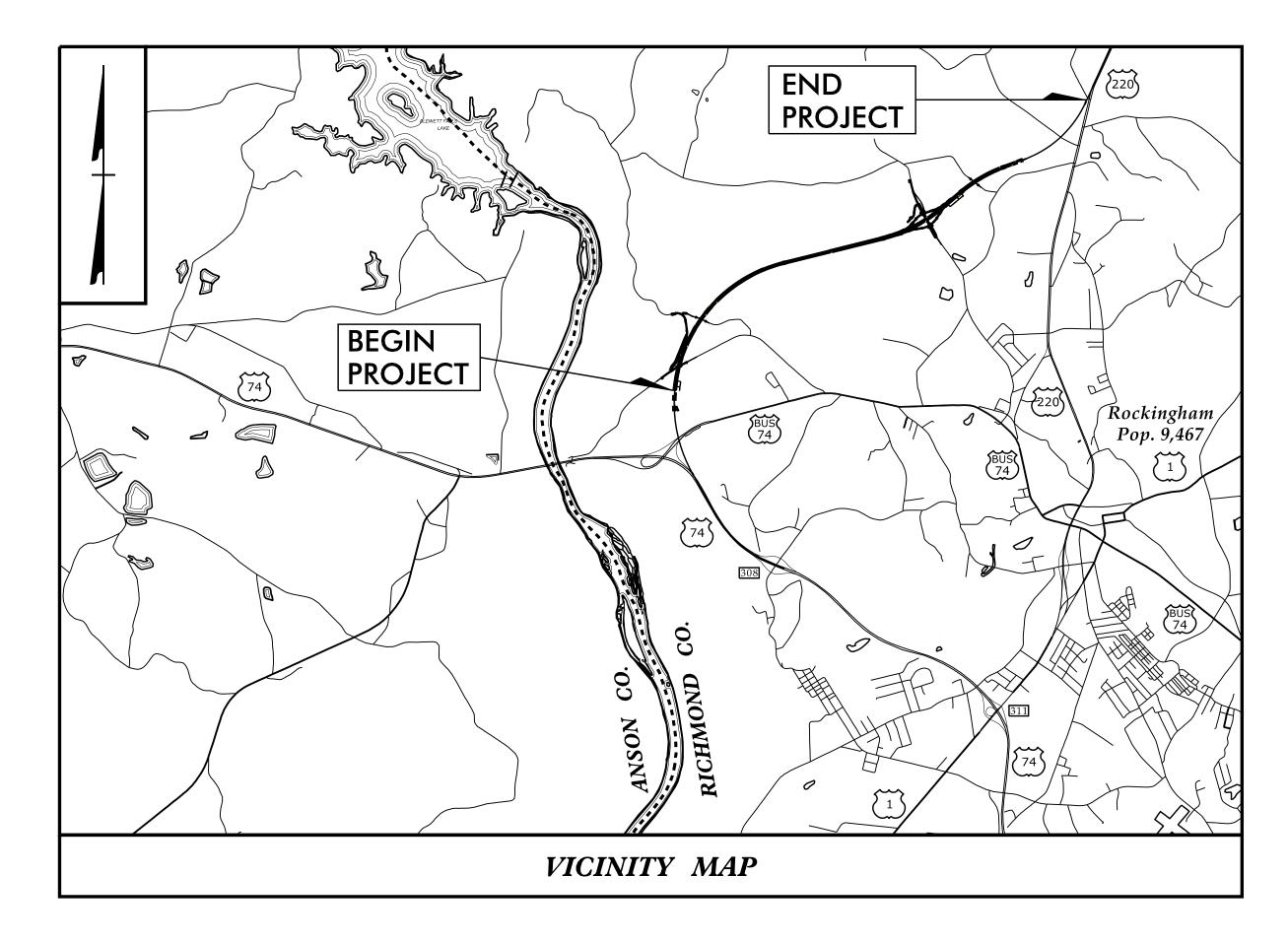


LOCATION: I-73/74 FROM 0.3 MILES SOUTH OF SR 1140 (OLD CHARLOTTE HIGHWAY) TO NORTH OF SR 1304 (HARRINGTON ROAD)



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

PLANS PREPARED BY:

MICHELLE WARD, P.E. PROJECT ENGINEER

CHRIS HARNDEN DESIGN ENGINEER NCDOT CONTACTS:

KEN THORNEWELL, P.E. PROJECT ENGINEER

ALLA LYUDMIRSKAYA DESIGN ENGINEER



INDEX OF SHEETS

SHEET NO.

TMP-1B

<u>TITLE</u>

TMP-1

TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS

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

TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT

STRATEGIES AND GENERAL NOTES)

TMP-2 AND TMP-2A SPECIAL SIGN DESIGNS

TEMPORARY TRAFFIC CONTROL PHASING

PROJECT LAYOUT

TRAFFIC CONTROL DETAILS - AREA 2 TRAFFIC CONTROL DETAILS - AREA 3

TMP-1

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

APPROVED: Michelle Ward *DATE*: 7/3/2019

SEAL



ROADWAY STANDARD DRAWINGS

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:

STD.	NO.	IIILE

Want
WORK ZONE ADVANCE WARNING SIGNS
TEMPORARY LANE CLOSURES
TEMPORARY ROAD CLOSURES
TEMPORARY SHOULDER CLOSURES
WORK ZONE VEHICLE ACCESSES
TRAFFIC CONTROL DESIGN TABLES
STATIONARY WORK ZONE SIGNS
PORTABLE WORK ZONE SIGNS
DRUMS
CONES
BARRICADES
FLAGGING DEVICES
TRUCK MOUNTED ATTENUATOR
SKINNY - DRUMS
PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
PAVEMENT MARKINGS - INTERSECTIONS
PAVEMENT MARKINGS - TURN LANES
PAVEMENT MARKINGS - PAINTED ISLANDS
PAVEMENT MARKINGS - BRIDGES
PAVEMENT MARKINGS - LANE REDUCTIONS
OBJECT MARKERS - TYPES
OBJECT MARKERS - INSTALLATION

PROJ. R	SHEET NO.			
R-	TMP-1A			
FDR	HDR Engineering, Inc. 555 Fayetteville St, Suite 900 N.C.B.E.L.S. License I	Raleigh, N.C. 27601		

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

——— EXIST. PVMT.

— PROPOSED PVMT.

NORTH ARROW

TEMP. SHORING (LOCATION PURPOSES ONLY)

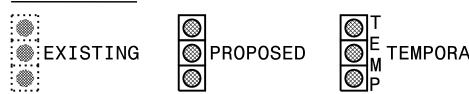
WORK AREA

CONTINUING CONSTRUCTION

REMOVAL WEDGING

TEMPORARY PAVEMENT

SIGNALS



PAVEMENT MARKINGS

——EXISTING LINES
——TEMPORARY LINES

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

CONE

DRUM

SKINNY DRUM

TUBULAR MARKER

TEMPORARY CRASH CUSHION

FLASHING ARROW PANEL (TYPE C)
FLAGGER

LAW ENFORCEMENT

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

O PORTABLE SIGN

- STATIONARY SIGN

STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

◆ YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

(P2) PAINT 24" WHITE STOPBAR

(PA) PAINT 4" WHITE EDGELINE

(PI) PAINT 4" YELLOW DOUBLE CENTER

DATE: 7/3/2019

DATE: 7/3/2019

DOCUMENT NOT CONSIDERED FINAL

UNLESS ALL SIGNATURES COMPLETED

ROADWAY STANDARD DRAWINGS & LEGEND

MANAGEMENT STRATEGIES

GENERAL NOTES

R-3421B TMP-1B 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

PROJ. REFERENCE NO.

SHEET NO.

THE PROJECT IS SEPARATED INTO THREE DISTINCT WORK AREAS. EACH AREA CAN BE COMPLETED INDEPENDENTLY OF EACH OTHER, UNTIL PLACEMENT OF THE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS AND MARKERS, AS STATED IN THE PHASING.

AREA 1 CONSISTS OF THE MAINLINE (-L-) CONSTRUCTION, INCLUDING ALL RAMPS.

AREA 2 CONSISTS OF THE NEW -SR1- ALIGNMENT: RECONSTRUCTION OF OLD CHARLOTTE HWY (-Y3-): AND THE REALIGNMENT. PERMANENT CLOSURE AND CONSTRUCTION OF TURNAROUNDS ON BLEWITT FALLS ROAD (-Y4-).

AREA 3 CONSISTS OF CONSTRUCTING THE REALIGNMENT OF CARTLEDGE CREEK ROAD (-Y5-), THE NEW -SR6- ALIGNMENT AND PERMANENT CLOSURE AND CONSTRUCTION OF TURNAROUNDS ON DAVE KINGS ROAD (-Y6-).

IN AREA 1, PHASE 1, CONSTRUCTION OF THE ENTIRE MAINLINE (-L-) CAN BEGIN, INCLUDING RAMPS AT THE -Y5- INTERCHANGE, EXCEPT IN LOCATIONS THAT WILL BLOCK ACCESS TO RESIDENCES AND FARMLANDS OR INTERFERE WITH EXISTING TRAFFIC PATTERNS ON OLD CHARLOTTE HIGHWAY (-Y3-), BLEWITT FALLS ROAD (-Y4-), CARTLEDGE CREEK ROAD (-Y5-) AND DAVE KINGS ROAD (-Y6-).

IN AREA 1, PHASE 2, MAINLINE WORK MAY BEGIN AT OLD CHARLOTTE HWY (-Y3-) AND CARTLEDGE CREEK ROAD (-Y5-) DURING CLOSURE OF THOSE TWO ROADS (SEE AREA 2 AND 3 PHASING). ONCE -Y3- AND -Y5- CONSTRUCTION IS COMPLETE AND OPEN TO TRAFFIC, AND BLEWITT FALLS ROAD (-Y4-) AND DAVE KINGS ROAD (-Y6-) ARE PERMANENTLY CLOSED, THE MAINLINE (-L-) MAY BE CONSTRUCTED WHERE IT CROSSES THOSE TWO LOCATIONS.

IN AREA 1, PHASE 3, ALL WORK THAT WAS BEGUN EARLIER IS COMPLETED (INCLUDING THE FINAL LAYER OF SURFACE COURSE), FINAL MARKINGS AND MARKERS ARE PLACED (INCLUDING EXTENDING ONTO THE R-3421C PROJECT), AND I-73/74 IS OPENED TO THE FINAL PATTERN (INCLUDING RAMPS). THE PLACEMENT OF THE FINAL MARKINGS AND MARKERS AND OPENING OF THE MAINLINE (-L-) TO THE FINAL TRAFFIC PATTERN WILL BE COMPLETED IN CONJUNCTION WITH THE OPENING OF AREAS 2 AND 3 TO THE FINAL PATTERN.

IN AREA 2, PHASE 1, WORK WILL BEGIN ON -SR1- FROM OLD CHARLOTTE HWY (-Y3-) TO JUST BEFORE BLEWITT FALLS ROAD (-Y4-) AS WELL AS THE WIDENING OF -SR1-AT THE TIE-IN WITH BLEWITT FALLS ROAD (-Y4-). IN PHASE 1, STEP 2, THE TIE-IN OF -SR1- AND BLEWITT FALLS ROAD (-Y4-) IS COMPLETED, USING INCIDENTAL STONE AS NECESSARY. DURING THE TIE-IN CONSTRUCTION, TRAFFIC MAY BE MAINTAINED ON THE EXISTING BLEWITT FALLS ROAD ALIGNMENT OR IN A TEMPORARY PATTERN USING THE PROPOSED -SR1- AND -Y4- ALIGNMENTS, ON EITHER STONE BASE OR ON COMPLETED PAVEMENT. AT THIS TIME, -SR1- IS NOT OPENED TO OLD CHARLOTTE HIGHWAY (-Y3-). IN STEP 3, -SR1- AND BLEWITT FALLS ROAD (-Y4-) ARE OPENED TO THE FINAL PATTERN. EXISTING BLEWITT FALLS ROAD WILL REMAIN OPEN TO BE UTILIZED AS AN OFF-SITE DETOUR ROUTE FOR OLD CHARLOTTE HIGHWAY (-Y3-) CONSTRUCTION IN PHASE 2.

IN AREA 2, PHASE 2, OLD CHARLOTTE HIGHWAY (-Y3-) IS CLOSED AND TRAFFIC DETOURED VIA -SR1- AND BLEWITT FALLS ROAD (-Y4-), WHILE CONSTRUCTION IS COMPLETED. OLD CHARLOTTE HIGHWAY (-Y3-) WILL BE RE-OPENED TO THE FINAL PATTERN AND BLEWITT FALLS ROAD (-Y4-) WILL BE PERMANENTLY CLOSED AND TURNAROUNDS CONSTRUCTED.

IN AREA 2, PHASE 3, THE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS AND MARKERS ARE PLACED AND ALL TRAFFIC IS PLACED IN THE FINAL PATTERN. THIS WILL BE COMPLETED IN CONJUNCTION WITH THE OPENING OF AREAS 1 AND 3 TO THE FINAL PATTERN.

IN AREA 3, PHASE 1, -SR6- AND CARTLEDGE CREEK ROAD (-Y5-) FROM EXISTING CARTLEDGE CREEK ROAD TO JUST PAST THE -SR6- INTERSECTION WILL BE CONSTRUCTED. IN ADDITION. CONSTRUCTION MAY BEGIN ON -Y5- AT THE TIE-IN TO EXISTING CARTLEDGE CREEK ROAD.

IN AREA 3, PHASE 2, CARTLEDGE CREEK ROAD (-Y5-) IS CLOSED AND TRAFFIC DETOURED VIA DAVE KINGS ROAD (-Y6-) AND CRESTVIEW DRIVE. LOCAL TRAFFIC WILL BE SHIFTED TO THE NEW -Y5- AND -Y6- ALIGNMENTS. DURING THE CLOSURE. CONSTRUCTION IS COMPLETED ON CARTLEDGE CREEK ROAD (-Y5-). ONCE COMPLETE, CARTLEDGE CREEK ROAD (-Y5-) WILL OPEN TO THE FINAL PATTERN WITH DRUMS BLOCKING LEFT TURN ACCESS ONTO THE RAMPS UNTIL THEY OPEN IN THE NEXT PHASE. AT THIS TIME, DAVE KINGS ROAD (-Y6-) WILL BE PERMANENTLY CLOSED AND TURNAROUNDS CONSTRUCTED.

IN AREA 3, PHASE 3, THE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS AND MARKERS ARE PLACED AND ALL TRAFFIC IS PLACED IN THE FINAL PATTERN. THIS WILL BE COMPLETED IN CONJUNCTION WITH THE OPENING OF AREAS 1 AND 2 TO THE FINAL PATTERN.

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 STOP TRAFFIC AS FOLLOWS:

ROAD NAME DAY & TIME RESTRICTIONS **DURATION & OPERATION** I-73/74/US 220 MONDAY THRU SUNDAY 30 MINUTES FOR OVERHEAD

SIGN INSTALLATIONS & 5:00 A.M. TO 10:00 P.M. REMOVAL OF EXISTING OVERHEAD SIGNS

HAULING REQUIREMENTS

B) 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

- 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.
- 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.

- 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.

PAVEMENT EDGE DROP OFF REQUIREMENTS

H) 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.

I) 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) 500' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- K) 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.
- L) 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.

M) 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.

- N) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- O) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME MARKING MARKER -SR1-, -SR6-, PAINT NONE SR 1140/OLD CHARLOTTE HWY (-Y3-). SR 1141/BLEWITT FALLS RD (-Y4-), SR 1005/CARTLEDGE CREEK RD (-Y5-) NONE -Y3- BRIDGE COLD APPLIED PLASTIC

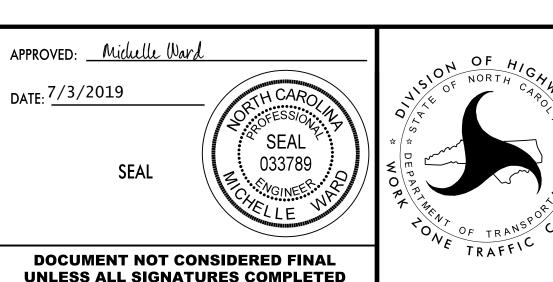
S) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

TYPE IV

- T) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING
- U) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.
- V) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE DRUMS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION.

MISCELLANEOUS

W) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 1000 FT AND 500 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.



TRANSPORTATION **OPERATIONS PLAN:** MANAGEMENT STRATEGIES AND GENERAL NOTES

PROJ. REFERENCE NO. SHEET NO. TMP-2

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: Fluorescent Orange SIGN NUMBER: SP-01 COPY COLOR: Black TYPE: STATIONARY QUANTITY: SEE PLANS SYMBOL Υ WID HT SIGN WIDTH: 3'-6" **HEIGHT:** 3'-0" TOTAL AREA: 10.5 Sq.Ft. BORDER TYPE: INSET **RECESS:** 0.63" WIDTH: 0.88" RADII: 2.25"

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2

- Legend and border shall be direct applied black non-reflective sheeting.
- 2.Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

DESIGN BY: R DRAYTON CHECKED BY:D KERNS Jun 10, 2019 DIV: 8 PROJECT ID: R-3421B **42**" 4.5" 4.5" Charlotte 6"D 36" 4.5" 6"D 4.5" **BORDER** $32.1^{"}$ R=2.25" TH=0.88" IN=0.63"

LETTER POSITIONS

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DATE: 7/3/2019

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Spacing Factor is 1 unless specified otherwise

OF HIGH WORTH CAROLLER AND LONG TRAFFIC

SPECIAL SIGN DESIGNS

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PROJ. REFERENCE NO. SHEET NO. R-3421B TMP-2A

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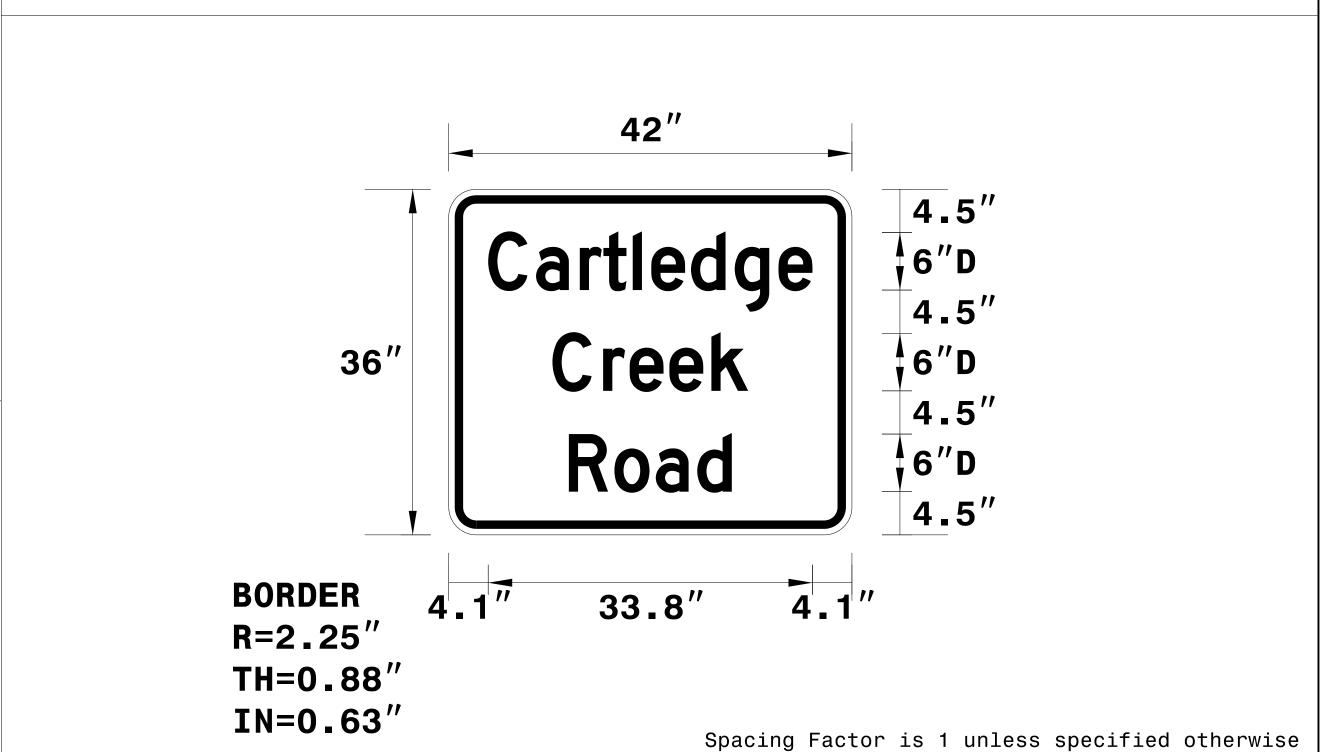
BACKG COLOR: Fluorescent Orange SIGN NUMBER: SP-02 DESIGN BY: R DRAYTON CHECKED BY:D KERNS Jun 10, 2019 TYPE: STATIONARY COPY COLOR: **Black** DIV: 8 PROJECT ID: R-3421B

QUANTITY: SEE PLANS SYMBOL Υ WID HT SIGN WIDTH: 3'-6" **HEIGHT:** 3'-0" TOTAL AREA: 10.5 Sq.Ft. **BORDER TYPE: INSET RECESS:** 0.63"

MAT'L: 0.080" (2.0 mm) ALUMINUM

USE NOTES: 1,2

- Legend and border shall be direct applied black non-reflective sheeting.
- 2.Background shall be NC GRADE B fluorescent orange retroreflective sheeting.

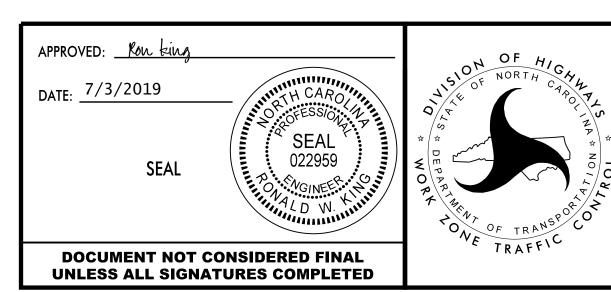


LETTER POSITIONS

WIDTH: 0.88"

RADII: 2.25"

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12.5	4.7	4.3	4.3	3.6	12.5											17



SPECIAL SIGN DESIGNS

NOTES:

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

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

THIS PROJECT IS PHASED IN WHICH THE WORK IN AREAS 1 THROUGH 3 MAY BE PERFORMED SIMULTANEOUSLY AND INDEPENDENTLY, UNLESS STATED IN THE PHASING.

AREA ⁻

MAINLINE (-L-) FROM STA. 128+00.00 TO STA. 453+00.00, INCLUDING ALL RAMPS

PHASE 1

STEP 1:

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -L- FROM STA. 128+00.00 TO 453+00.00, INCLUDING RAMPS AT THE -Y5- INTERCHANGE. (SEE NOTES BELOW) (SEE SHEET TMP-4 FOR PROJECT LAYOUT)

NOTES:

- 1. OMIT -L- LINE CONSTRUCTION (AND RAMPS) IN LOCATIONS THAT WILL BLOCK ACCESS TO RESIDENCES AND FARMLANDS. ENSURE THAT SERVICE ROADS ARE CONSTRUCTED PRIOR TO BEGINNING WORK IN THESE AREAS. (SEE ROADWAY PLANS)
- 2. OMIT -L- LINE CONSTRUCTION FROM STA. 135+00 +/- TO 147+00 +/- AT OLD CHARLOTTE HWY (-Y3-).
- 3. OMIT -L- LINE CONSTRUCTION FROM STA. 297+00 +/- TO 307+00 +/- AT CARTLEDGE CREEK RD (-Y5-), INCLUDING PORTION OF -Y5RPA- FROM STA. 12+75 +/- TO 13+80 +/-.
- 4. OMIT -L- LINE CONSTRUCTION FROM -L- STA. 165+00 +/- TO 177+00 +/-UNTIL BLEWITT FALLS ROAD (-Y4-) IS CLOSED AND TURN-AROUNDS ARE CONSTRUCTED.
- 5. OMIT -L- LINE CONSTRUCTION FROM -L- STA. 330+00 +/- TO 338+00 +/-UNTIL DAVE KINGS ROAD (-Y6-) IS CLOSED AND TURN-AROUNDS ARE CONSTRUCTED.

PHASE 2

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -L- FROM STA. 135+00 +/- TO 147+00 +/- DURING THE CLOSURE OF OLD CHARLOTTE HWY (-Y3-). (SEE AREA 2, PHASE 2, STEPS 1-3)

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -L- FROM STA. 297+00 +/- TO 307+00 +/- AND -Y5RPA- FROM STA. 12+75 +/- TO 13+80 +/- DURING THE CLOSURE OF CARTLEDGE CREEK RD (-Y5-), INCLUDING BRIDGES. (SEE AREA 3, PHASE 2, STEPS 1-3)

STEP 2:

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -L- FROM STA. 165+00 +/- TO 177+00 +/- AFTER BLEWITT FALLS RD (-Y4-) IS PERMANENTLY CLOSED TO TRAFFIC. (SEE AREA 2, PHASE 2, STEP 4)

AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF -L- FROM STA. 330+00 +/- TO 338+00 +/- AFTER DAVE KINGS ROAD (-Y6-) IS PERMANENTLY CLOSED TO TRAFFIC. (SEE AREA 3, PHASE 2, STEP 4)

PHASE 3

STEP 1:

AWAY FROM TRAFFIC, AND USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14) ON -Y5- AT RAMP LOCATIONS, AS NECESSARY, COMPLETE CONSTRUCTION OF -L- AND ALL RAMPS, BEGUN EARLIER, INCLUDING THE FINAL LAYER OF SURFACE COURSE.

STEP 2:

AWAY FROM TRAFFIC, USING LANE CLOSURES (RSD 1101.02, SHEETS 4 & 9 OF 14), AND USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14) ON -Y5-AT RAMP LOCATIONS, COMPLETE THE FOLLOWING ON -L- AND ALL RAMPS:

-INSTALL ALL OFF-SITE OVERHEAD AND GROUND-MOUNTED SIGNING ASSEMBLIES AS SHOWN ON THE FINAL SIGNING PLANS. (NOTE: PLAN INCLUDES NEW/REVISED SIGNS ON THE R-3421C PROJECT.) -PLACE FINAL MARKINGS AND MARKERS AS SHOWN ON THE FINAL PAVEMENT MARKING PLAN. (NOTE: PLAN INCLUDES NEW STRIPING ON THE R-3421C PROJECT.)

ONCE COMPLETE, OPEN ALL ROADS TO THE FINAL PATTERN.

PHASE 3, STEP 2 SHALL BE COMPLETED SIMULTANEOUSLY WITH THE COMPLETION AND OPENING OF AREAS 2 AND 3 TO THE FINAL PATTERN, IN PHASE 3, STEP 1 AND OPENING R-3421A TO THE FINAL PATTERN.

REMOVE ALL REMAINING TRAFFIC CONTROL DEVICES.

PHASING

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

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

CONSTRUCT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE ON ALL SERVICE ROADS AND Y-LINES UNTIL STATED TO PLACE THE FINAL LAYER IN THE PHASING.

COORDINATE WITH THE CONTRACTOR AND ENGINEER FOR ANY PROJECTS IN THE VICINITY OF PROJECT R-3421B.

AREA 2

-SR1-, SR 1140 / OLD CHARLOTTE HWY (-Y3-) & SR 1141 / BLEWITT FALLS RD (-Y4-) (SEE TMP-5 AND TMP-6)

PHASE 1

STEP 1:

AWAY FROM TRAFFIC, AND USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14) AS NECESSARY ON OLD CHARLOTTE HWY (-Y3-), BEGIN CONSTRUCTION OF -SR1- FROM STA. 10+25 +/- TO 42+50 +/-.

USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14), BEGIN CONSTRUCTION OF -SR1-FROM STA. 45+50 +/- TO 49+00.00.

USING RSD 1101.03, SHEETS 1 & 2 OF 9, INSTALL AND COVER OFF-SITE DETOUR SIGNS FOR OLD CHARLOTTE HWY (-Y3-) AS SHOWN ON TMP-6.

USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14), CONSTRUCT -SR1- FROM STA. 42+50 +/- TO 45+50 +/-, COMPLETE CONSTRUCTION OF -SR1- FROM STA. 45+50 +/-TO 49+00.00, AND CONSTRUCT BLEWITT FALLS RD (-Y4-) FROM STA. 10+00.00 TO 13+00.00, WEDGING OVER EXISTING AND USING INCIDENTAL STONE AS NEEDED. (SEE SHEET TMP-5)

AT THE END OF THE WORK PERIOD, TRAFFIC MAY BE RETURNED TO THE EXISTING BLEWITT FALLS RD (-Y4-) OR OPENED TO THE TEMPORARY PATTERN AT THE INTERSECTION OF -SR1- AND BLEWITT FALLS RD (-Y4-) AS SHOWN ON SHEET TMP-5. -SR1- TO OLD CHARLOTTE HWY (-Y3-) DOES NOT HAVE TO BE OPENED AT THIS TIME.

STEP 3:

AWAY FROM TRAFFIC, AND USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14) AS NECESSARY ON OLD CHARLOTTE HWY (-Y3-), COMPLETE CONSTRUCTION OF -SR1-FROM STA 10+25 +/- TO 42+50 +/-. THEN PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON -SR1- AND BLEWITT FALLS RD (-Y4-) AND SHIFT TRAFFIC TO THE FINAL PATTERN. (SEE FINAL PAVEMENT MARKING PLANS)

PHASE 2

COMPLETE THE WORK REQUIRED IN AREA 2, PHASE 2, STEPS 1 THRU 3 IN FOUR HUNDRED TWENTY (420) CONSECUTIVÉ CALENDAR DAYS. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES.)

STEP 1:

UNCOVER OFF-SITE DETOUR SIGNS INSTALLED IN PHASE 1. STEP 1 AND CLOSE OLD CHARLOTTE HWY (-Y3-) TO TRAFFIC. (SEE SHEET TMP-6)

STEP 2:

AWAY FROM TRAFFIC, AND USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14), AS NECESSARY, CONSTRUCT OLD CHARLOTTE HWY (-Y3-).

STEP 3:

AWAY FROM TRAFFIC, AND USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14), AS NECESSARY, PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON OLD CHARLOTTE HWY (-Y3-) AND OPEN TO TRAFFIC. THEN COVER OR REMOVE OFF-SITE DETOUR SIGNS. (SEE FINAL PAVEMENT MARKING PLANS)

STEP 4:

USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14), CONSTRUCT TURNAROUNDS ON BLEWITT FALLS RD (-Y4-) AND PERMANENTLY CLOSE BLEWITT FALLS RD (-Y4-) TO TRAFFIC.

PHASE 3

<u>STEP 1:</u> USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14), PLACE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS AND MARKERS ON -SR1-, OLD CHARLOTTE HWY (-Y3-) AND BLEWITT FALLS RD (-Y4-) AND RETURN TO THE FINAL PATTERN. (SEE FINAL PAVEMENT MARKING PLANS)

PHASE 3, STEP 1 SHALL BE COMPLETED SIMULTANEOUSLY WITH THE COMPLETION AND OPENING OF AREAS 1 AND 3 TO THE FINAL PATTERN.

REMOVE ALL REMAINING TRAFFIC CONTROL DEVICES.

PROJ. REFERENCE NO. SHEET NO. R-3421B TMP-3

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

AREA 3

SR 1005 / CARTLEDGE CREEK ROAD (-Y5-), -SR6- & SR 1303 / DAVE KINGS ROAD (-Y6-) (SEE TMP-7 & TMP-8)

PHASE 1

STEP 1:

AWAY FROM TRAFFIC AND USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14) AS NECESSARY, CONSTRUCT THE FOLLOWING:

CARTLEDGE CREEK ROAD (-Y5-) FROM STA. 17+00 +/- TO 24+50 +/-.

USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14) AS NECESSARY, BEGIN CONSTRUCTION OF -Y5- FROM STA. 10+00.00 TO 17+00 +/-.

USING 1101.03, SHEET 1 OF 9, INSTALL AND COVER OFF-SITE DETOUR SIGNS FOR CARTLEDGE CREEK RD (-Y5-) AS SHOWN ON TMP-8.

PHASE 2

UNCOVER OFF-SITE DETOUR SIGNS INSTALLED IN PHASE 1, STEP 1 AND CLOSE CARTLEDGE CREEK RD (-Y5-) TO THRU TRAFFIC, SHIFTING LOCAL TRAFFIC ONTO THE NEW -Y5- AND -SR6- ALIGNMENTS. (SEE SHEET TMP-8 FOR OFF-SITE DETOUR ROUTE) (SEE SHEET TMP-7 FOR TEMPORARY PATTERN FOR LOCAL TRAFFIC.)

STEP 2:

USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14) COMPLETE THE FOLLOWING IN A CONTINUOUS MANNER:

- CONSTRUCTION OF -Y5- FROM STA. 10+00.00 TO 17+00 +/-
- PLACEMENT OF TEMPORARY MARKINGS ON -Y5- FROM STA. 10+00.00 TO 23+58 +/- AND -SR6- AS SHOWN ON SHEET TMP-7

AWAY FROM TRAFFIC, CONSTRUCT CARTLEDGE CREEK RD (-Y5-) FROM STA. 24+50 +/- TO 43+75.00.

AWAY FROM TRAFFIC, CONSTRUCT -L- LINE BRIDGES OVER CARTLEDGE CREEK RD (-Y5-) DURING CLOSURE. (SEE AREA 1, PHASE 2, STEP 1)

AWAY FROM TRAFFIC, AND USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14), AS NECESSARY, PLACE TEMPORARY MARKINGS IN THE FINAL PATTERN ON CARTLEDGE CREEK RD (-Y5-) AND OPEN TO TRAFFIC. THEN COVER OR REMOVE OFF-SITE DETOUR SIGNS. (SEE FINAL PAVEMENT MARKING PLANS)

PLACE TYPE III BARRICADES AT ALL RAMPS AND DRUM OFF ALL TURN LANES ON CARTLEDGE CREEK RD (-Y5-) UNTIL RAMPS ARE OPENED IN PHASE 3, STEP 1.

STEP 4:

USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14), CONSTRUCT TURNAROUNDS ON DAVE KINGS RD (-Y6-) AND PERMANENTLY CLOSE DAVE KINGS RD (-Y6-) TO TRAFFIC.

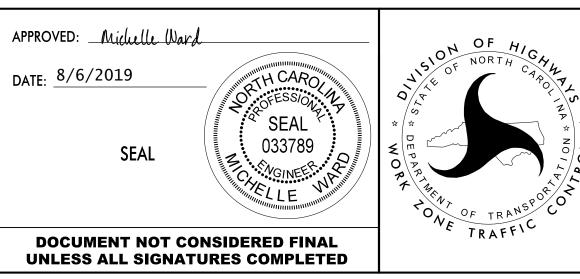
PHASE 3

STEP 1:

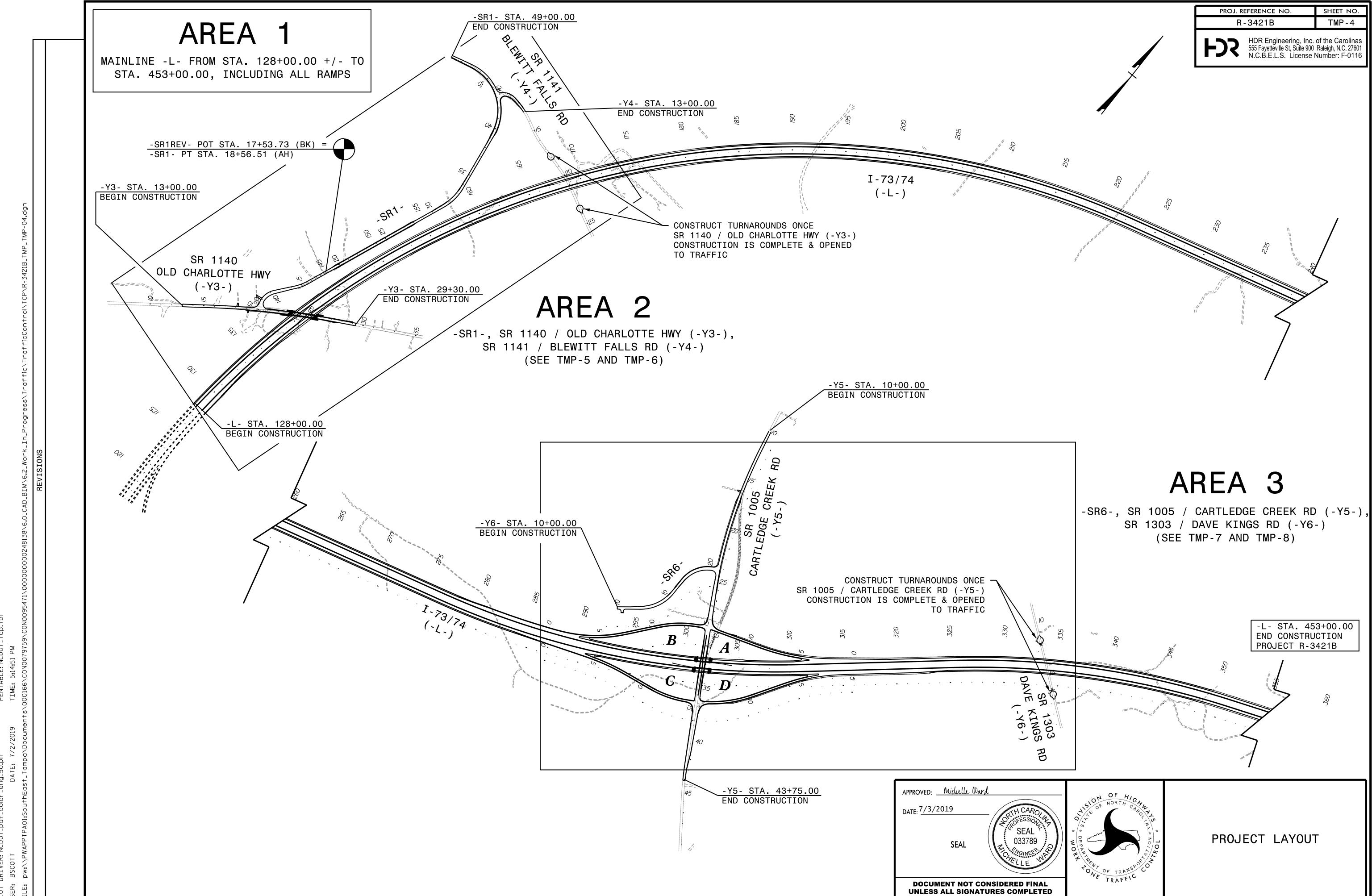
USING FLAGGERS (RSD 1101.02, SHEET 1 OF 14), PLACE FINAL LAYER OF SURFACE COURSE AND FINAL MARKINGS AND MARKERS ON -SR6- AND CARTLEDGE CREEK RD (-Y5-) AND OPEN TO THE FINAL PATTERN. (SEE FINAL PAVEMENT MARKING PLANS)

PHASE 3, STEP 1 SHALL BE COMPLETED SIMULTANEOUSLY WITH THE COMPLETION AND OPENING OF AREAS 1 AND 2 TO THE FINAL PATTERN.

REMOVE ALL REMAINING TRAFFIC CONTROL DEVICES.



TEMPORARY TRAFFIC CONTROL PHASING



PROJ. REFERENCE NO. SHEET NO. R-3421B TMP-5 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 -SR1- STA. 45+50 +/--Y4- STA. 13+00.00 -Y4- STA. 10+00.00 -SR1- STA. 49+00.00 - CONSTRUCT USING INCIDENTAL STONE, AS NECESSARY BLEWITT FALLS RD -SR1- STA. 42+50 +/--Y4- STA. 15+00 +/-48'' x 30'' -SR1- STA. 48+50 +/-**ROAD** CLOSED W1-6L PLACE TRAFFIC AND DEVICES IN THE PATTERN SHOWN AT THE END OF THE WORK PERIOD USING INCIDENTAL STONE, AS NECESSARY, ONCE TRAFFIC CAN NO LONGER BE MAINTAINED ON EXISTING BLEWITT FALLS RD (-Y4-) UNTIL WORK AREA IS COMPLETE AND -SR1- AND BLEWITT FALLS RD (-Y4-) ARE OPENED TO THE FINAL PATTERN IN PHASE 1, STEP 3. TYPE III BARRICADE NOTE: ONCE TRAFFIC CAN NO LONGER BE MAINTAINED ON EXISTING, USE INCIDENTAL STONE TO SHIFT TRAFFIC IN THE TEMPORARY PATTERN SHOWN ON THIS SHEET UNTIL REMAINDER OF PROPOSED CONSTRUCTION CAN BE COMPLETED. ONCE WORK AREA (-SR1- STA. 42+50 TO 49+00 & -Y4-) IS COMPLETE, PLACE MARKINGS AS SHOWN. SECTION A-A -SR1- STA. 44+00 +/-TRAFFIC PLACED IN TEMPORARY PATTERN ON INCIDENTAL STONE BASE APPROVED: Michelle Ward DATE: 7/3/2019 AREA 2 INCIDENTAL STONE TO — MAINTAIN TRAFFIC PHASE 1, STEP 2 BEGIN WIDENING WHILE
MAINTAINING TRAFFIC ON EXISTING -BEGIN WIDENING WHILE MAINTAINING TRAFFIC ON EXISTING DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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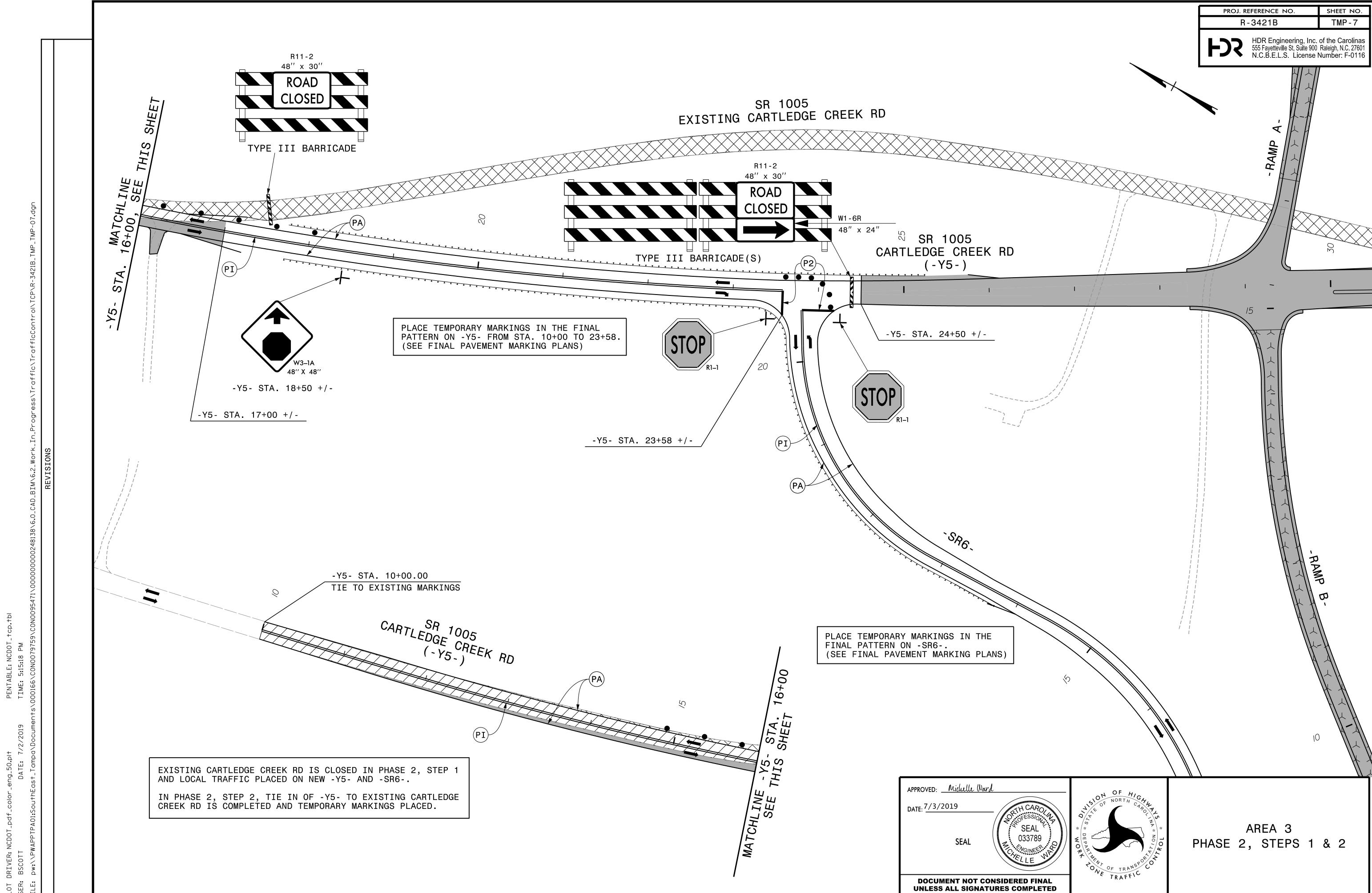
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