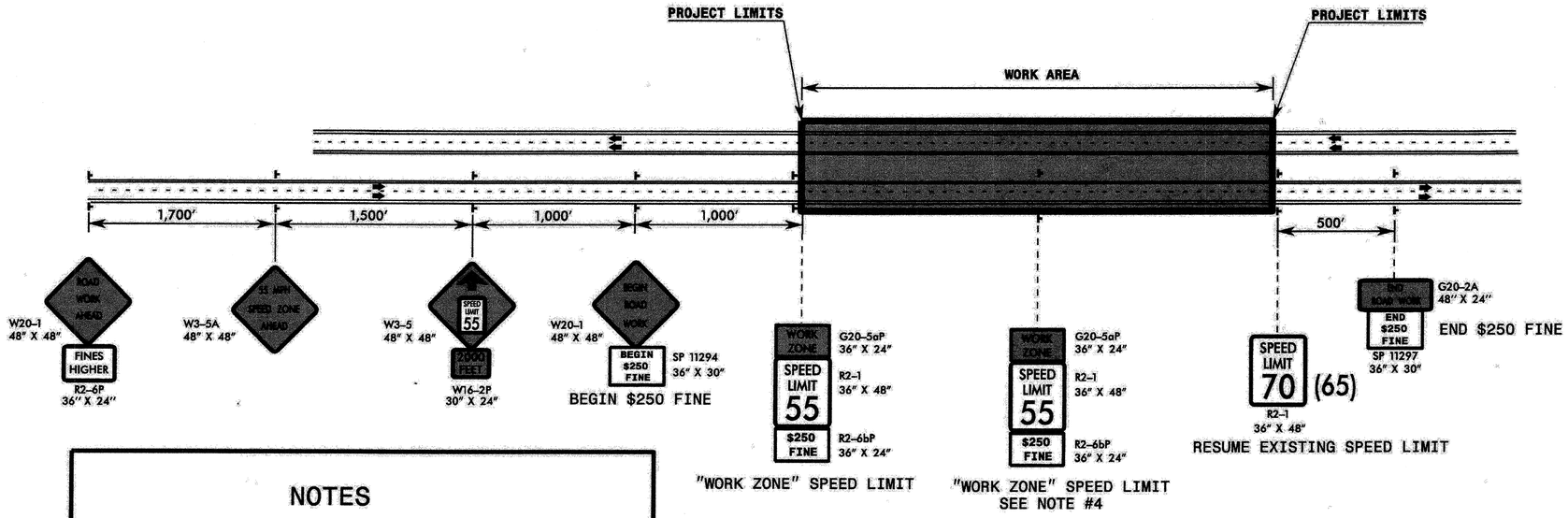
Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No: F-0358

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-15.1



NOTES

1) THE WORK ZONE SPEED LIMIT WILL BE ESTABLISHED IN COLLABORATON BETWEEN THE REGIONAL TRAFFIC ENGINEER, THE DIVISION AND THE WORK ZONE TRAFFIC CONTROL SECTION. THIS DRAWING SHOWS THE TYPICAL APPLICATION OF REDUCING THE "WORK ZONE SPEED LIMIT" TO 55 MPH.

2) IF THE "WORK ZONE SPEED LIMIT" ONLY APPLIES TO A SPECIFIC PORTION AND NOT THE ENTIRE PROJECT, THE EXISTING SPEED LIMIT IS TO BE REESTABLISHED INSIDE THE PROJECT LIMITS. THE EXISTING SPEED LIMIT SIGNS AND THE "END $250 FINE" SIGNS ARE TO BE INSTALLED AT THE LOCATION WHERE THE EXISTING SPEED LIMIT IS TO RESUME. (SEE GUIDELINE- D)

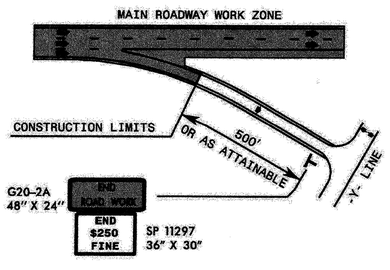
3) IF THE WORK ZONE SPEED LIMIT REDUCTION IS INSIDE THE WORK AREA, SIGNS W3-5A, W3-5, AND THE R2-1'S ALONG WITH THE SPEEDING FINE SIGNS ARE TO BE INSTALLED AT THE DISTANCE SHOWN ABOVE IN ADVANCE OF WHERE THE SPEED LIMIT IS REDUCED.

4) THE WORK ZONE SPEED LIMIT SIGNS ARE TO BE MOUNTED FROM 7' ABOVE EDGE OF PAVEMENT ELEVATION.

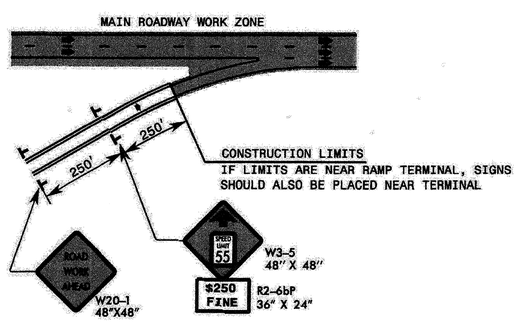
5) WHEN TEMPORARY LANE CLOSURES ARE INSTALLED AT THE BEGINNING OF THE PROJECT LIMITS, THE PORTABLE LANE CLOSURE SIGNS ARE TO BE ADJUSTED TO AVOID SIGN OVERLAP/CLUTTER

6) THE NEED AND LOCATION OF ADDITIONAL POSTED "WORK ZONE SPEED LIMIT" SIGNS WITHIN THE WORK AREA IS TO BE DETERMINED BY THE REGIONAL TRAFFIC ENGINEER.

EXIT RAMPS



ENTRANCE RAMPS



GUIDELINES

A) THIS DRAWING IS FOR USE ONLY AFTER AN ENGINEERING INVESTIGATION AND CRITERIA REVIEW HAS BEEN PERFORMED BY THE REGIONAL TRAFFIC ENGINEER AND THE WORK ZONE TRAFFIC CONTROL SECTION. THE WORK ZONE SPEED LIMIT REDUCTION IS INTENDED FOR USE ON FREEWAYS WITH SPEED LIMITS 65 MPH OR GREATER. SEE WORK ZONE SPEED LIMIT GUIDELINES FOR CRITERIA.

B) THE STATE TRAFFIC ENGINEER HAS TO ORDINANCE THE SPEED LIMIT REDUCTION IN ORDER FOR THE REDUCTION TO BE VALID AND ENFORCEABLE. NO SPEED LIMIT SIGNS SHALL BE INSTALLED PRIOR TO RECEIVING A SIGNED ORDINANCE. IN ADDITION, THE $250 SPEEDING FINE ALSO REQUIRES A SEPARATE SIGNED ORDINANCE BY THE STATE TRAFFIC ENGINEER.

C) EACH DIRECTION OF THE PROJECT IS TO BE EVALUATED FOR THE "WORK ZONE" SPEED LIMIT REDUCTION. THIS DRAWING INTENTIONALLY HAS 1 DIRECTION SIGNED AS A REMINDER TO CAREFULLY CONSIDER WHETHER BOTH DIRECTIONS OF THE PROJECT NEED TO HAVE THE SPEED LIMIT REDUCED.

D) FOR PROJECTS THAT EXCEED 2 MILES IN LENGTH, AN EVALUATION IS TO BE MADE TO DETERMINE IF THE "WORK ZONE" SPEED LIMIT REDUCTION APPLIES TO THE ENTIRE PROJECT LENGTH OR IF ONLY A PORTION OF THE PROJECT LENGTH. THE "WORK ZONE" SPEED LIMIT REDUCTION MAY TERMINATE BEFORE THE END OF THE PROJECT LIMITS. THE DRAWING IS TO BE MODIFIED AS NEEDED TO REFLECT THESE CONDITIONS.

E) THE $250 SPEEDING FINE APPLIES FOR ALL PROJECTS THAT QUALIFY FOR A "WORK ZONE" SPEED LIMIT REDUCTION.

F) ALL "WORK ZONE" SPEED LIMIT REDUCTION SIGNAGE SHALL BE REMOVED WHEN THE CONDITION/S THAT WARRANTED THE REDUCTION AND FINE IS REMOVED. THE REGIONAL TRAFFIC ENGINEER WILL BE NOTIFIED BY THE RESIDENT ENGINEER AT THIS TIME TO RESCIND THE ORDINANCES AND RETURN THE EXISTING POSTED SPEED LIMIT. THIS SHOULD TAKE PLACE BEFORE THE PROJECT IS 100% COMPLETE AND ACCEPTED FOR MAINTENANCE.

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T. RZEPKA

"WORK ZONE" SPEED LIMIT REDUCTION

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

CADD FILE

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-15.2

SIGN NUMBER: SP11297
TYPE: E
QUANTITY: SEE PLANS
SIGN WIDTH: 3'-0"
HEIGHT: 2'-6"
TOTAL AREA: 7.5 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.5"
WIDTH: 0.75"
RADII: 1.88"
NO. Z BARS:
LENGTH:

BACKG COLOR: White
COPY COLOR: Black

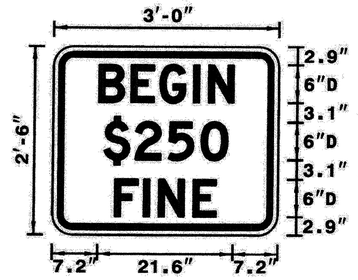
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2

1. Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
2. Background shall be Grade C reflective sheeting.

DESIGN BY: CWJ
PROJECT ID: ALL
CHECKED BY:
DIV: ALL
DATE: Jul 26, 2011



SP 11294

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

								Series/Size Text Length
	B	E	G	I	N			D 2000
7.2	5.1	4.6	5.4	2.4	4.1	7.2		21.6
	$	2	5	0				D 2000
8.1	5	5.3	5.3	4.3	8.1			19.8
	F	I	N	E				D 2000
9.9	4.6	2.4	5.5	3.7	9.9			16.3

FILENAME: BEGIN $250 Fine

NORTH CAROLINA D.O.T. SIGN DETAIL

SIGN NUMBER: SP11294
TYPE: E
QUANTITY: SEE PLANS
SIGN WIDTH: 3'-0"
HEIGHT: 2'-6"
TOTAL AREA: 7.5 Sq.Ft.
BORDER TYPE: INSET
RECESS: 0.5"
WIDTH: 0.75"
RADII: 1.88"
NO. Z BARS:
LENGTH:

BACKG COLOR: White
COPY COLOR: Black

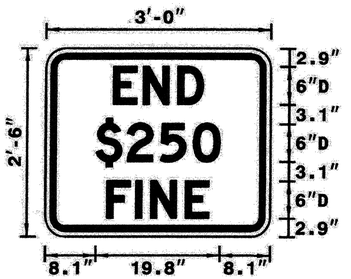
SYMBOL	X	Y	WID	HT

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2

1. Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
2. Background shall be Grade C reflective sheeting.

DESIGN BY: CWJ
PROJECT ID: ALL
CHECKED BY:
DIV: ALL
DATE: Jul 26, 2011



SP 11297

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

								Series/Size Text Length
	E	N	D					D 2000
10.8	4.7	5.5	4.1	10.8				14.3
	$	2	5	0				D 2000
8.1	5	5.3	5.3	4.3	8.1			19.8
	F	I	N	E				D 2000
9.9	4.6	2.4	5.5	3.7	9.9			16.3

FILENAME: END $250 FINE_Sgn_SGN

NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: Michael T Rzepka DATE: 1-4-12

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 15876 ENGINEER MICHAEL T RZEPKA

SIGN DESIGNS

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

DIVISION OF HIGHWAYS TRAFFIC ENGINEERING BRANCH TRAFFIC CONTROL UNIT

REVISIONS

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1/4/2012
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PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

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

PROJ. REFERENCE NO.	SHEET NO.
I-3819A	TCP-15.3

PROJ. REFERENCE NO.	SHEET NO.

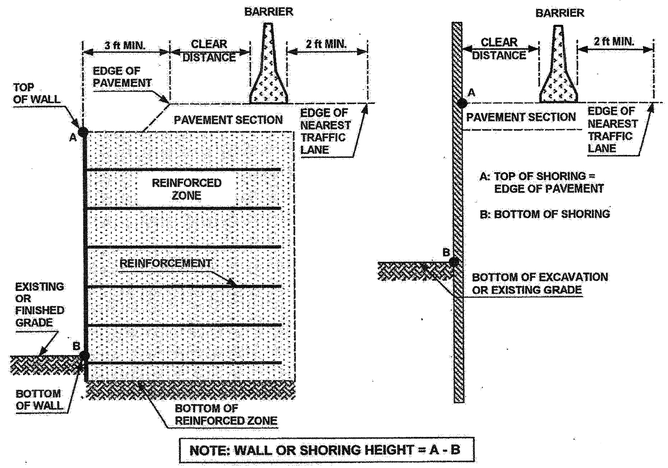

FIGURE A

NOTES

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

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

3- PROVIDE PORTABLE CONCRETE BARRIER TO PROTECT TEMPORARY SHORING IF SHORING IS LOCATED WITHIN THE CLEAR ZONE AS DEFINED IN THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).

4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED PCB, ANCHORED PCB OR AN OREGON BARRIER FROM THE TABLE SHOWN IN FIGURE B. FOR TRAFFIC LANES AND PORTABLE CONCRETE BARRIER LOCATED ABOVE AND BEHIND TEMPORARY SHORING, THE FOLLOWING ARE DEFINED AS:

CLEAR DISTANCE - HORIZONTAL DISTANCE FROM THE BACK FACE OF THE BARRIER TO THE EDGE OF PAVEMENT FOR TEMPORARY MSE WALL OR TO THE FACE OF NON-ANCHORED TEMPORARY SHORING AS SHOWN IN FIGURE A.

OFFSET - HORIZONTAL DISTANCE FROM THE FRONT FACE OF THE BARRIER TO CENTERLINE OF THE FURTHEST TRAFFIC LANE AS SHOWN IN FIGURE B FOR 3 TRAFFIC LANES.

5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET AN UNANCHORED PCB AGAINST THE TRAFFIC SIDE OF THE SHORING AND DESIGN SHORING FOR TRAFFIC IMPACT OR USE THE "SURCHARGE CASE WITH TRAFFIC IMPACT" FOR THE STANDARD TEMPORARY SHORING. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).

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

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

8- UNLESS NOTED OTHERWISE ON THE PLANS, SET PORTABLE CONCRETE BARRIER WITH A MINIMUM DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A.

9- FOR PORTABLE CONCRETE BARRIER ABOVE AND BEHIND TEMPORARY MSE WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.

10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200' IN LENGTH AND WET OR DRY PAVEMENT.

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
		>56	32	36	42	45	47	51
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
		50-56	26	26	28	32	35	38
		>56	26	27	29	32	36	38
Anchored PCB or Oregon Barrier	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB or Oregon Barrier	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

*** See Figure Below**

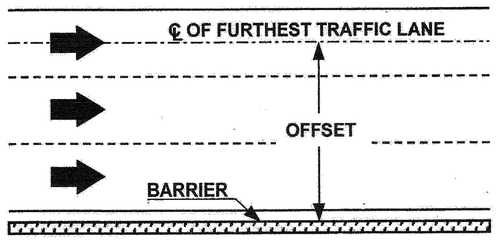

FIGURE B

APPROVED: _____ DATE: _____

SEAL 028380 ENGINEER JOSEPH C. HUTCHESON

Sept 10, 2010

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

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

1/4/2012
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