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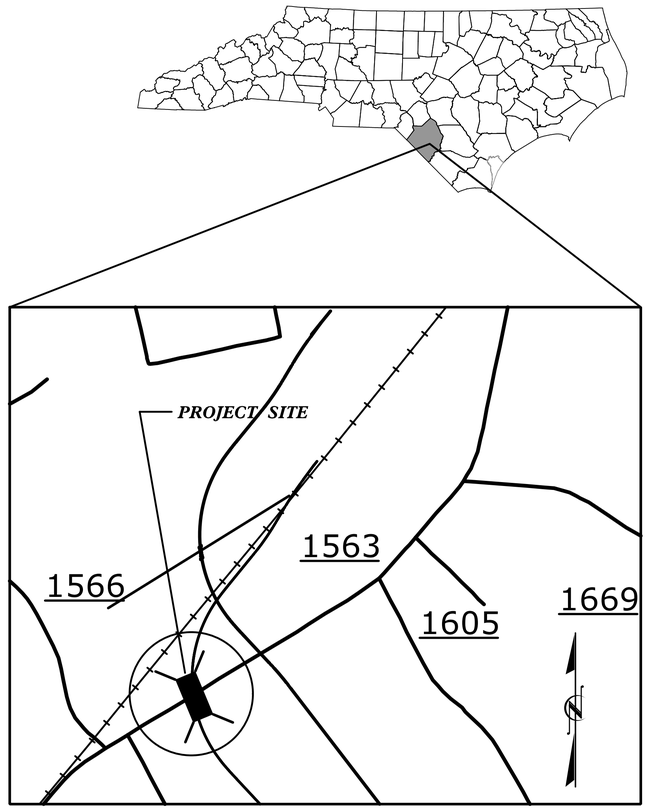
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ROBESON COUNTY



LOCATION: ***RAIL GRADE SEPARATION OVER SR 1563 (UNION CHAPEL RD)***

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

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. — *STATE TRAFFIC MANAGEMENT ENGINEER*
D.W. BISSETTE, P.E. — *CENTRAL TRAFFIC CONTROL ENGINEER*
_____ — *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

INDEX OF SHEETS

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R. B. EARLY, PE — *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*
J. A. PHILLIPS — *TRAFFIC CONTROL DESIGN ENGINEER*

APPROVED: DocuSigned by: Rhonda Early 6EEE13EA330A4FB...
DATE: 1/19/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

SHEET NO.
TMP-1

P-4900A

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REVISIONS

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ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANAUARY 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
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1250.01	PAVEMENT MARKER - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

EXISTING PROPOSED TEMP TEMPORARY

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION	PAY ITEM
	PAVEMENT MARKING LINES	
PA	WHITE EDGELINE	PAINT (4")
PI	YELLOW DOUBLE CENTER LINE	
	PAVEMENT MARKERS	
		TEMPORARY RAISED
MH	YELLOW & YELLOW	

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APPROVED: Rhonda Early DATE: 1/19/2015

SEAL 023521 NORTH CAROLINA PROFESSIONAL ENGINEER RHONDA B. EARLY

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DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN

ROADWAY STANDARD DRAWINGS & LEGENDS

PROJ. REFERENCE NO.	SHEET NO.
P-4900A	TMP-1B

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
-Y1- (SR 1563, UNION CHAPEL RD)	MONDAY THRU FRIDAY 7:00 AM - 9:00 AM & 4:00 PM - 6:00 PM

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

ROAD NAME

-Y1- (SR 1563, UNION CHAPEL RD)

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

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

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
-Y1- (SR 1563 UNION CHAPEL RD)	6:00AM - 9:00PM	30 MINUTES FOR HANGING STEEL

LANE AND SHOULDER CLOSURE REQUIREMENTS

D) 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.

E) 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.

F) 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.

G) 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.

H) 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

I) 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.

SIGNING

J) 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.

K) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

L) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT 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 TRANSPORTATION MANAGEMENT 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 TRANSPORTATION MANAGEMENT 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.

M) 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

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	MARKER
1.	-Y1- (SR 1563, UNION CHAPEL RD)	PAINT	TEMPORARY RAISED

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.

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SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

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TRANSPORTATION MANAGEMENT PLAN

GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
P-4900A	TMP-2

SHORING LOCATION 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 FROM STATION -Y1-, STA 21+83.3± 24.6 FT LT, TO STATION -Y1-, STA 22+51.6±24.6 FT LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUND-WATER ELEVATION:

GROUNDWATER ELEVATION = 164 FT±

SOIL PARAMETERS ABOVE ELEVATION 150′
UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 LB/SF

SOIL PARAMETERS ABOVE ELEVATION 150′ AND ELEVATION 137′
UNIT WEIGHT (g) = 120 LB/CF
FRICTION ANGLE (f) = 0 DEGREES
COHESION (c) = 250 LB/SF

SOIL PARAMETERS ABOVE ELEVATION 137′
UNIT WEIGHT (g) = 120 LB/CF
FRICTION ANGLE (f) = 27 DEGREES
COHESION (c) = 0 LB/SF

DESIGN TEMPORARY SHORING FOR AN UNBALANCED HYDROSTATIC PRESSURE EQUAL TO THE DIFFERENCE BETWEEN THE GROUNDWATER ELEVATION AND THE BASE OF THE EXCAVATION UNLESS A FULLY FUNCTIONAL WELL POINT DEWATERING SYSTEM HAS BEEN PROVIDED OUTSIDE THE TEMPORARY SHORING. THE COSTS OF THE OPTIONAL WELL POINT SYSTEM SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE FOUNDATION EXCAVATION.

SHORING LOCATION NO. 2

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 FROM STATION -Y1-, STA 21+53.7± 24.6 FT RT, TO STATION -Y1-, STA 22+21.1±24.6 FT RT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

GROUNDWATER ELEVATION = 164 FT ±

SOIL PARAMETERS ABOVE ELEVATION 149′
UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 LB/SF

SOIL PARAMETERS ABOVE ELEVATION 149′ AND ELEVATION 139′
UNIT WEIGHT (g) = 120 LB/CF
FRICTION ANGLE (f) = 0 DEGREES
COHESION (c) = 250 LB/SF

SOIL PARAMETERS ABOVE ELEVATION 139′
UNIT WEIGHT (g) = 120 LB/CF
FRICTION ANGLE (f) = 27 DEGREES
COHESION (c) = 0 LB/SF

DESIGN TEMPORARY SHORING FOR AN UNBALANCED HYDROSTATIC PRESSURE EQUAL TO THE DIFFERENCE BETWEEN THE GROUNDWATER ELEVATION AND THE BASE OF THE EXCAVATION UNLESS A FULLY FUNCTIONAL WELL POINT DEWATERING SYSTEM HAS BEEN PROVIDED OUTSIDE THE TEMPORARY SHORING. THE COSTS OF THE OPTIONAL WELL POINT SYSTEM SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE FOUNDATION EXCAVATION.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH SEALED DOCUMENTS FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENTS WERE SUBMITTED TO THE WZTC SECTION ON JANUARY 14, 2015 AND SEALED BY PROFESSIONAL ENGINEER, MICHAEL VALIQUETTE, P.E., LICENSE # 32672.

APPROVED: DocuSigned by: Rhonda Early DATE: 1/19/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

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DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN

TEMPORARY SHORING NOTES

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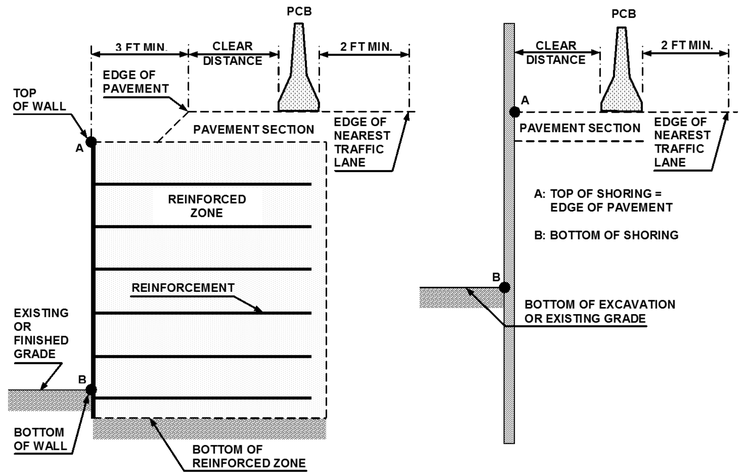

NOTE: WALL OR SHORING HEIGHT = A - B

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.

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	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

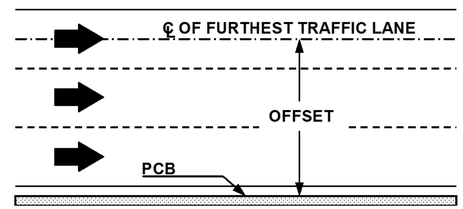

FIGURE B

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APPROVED Rhonda Early DATE: 1/19/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

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TRANSPORTATION MANAGEMENT PLAN

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

PROJ. REFERENCE NO.	SHEET NO.
P-4900A	TMP-3

PHASING

NOTES:

REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

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.

COMPLETE ANY PROPOSED WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE. THIS MAY REQUIRE TEMPORARY DITCHES.

THE TERM RSD DENOTES "ROADWAY STANDARD DRAWING".

PHASE I (SEE TMP-4 & TMP-5)

STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ON SR 1563 (UNION CHAPEL RD) ACCORDING TO RSD 1101.01.

STEP 2: USING RSD 1101.02 (SHEET 1 OF 15), PLACE TEMPORARY ASPHALT PAD AND PCB ALONG LT & RT SHOULDERS OF -Y1- AS SHOWN ON TMP-4.

STEP 3: USING RSD 1101.02 (SHEET 1 OF 15) AS NEEDED, INSTALL SHORING AND BEGIN CONSTRUCTION OF RR BRIDGE. (SEE TMP-2 FOR SHORING NOTES AND STRUCTURE PLANS FOR DETAILS.) REMOVE SHORING AND PCB AS SOON AS NO LONGER NEEDED. (SEE SHEET TMP-4.)

NOTE: CONTRACTOR IS TO SCHEDULE WORK ALONG RT SIDE OF -Y1- SO THAT PROPERTY ACCESS IMPACTS ARE MINIMIZED AS MUCH AS POSSIBLE. COORDINATE SCHEDULE OF DRIVEWAY CLOSURE WITH PROPERTY OWNER.

STEP 4: USING RSD 1101.03 (SHEET 8 OF 9) AS NEEDED, INSTALL BRIDGE GIRDERS. (REFER TO SHEET TMP-5.)

STEP 5: COMPLETE BRIDGE.

8/17/99

REVISIONS

QA/QC STAGE:

REVIEW:

CONCUR:

REVISE:

VERIFY:

11:27:10 AM
...\P4900_te_TMP_03phasing.dgn
$$$$USERNAME$$$$

APPROVED: DocuSigned by: Rhonda B. Early DATE: 2/23/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

HNTB

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN

PHASING

PROJ. REFERENCE NO.	SHEET NO.
P-4900A	TMP-4

8/17/99

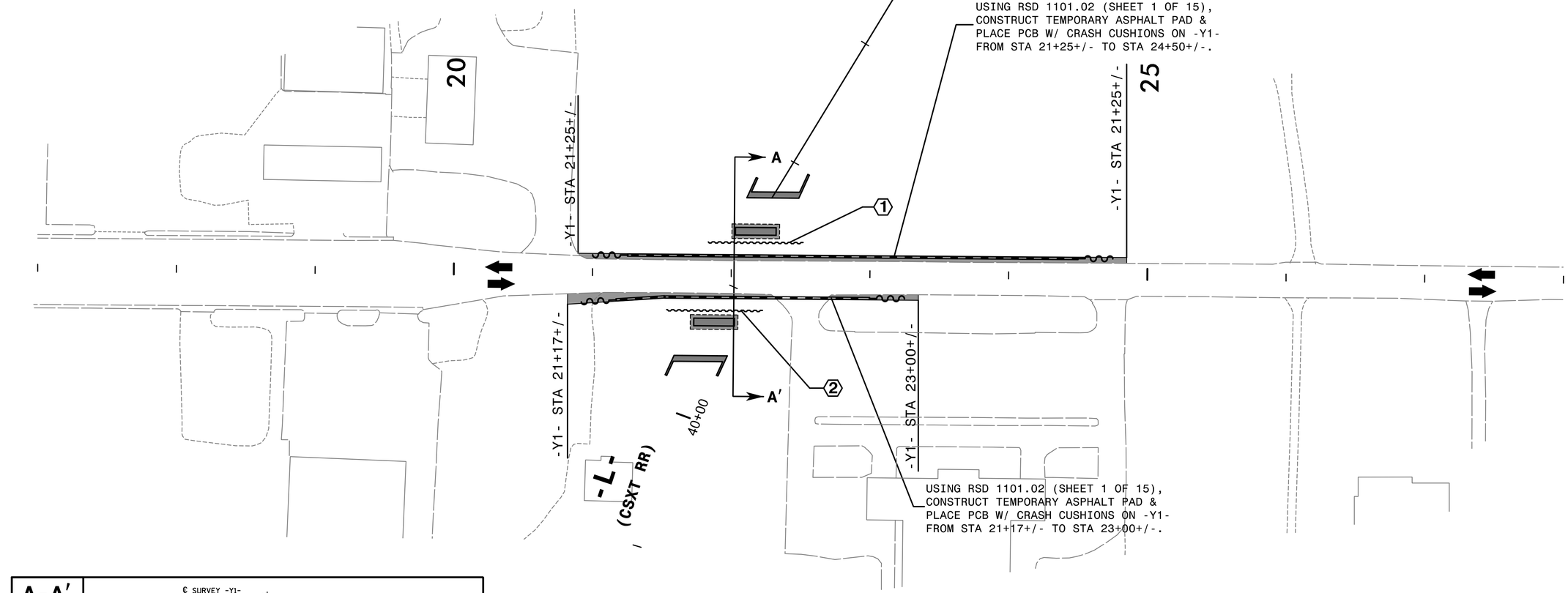
REVISIONS

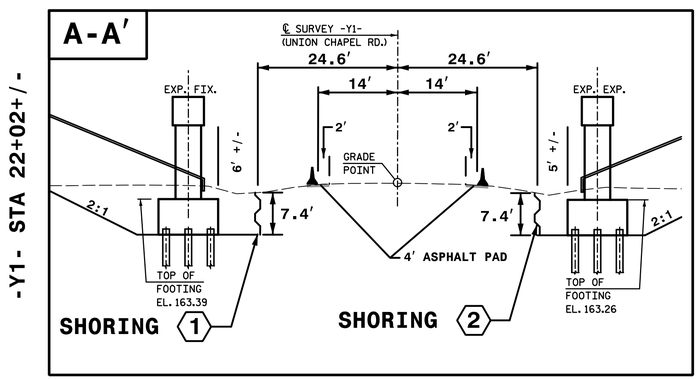
Ⓐ

MESSAGE NO. 1	MESSAGE NO. 2
XX/XX	EXPECT
NIGHT	30 MIN
WORK	DELAYS

CHANGEABLE MESSAGE SIGN

PLACE CMS BOARDS AT BRIDGE SITE ONE WEEK IN ADVANCE OF CLOSURE TO HANG GIRDERS. (SEE TMP-5 FOR LOCATION.)





1 EST QUANTITY = 395 SF

TEMPORARY SHORING
FROM -Y1- STA 21+83.3+/-, 24.6′ LT
TO -Y1- STA 22+51.6+/-, 24.6′ LT

(SEE SHEET TMP-2 FOR TEMPORARY SHORING NOTES)

2 EST QUANTITY = 395 SF

TEMPORARY SHORING
FROM -Y1- STA 21+53.7+/-, 24.6′ RT
TO -Y1- STA 22+22.1+/-, 24.6′ RT

(SEE SHEET TMP-2 FOR TEMPORARY SHORING NOTES)

APPROVED: Rhonda Early DocuSigned by: DATE: 1/19/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

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Raleigh, North Carolina 27609
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TRANSPORTATION MANAGEMENT PLAN

PHASE I DETAIL 1

QA/QC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

10:00:31 PM
\\TCP\P4900A\p4900_te_pld1.dgn
$$$$USERNAME$$$$

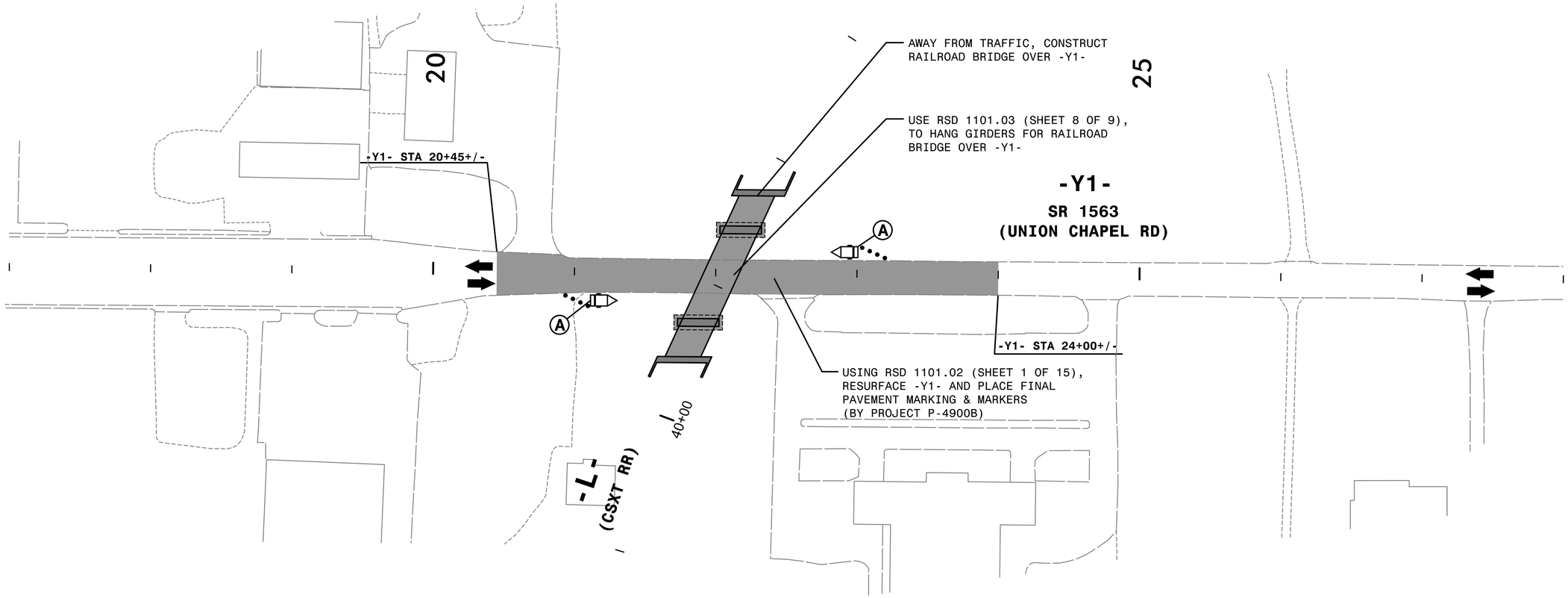
PROJ. REFERENCE NO.	SHEET NO.
P-4900A	TMP-5

Ⓐ

MESSAGE NO. 1	MESSAGE NO. 2
XX/XX	EXPECT
NIGHT	30 MIN
WORK	DELAYS

CHANGEABLE MESSAGE SIGN

PLACE CMS BOARDS AT BRIDGE SITE ONE WEEK IN ADVANCE OF CLOSURE TO HANG GIRDERS.



REVISIONS

8/17/99

QA/QC STAGE:

REVIEW:

CONCUR:

REVISE:

VERIFY:

11:27:28 AM
\\TEP\P4900A\p4900_te_pld2.dgn
$$$$USERNAME$$$$

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APPROVED: Rhonda B. Early DATE: 2/23/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT PLAN

PHASE I DETAIL 2