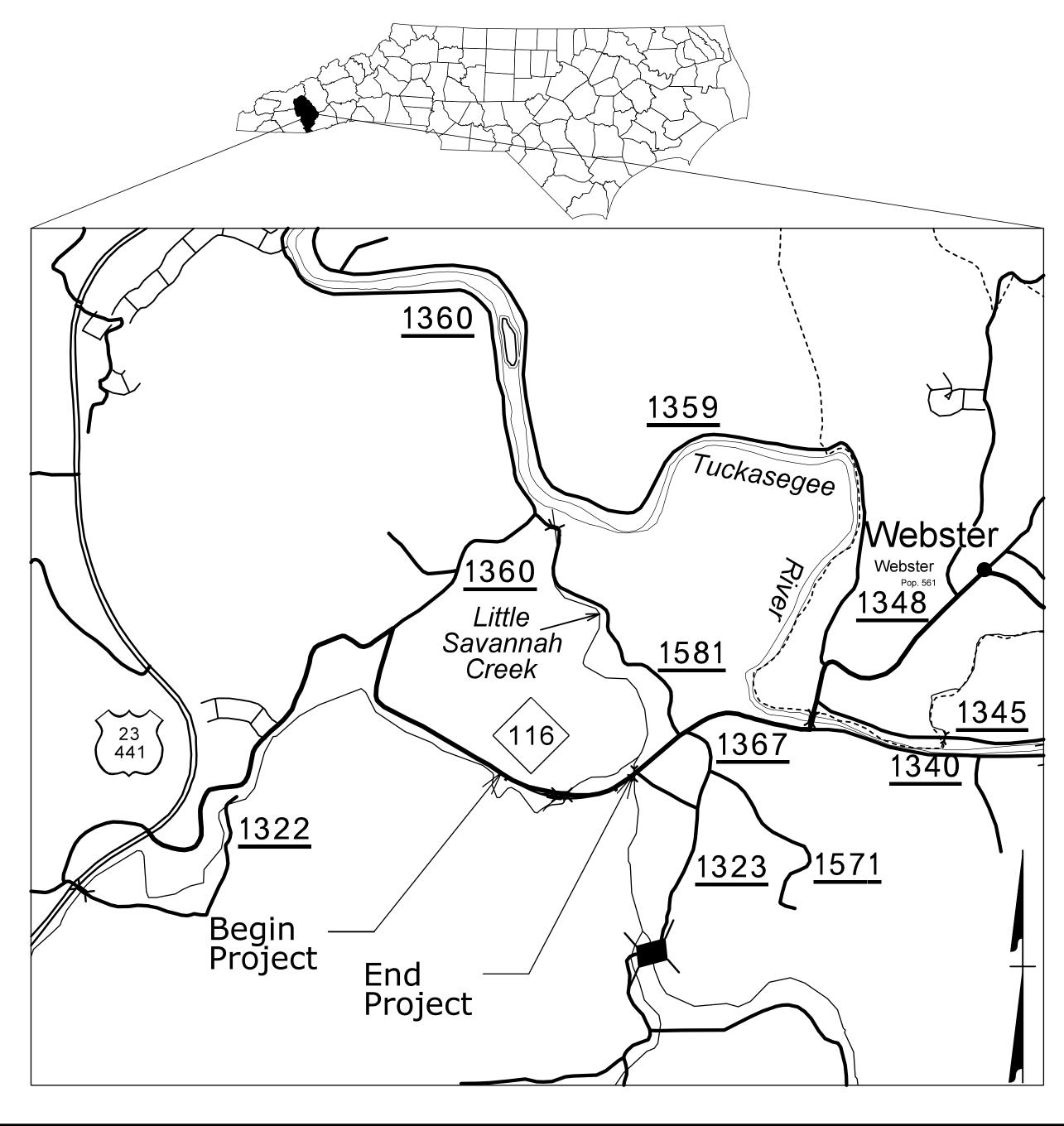
TRANSPORTATION MANAGEMENT PLAN

JACKSON COUNTY



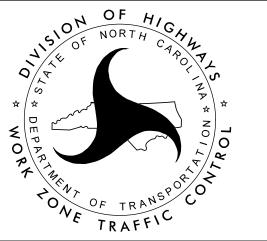
NCDOT CONTACT INFORMATION: ZACH SHULER
Bridge Program Manager

PLAN PREPARED FOR N.C.D.O.T. BY:



TGS ENGINEERS
201 W. MARION ST. STE. 200
SHELBY, NC 28150
PH (704) 476–0003
CORP. LICENSE NO.: C–0275

JIMMY TERRY, PE PROJECT ENGINEER SANDRA MELVIN DESIGN ENGINEER



INDEX OF SHEETS

SHEET NO.	<u>TITLE</u>
TMP - 1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEET
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-1C	TEMPORARY SHORING DATA
TMP-2	TEMPORARY TRAFFIC CONTROL PHASING
TMP-3 & TMP-4	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL TEMPORARY PAVEMENT MARKING PLAN
TMP-6	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL TEMPORARY PAVEMENT MARKING PLAN
TMP - 7	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

APPROVED: Jimmy terry

DATE:_



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" -N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.

TITLE

1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1180.01	SKINNY - DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

DIRECTION OF PEDESTRIAN TRAFFIC FLOW

---- EXIST. PVMT.

NORTH ARROW

— PROPOSED PVMT.

TEMP. SHORING (LOCATION PURPOSES ONLY)

WORK AREA

REMOVAL

TEMPORARY SIGNING

FLAGGER

PORTABLE SIGN

STATIONARY SIGN

STATIONARY OR PORTABLE SIGN

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

TEMPORARY CRASH CUSHION

TRUCK MOUNTED ATTENUATOR (TMA)

CHANGEABLE MESSAGE SIGN

FLASHING ARROW BOARD

LAW ENFORCEMENT

DRUM SKINNY DRUM O TUBULAR MARKER

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

CRYSTAL/RED

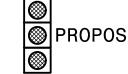
◆ YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

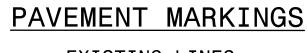
SIGNALS











----EXISTING LINES ----TEMPORARY LINES

TEMPORARY PAVEMENT MARKING

SYMBOL DESCRIPTION

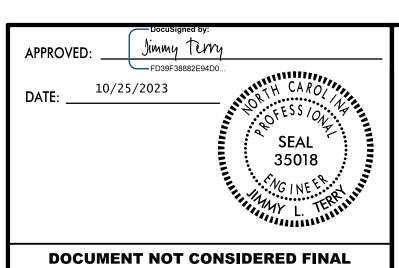
PAVEMENT MARKINGS

COLD APPLIED PLASTIC (4")

(4") WHITE EDGELINE (IV) (4") YELLOW DOUBLE CENTER (IV)

PAINT (4")

(4") WHITE EDGELINE (4") YELLOW EDGELINE P10 (4") YELLOW DOUBLE CENTER



ROADWAY STANDARD DRAWINGS & LEGEND

UNLESS ALL SIGNATURES COMPLETED

GENERAL NOTES

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) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- M) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE **ENGINEER**.

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKE
NC 116	PAINT	NONE
PROPOSED STRUCTURE	TEMP. TAPE	NONE

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

LOCAL NOTES

MAINTAIN ACCESS TO DRIVEWAYS AND SIDE ROADS AT ALL TIMES IN THE PROJECT AREA.

PROJ. REFERENCE NO.

17BP.14.R.204

SHEET NO.

TMP-1B

TGS ENGINEERS
201 W. MARION ST., STE 200
SHELBY, NC 28150
PH (704) 476–0003
CORP. LICENSE NO.: C–0275

MANAGEMENT STRATEGIES

THE PROPOSED NC 116 (WEBSTER RD) WILL BE CONSTRUCTED USING A COMBINATION OF TEMPORARY LANE AND SHOULDER CLOSINGS, TRAFFIC SHIFTS AND FLAGGERS AS NEEDED.



Jimmy Terry APPROVED: 10/25/2023 DATE: **DOCUMENT NOT CONSIDERED FINAL**

UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION **OPERATIONS** PLAN

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

NC 116

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

ROAD NAME DAY AND TIME RESTRICTIONS

> MON THRU FRI MON THRU FRI

7:00 AM TO 9:00 AM

4:00 PM TO 6:00 PM

LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) 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.
- C) 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.
- D) 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.

- E) 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.
- F) 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.
- G) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

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.

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

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

TEMPORARY SHORING DATA

PROJ. REFERENCE NO. SHEET NO. 17BP.14.R.204 TMP-1C

Shoring Location No.1:

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

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE END BENT CONSTRUCTION FROM STATION -L- STA. 23+79 +/-, 33' LT TO STATION -L- STA. 24+04+/-, 33' LT.

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 FROM STATION -L- STA. 23+79 +/-, 33' LT TO STATION -L- STA. 24+04+/-, 33' LT, 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 = 2026 FT

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -L- STA. 23+79 +/-, 33' LT TO STATION -L- STA. 24+04+/-, 33' LT MAY NOT PENETRATE BELOW ELEVATION 2022 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- STA. 23+79 +/-, 33' LT TO STATION -L- STA. 24+04+/-, 33' LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING STATION -L- STA. 23+79 +/-, 33' LT TO STATION -L- STA. 24+04+/-, 33' LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

Shoring Location No.2:

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

TEMPORARY SHORING IS REQUIRED FOR THE BRIDGE END BENT CONSTRUCTION FROM STATION -L- STA. 25+71 +/-, 30' LT TO STATION -L- STA. 25+96+/-, 27' LT.

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 FROM STATION -L- STA. 25+71 +/-, 30' LT TO STATION -L- STA. 25+96+/-, 27' LT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

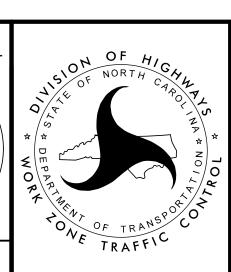
UNIT WEIGHT (γ) = 120 LB/CF FRICTION ANGLE (φ) = 30 DEGREES COHESION (c) = 0 LB/SF GROUNDWATER ELEVATION = 2024 FT

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION -L- STA. 25+71 +/-, 30' LT TO STATION -L- STA. 25+96+/-, 27' LT MAY NOT PENETRATE BELOW ELEVATION 2022 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -L- STA. 25+71 +/-, 30' LT TO STATION -L- STA. 25+96+/-, 27' LT.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING STATION -L- STA. 25+71 +/-, 30' LT TO STATION -L- STA. 25+96+/-, 27' LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



TEMPORARY
SHORING DATA

PHASING

TGS ENGINEERS
201 W. MARION ST., STE 200
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY INSTALL ADVANCED WARNING SIGNS ON THE -L- ALIGNMENT (NC 116) IN ACCORDANCE WITH NCDOT RDY STA. 1101.01, SHEET 3 OF 3.

UNLESS OTHERWISE NOTED PROVIDE ACCESS TO ALL DRIVEWAYS AND SIDE STREET AT ALL TIMES IN THE PROJECT AREA.

UNLESS OTHERWISE NOTED TWO WAY TRAFFIC SHALL BE MAINTAINED ON TWO 11 FT (MIN) LANES AT ALL TIMES WHILE FLAGGERS ARE NOT AT WORK ON NC 116.

PHASE I

STEP 1 (TMP-3)

WITH NC 116 TRAFFIC IN EXISTING PATTERN AND USING NCDOT RDY STD 1101.02, SHEET 1 OF 14, CONSTRUCT THE FOLLOWING AS SHOWN ON PLANS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE:

-L- FROM STA. 25+69± TO STA. 29+00±

-DR- FROM STA. 10+12± TO 13+55± (PLACE ONLY ABC BASE)

STEP 2 (TMP-4)

SHIFT -DR- TRAFFIC AS SHOWN ON PLANS

INSTALL TEMPORARY GUARDRAIL AS SHOWN ON PLANS.

INSTALL TEMPORARY SHORING AS SHOWN ON PLANS.

CONSTRUCT THE PROPOSED STRUCTURE FROM -L- STA. 23+71.00 TO -L- STA. 25+45.00.

CONSTRUCT APPROACHES, DRIVEWAYS AND TIE-INS TO EXISTING EDGE OF PAVEMENT IN WORK AREA AS SHOWN ON TMP-5, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. USE TEMPORARY LANE CLOSURES AND FLAGGERS IN ACCORDANCE TO NCDOT RDY STA 1101.02, SHEET 1 OF 14 AS NEEDED.

CONSTRUCT -DR- FROM STA 10+12± TO 13+55± AS SHOWN ON PLANS. PLACE ONLY ABC BASE

STEP 3 (TMP-5)

REMOVE TEMPORARY GUARDRAIL AND SHORING.

USING TEMPORARY LANE CLOSURES AND FLAGGERS IN ACCORDANCE WITH NCDOT RDY STD 1101.02, SHEET 1 OF 14 PLACE TEMPORARY PAVEMENT MARKING AS SHOWN ON TMP-5.

TO ASSURE SMOOTH TRANSITIONS BETWEEN EXISTING AND NEW PAVEMENT WEDGE NC 116 PAVEMENT IF NEEDED. REMOVE EXISTING RAISED ISLAND ON -DR2- AND WEDGE PAVEMENT.

SHIFT NC 116 TRAFFIC ONTO THE NEW STRUCTURE AND NEW PAVEMENT AS SHOWN ON PLAN.

USING TEMPORARY LANE CLOSURES AND FLAGGERS IN ACCCORDANCE TO NCDOT RDY STD 1101.02, SHEET1 OF 14 WIDEN NC 116 UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM-L- STA 31+00± TO 35+00±.
WEDGE EXISTING PAVEMENT AS NEEDED TO TRANSITION BETWEEN EXISTING AND NEW PAVEMENT.

PHASE 2

STEP 1 (TMP-6)

WITH TRAFFIC SHIFTED TO THE NEW ALIGNMENT, AND USING TEMPORARY LANE CLOSURES AND FLAGGERS IN ACCORDANCE TO NCDOT RDY STD 1101.02, SHEET 1 OF 14 CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS SHOWN ON PLAN:

-L- FROM STA. 17+00± TO STA. 21+67±

-L- FROM STA. 27+43± TO STA. 35+00±

-DR2- FROM STA. 10+35± TO STA. 11+16±

REPLACE/REVISE PAVEMENT MARKINGS AS SHOWN ON PLAN.
USING TEMPORARY PAVEMENT MARKINGS AND DRUMS DELINEATE THE PROPOSED CONCRETE ISLAND AT -DR2-

REMOVE THE EXISTING STRUCTURE AND PAVEMENT AS SHOWN ON PLANS

STEP 2 (TMP-7)

WITH NC 116 TRAFFIC IN ITS FINAL PATTERN USING TEMPORARY LANE CLOSURES AND FLAGGERS IN ACCORDANCE WITH NCDOT RDY STD 1101.02, SHEET 1 OF 14 PLACE THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:

-L- FROM STA. 17+00.00 STA. 23+71.00 (BEGIN BRIDGE)

-L- FROM STA. 25+45.00 (END BRIDGE) TO STA. 35+00.00

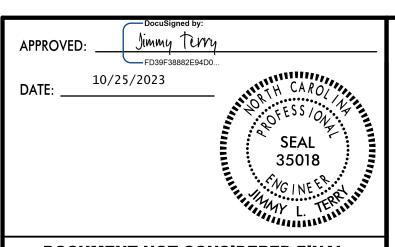
-DR- FROM STA. 10+12.00 TO STA. 13+55.00

-DR2- FROM STA. 10+35.00 TO 11+39.82

PLACE MONOLITHIC CONCRETE ISLAND ON -DR2-

USING TEMPORARY LANE CLOSURES AND FLAGGERS IN ACCORDANCE WITH NCDOT RDY STD 1101.02, SHEET 1 OF 14 PLACE FINAL PAVEMENT MARKINGS AS SHOWN IN PAVEMENT MARKING PLAN.

REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN ALL ROADS TO TRAFFIC.





PHASING

User:smelvin

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

