

LOCATION: US 117A (N. WILLIAM ST) FROM NORTH OF US 70 TO SR 1571 (TOMMY'S RD)

LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND TMP-1A

TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES) TMP-1B & 1C

PORTABLE CONCRETE BARRIER AT TEMPORARY

SHORING LOCATIONS

SHEET NO.

TMP-2

TMP-2A TEMPORARY SHORING NOTES TMP-2B THRU TMP-2D SPECIAL SIGN DESIGNS

TMP-3 TEMPORARY TRAFFIC CONTROL PHASING

TMP-4 THRU TMP-13 TEMPORARY TRAFFIC CONTROL PHASE 1 DETAILS TMP-14 THRU TMP-22 TEMPORARY TRAFFIC CONTROL PHASE 2 DETAILS TMP-23 THRU TMP-28 TEMPORARY TRAFFIC CONTROL PHASE 3 DETAILS TMP-29 THRU TMP-33 TEMPORARY TRAFFIC CONTROL PHASE 4 DETAILS

HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116

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APPROVED: Michelle Ward

 $DATE: \frac{1/30/2020}{}$

SEAL



WORK ZONE SAFETY & MOBILITY "from the MOUNTAINS to the COAST"

PLANS PREPARED BY:

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THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

ROADWAY STANDARD DRAWINGS

TITLE STD. NO.

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 BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1165.01	TRUCK MOUNTED ATTENUATOR
1180.01	SKINNY-DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264 02	OBJECT MARKERS - INSTALLATION

LEGEND

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SHEET NO.

PROJ. REFERENCE NO.

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

DRUM

SKINNY DRUM

TUBULAR MARKER

TEMPORARY CRASH CUSHION FLASHING ARROW BOARD

FLAGGER

LAW ENFORCEMENT

CHANGEABLE MESSAGE SIGN

TRUCK MOUNTED ATTENUATOR (TMA)

TEMPORARY SIGNING

PORTABLE SIGN

STATIONARY SIGN

STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKINGS

----EXISTING LINES ——TEMPORARY LINES

SIGNALS

EXISTING

GENERAL

----- EXIST. PVMT.

→ NORTH ARROW

WORK AREA

REMOVAL

WEDGING

PROPOSED PVMT.

ONGOING CONSTRUCTION

TEMPORARY PAVEMENT

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

TEMP. SHORING (LOCATION PURPOSES ONLY)

TEMPORARY PAVEMENT MARKING

PAINT 24" WHITE STOPBAR

PAINT 4" 2'-6'/SP. WHITE MINI-SKIP

PAINT 4" WHITE EDGELINE

PAINT 4'' 10'-30'/SP. WHITE SKIP

PAINT 4" YELLOW EDGELINE

PAINT 4'' 3'-9'/SP. WHITE MINI-SKIP

PAINT 4" WHITE SOLID LANE LINE

PAINT 4" 10'-30'/SP. YELLOW SKIP

PAINT 4" YELLOW SINGLE CENTER

PAINT 4" YELLOW DOUBLE CENTER

PAINT 8" 3'-9'/SP. WHITE MINI-SKIP

PAINT 8" WHITE GORELINE

PAINT 8" YELLOW DIAGONAL

PAINT 8" WHITE SOLID LANE LINE

PAINT LEFT TURN ARROW

PAINT RIGHT TURN ARROW

PAINT STRAIGHT ARROW

PAINT COMBO LEFT-STRAIGHT ARROW

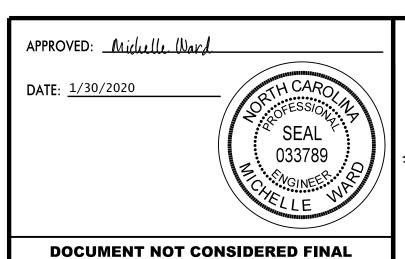
PAINT COMBO RIGHT-STRAIGHT ARROW

PAINT COMBO LEFT-RIGHT-STRAIGHT ARROW

PAINT ALPHANUMERIC CHARACTER

PAINT MERGE ARROW

PAINT U-TURN ARROW



UNLESS ALL SIGNATURES COMPLETED



ROADWAY STANDARD DRAWINGS & LEGEND

MANAGEMENT STRATEGIES

DURING PHASE 1, STEP 1, TRAFFIC IS MAINTAINED IN THE EXISTING TRAFFIC PATTERNS AND WIDENING ON THE RIGHT SIDE, LEFT SIDE, OR BOTH WILL BEGIN. IN ADDITION, WIDENING ON THE LEFT WILL BE COMPLETED FROM THE BEGINNING OF THE PROJECT TO AROUND -L- STA. 16+80 +/- IN ORDER TO SHIFT TRAFFIC TO THE PHASE 1,STEP 1A PATTERN. -L- LINE WORK WILL BE OMITTED AT -Y3- AND -Y7-.

ALSO IN STEP 1, -Y1-, -Y6-, PORTION OF -Y7-, -Y8- (RT SIDE), -Y9-, -Y10-(WEST OF -L-) AND -DR1- WILL BE CONSTRUCTED.

IN PHASE 1, STEP 1A, -L- WILL BE REDUCED TO A THREE-LANE TRAFFIC PATTERN AT THE BEGINNING OF THE PROJECT, AND DURING A 60 DAY ICT, REMOVAL OF EXISTING PAVEMENT AND RECONSTRUCTION WILL TAKE PLACE FROM -L- STA. 14+00 +/-TO STA. 22+00 +/-. ONCE COMPLETE, TRAFFIC WILL OPEN UP TO A FOUR-LANE PATTERN, STILL IN PHASE 1, OR GO DIRECTLY TO THE PHASE 2 TRAFFIC PATTERN.

IN PHASE 1, STEP 1B, -Y3- (11TH STREET) WILL BE CLOSED DURING A 14 DAY ICT AND RECONSTRUCTEED. ONCE COMPLETE. TRAFFIC WILL OPEN TO EITHER THE PHASE 1. STEP 1 PATTERN OR TO THE PHASE 2 TRAFFIC PATTERN.

IN PHASE 2, STEP 1, -L- TRAFFIC WILL BE SHIFTED TO THE RIGHT SIDE FOR THE FIRST HALF OF THE PROJECT, SHIFTING BACK TO EXISTING FOR THE SECOND HALF. WORK WILL BEGIN ON THE LEFT SIDE OF -L- FROM STA. 14+00 +/- TO STA. 45+60 +/-, INCLUDING PAVEMENT REMOVAL AND RECONSTRUCTION FROM -L- STA. 14+00 +/- TO STA. 22+00 +/- AND STA. 31+60 +/- TO STA. 36+60 +/-.

IN ADDITION, -Y2- AND LEFT SIDE OF -Y8- WILL ALSO BE CONSTRUCTED, AS WELL AS RIGHT SIDE WIDENING ON -Y4- (US 117) AND LEFT AND RIGHT SIDE ON -Y4-(PATETOWN RD).

IN PHASE 2, STEP 1A, TRAFFIC FROM -L- STA. 14+00 +/- TO STA. 22+00 +/- WILL BE PLACED IN A THREE-LANE PATTERN AND DURING A 60 DAY ICT, REMOVAL OF EXISTING PAVEMENT AND RECONSTRUCTION WILL TAKE PLACE FROM -L- STA. 14+00 +/-TO STA. 22+00 +/-. ONCE COMPLETE, ALL FOUR LANES WILL REOPEN IN THE PHASE 2, STEP 1 TRAFFIC PATTERN.

IN PHASE 2, STEP 1B, -Y7- IS CLOSED AND RECONSTRUCTED AND REOPENED TO THE PHASE 2, STEP 1 PATTERN ON -L-.

IN PHASE 2, STEP 2, -Y4-/-Y5- (US 117 SB) IS CLOSED AND DETOURED, THEN DURING A 30 DAY ICT, THIS AREA IS RECONSTRUCTED. ONCE COMPLETE, TRAFFIC IS OPENED TO THE PHASE 3 TRAFFIC PATTERN.

IN PHASE 3, RIGHT SIDE OF -L- IS CONSTRUCTED FROM AROUND -L- STA. 49+00 +/-TO STA. 65+30 +/- AND THE MEDIAN ISLANDS ARE CONSTRUCTED FROM -L- STA. 72+14 +/- TO THE END OF THE PROJECT.

IN PHASE 4, COMPLETION OF ALL MEDIAN WORK (MONOLITHIC ISLANDS AND CURB AND GRASS ISLANDS) WILL BE COMPLETED, THEN THE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS WILL BE PLACED AND TRAFFIC SHIFTED TO THE FINAL PATTERN.

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 MONDAY THROUGH FRIDAY US 117 BUS/NC 111 (N. WILLIAM ST.) 6:00 A.M. TO 9:00 A.M. 4:00 P.M. TO 7:00 P.M.

-Y- LINES MONDAY THROUGH FRIDAY 6:00 A.M. TO 9:00 A.M. 4:00 P.M. TO 7:00 P.M.

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

ROAD NAME

US 117 BUS/NC 111 (N. WILLIAM ST.) -Y- LINES

<u>HOLIDAY</u>

- 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 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY. SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
- 3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

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

- 6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
- 7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
- 8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

LANE AND SHOULDER CLOSURE REQUIREMENTS

C) 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.

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SHEET NO.

TMP-1B

- D) 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.
- E) 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.

- F) 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.
- G) 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.
- H) DO NOT INSTALL MORE THAN 1 MILE OF LANE CLOSURE ON -L- (N. WILLIAM STREET) MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- I) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON -L- (N. WILLIAM STREET).

PAVEMENT EDGE DROP OFF REQUIREMENTS

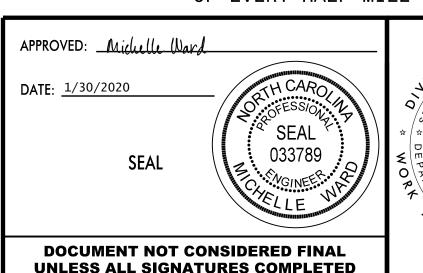
J) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

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.

K) 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) 200 FT. IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.



TRANSPORTATION **OPERATIONS** PLAN

GENERAL NOTES (CONT.)

TRAFFIC PATTERN ALTERATIONS

L) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- M) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- PROVIDE 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.
- O) 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.
- P) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- Q) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200' IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS

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

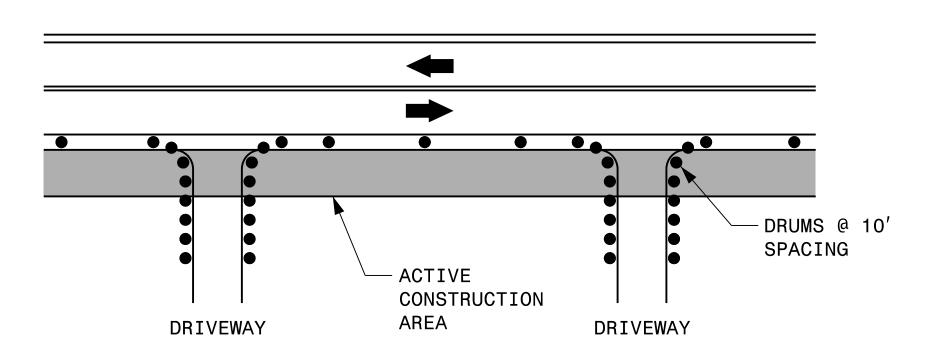
ROAD NAME	<u>MARKING</u>	MARKER
-L- (N. WILLIAMS ST.)	PAINT	TEMPORARY RAISED
-Y- LINES	PAINT	TEMPORARY RAISED

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

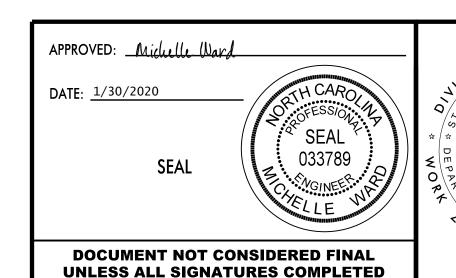
MISCELLANEOUS

- Z) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- AA) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.
- BB) CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES. 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.).
- CC) MAINTAIN ACCESS TO ALL BUS STOP LOCATIONS THROUGHOUT THE PROJECT LIMITS. COORDINATE WITH THE RESIDENT ENGINEER AND GOLDSBORO-WAYNE TRANSPORTATION AUTHORITY (GWTA) FOR APPROPRIATE ALTERNATE BUS STOP LOCATIONS IF BUS STOPS NEED TO BE TEMPORARILY RELOCATED DUE TO CONSTRUCTION OPERATIONS.
- DD) PLACE DRUMS ALONG ALL DRIVEWAYS TO PREVENT TRAFFIC FROM ENTERING ACTIVE CONSTRUCTION AREAS.

DRUM PLACEMENT ALONG DRIVEWAYS TYPICAL



EE) INSTALL TEMPORARY STOP SIGNS (R1-1) OR RELOCATE EXISTING SIGNS AT ALL UNSIGNALIZED -Y- LINES WHEN SHIFTING -Y- LINE OR -L- LINE TRAFFIC PATTERNS.





TRANSPORTATION **OPERATIONS** PLAN

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SHEET NO.

TMP-1C

EDGE OF PAVEMENT OF WALL EDGE OF NEAREST PAVEMENT SECTION **PAVEMENT SECTION NEAREST** TRAFFIC TRAFFIC LANE LANE A: TOP OF SHORING = REINFORCED EDGE OF PAVEMENT ZONE **B: BOTTOM OF SHORING** REINFORCEMENT **BOTTOM OF EXCAVATION** EXISTING OR EXISTING GRADE **FINISHED** GRADE BOTTOM **OF WALL** REINFORCED ZONE NOTE: WALL OR SHORING HEIGHT = A - B

FIGURE A

NOTES

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- 2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- 3- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH 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 OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.
- 5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.
- 6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- 7- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.
- 8- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.
- 9- FOR PCB ABOVE AND BEHIND TEMPORARY 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 FT IN LENGTH AND WET OR DRY PAVEMENT.

PROJ. REFERENCE NO.	SHEET NO.
U-2714	TMP-2

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MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier	Pavement	Offset *		De	sign Spe	ed, mph		
Type	Type	ft	< 30	31-40	41-50	51-60	61-70	71-80
		<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
	Asphalt	26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
e		38-44	31	34	41	43	45	48
PCB		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
re		>56	32	36	42	45	47	51
Unanchored		<8	17	18	21	22	25	26
ou i		8-14	19	20	23	25	26	29
n a		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
	Concrete	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	Asphalt	All Offsets		24 f	or All D	esign Sp	eeds	
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets		12 f	or All D	esign Sp	eeds	

* See Figure Below

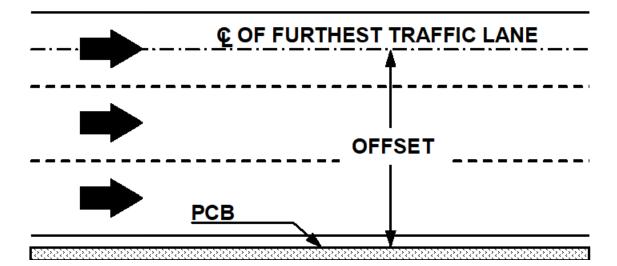
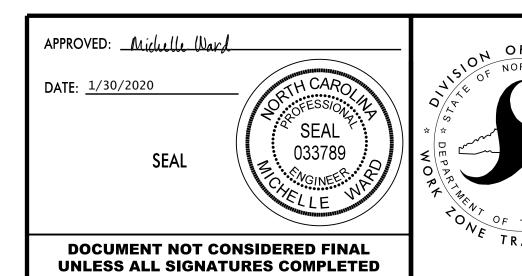


FIGURE B



PORTABLE CONCRETE
BARRIER AT
TEMPORARY SHORING
LOCATIONS

TEMPORARY SHORING NOTES

PROJ. REFERENCE NO. SHEET NO. U-2714 TMP-2A

HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116

NOTES FOR TEMPORARY SHORING No. 1

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

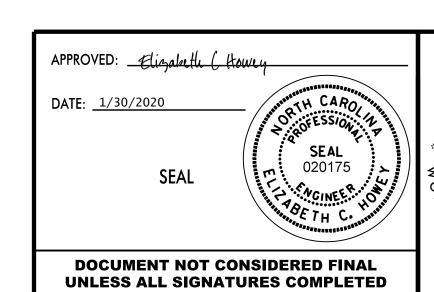
BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

> UNIT WEIGHT (γ) = 120 LB/CF FRICTION ANGLE (ϕ) = 30 DEGREES COHESION (c) = 0 LB/SFGROUNDWATER ELEVATION = 110 FT+

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.





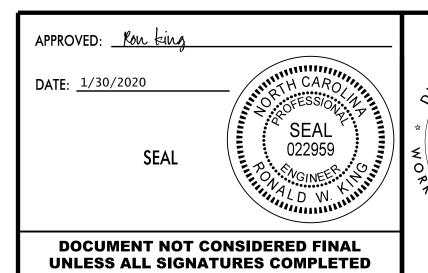
TEMPORARY SHORING NOTES

PROJ. REFERENCE NO. SHEET NO. U-2714 TMP-2B

HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116

SIGN NUMBER: SP-01 CHECKED BY: RON KING BACKG COLOR: Orange DESIGN BY: CHRIS HARNDEN TYPE: D COPY COLOR: Black PROJECT ID: U-2714 DIV: 4 DATE: May 3, 2017 QUANTITY: 13 SYMBOL Y WIDTH HEIGHT SIGN WIDTH: 2'-6" HEIGHT: 1'-0" TOTAL AREA: 2.5 Sq.Ft. BORDER TYPE: RECESSED RECESS: 0.38" WIDTH: 0.44" RADII: 1.5" MAT'L: 0.125" (3.2 mm) ALUMINUM NO. Z BARS: LENGTH: USE NOTES: 1,2 1. Legend and border shall be direct applied BORDER R=1.5" 19.2" 5.4" non reflective sheeting. 2. Background shall be Grade B reflective sheeting. TH=0.44" IN=0.38"

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SPECIAL SIGN DESIGN

CHARNDEN

DATE: 1/30/2020

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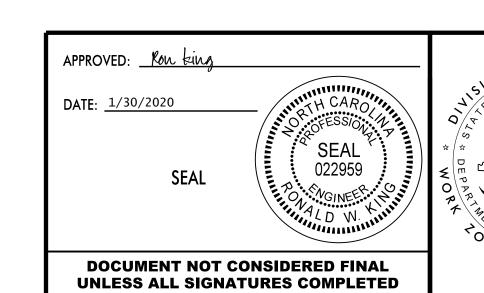
pw:\\PWAPPTPA01:SouthEast_Tampa\Documents\000166\C0N0104978\C0N0105025\000000000077

PROJ. REFERENCE NO. SHEET NO. U-2714 TMP-2C

HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116

BACKG COLOR: Orange SIGN NUMBER: SP-02 CHECKED BY: RON KING DESIGN BY: CHRIS HARNDEN COPY COLOR: Black TYPE: D PROJECT ID: U-2714 DIV: 4 DATE: May 4, 2017 QUANTITY: 8 Y WIDTH HEIGHT SYMBOL SIGN WIDTH: 3'-6" HEIGHT: 1'-0" TOTAL AREA: 3.5 Sq.Ft. BORDER TYPE: RECESSED RECESS: 0.38" WIDTH: 0.44" RADII: 1.5" MAT'L: 0.125" (3.2 mm) ALUMINUM NO. Z BARS: LENGTH: USE NOTES: 1,2 1. Legend and border shall be direct applied 3.95" BORDER R=1.5" 3.95" 34.1" non reflective sheeting. 2. Background shall be Grade B reflective sheeting. TH=0.44" IN=0.38"

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SPECIAL SIGN DESIGN

PROJ. REFERENCE NO. SHEET NO. U-2714 TMP-2D

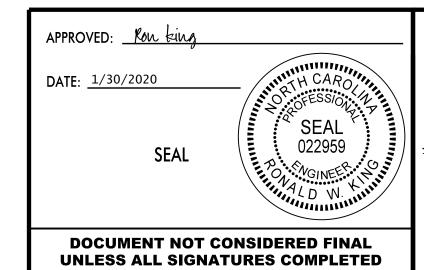
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116

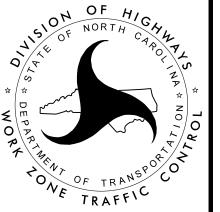
BACKG COLOR: Orange SIGN NUMBER: SP-03 TYPE: D COPY COLOR: Black QUANTITY: 4 Y WIDTH HEIGHT SYMBOL SIGN WIDTH: 3'-0" HEIGHT: 1'-0" TOTAL AREA: 3.0 Sq.Ft. BORDER TYPE: RECESSED RECESS: 0.38" WIDTH: 0.44" RADII: 1.5" MAT'L: 0.125" (3.2 mm) ALUMINUM NO. Z BARS: LENGTH: USE NOTES: 1,2 1. Legend and border shall be direct applied non reflective sheeting.

2. Background shall be Grade B reflective sheeting.

CHECKED BY: RON KING DESIGN BY: CHRIS HARNDEN PROJECT ID: U-2714 DIV: 4 DATE: May 16, 2017 BORDER 30.3" 2.85" R=1.5" TH=0.44" IN=0.38"

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SPECIAL SIGN DESIGN

NOTES:

BEFORE BEGINNING ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS AND TRAFFIC CONTROL DEVICES ACCORDING TO RSD 1101.01, SHEETS 2 & 3 OF 3. FIELD VERIFY LOCATIONS WITH THE RESIDENT ENGINEER PRIOR TO INSTALLATION.

MAINTAIN ACCESS TO ALL RESIDENCES AND BUSINESSES DURING THE LIFE OF THE CONTRACT USING INCIDENTAL STONE AS NEED. UNLESS OTHERWISE NOTED IN THE PHASING OR AS DIRECTED BY THE ENGINEER.

COMPLETE ANY PROPOSED OR TEMPORARY WIDENING IN SUCH A MANNER THAT NO PONDING OF WATER WILL OCCUR WITHIN THE TRAVEL LANE.

WHEN WEDGING OVER THE EXISTING PAVEMENT, WEDGE TO PROPOSED ELEVATION (LESS THE FINAL LAYER OF SURFACE COURSE), OR WEDGE AS NEEDED TO MAINTAIN TRAFFIC. MAINTAIN POSITIVE DRAINAGE AND MAINTAIN A MAXIMUM .04 ROLLOVER IN BOTH EXISTING AND/OR TEMPORARY TRAVEL LANES.

WHEN PHASING STATES TO USE LANE CLOSURES, REFER TO THE FOLLOWING FOR ALL EXISTING AND PROPOSED ROADS:

- ALL TWO-LANE/TWO-WAY FACILITIES SEE RSD 1101.02, SHEET 1 OF 14
- ALL 3-LANE OR 5-LANE ROADWAYS SEE RSD 1101.02, SHEET 2 OF 14
- ALL MULTI-LANE FACILITIES POSTED < 60 MPH SEE RSD 1101.02, SHEET 3 OF 14

WHEN USING LANE CLOSURES (RSD 1101.02), RETURN TRAFFIC TO EXISTING AND/OR CURRENT TEMPORARY TRAFFIC PATTERN UPON ACTIVITIES COMPLETION, UNLESS OTHERWISE NOTED IN THE PHASING.

WHEN INSTALLING AND ACTIVATING TEMPORARY AND FINAL SIGNALS, USE LANE CLOSURES (RSD 1101.02, SHEETS 1 & 3) AND LAW ENFORCEMENT.

COMPLETE PROPOSED CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE UNTIL STATED TO PLACE FINAL LAYER IN THE PHASING.

PHASE 1 (TMP-4 THRU TMP-13)

STEP 1:

NOTE: DURING PHASE 1, STEP 1, THE FOLLOWING TEMPORARY SIGNALS WILL BE NEEDED FOR ROADWAY WIDENING:

> #04-0371T1 AT THE -Y1- (NEIL STREET) INTERSECTION #04-0414T1 AT THE -Y3- (11TH STREET) INTERSECTION #04-0280T1 AT THE -Y4-/-Y6- (PATETOWN ROAD) INTERSECTION

USING LANE CLOSURES, BEGIN CONSTRUCTION OF THE FOLLOWING:

- LEFT SIDE OF -L- FROM PROJECT BEGIN TO STA. 16+80 +/- (TMP-4)
- RIGHT SIDE OF -L- FROM PROJECT BEGIN TO STA. 49+00 +/-, EXCEPT AT -Y3- (11TH STREET. (TMP-4 THRU TMP-6)

NOTE: -Y3- (11TH STREET) TO REMAIN OPEN UNTIL CLOSED FOR CONSTRUCTION IN PHASE 1, STEP 1B.

- LEFT SIDE OF -L- FROM STA. 51+00 +/- TO THE END OF THE PROJECT EXCEPT AT -Y7- (FEDELON TRAIL), INCLUDING THE FOLLOWING ALONG -L-: (TMP-7 THRU TMP-10) NOTE: PLACE TEMPORARY PAVEMENT MARKING AND PLACE TRAFFIC IN THE TRAFFIC PATTERN SHOWN FROM -L- STA. 70+00 +/-TO THE END OF THE PROJECT TO CONDUCT WORK IN THIS AREA.
 - TEMPORARY PAVEMENT FROM -L- STA. 51+00 +/- TO STA. 54+48 +/-
 - CULVERT EXTENSION AROUND -L- STA. 75+50 +/-NOTE: FOR CULVERT CONSTRUCTION, INSTALL TEMPORARY SHORING NO. 1 BEHIND EXISTING GUARDRAIL PRIOR TO REMOVING EXISTING WINGWALL. GUARDRAIL IS TO REMAIN IN PLACE UNTIL CULVERT EXTENSION IS COMPLETE, SHORING IS REMOVED AND BACKFILL IS PLACED.
- RIGHT SIDE OF -L- FROM STA. 65+30 +/- TO END OF PROJECT (TMP-8 THRU TMP-10)
- NOTE: PLACE TEMPORARY PAVEMENT MARKING AND PLACE TRAFFIC IN THE TRAFFIC PATTERN SHOWN FROM -L- STA. 70+00 +/- TO THE END OF THE PROJECT TO COMPLETE WORK IN THIS AREA
- -Y1- (NEIL STREET), -Y6- (PATETOWN ROAD) AND LEFT SIDE OF -Y8-(INDUSTRY COURT) (TMP-4, TMP-6, TMP-8 AND TMP-11)
- -Y7- (FEDELON TRAIL) (WEDGING AND WIDENING PORTION ONLY) FROM STA. 10+50 +/- TO STA. 13+50 +/-, -DR1-, -Y9- (CAROLINA COMMERCE DRIVE), -Y10- AND -Y11- (TOMMY'S ROAD) (TMP-7 THRU TMP-10)

PHASING

COMPLETE THE WORK REQUIRED IN PHASE 1, STEP 1A IN SIXTY (60) CONSECUTIVE DAYS. MAY BE COMPLETED SIMULTANEOUSLÝ WITH PHASE 1, STEP 1 AND STEP 1B. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 1A:

USING LANE CLOSURES, COMPLETE LEFT SIDE OF -L- FROM PROJECT BEGIN TO -L- STA. 16+80 +/-, PLACE TEMPORARY PAVEMENT MARKING AND SHIFT TRAFFIC TO THE PATTERN SHOWN ON TMP-12 WITH TEMPORARY SIGNAL #04-0371T2 AT THE -Y1-INTERSECTION. THEN CONSTRUCT OR COMPLETE CONSTRUCTION OF THE FOLLOWING:

- RIGHT SIDE OF -L- FROM PROJECT BEGIN TO STA. 22+00 +/-
- REMOVAL AND RECONSTRUCTION OF PAVEMENT, AS SHOWN, FROM -L- STA. 14+00 +/- TO STA. 22+00 +/- (REMAINDER OF EX. PAVEMENT WILL BE REMOVED IN PHASE 2.)

ONCE COMPLETE, USING LANE CLOSURES, PLACE TEMPORARY PAVEMENT MARKING AND SHIFT TRAFFIC TO EITHER THE PHASE 1 TRAFFIC PATTERN WITH TEMPORARY SIGNAL #04-0371T2 STILL IN PLACE OR TO THE PHASE 2 TRAFFIC PATTERN, WITH TEMPORARY SIGNAL #04-0371T3 AT THE -Y1- INTERSECTION.

COMPLETE THE WORK REQUIRED IN PHASE 1, STEP 1B IN FOURTEEN (14) CONSECUTIVE DAYS. MAY BE COMPLETED SÍMULTANEOUSLY WITH PHASE 1, STEP 1 AND STEP 1A. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 1B:

USING RSD 1101.03, SHEET 1 & 2 OF 9, CLOSE -Y3- (11TH STREET) AND PLACE TRAFFIC ON THE OFFSITE DETOUR SHOWN ON TMP-13 AND PLACE TEMPORARY SIGNAL #04-0414T1 ON FLASH, THEN CONSTRUCT -Y3- (11TH STREET) AS SHOWN ON TMP-13.

ONCE COMPLETE, USING LANE CLOSURES, PLACE TEMPORARY PAVEMENT MARKING AND OPEN TRAFFIC TO EITHER THE PHASE 1 TRAFFIC PATTERN ON -L- AND REACTIVATE TEMPORARY SIGNAL #04-0414T1 OR TO THE PHASE 2 TRAFFIC PATTERN ON -L- AND ACTIVATE TEMPORARY SIGNAL #04-0414T2.

USING LANE CLOSURES, COMPLETE CONSTRUCTION OF THE FOLLOWING IN PHASE 1:

- RIGHT SIDE OF -L- FROM STA. 22+00 +/- TO STA. 49+00 +/- (TMP-5 AND TMP-6)
- RIGHT SIDE OF -L- FROM STA. 65+30 +/- TO STA. 72+10 +/- (TMP-8)
- -Y1- (NEIL STREET), -Y6- (PATETOWN ROAD) AND LEFT SIDE OF -Y8-(INDUSTRY COURT) (TMP-4, TMP-6, TMP-8 AND TMP-11)

PHASE 2 (TMP-14 THRU TMP-22)

NOTE: DURING PHASE 2, STEP 1, THE FOLLOWING TEMPORARY SIGNALS WILL BE NEEDED WHEN SHIFTING TO THE PHASE 2 TRAFFIC PATTERN:

> #04-0371T3 AT THE -Y1- (NEIL STREET) INTERSECTION #04-0414T2 AT THE -Y3- (11TH STREET) INTERSECTION #04-0280T2 AT THE -Y6- (PATETOWN ROAD) INTERSECTION

USING LANE CLOSURES, PLACE TEMPORARY PAVEMENT MARKING AND SHIFT TRAFFIC TO THE PHASE 2 TRAFFIC PATTERN SHOWN ON TMP-14 THRU TMP-18. THEN BEGIN CONSTRUCTION OF THE FOLLOWING:

- LEFT SIDE OF -L-, INCLUDING REMOVAL AND RECONSTRUCTION OF EXISTING PAVEMENT, FROM -L- STA. 14+00 +/- TO STA. 22+00 +/-, AS SHOWN ON TMP-14, WITH TRAFFIC REMAINING IN A FOUR-LANE PATTERN. (ADDITIONAL REMOVAL AND RECONSTRUCTION WILL BE COMPLETED DURING AN ICT IN PHASE 2, STEP 1A WHILE TRAFFIC IS IN A THREE-LANE PATTERN.)
- LEFT SIDE OF -L- FROM STA. 22+00 +/- TO STA. 31+60 +/- (SEE TMP-15)
- LEFT SIDE OF -L-, INCLUDING REMOVAL AND RECONSTRUCTION OF EXISTING PAVEMENT, FROM -L- STA, 31+60 +/- TO STA, 36+60 +/- (SEE TMP-15 & 16) - LEFT SIDE OF -L- FROM STA. 36+60 +/- TO STA. 45+60 +/- (SEE TMP-16)
- -Y2- (E. HOOKS RIVER ROAD), -Y4RT- (RIGHT SIDE) FROM STA. 12+50 +/-TO STA. 18+66.22, -Y4LT- FROM STA. 18+45 +/- TO STA. 19+05.77, -Y4- STA. 18+86.19 TO -L-, AND RIGHT SIDE OF -Y8- (INDUSTRY COURT) (TMP-15 THRU TMP-18)

COMPLETE THE WORK REQUIRED IN PHASE 2, STEP 1A IN SIXTY (60) CONSECUTIVE DAYS. MAY BE COMPLETED SIMULTANEOUSLY WITH PHASE 2, STEP 1 AND 1B. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 1A:

<u>USING LANE CLOSURES</u>, PLACE -L- TRAFFIC IN A THREE-LANE/TWO-WAY TRAFFIC PATTERN AS SHOWN ON TMP-19 AND COMPLETE EXISTING PAVEMENT REMOVAL AND RECONSTRUCTION FROM -L- STA. 14+00 +/- TO STA. 22+00+/-TEMPORARY SIGNAL #04-0371T3 WILL CONTINUE TO BE UTILIZED IN PHASE 2 STEP 1A.

ONCE REMOVAL AND RECONSTRUCTION IS COMPLETE, ALL FOUR LANES WILL BE RE-OPENED TO THE PHASE 2, STEP 1 TRAFFIC PATTERN AND TEMPORARY SIGNAL #04-0371T3 WILL REMAIN IN PLACE.

PROJ. REFERENCE NO. SHEET NO. TMP-3 U-2714 HDR Engineering,
555 Fayetteville St, Suite 900 Raleign, N.C. 2700.
N.C.B.E.L.S. License Number: F-0116

COMPLETE THE WORK REQUIRED IN PHASE 2, STEP 1B IN FOURTEEN (14) CONSECUTIVE DAYS. MAY BE COMPLETED SIMULTANEOUSLY WITH PHASE 2, STEP 1 AND 1A. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

USING RSD 1101.03, SHEET 1 & 2 OF 9, CLOSE -Y7- (FEDELON TRAIL) AND PLACE TRAFFIC ON THE OFFSITE DETOUR SHOWN ON TMP-20. THEN USING LANE AND ROAD CLOSURES, CONSTRUCT -Y7- (FEDELON TRAIL) AND -L- AT -Y7- AS SHOWN ON TMP-20.

ONCE COMPLETE, PLACE TEMPORARY PAVEMENT MARKING AND OPEN TRAFFIC TO THE PHASE 1/PHASE 2 (EXISTING) TRAFFIC PATTERN ON -L-.

COMPLETE THE WORK REQUIRED IN PHASE 2, STEP 2 IN THIRTY (30) CONSECUTIVE DAYS. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

MUST BE COMPLETED AT END OF PHASE 2 IN ORDER TO GO DIRECTLY TO THE PHASE 3 TRAFFIC PATTERN ONCE COMPLETE.

NOTE: ALL WORK BEGUN IN PHASE 1 AND PHASE 2, STEP 1 FROM -L- STA. 36+60 +/-TO END OF PROJECT, INCLUDING -L- AND ALL -Y- LINES IN THIS AREA, SHALL BE COMPLETED PRIOR TO, OR DURING, PHASE 2, STEP 2 IN ORDER TO SHIFT TRAFFIC TO THE PHASE 3 TRAFFIC PATTERN AT THE END OF THE THIRTY (30) DAY ICT.

USING RSD 1101.03, SHEET 2 OF 9, CLOSE US 117 SB AT BOTH -Y5- AND -Y4-(PATETOWN ROAD) AND PLACE TRAFFIC ON THE OFFSITE DETOUR, PLACE TEMPORARY PAVEMENT MARKING AND ACTIVATE TEMPORARY SIGNAL #04-0280T3 AT THE -Y4-/-Y6-(PATETOWN ROAD) INTERSECTION, THEN USING LANE AND ROAD CLOSURES COMPLETE THE FOLLOWING: (TMP-21 AND TMP-22)

- -Y4RT- (LEFT SIDE) FROM STA. 12+50 +/- TO STA. 16+87 +/-
- -Y4LT- FROM STA. 12+50 +/- TO STA. 18+45 +/-
- L- FROM STA. 45+60 +/- TO 51+00 +/-, INCLUDING TEMPORARY PAVEMENT SHOWN ON TMP-21 FROM -L- STA. 50+39 +/- TO STA. 51+00 +/-.

UPON COMPLETION, USING LANE CLOSURES, PLACE TEMPORARY PAVEMENT MARKING IN THE PHASE 3 TRAFFIC PATTERN AS SHOWN ON SHEETS TMP-23 THRU TMP-28, ACTIVATE TEMPORARY SIGNAL #04-0280T4 AT THE -Y4-/-Y6- (PATETOWN ROAD) INTERSECTION, AND SHIFT TRAFFIC.

PHASE 3 (TMP-23 THRU TMP-28)

NOTE: DURING PHASE 3, TEMPORARY SIGNAL #04-0280T4 WILL BE NEEDED AT -Y4-/-Y6-(PATETOWN ROAD).

STEP 1:

UPON COMPLETION OF -Y4- (PATETOWN ROAD) AND -Y5- (US 117) DURING THE THIRTY (30) DAY ICT IN PHASE 2, STEP 2, AND SHIFTING ALL TRAFFIC TO THE PHASE 3 TRAFFIC PATTERN, USING LANE CLOSURES, CONSTRUCT THE FOLLOWING:

- RIGHT SIDE OF -L- FROM STA. 49+00 +/- TO STA. 65+30 +/-
- MEDIAN ISLAND ALONG -L- FROM STA. 72+14 +/- TO STA. 91+40 +/-

PHASE 4 (TMP-29 THRU TMP-33)

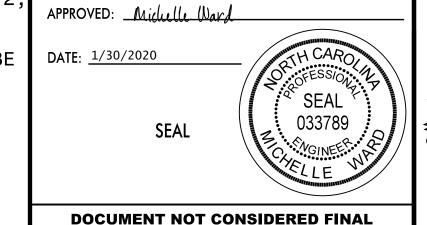
NOTE: DURING PHASE 4, THE FOLLOWING TEMPORARY SIGNALS WILL BE NEEDED:

#04-0371T4 AT THE -Y1- (NEIL STREET) INTERSECTION #04-0414T3 AT THE -Y3- (11TH STREET) INTERSECTION #04-0280T5 AT THE -Y4-/-Y6- (PATETOWN ROAD) INTERSECTION

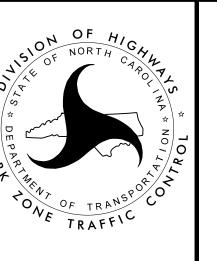
USING LANE CLOSURES, PLACE TEMPORARY PAVEMENT MARKING AND SHIFT TRAFFIC TO THE PHASE 4 TRAFFIC PATTERN, THEN CONSTRUCT AND/OR COMPLETE CONSTRUCTION OF ALL MEDIAN ISLANDS ALONG -L-, INCLUDING COMPLETION OF ISLANDS BEGUN IN PHASE 3, AND ISLANDS AT ALL -Y- LINE LOCATIONS. (TMP-29 THRU TMP-33)

USING LANE CLOSURES, INSTALL THE FINAL SIGNALS, PLACE THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS ACCORDING TO THE PAVEMENT MARKING PLAN AND OPEN -L- AND ALL -Y- LINES TO THE FINAL TRAFFIC PATTERN.

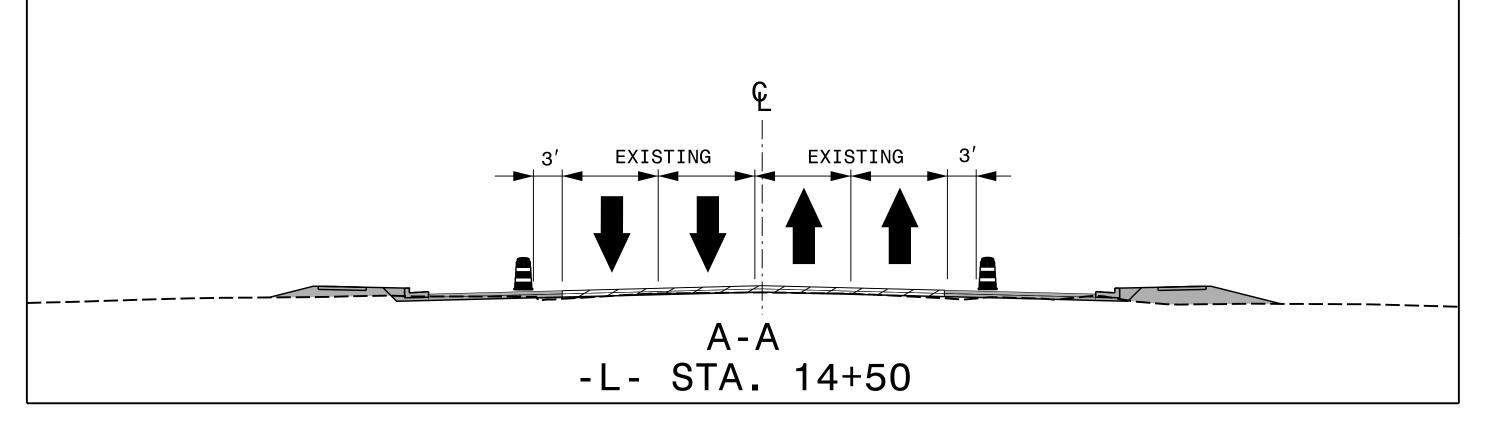
REMOVE ALL WORK ZONE TRAFFIC CONTROL DEVICES.

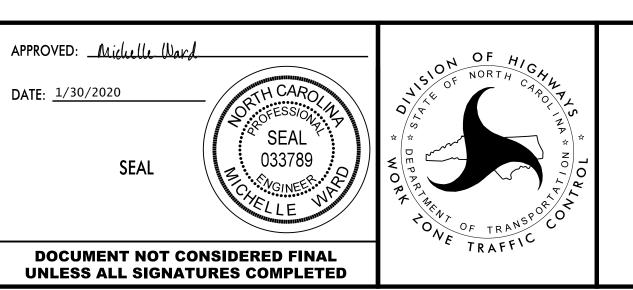


UNLESS ALL SIGNATURES COMPLETED



PHASING



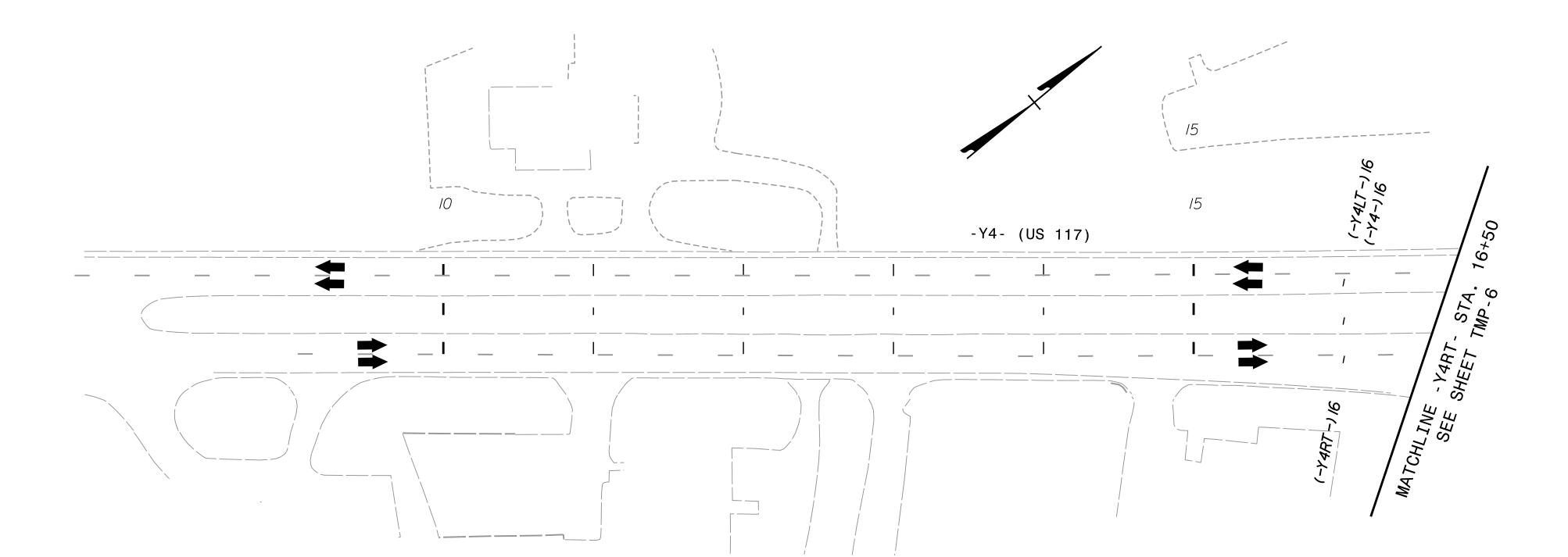


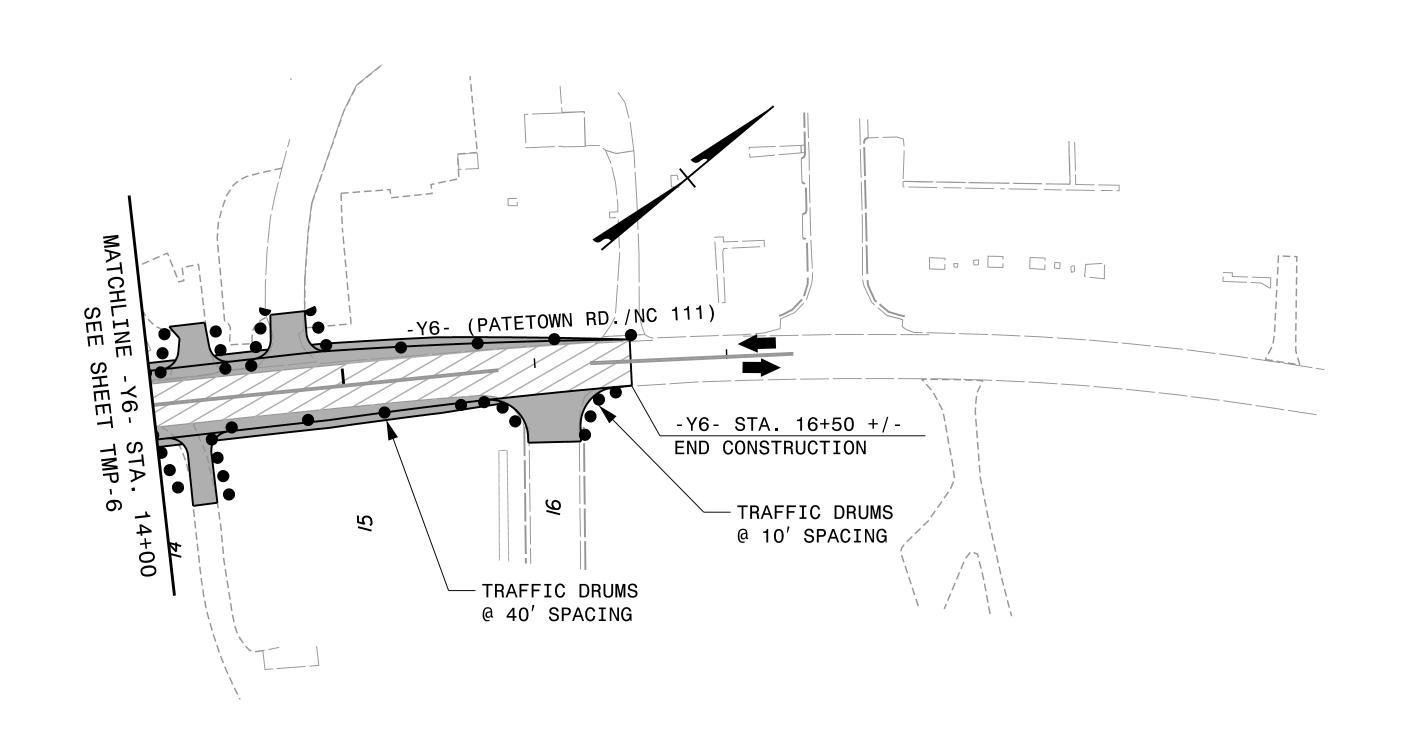
PHASE 1 STEP 1

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PROJ. REFERENCE NO. SHEET NO. U-2714 TMP-11

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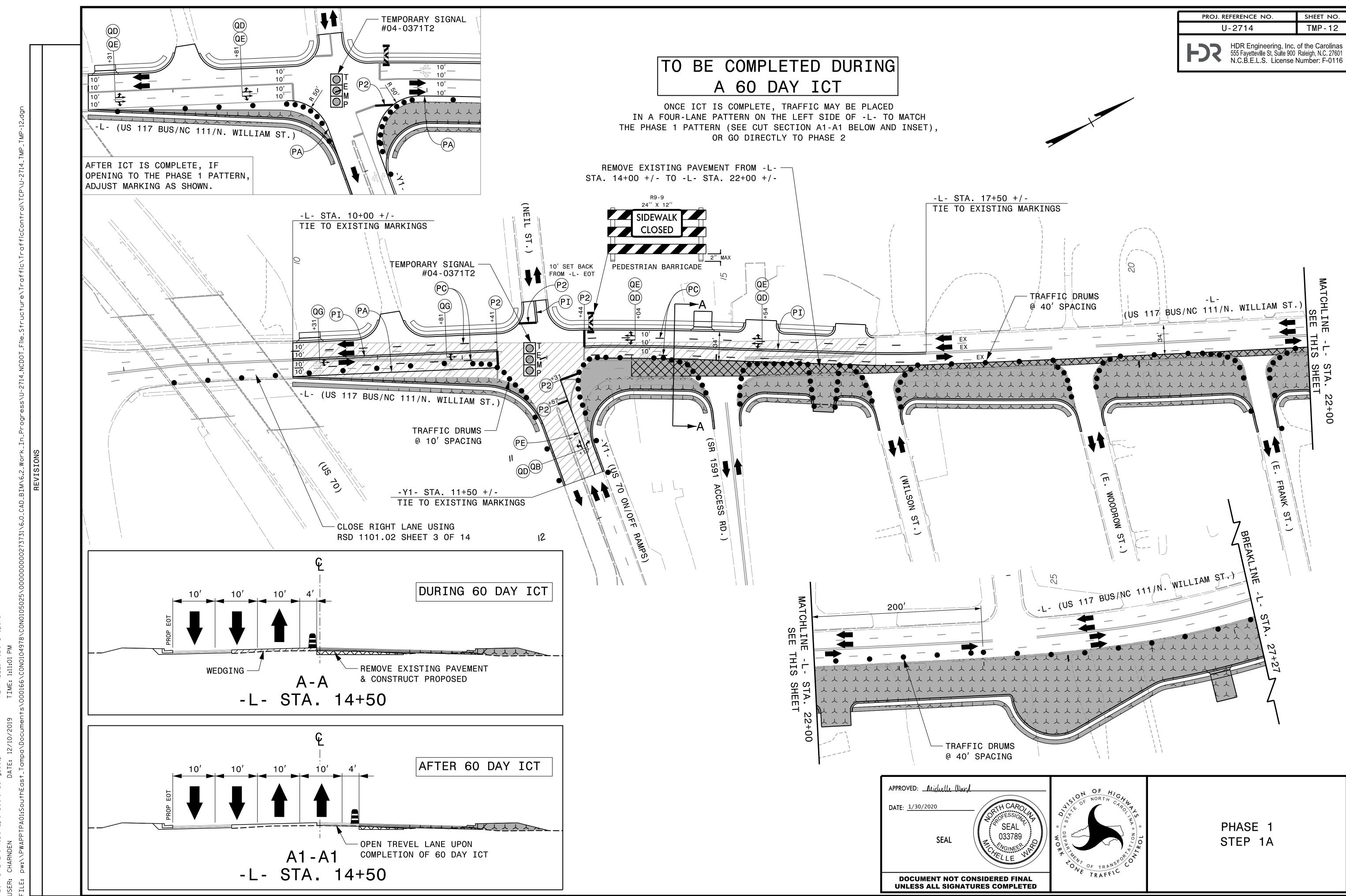


DATE: 1/30/2020

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PHASE 1 STEP 1



(US 117 BUS/NC 111/N. WILLIAM ST.) PLACE TEMPORARY SIGNAL #04-0414T1 — ON FLASH TRAFFIC DRUM @ 10' SPACING TRAFFIC DRUM @ 40' SPACING TYPE III BARRICADE -Y3- STA. 12+50 +/-END FULL DEPTH CONSTRUCTION BEGIN WEDGING & WIDENING B -Y3- STA. 13+77 +/-END WEDGING & WIDENING NOTES:

BUS(117 117 E G LEGEND

● ● = DETOUR ROUTE

---- = CLOSED ROAD

APPROVED: Michelle Ward

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DATE: <u>1/30/2020</u>

-Y3- DETOUR

TYPE III BARRICADE R11-2 TYPE III BARRICADE DETOUR DETOUR 24" X 12" 21" X 15" (D)DETOUR END DETOUR M4-8 A $\left(\mathsf{E}\right)$ DETOUR DETOUR M4-8 M4-8 24" X 12" 24" X 12" END DETOUR | M4-8 A 24" X 12" 24" X 12" **BUSINESS BUSINESS** 24'' X 18'' M4-3 M4-3 24" X 12" 24" X 12" BUSINESS M4-3 G I (H)

R11-3

60" x 30"

ROAD CLOSED

PROJ. REFERENCE NO.

U-2714

PHASE 1, STEP 1B

-Y3- (11TH ST)

DETOUR ROUTE

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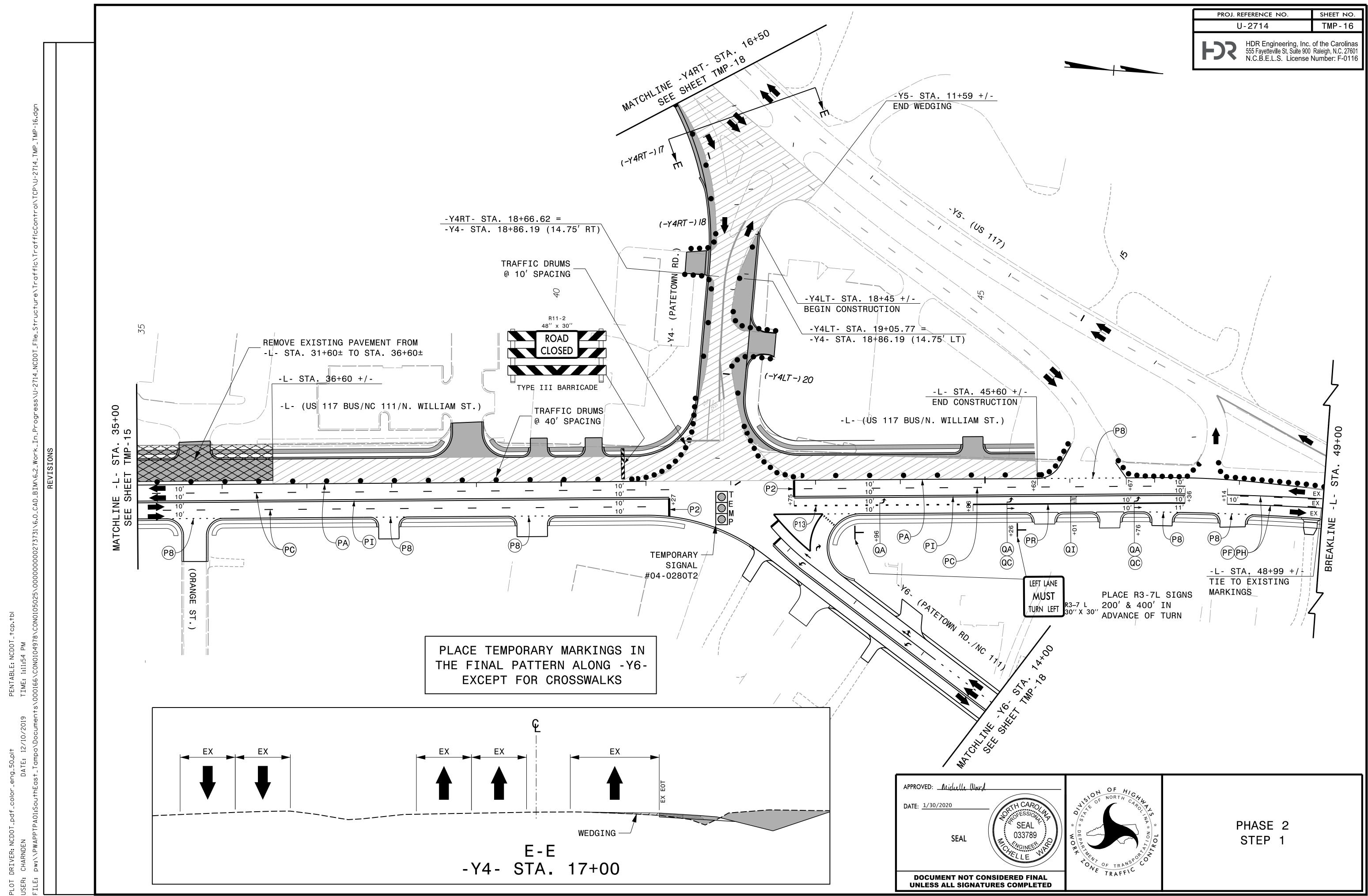
SHEET NO.

TMP-13

- 1. SEE RSD 1101.03, SHEET 1 & 2 OF 9, FOR ADDITIONAL SIGN & BARRICADE PLACEMENT.
- 2. SEE TMP-2B FOR SPECIAL SIGN DESIGN.
- 3. SIGNED US 70 TO BUSINESS 117 (N. WILLIAM ST.) TO MINIMIZE 11TH ST. CUT-THRU TRAFFIC TO BUSINESS 117 ON CHURCH ST. AND ORANGE ST. HOWEVER, THERE WILL BE SOME TRAFFIC UTILIZING CHURCH ST./ORANGE ST. AS A DETOUR DURING THE CLOSURE.
- 4. IF RETURNING TO THE PHASE 1 TRAFFIC PATTERN, RECORD THE EXISTING MARKINGS AT THE -L-/-Y3- INTERSECTION, REPLACE MARKINGS UPON OPENING AND RE-ACTIVATE TEMPORARY SIGNAL 04-0414T1.

TO BE COMPLETED DURING A 14 DAY ICT

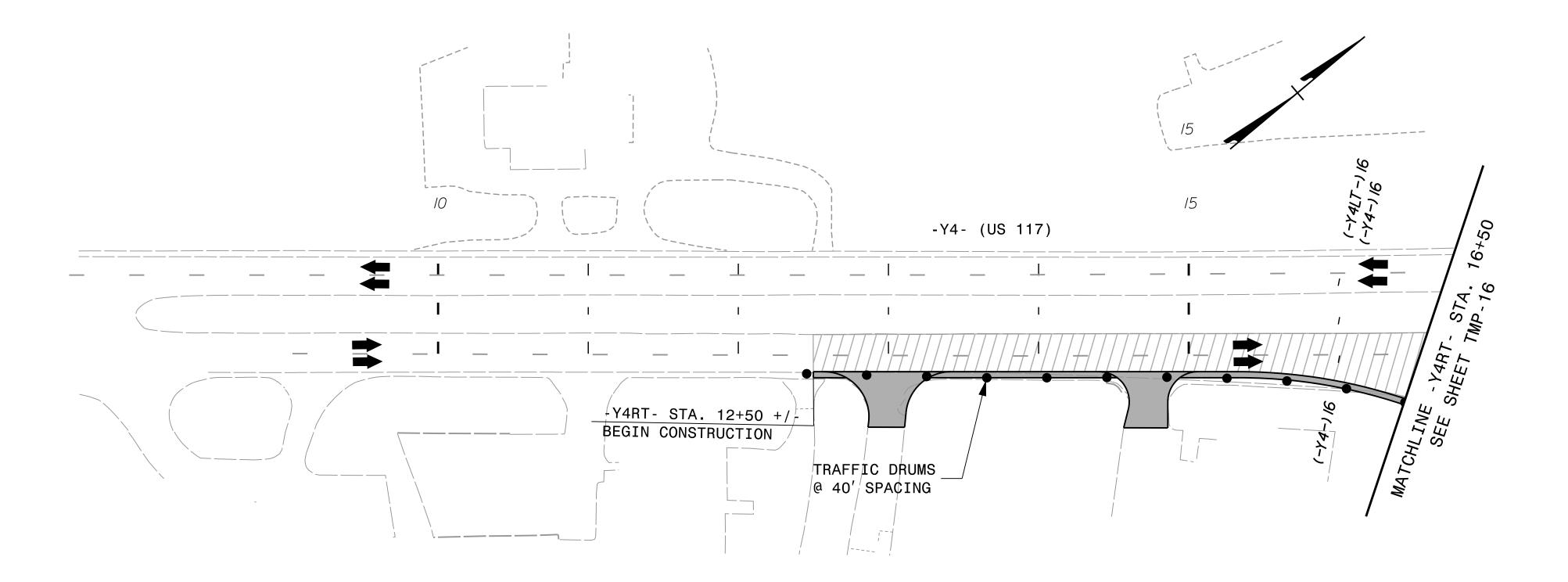
ONCE ICT IS COMPLETE, TRAFFIC MAY OPEN
BACK UP TO THE PHASE 1, STEP 1 TRAFFIC PATTERN
OR GO DIRECTLY TO PHASE 2

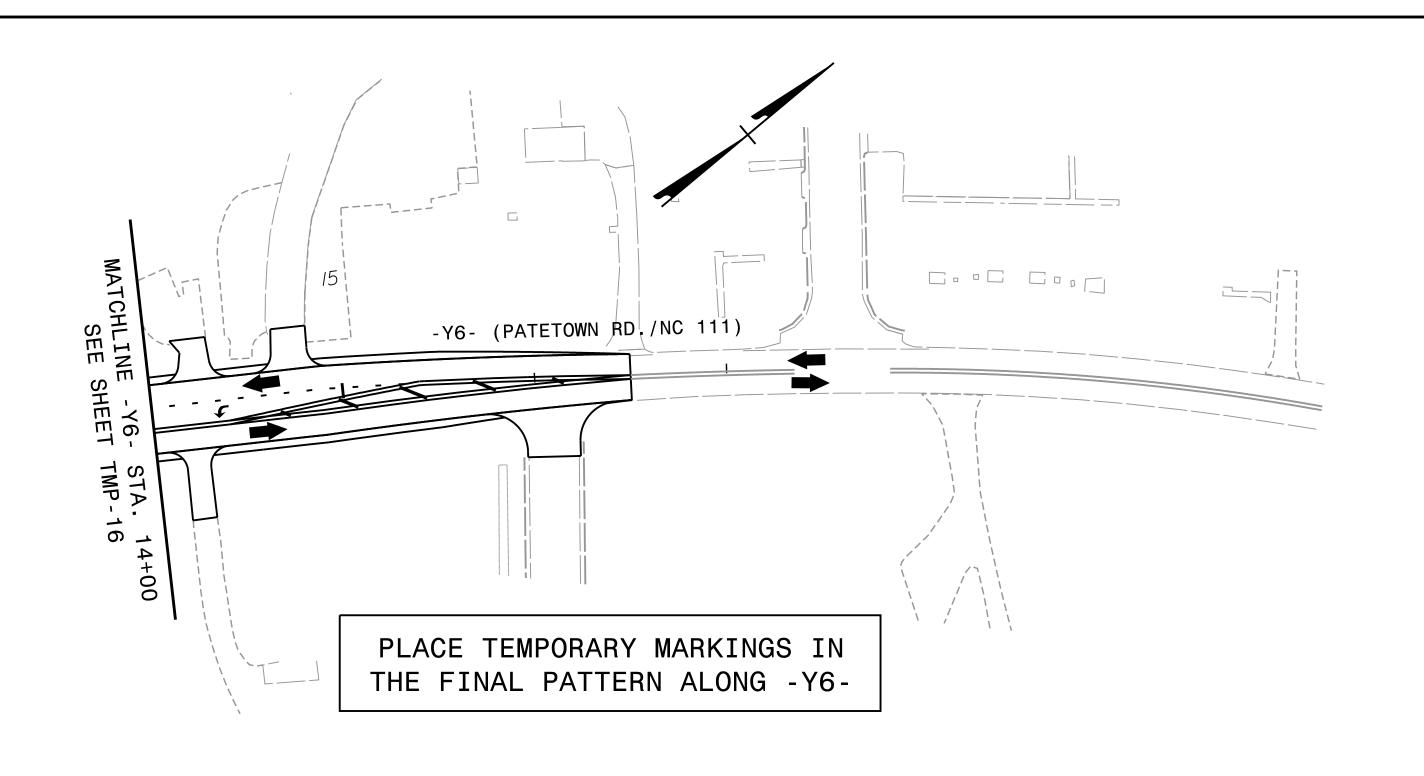


PROJ. REFERENCE NO. SHEET NO.

U-2714 TMP-18

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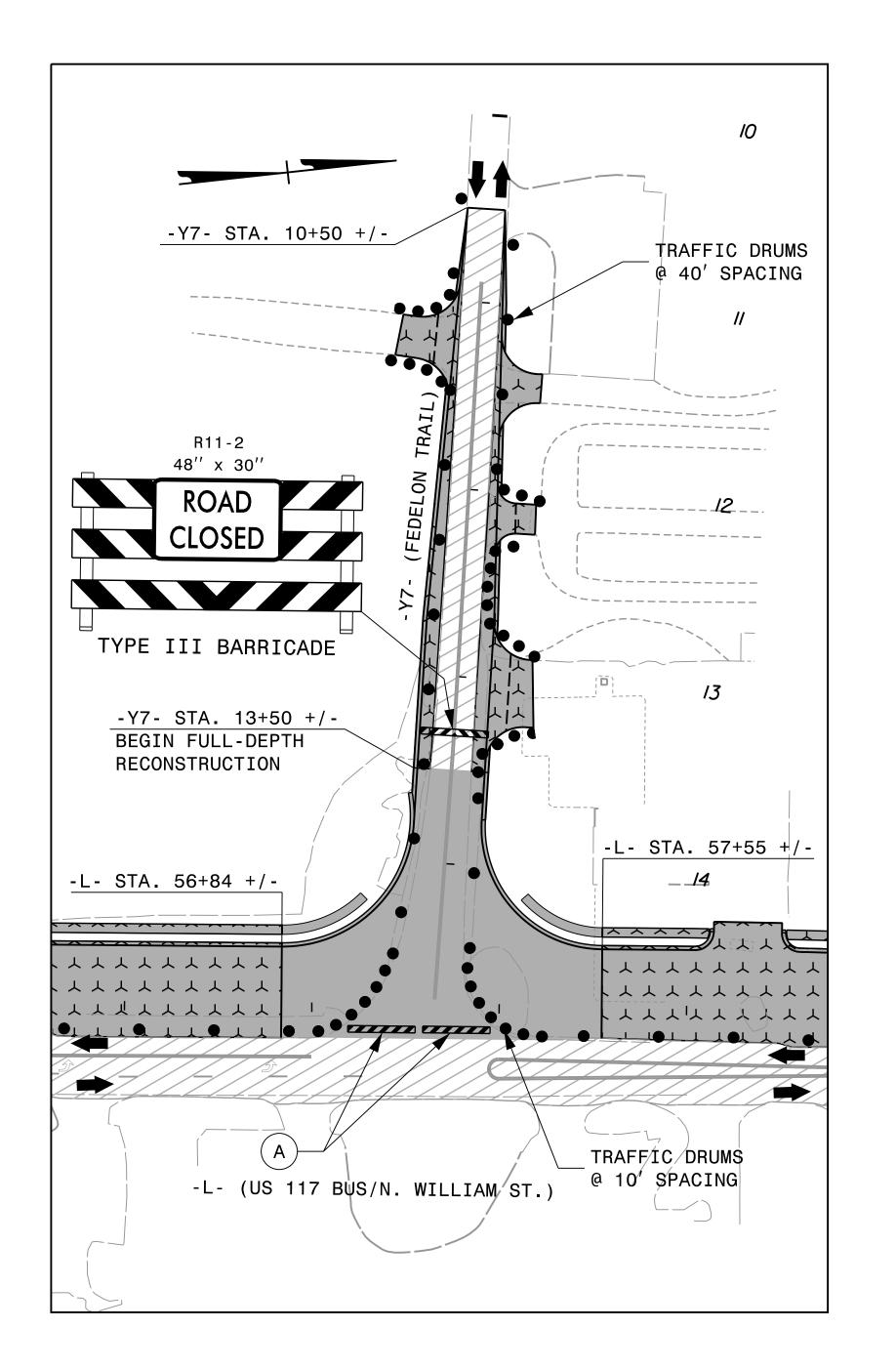
DATE: 1/30/2020

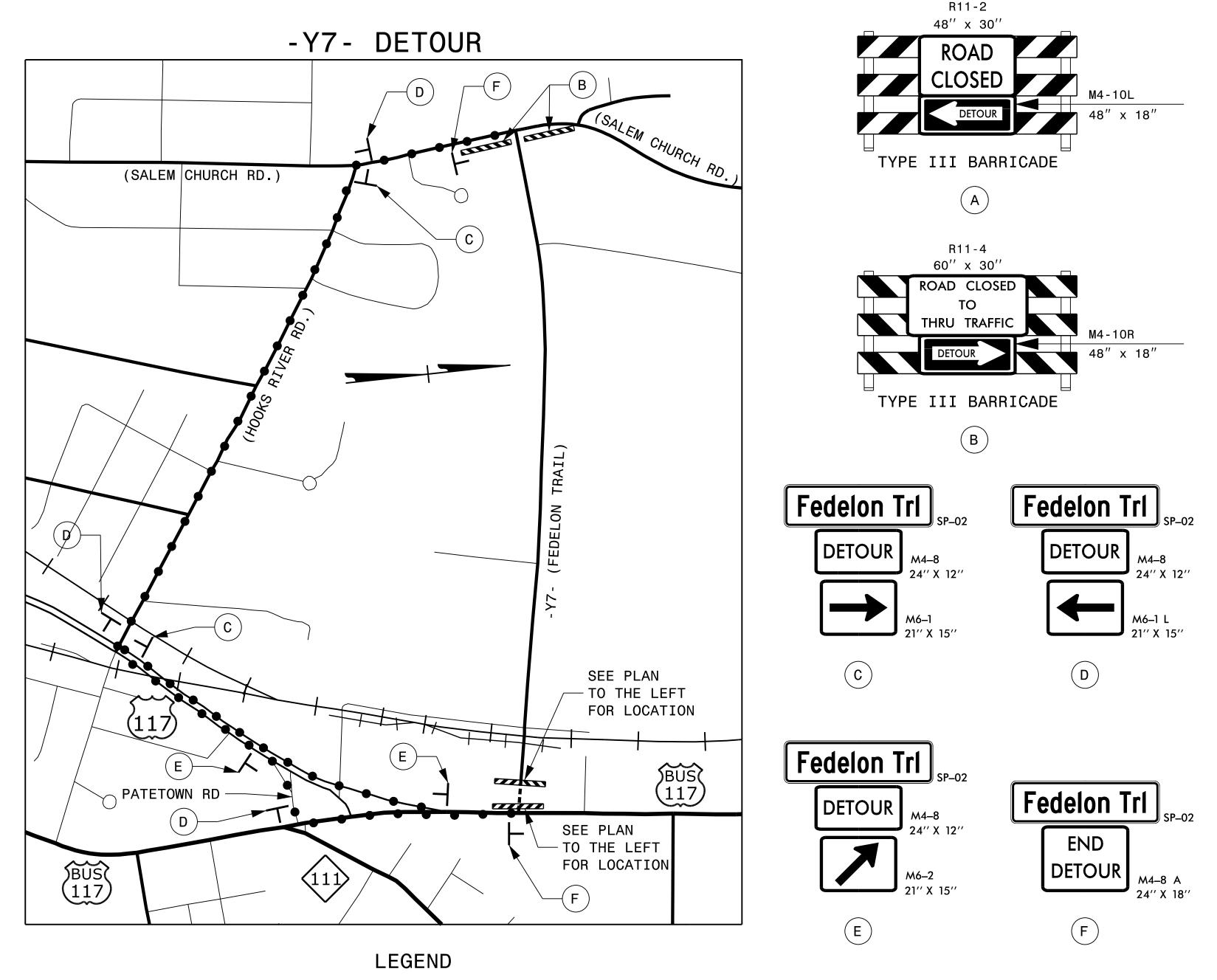
SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PHASE 2 STEP 1

PROJ. REFERENCE NO. SHEET NO. U-2714 TMP-20 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116





NOTES:

● ● = DETOUR ROUTE

---- = CLOSED ROAD

- 1. SEE RSD 1101.03, SHEET 1 & 2 OF 9, FOR ADDITIONAL SIGN & BARRICADE PLACEMENT.
- 2. SEE TMP-2C FOR SPECIAL SIGN DESIGN.
- 3. CANNOT BE COMPLETED SIMULTANEOUSLY WITH THE CLOSURE OF US 117 IN PHASE 2 STEP 2.

DETOUR | M4-8

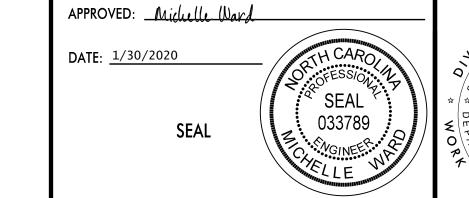
END

F

24" X 12"

M6-1 L

4. WHEN RETURNING TO THE PHASE 1/PHASE 2 TRAFFIC PATTERN, RECORD THE EXISTING MARKINGS AT THE -L-/-Y7- INTERSECTION AND REPLACE MARKINGS UPON OPENING.

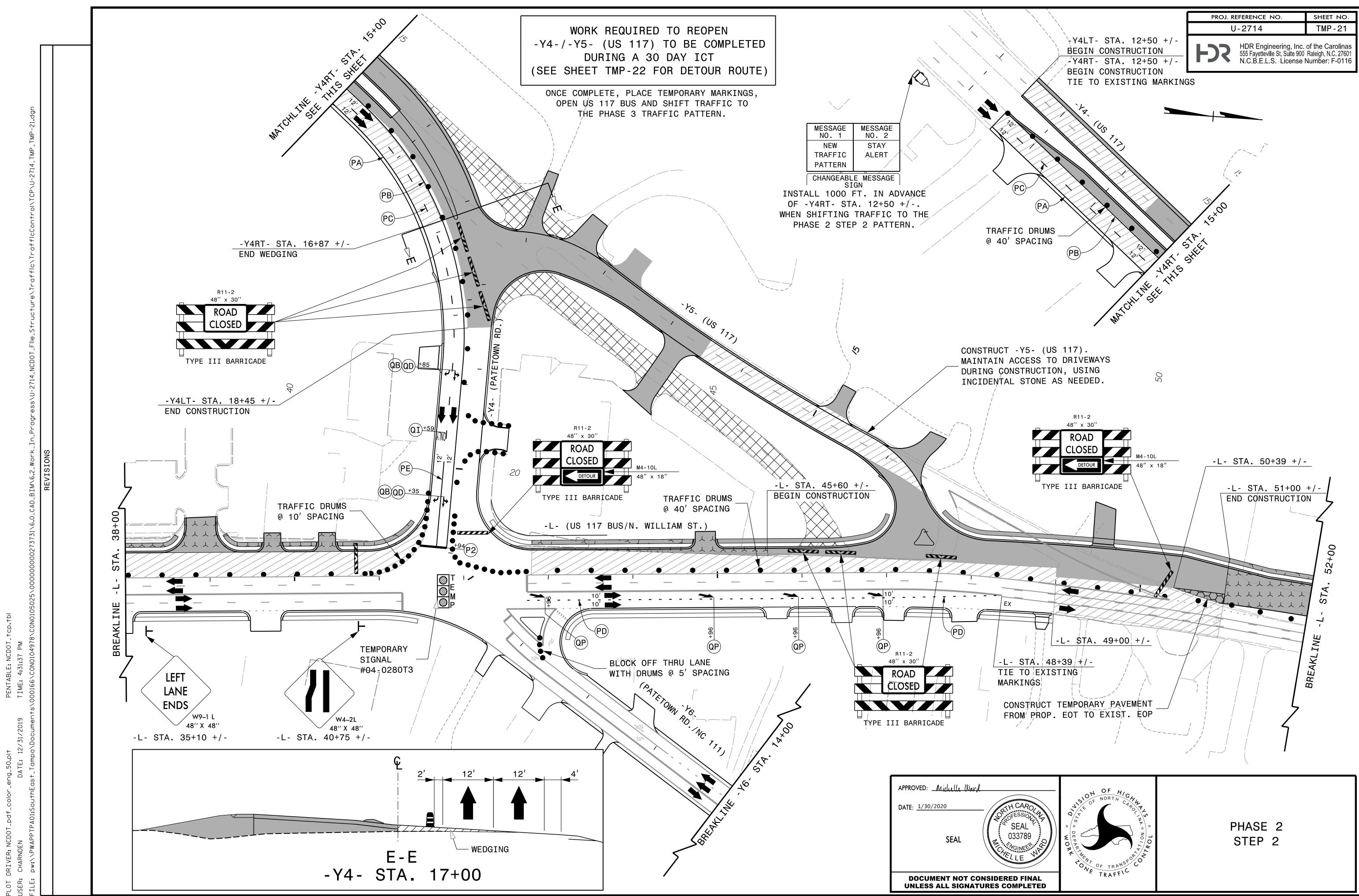


DOCUMENT NOT CONSIDERED FINAL **UNLESS ALL SIGNATURES COMPLETED**

PHASE 2, STEP 1B -Y7- (FEDELON TRAIL) DETOUR ROUTE

TO BE COMPLETED DURING A 14 DAY ICT

ONCE ICT IS COMPLETE, RE-OPEN TRAFFIC TO THE PHASE 1/PHASE 2 (EXISTING) TRAFFIC PATTERN

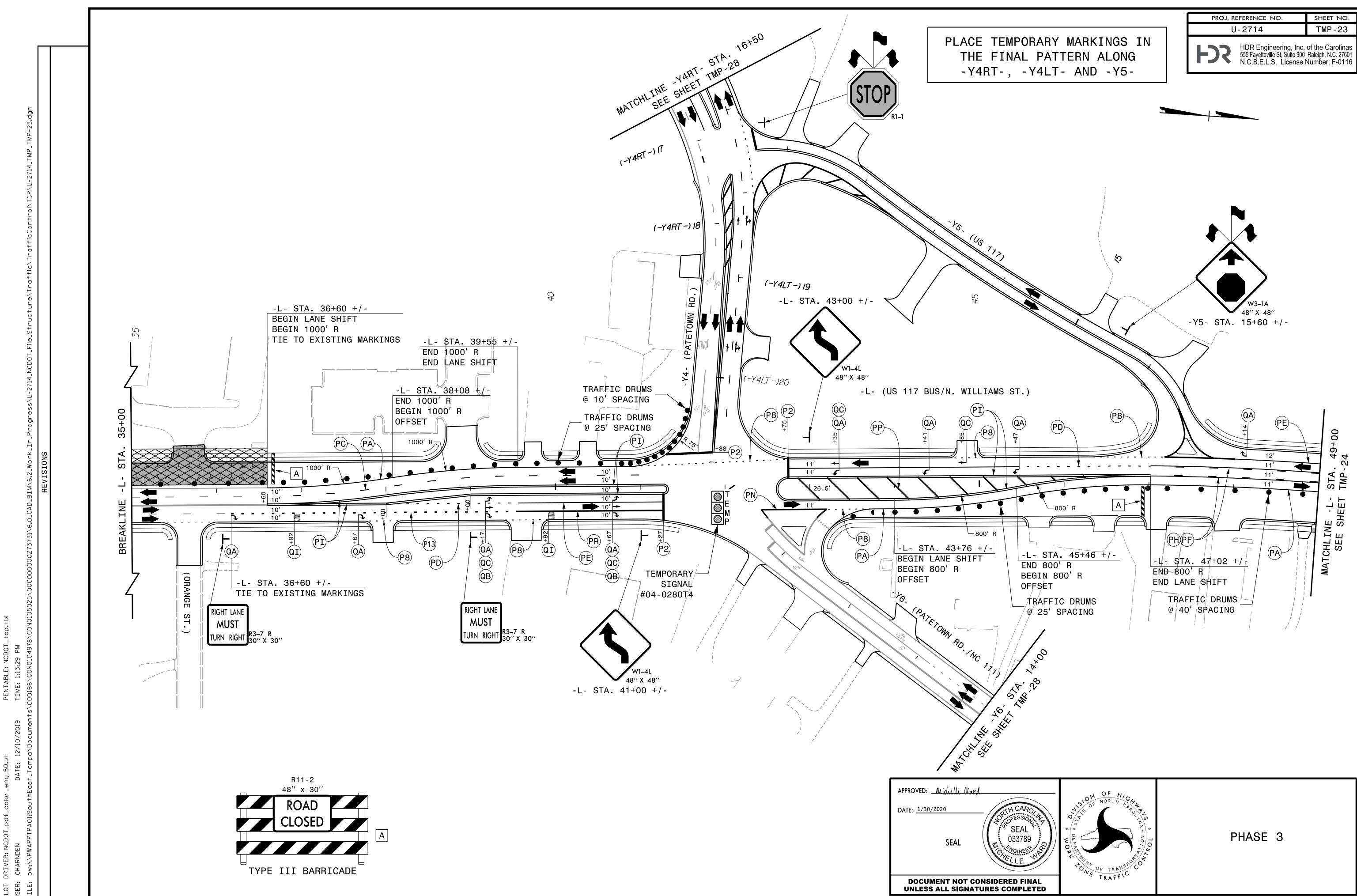


PROJ. REFERENCE NO. SHEET NO. LEGEND TMP-22 U-2714 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116 ·/ GEORGE /ST ● ● = DETOUR ROUTE ---- = CLOSED ROAD DETOUR DETOUR <u>_____</u> <u>_____</u> SOUTH NORTH SOUTH 13 COVER EXISTING ARROWS DETOUR M4-8 A BUS (117) SOUTH NORTH **EAST** SOUTH M3-3 24" X 12" SOUTH BY-PASS ! BUS 117 CLOSE SB
DIRECTION
ONLY R11-2 48'' x 30'' 48" x 30" ROAD ROAD CLOSED END CLOSED CLOSED DETOUR DETOUR 24" X 18" SOUTH M3-3 24" X 12" TYPE III BARRICADE TYPE III BARRICADE NEXT LEFT TYPE III BARRICADE George St SP-03 36" X 12" (K)(H)APPROVED: Midulle Ward DATE: 1/30/2020 ROAD CLOSED D E G PHASE 2, STEP 2 -Y5- (US 117) SEAL DETOUR ROUTE NEXT RIGHT 1. SEE RSD 1011.03, SHEET 2 OF 9 FOR ADDITIONAL SIGNS ON -Y6- (PATETOWN RD). 2. SEE SHEET TMP-2D FOR SPECIAL SIGN DESIGN. DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED 3. PLACE SIGN "M" AT -Y6- STA. 16+50 AND AT -L-/-Y6- INTERSECTION.

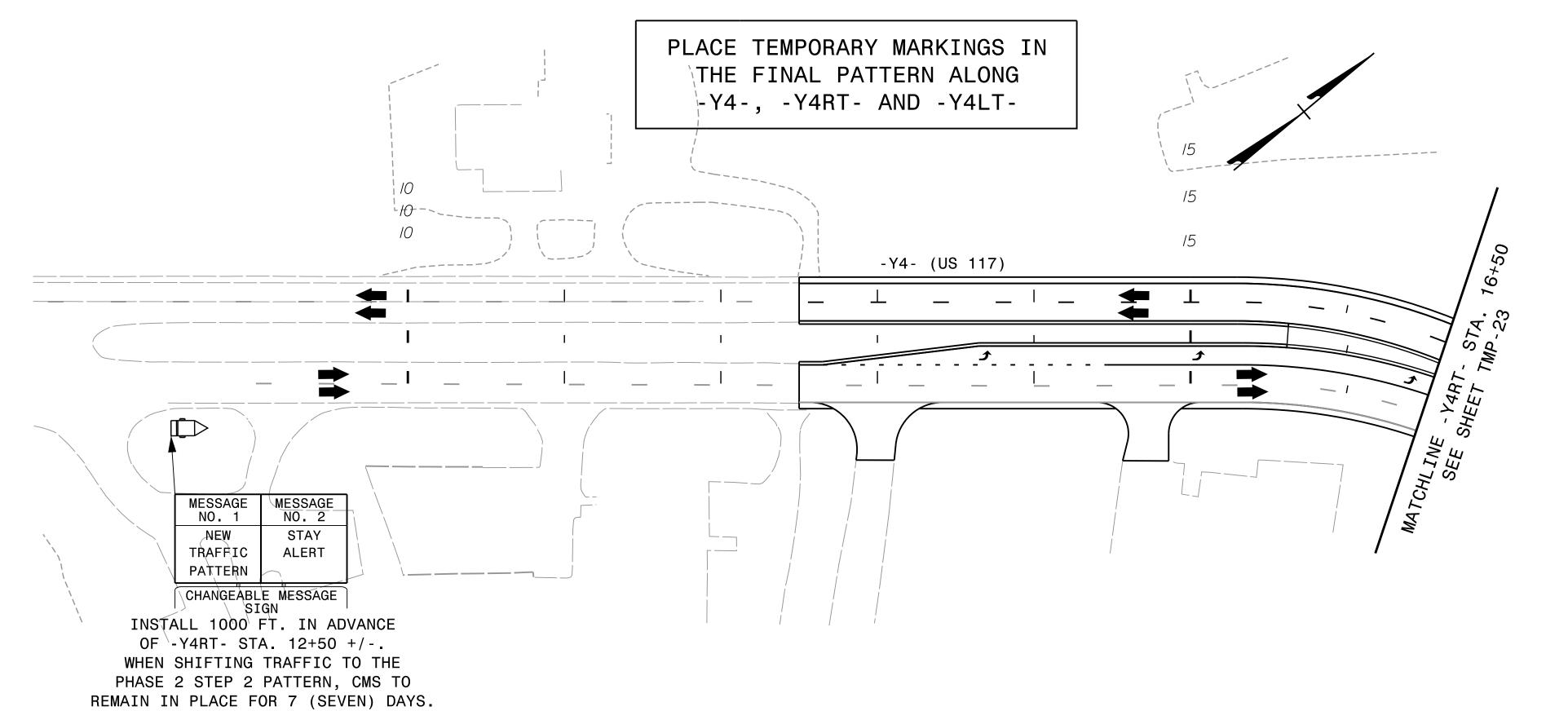
T DRIVER: NCDOT_pdf_color_eng_50.plt

R: CHARNDEN

E: pw:\\PWAPPTPA01:SouthEqst_Tampa\Documents\000166\CON0104978\CON01



HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116



WATCHLINE -Y6. STA. 14+00
SEE SHEET TWP-23

DATE: 1/30/2020

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PHASE 3

