

**PLAN FOR PROPOSED
TRAFFIC CONTROL, MARKING & DELINEATION
HYDE COUNTY**

B-3858

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"- ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION-RALEIGH, N.C., DATED JANUARY 2002 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE 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
1135.01	CONES
1150.01	FLAGGERS
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

INDEX OF SHEETS

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TCP-13	REPLACEMENT DETAIL FOR RSD 1145.01

LEGEND

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
 - NORTH ARROW
 - PROPOSED PVMT. EXIST. PVMT.
 - WORK AREA
 - REMOVAL OF EXISTING PAVEMENT

- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
 - TYPE II BARRICADE
 - TYPE III BARRICADE
 - CONE
 - DRUM
 - FLASHING ARROW PANEL (TYPE C)
 - TYPE 'B' WARNING LIGHT
 - STATIONARY SIGN
 - PORTABLE SIGN
 - STATIONARY OR PORTABLE SIGN
 - WARNING FLAGS
 - CRASH CUSHION
 - CHANGEABLE MESSAGE SIGN
 - TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
 - POLICE
 - FLAGGER

TEMPORARY PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	PAVEMENT MARKINGS	PAY ITEM QUANTITY		TOTAL QUANTITY
			BREAKDOWN		
		PAINT (4")			
PA	WHITE EDGELINE (2X)		6600	LF	
PI	YELLOW DOUBLE CENTER (2X)		6600	LF	
				TOTAL	13200 LF
		PAINT (24")			
P4	WHITE STOPBAR (2X)		40	LF	
				TOTAL	40 LF

NOTE: FOR EACH PAINT PAVEMENT MARKING ITEM, 1X IMPLIES A SINGLE APPLICATION, 2X IMPLIES TWO APPLICATIONS, AND 3X IMPLIES THREE APPLICATIONS.

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

TIP PROJECT:

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APPROVED: <i>Betsy L. Watson</i> DATE: 3/02/05	PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT
SEAL 	J. STUART BOURNE, P.E. WORK ZONE TRAFFIC CONTROL ENGINEER JOSEPH ISHAK, P.E. TRAFFIC CONTROL PROJECT ENGINEER BETSY L. WATSON, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER ALLA LYUDMIRSKAYA TRAFFIC CONTROL DESIGN ENGINEER

PROJECT NOTES

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

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.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) 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.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 40 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING SHEET TCP-11 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- C) 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.
- D) 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.
- E) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.
- F) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FT OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.
- G) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON NEBRASKA RD. AND GREAT DITCH RD.

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 A 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 1.5 inches IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- K) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE DEPARTMENT.

- L) STATE FORCES WILL BE RESPONSIBLE FOR PERMANENT SIGNING.
- M) PROVIDE DETOUR SIGNING WITHIN THE PROJECT LIMITS.
- N) COVER OR REMOVE ALL DETOUR SIGNS WITHIN THE PROJECT LIMITS WHEN DETOUR IS NOT IN OPERATION.
- O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- P) WHEN USING ROADWAY STANDARD NO. 1101.02, DRUMS MAY BE USED IN LIEU OF CONES ON NEBRASKA RD. AND GREAT DITCH RD.
- Q) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.

- R) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY. STAGGER OR OVERLAP BARRICADES TO ALLOW FOR INGRESS OR EGRESS.
- S) PLACE SETS OF THREE DRUMS PERPENDICULAR TO THE EDGE OF THE TRAVELWAY ON 250 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC. THESE DRUMS SHALL BE IN ADDITION TO CHANNELIZING DEVICES.

PAVEMENT MARKINGS AND MARKERS

- T) STATE FORCES WILL INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
1. NEBRASKA RD	PAINT	NONE
2. GREAT DITCH RD.	PAINT	NONE

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

ROAD NAME	MARKING	MARKER
1. NEBRASKA RD.	PAINT	NONE
2. GREAT DITCH RD.	PAINT	NONE

- V) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- W) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.
- X) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

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PROJ. REFERENCE NO.	SHEET NO.
B-3858	TCP-3

PHASING

NOTE: MAINTAIN ACCESS TO ALL RESIDENCES DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN PHASING OR DIRECTED BY THE ENGINEER.

STEP 1: USING RSD 1101.02, SHEET 1 OF 7, PERFORM THE FOLLOWING: AT THE END OF EACH WORK DAY RETURN TRAFFIC TO THE EXISTING TRAFFIC PATTERN UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER. SEE SHEET TCP-4 AND ROADWAY PLANS.

1. INSTALL ADVANCED WORK ZONE WARNING SIGNS. SEE SHEET TCP-10.
2. CONSTRUCT WORK UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS:
 - FROM -L- PC STA.9+25+/- TO -L- POC STA.11+80+/- INCLUDING THE FOLLOWING:
CONSTRUCT TEMPORARY PAVEMENT UP TO EDGE AND ELEVATION OF EXISTING ROADWAY FROM -L- POC STA.11+20+/- TO -L- POC STA.11+80+/- . THE TEMPORARY PAVEMENT IS INTENDED TO PROVIDE ADEQUATE ROOM FOR TRAFFIC MOVEMENTS AT THIS LOCATION DURING CONSTRUCTION IN STEP 3.
 - FROM -L- STA.12+56+/- TO -L- STA.14+25+/- .

STEP 2: USING RSD 1101.02, SHEET 1 OF 7, PERFORM THE FOLLOWING: AT THE END OF THE WORK DAY RETURN TRAFFIC TO THE TWO-LANE TWO-WAY TRAFFIC PATTERN. SEE SHEETS TCP-5 & TCP-6 AND ROADWAY PLANS.

1. PLACE TRAFFIC IN ONE-LANE TWO-WAY TRAFFIC PATTERN ON NB LANE OF THE EXISTING SR 1110 (NEBRASKA RD.) FROM -L- STA.8+50+/- TO -L- STA.11+80+/- . SEE SHEET TCP-5.
2. CONSTRUCT THE TIE-IN WORK UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE OF TEMPORARY EXTENSION AREA WITH SB LANE OF THE EXISTING SR 1110 (NEBRASKA RD.) FROM -L- PT STA.9+25+/- TO -L- POC STA.11+80+/- . PLACE TEMPORARY PAVEMENT MARKING (PAINT) FOR THE TEMPORARY TRAFFIC PATTERN FROM -L- PT STA.8+50+/- TO -L- POC STA.11+80+/- . SEE SHEET TCP-6.

3. PLACE TRAFFIC ONTO TEMPORARY TRAFFIC PATTERN AS SHOWN ON TCP-6.

STEP 3: PERFORM THE FOLLOWING: AT THE END OF EACH WORK DAY RETURN TRAFFIC TO THE EXISTING TRAFFIC PATTERN. SEE SHEET TCP-6 AND ROADWAY PLANS.

- 1- CONSTRUCT THE PROPOSED STRUCTURE AND APPROACHES UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA.11+79 +/- TO -L- STA.12+56+/- .
- 2- INSTALL PROPOSED GUARDRAIL ON THE RIGHT SIDE OF -L- AS SHOWN ON ROADWAY PLANS.

STEP 4: USING RSD 1101.02, SHEET 1 OF 7, PERFORM THE FOLLOWING: AT THE END OF THE WORK DAY RETURN TRAFFIC TO THE EXISTING TRAFFIC PATTERN. SEE SHEETS TCP-7, TCP-8 & TCP-9 AND ROADWAY PLANS.

1. PLACE TRAFFIC IN ONE-LANE TWO-WAY TRAFFIC PATTERN AS SHOWN ON SHEET TCP-7.
 2. COMPLETE CONSTRUCTION AND TIE-IN WORK UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE OF:
 - NB/EB LANE OF PROPOSED SR 1110 (NEBRASKA RD.) FROM -L- STA.11+07+/- TO -L- STA.11+75+/- , AND FROM -L- STA.14+25+/- TO -L- STA.17+68+/- .
 - PROPOSED -Y- (SR 1116 GREAT DITCH RD.) WITH EXISTING SR 1116 AT -Y- STA.10+40+/- .
 3. PLACE TEMPORARY PAVEMENT MARKING (PAINT) ON NB/EB LANE OF THE PROPOSED -L- FROM STA.11+07+/- TO STA.17+68+/- AND ON -Y- FROM STA.10+00+/- TO STA.11+50+/- . SEE SHEET TCP-8.
 4. PLACE TRAFFIC IN ONE-LANE TWO-WAY TRAFFIC PATTERN ON NB/EB LANE OF PROPOSED SR 1110 (NEBRASKA RD.) FROM -L- STA.8+50+/- TO -L- STA.17+68+/- . SEE SHEET TCP-8.
- PLACE TRAFFIC IN TWO-LANE TWO-WAY TRAFFIC PATTERN ON PROPOSED -Y- (SR 1116 GREAT DITCH RD.) FROM -Y- STA.10+00+/- TO -Y- STA.11+50+/- . SEE SHEET TCP-8.

5. - COMPLETE CONSTRUCTION AND TIE-IN WORK INCLUDING THE FINAL LAYER OF SURFACE COURSE OF PROPOSED DRIVEWAY -DR- WITH -L- AT -L- STA.11+60+/- .

- COMPLETE CONSTRUCTION AND TIE-IN WORK UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE OF:

WB/SB LANE OF PROPOSED SR 1110 (NEBRASKA RD.) FROM -L- STA.11+50+/- TO -L- STA.11+75+/- AND FROM -L- STA.15+00+/- TO -L- STA.17+68+/- .

6. PLACE TEMPORARY PAVEMENT MARKING (PAINT) ON WB LANE OF THE PROPOSED -L- FROM STA.11+20+/- TO STA.17+68+/- . SEE SHEET TCP-8.

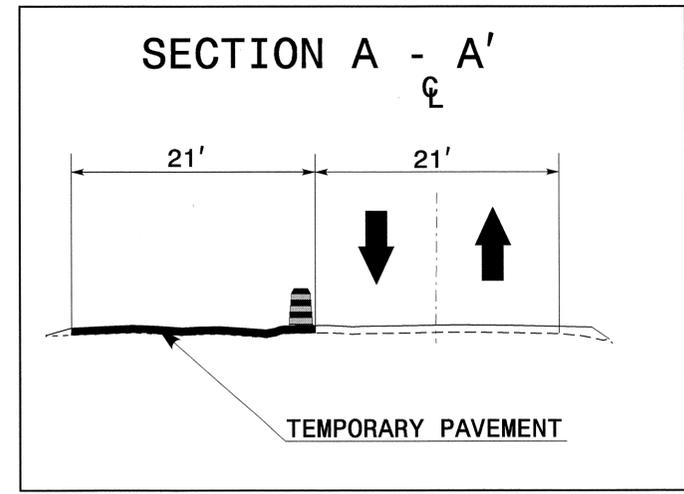
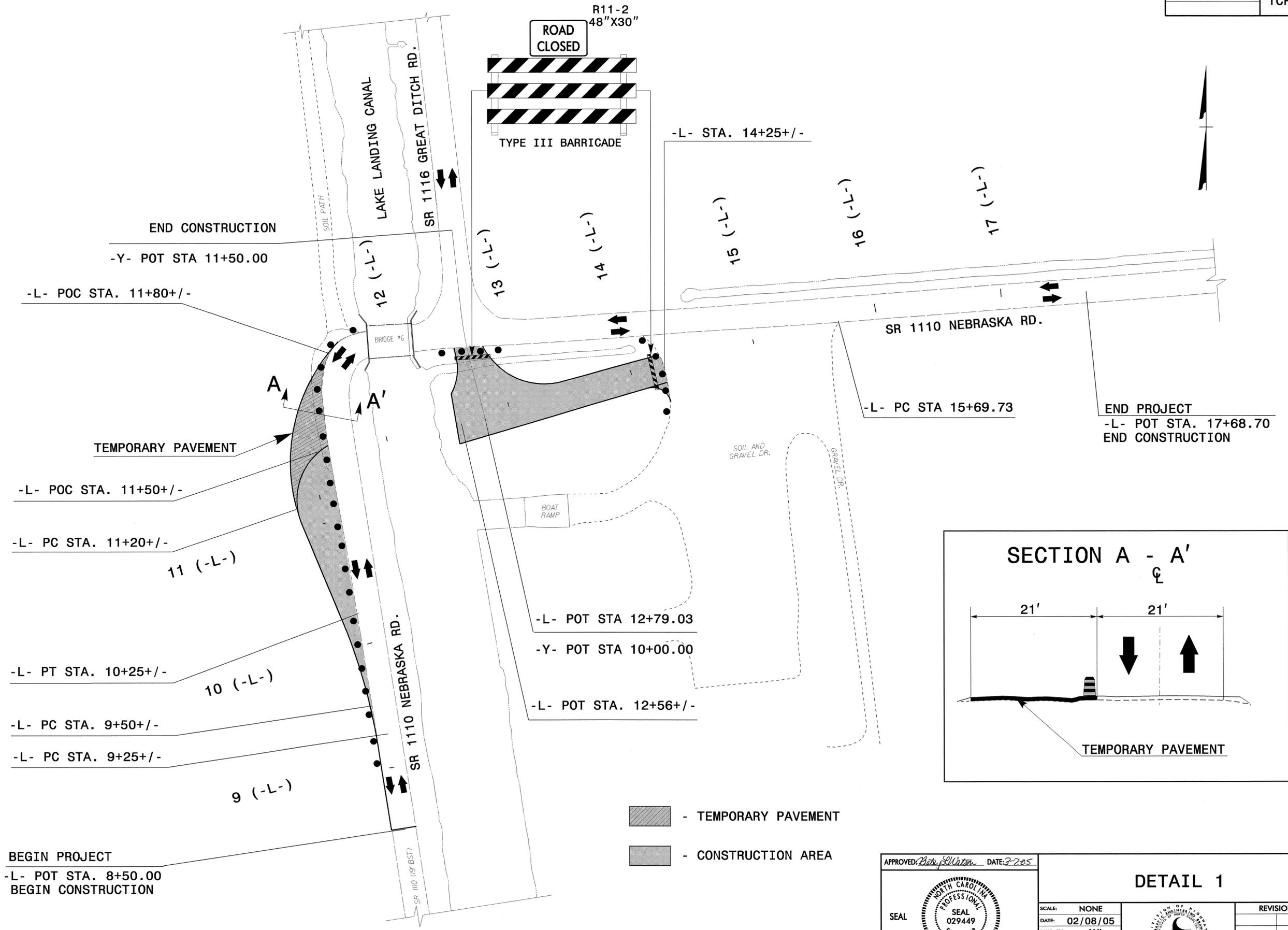
7. OPEN PROPOSED SR 1110 (NEBRASKA RD.) TO TWO-LANE TWO-WAY TRAFFIC PATTERN AS SHOWN ON TCP-9.

STEP 5: USING RSD 1101.02, SHEET 1 OF 7, PERFORM THE FOLLOWING: AT THE END OF EACH WORK DAY RETURN TRAFFIC TO THE EXISTING TRAFFIC PATTERN UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER. SEE SHEET TCP-9 AND ROADWAY PLANS.

1. REMOVE EXISTING STRUCTURE AND EXISTING ROADWAY FROM -L- STA.11+20+/- TO -L- STA.16+50+/- .
2. PLACE FINAL LAYER OF SURFACE COURSE ON PROPOSED -L- (SR 1110 NEBRASKA RD.) AND ON PROPOSED -Y- (SR 1116 GREAT DITCH RD.) .
3. STATE FORCES WILL PLACE FINAL PAVEMENT MARKING ON PROPOSED -L- (SR 1110 NEBRASKA RD.) AND ON PROPOSED -Y- (SR 1116 GREAT DITCH RD.) .
4. REMOVE ALL TRAFFIC CONTROL DEVICES.

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 - TEMPORARY PAVEMENT
 - CONSTRUCTION AREA

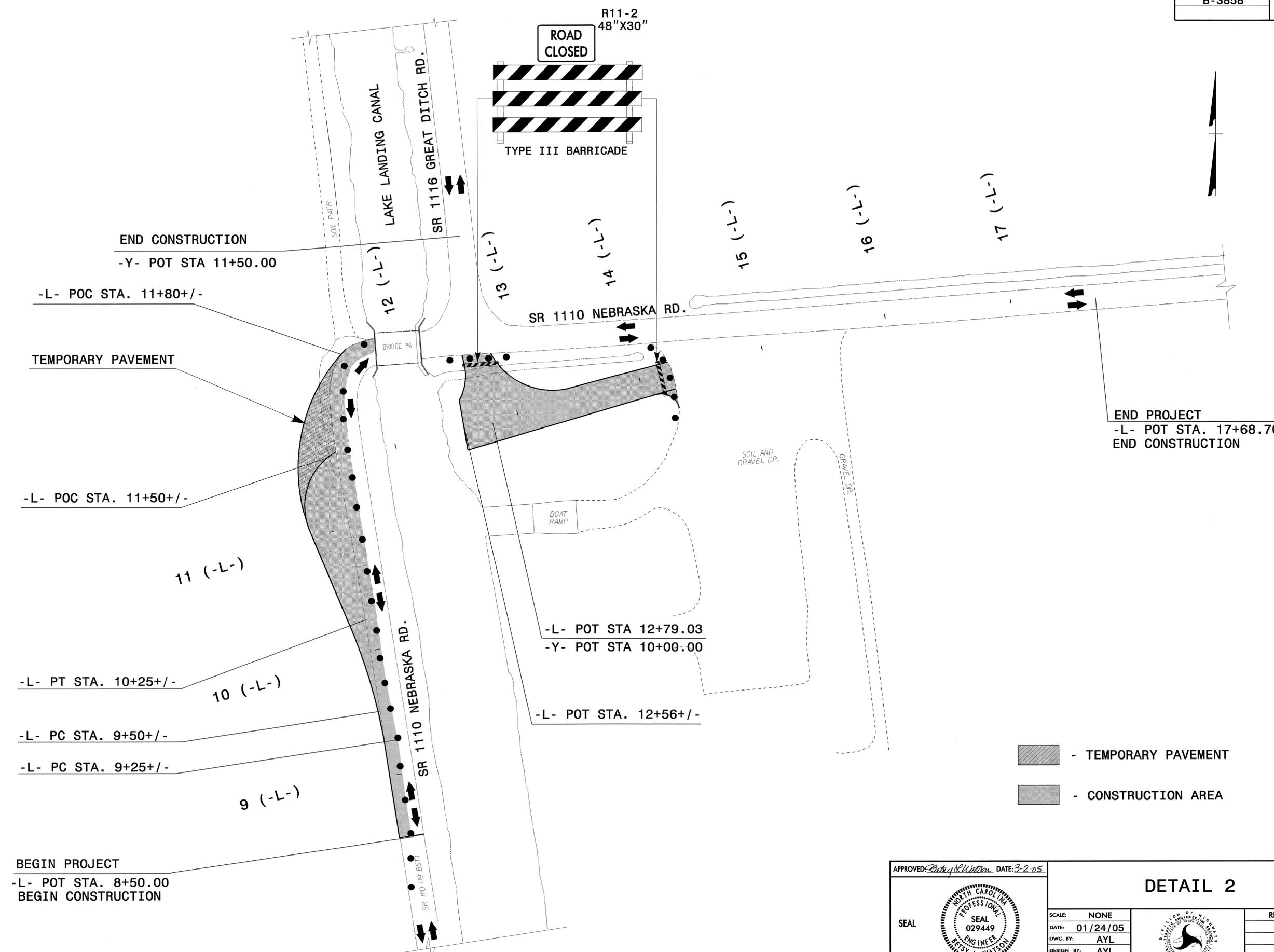
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DETAIL 1

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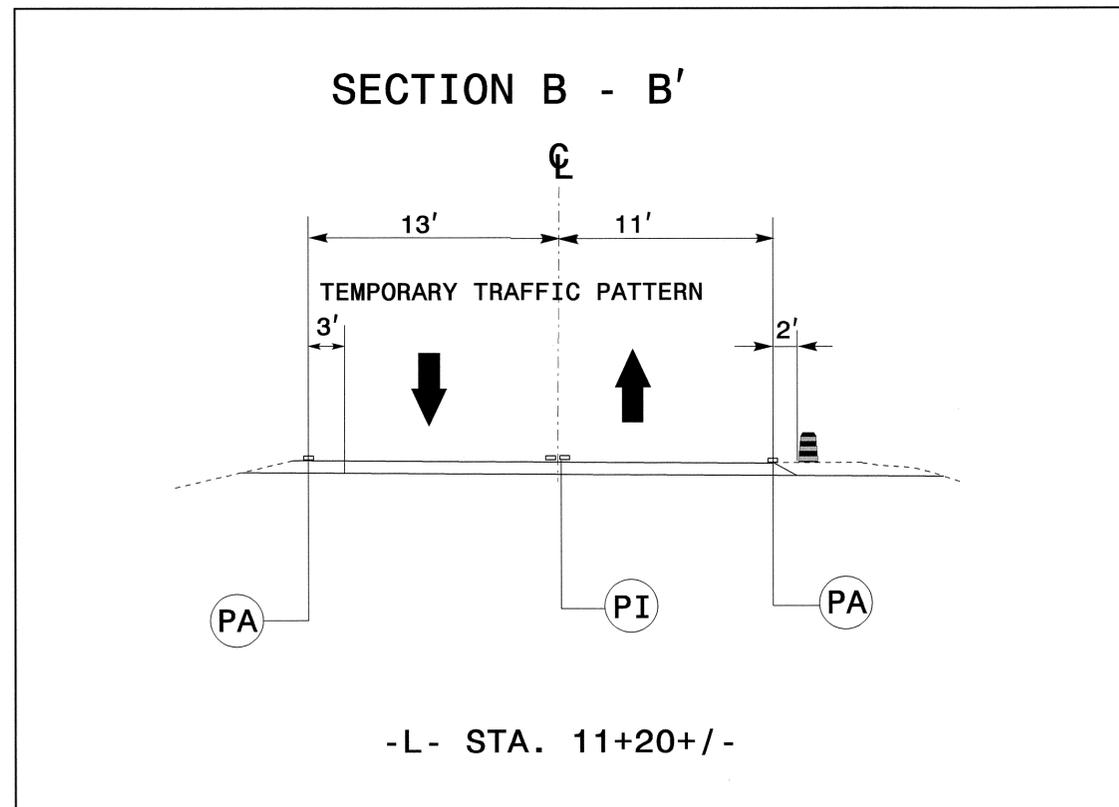
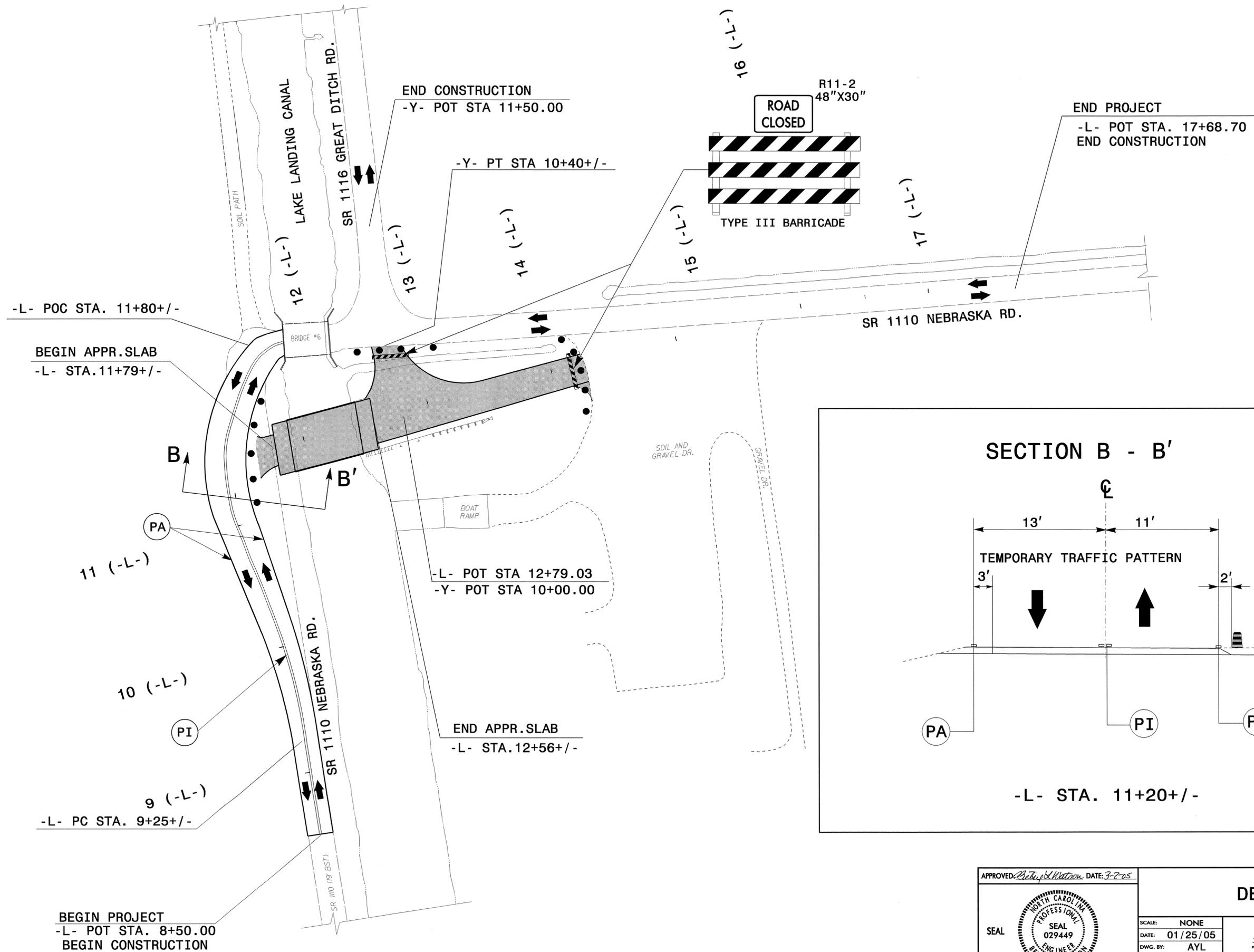
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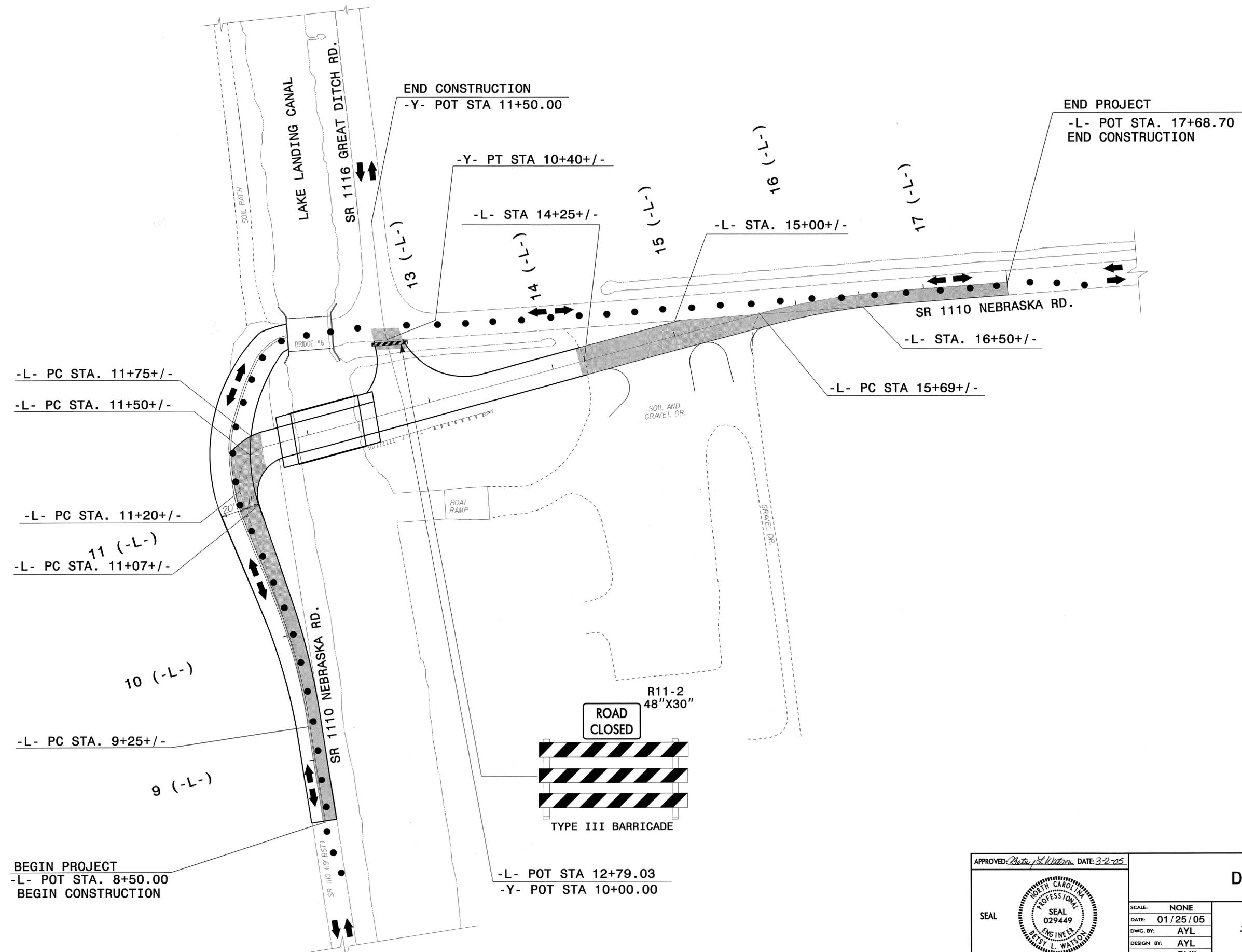
 - TEMPORARY PAVEMENT
 - CONSTRUCTION AREA

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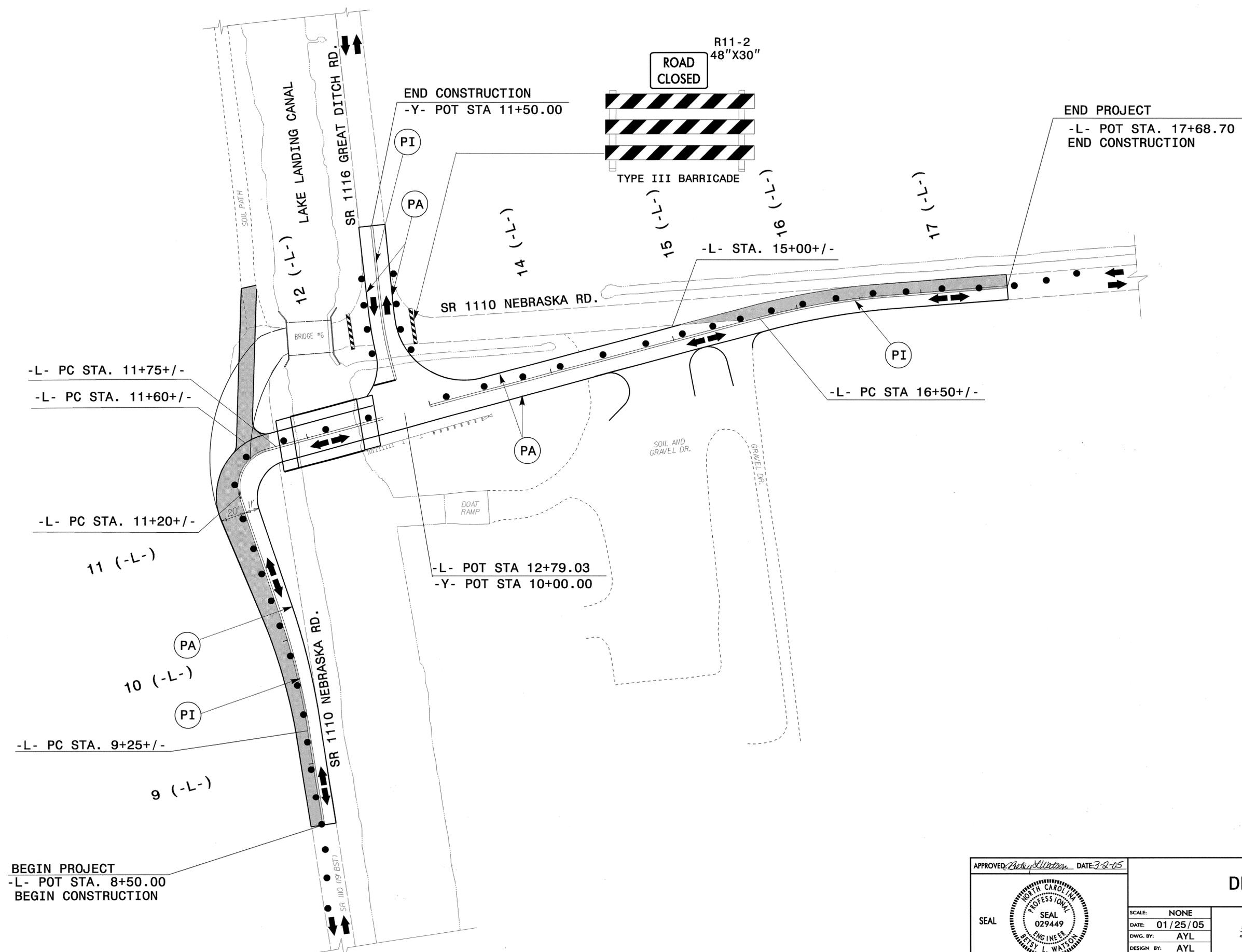
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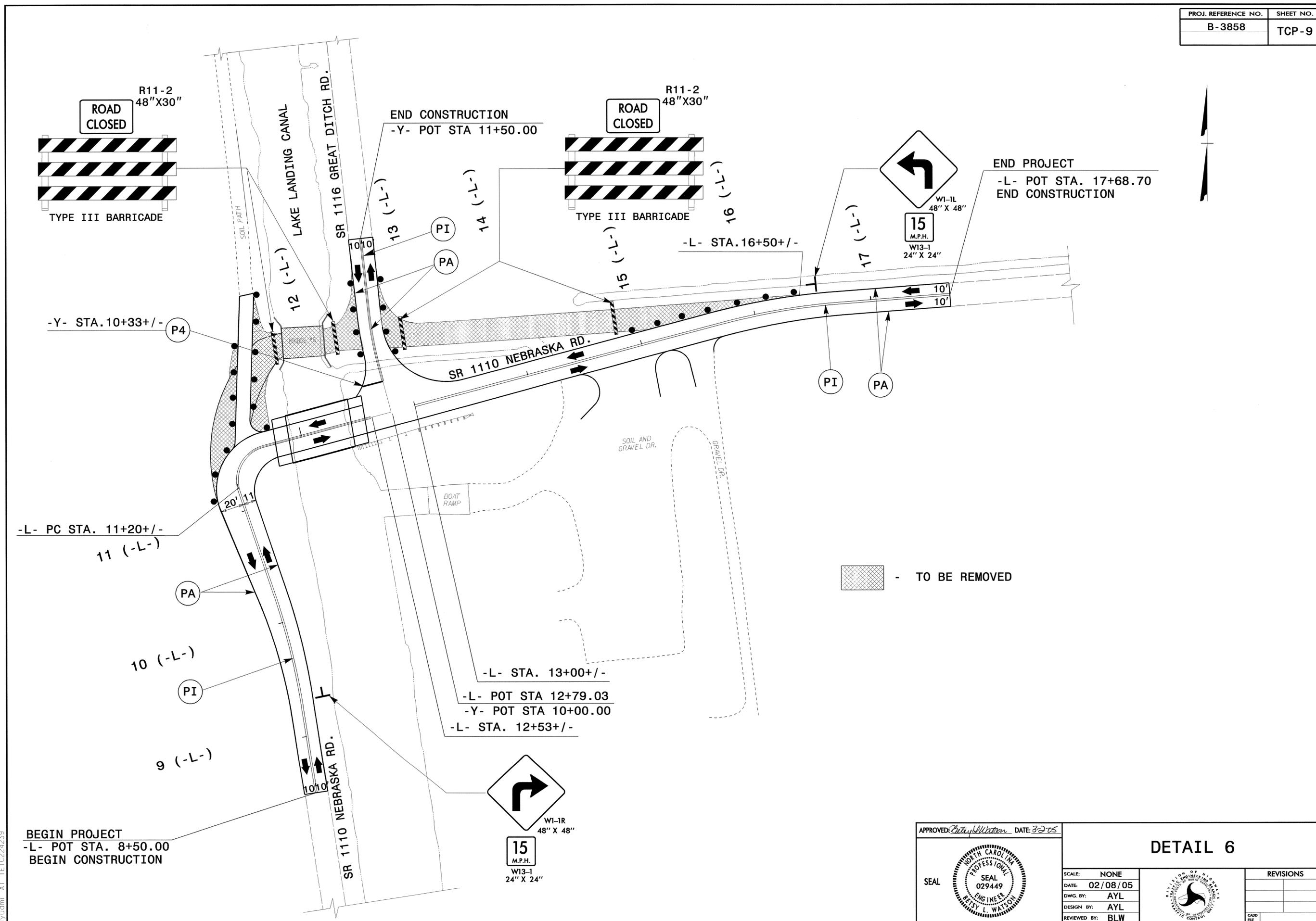
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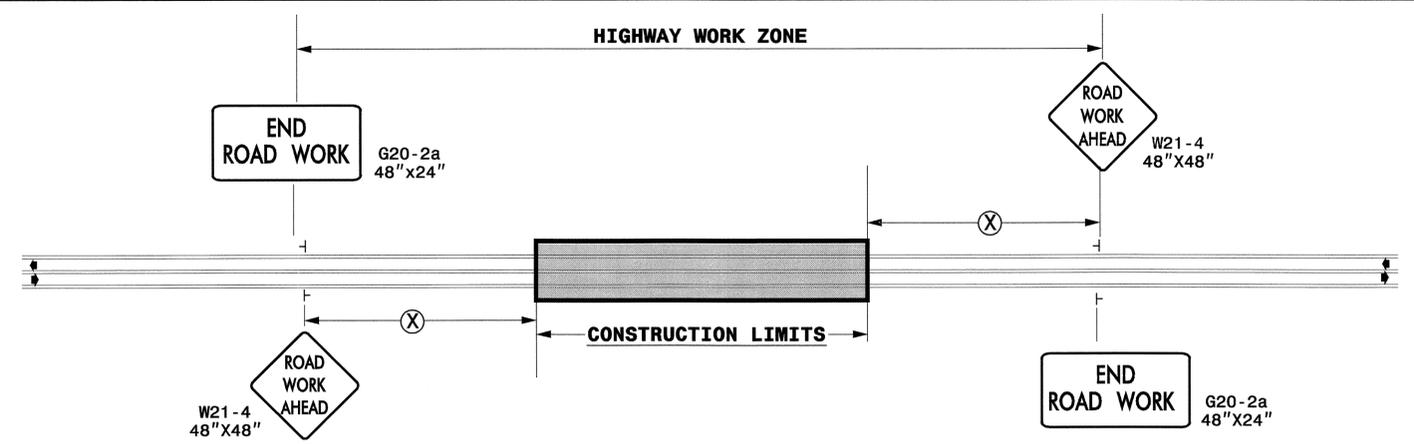
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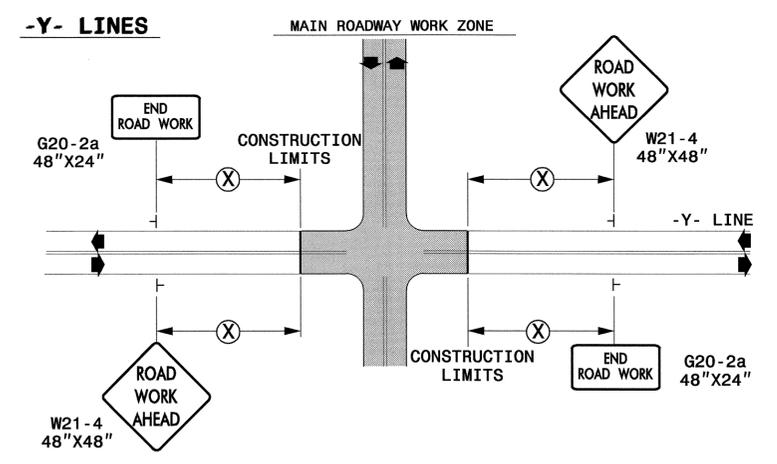
TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	500'
≥ 55	1000'

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



DETAIL DRAWING FOR
TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

┆ STATIONARY SIGN

◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

APPROVED: <i>[Signature]</i> DATE: 3-2-05	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS		
	SCALE: NONE		
	DATE: 01/13/05		REVISIONS
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	DESIGN BY: AYL		10-98 03/04
REVIEWED BY: BLW	01/01 11/04	CADD FILE	

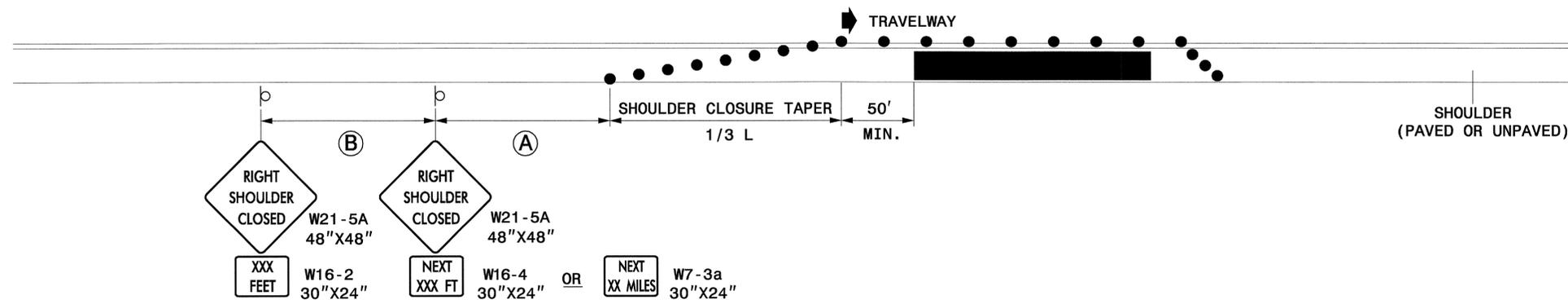
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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

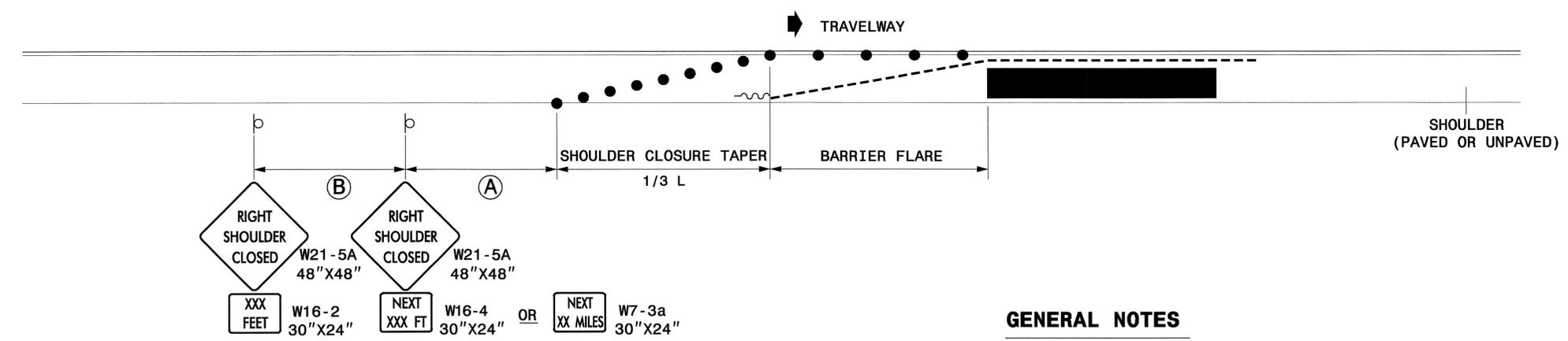
1-05

ENGLISH STANDARD DRAWING FOR
TEMPORARY SHOULDER CLOSURES

SHOULDER CLOSURES UTILIZING DRUMS



SHOULDER CLOSURES UTILIZING TEMPORARY BARRIER



GENERAL NOTES

- PLACE SHOULDER CLOSURE SIGNS ON THE SAME SIDE AS THE SHOULDER THAT IS CLOSED.
- PLACE DRUMS IN THE SHOULDER TAPER AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF DRUMS ALONG THE WORK AREA AND BARRIER FLARE IS EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
- FLARE THE APPROACH END OF PORTABLE CONCRETE BARRIER BEYOND THE SHOULDER AND USE A CRASH CUSHION FOR PROTECTION IF THE EXPOSED END OF THE BARRIER IS WITHIN THE "CLEAR ZONE".
- USE STATIONARY SIGNS FOR LONG TERM OPERATIONS (LONGER THAN 3 DAYS).
- REFER TO STD. 1101.11 SHEETS 1, 3, & 4, FOR "L" DISTANCE, BARRIER FLARE RATES, AND SIGN SPACING.

LEGEND

- ~ TEMPORARY CRASH CUSHION
- - - PORTABLE CONCRETE BARRIER
- DRUM
- STATIONARY OR PORTABLE SIGN
- ➔ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1
1101D04

SHEET 1 OF 1
1101D04

REPLACEMENT DETAIL FOR
RSD 1130.01

REPLACEMENT DETAIL FOR
RSD 1101.04

APPROVED: *Betsy L. Watson* DATE: 3-2-05

SEAL

SCALE: NONE
DATE: 11/04
DWG. BY: MMM
DESIGN BY: MMM
REVIEWED BY: MMM



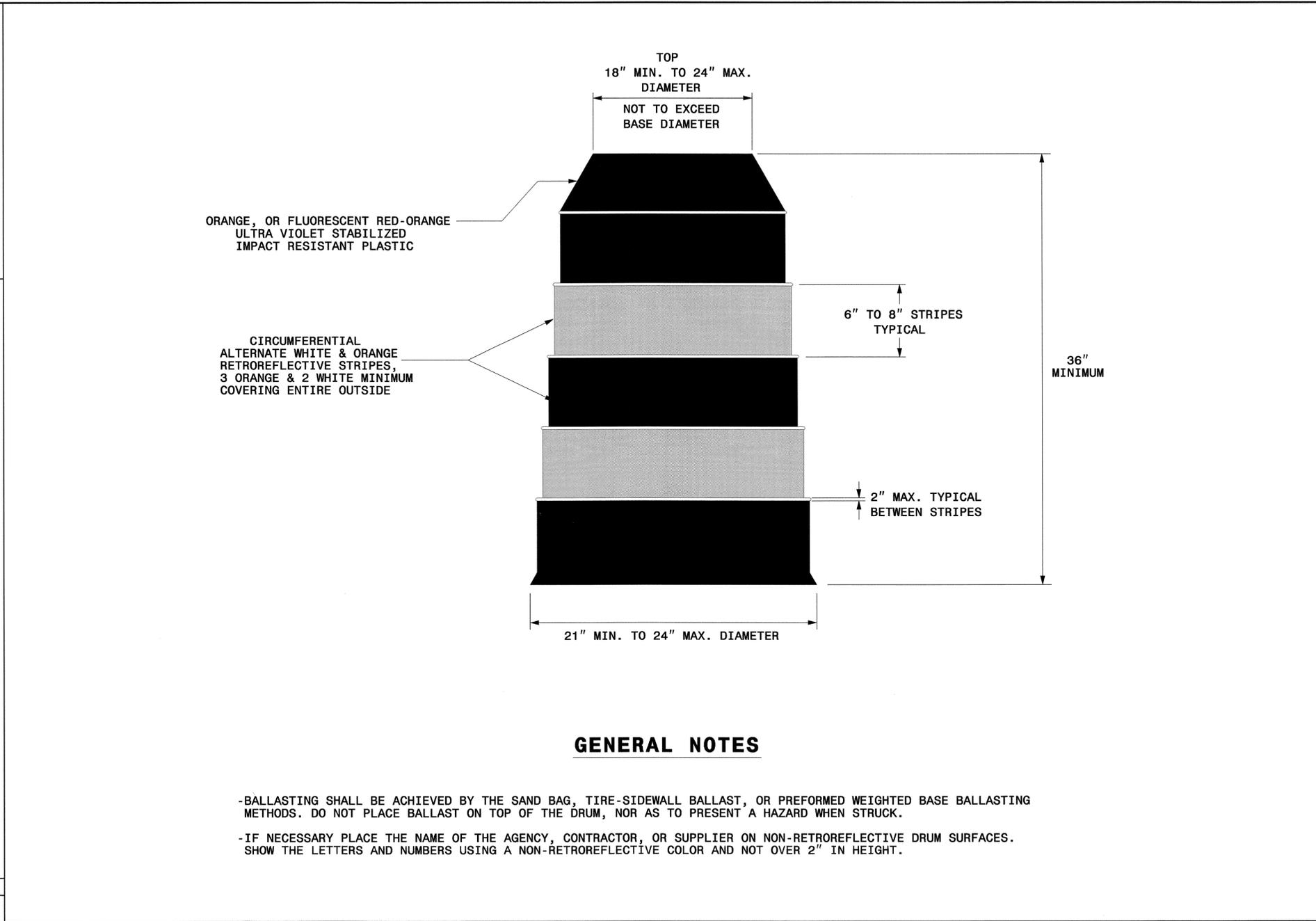
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ENGLISH STANDARD DRAWING FOR
DRUMS

SHEET 1 OF 1
1130D01



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RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
DRUMS

SHEET 1 OF 1
1130D01

GENERAL NOTES

- BALLASTING SHALL BE ACHIEVED BY THE SAND BAG, TIRE-SIDEWALL BALLAST, OR PREFORMED WEIGHTED BASE BALLASTING METHODS. DO NOT PLACE BALLAST ON TOP OF THE DRUM, NOR AS TO PRESENT A HAZARD WHEN STRUCK.
- IF NECESSARY PLACE THE NAME OF THE AGENCY, CONTRACTOR, OR SUPPLIER ON NON-RETROREFLECTIVE DRUM SURFACES. SHOW THE LETTERS AND NUMBERS USING A NON-RETROREFLECTIVE COLOR AND NOT OVER 2" IN HEIGHT.

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APPROVED: <i>Betsy J. Walter</i> DATE: 3-2-05		REPLACEMENT DETAIL FOR RSD 1130.01	
SCALE:	NONE		REVISIONS
DATE:	8/02		
DWG. BY:	MMM		
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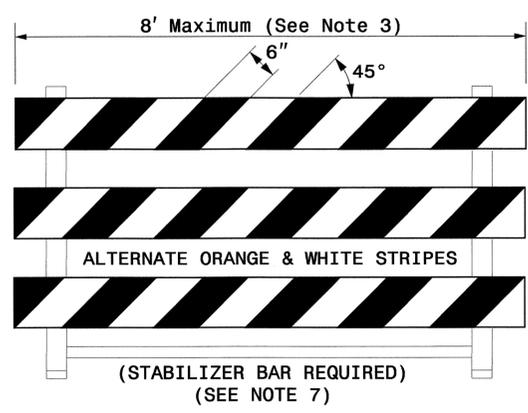
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1-05

ENGLISH STANDARD DRAWING FOR
BARRICADES
TYPE-III

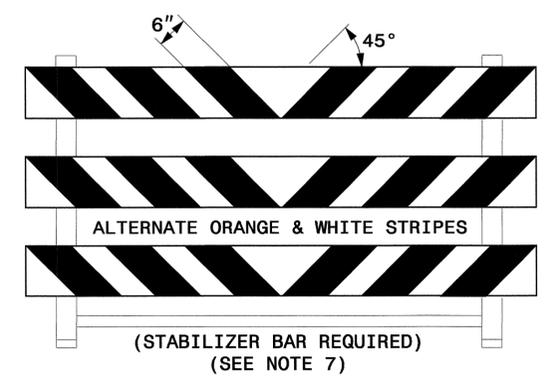
SHEET 1 OF 1
1145D01

TYPE III BARRICADE



TYPE III BARRICADE

END-OF-ROADWAY APPLICATIONS



GENERAL NOTES

- 1) HORIZONTAL RAILS FOR TYPE-III BARRICADES MAY BE HOLLOW/CORRUGATED EXTRUDED RIGID POLYOLEFIN, HIGH DENSITY POLYETHYLENE, OR OTHER NCDOT APPROVED RAILS. BARRICADE RAILS OF FRANGIBLE PLASTICS SUCH AS PVC MAY NOT BE USED. IF APPROVED PLASTIC TYPE RAILS ARE USED, THEY MUST BE FLAME TREATED BY THE MANUFACTURER SO THAT REFLECTIVE SHEETING MAY ADHERE PROPERLY.
- 2) BARRICADES AND BARRICADE RAILS ARE APPROVED AS A SINGLE UNIT.
- 3) BARRICADE SHALL BE LIMITED TO A MAXIMUM LENGTH OF 8 FT UNLESS NCHRP 350 CRASH TESTED AND NCDOT APPROVED.
- 4) ONLY NCDOT APPROVED COMPOSITE AND ROLL-UP SIGNS MAY BE MOUNTED ON THE BARRICADE.
- 5) SIGNS MOUNTED ON BARRICADES SHOULD NOT COVER MORE THAN 50 PERCENT OF THE TOP TWO RAILS OR 33 PERCENT OF THE TOTAL AREA OF THE THREE RAILS.
- 6) USE TYPE VII, VIII OR IX SHEETING ON BOTH SIDES OF THE RAILS.
- 7) BARRICADE MUST BE NCHRP 350 AND NCDOT APPROVED WITH STABILIZER BAR OR ADEQUATE LATERAL BRACING.
- 8) ASSEMBLY OF THE GENERIC BARRICADES MUST BE SELF CERTIFIED BY THE ASSEMBLER.
- 9) BARRICADES USED TO CLOSE A ROADWAY SHALL EXTEND ACROSS THE ENTIRE ROADWAY. WHERE LOCAL TRAFFIC MUST BE MAINTAINED, THEY MAY BE PLACED IN A STAGGERED PATTERN.
- 10) STRIPES ON WORK ZONE BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE RETROREFLECTIVE STRIPES, SLOPED DOWNWARD TOWARDS THE SIDE WHICH TRAFFIC IS TO PASS OR TURN IN DETOURING. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES. USE RED AND WHITE STRIPES FOR PERMANENT BARRICADES.
- 11) SEE APPROVED PRODUCTS LIST FOR MANUFACTURERS OF APPROVED BARRICADES.
- 12) PLACE MANUFACTURER'S NAME AND FEDERAL HIGHWAY ADMINISTRATION'S NCHRP 350 APPROVAL LETTER NUMBER ON BARRICADE.
- 13) USE SANDBAGS PLACED ON THE LOWER PART OF THE FRAME FOR BALLASTING. DO NOT PLACE SANDBAGS ON TOP OF A STRIPED RAIL. DO NOT BALLAST BARRICADES BY HEAVY OBJECTS SUCH AS ROCKS, CHUNKS OF CONCRETE OR OTHER ITEMS THAT WOULD CAUSE DAMAGE IF THE BARRICADE IS STRUCK BY A VEHICLE.

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1-05

ENGLISH STANDARD DRAWING FOR
BARRICADES
TYPE-III

SHEET 1 OF 1
1145D01

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APPROVED: <i>Barbara Wilson</i> DATE: 3-2-05		REPLACEMENT DETAIL FOR RSD 1145.01									
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