



BILL OF MATERIALS

	MOBILIZATION	BRIDGE JACKING	SPAN RE-POSITIONING	REPLACEMENT OF BRIDGE BEARINGS (TYPE P1)	REPLACEMENT OF BRIDGE BEARINGS (TYPE P2)	REPLACEMENT OF BRIDGE BEARINGS (TYPE P3)
UNIT	LS	EA	EA	EA	EA	EA
QUANTITY	LS	5	2	15	10	10

CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO VERIFY INFORMATION SHOWN ON THESE PLANS AND SHALL OBTAIN ALL OTHER EXISTING BRIDGE DATA NECESSARY FOR THE EXECUTION OF THE WORK.

ANCHOR BOLTS SHALL CONFORM TO EITHER ASTM A572. GRADE 50 OR EQUIVALENT AND SHALL BE GALVANIZED. ALL ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIAL PROVISIONS FOR "ADHESIVELY ANCHORED ANCHOR BOLTS". GALVANIZING OF ANCHOR BOLTS, NUTS AND WASHER SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

STEEL SOLE PLATES FOR TYPE P1 BEARING SHALL CONFORM WITH ASTM A36 AND SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. STEEL SOLE PLATE FOR TYPE P2 AND P3 BEARING SHALL CONFORM TO ASTM A36 AND BE METALLIZED AFTER VULCANIZE BONDING TO THE ELASTOMER. METALLIZING SHALL CONFORM TO AWS C2.2 AND SHALL HAVE A MINIMUM COATING THICKNESS OF 4 MILS.

PRIOR TO JACKING THE SPANS, LOCATE THE APPROXIMATE POSITION OF THE ANCHOR BOLT HOLES ON EACH CAP. USING A PACHOMETER, CHECK THE CAP FOR MAIN REINFORCING STEEL INTERFERENCE WITH THE HOLES. IF NECESSARY, ADJUST THE HOLE LOCATIONS SLIGHTLY TO AVOID REINFORCING STEEL AND MARK THE LOCATIONS, DRILL THE HOLES AND CLEAN IN ACCORDANCE WITH THE SPECIAL PROVISION "ADHESIVELY ANCHORED ANCHOR BOLTS". CLEAN THE CAP OF DEBRIS. ALSO PRIOR TO JACKING, THE CONTRACTOR SHALL HAVE ALL MATERIALS NECESSARY FOR REPLACEMENT OF THE BEARING. UNLESS OTHERWISE APPROVED BY THE ENGINEER.

FOR SPANS THAT REQUIRE HORIZONTAL REPOSITIONING, REPLACE THE EXISTING BEARINGS, OR SLIDING DEVICES IF APPLICABLE, UNDER BOTH ENDS OF THE SPAN DURING THE FINAL VERTICAL JACKING OPERATION. IF THE ADJACENT SPAN AT EITHER BENT DOES NOT REQUIRE HORIZONTAL REPOSITIONING, REPLACE THE BEARINGS UNDER THAT SPAN END DURING THE FINAL VERTICAL JACKING OPERATION. IF THE ADJACENT SPAN AT EITHER BENT DOES REQUIRE HORIZONTAL REPOSITIONING, DO NOT REPLACE THE BEARING UNDER THAT SPAN END UNTIL IT IS REPOSITIONED.

NOTES:

LOWER THE SPANS AND OPEN THE BRIDGE TO TRAFFIC ONCE THE NEW BEARINGS ARE IN THE CORRECT POSITION. WELDING AND BOLT INSTALLATION SHALL BE PERFORMED WHILE THE BRIDGE IS OPEN TO TRAFFIC AND WITHIN 24 HOURS OF THE SPAN WAS FIRST JACKED.

DO NOT PERMIT TRAFFIC ON THE SPANS WHILE JACKS SUPPORT IT AND WHEN SLIDING PLATES ARE INSTALLED UNDER THE GIRDERS WITHOUT BLOCKING OR RESTRAINT.

REPLACE BEARING ON THE EXTERIOR GIRDERS OF ALL SPANS INVOLVED WITH TYPE P2 BEARINGS.REPLACE BEARINGS ON THE INTERIOR GIRDER OF THE EXPANSION END OF ALL SPANS INVOLVED WITH TYPE P3 BEARINGS. REPLACE BEARINGS ON THE INTERIOR GIRDERS OF THE FIXED END OF ALL SPANS INVOLVED WITH TYPE P1 BEARINGS. STEEL SOLE PLATES AND ANCHOR BOLTS.

DO NOT LEAVE SLIDING PLATES IN PLACE UNATTENDED, SLIGHT CHANGE IN TEMPERATURE MIGHT CAUSE BRIDGE TO MOVE DOWN.

UPON REMOVAL OF EXISTING BEARINGS, CLEAN THE CAP AND REMOVE ANY EPOXY COATING FROM THE AREA WHERE THE NEW BEARING WILL REST.

REPLACE BEARING ON THE EXTERIOR GIRDERS OF ALL SPANS INVOLVED WITH TYPE P2 BEARINGS. REPLACE BEARINGS ON THE INTERIOR GIRDER OF THE EXPANSION END OF ALL SPANS INVOLVED WITH TYPE P3 BEARINGS. REPLACE BEARINGS ON THE INTERIOR GIRDERS OF THE FIXED END OF ALL SPANS INVOLVED WITH TYPE P1 BEARINGS, STEEL SOLE PLATES AND ANCHOR BOLTS.

GRIND SURFACES OF THE SOLE PLATES THAT HAVE BEEN METALLIZED IN AND AROUND THE AREA OF THE PLATE THAT IS TO BE WELDED.

INSTALL BEARINGS AS SHOWN.FOR TYPE P1 BEARINGS, POSITION THE SOLE PLATE AND TYPE P1 BEARING TO ALIGN WITH THE PREVIOUSLY DRILLED HOLES IN THE CAP.JACKS AND BLOCKING MAY BE REMOVED ONCE THE NEW BEARINGS ARE IN POSITION AND THE SPAN LOWERED.

WHEN WELDING THE SOLE PLATE TO THE EMBEDDED P GIRDER, USE TEMPERATURE INDICATING WAX PENS, OF MEANS, TO ENSURE THAT THE TEMPERATURE OF THE S DOES NOT EXCEED 300 F. TEMPERATURES ABOVE THI FLASTOMER.

WELDS SHALL BE MADE IN ONE PASS USING A MAXI ELECTRODE, AND THEN ALLOWED TO COOL BEFORE MAK ANOTHER PASS. APPLY TWO COATS OF ZINC-RICH PAI WELDED AREAS AND ANY DAMAGED AREAS IN ACCORD THE SPECIFICATIONS.

INSTALL BOLTS USING APPROVED ADHESIVE BONDING ALLOW ADHESIVE TO CURE BEFORE INSTALLING NUT WASHER TIGHTEN FINGER TIGHT AND THEN BACK OF THE THREAD OF THE NUT AND BOLT SHALL THEN BE WITH A SHARP POINTED TOOL.

REAPPLY EPOXY COATING TO CAP IF, AFTER THE BEA INSTALLED, UNCOATED PORTIONS OF THE CAP AREA A THE BEARING ARE EXPOSED OR PORTIONS OF THE EX EPOXY ARE DAMAGE. SEE SPECIAL PROVISIONS FOR PROTECTIVE COATING."

PROCEED TO THE NEXT SPANS UNTIL ALL BEARING O ARE PLACED.

SEE SPECIAL PROVISIONS FOR "REPLACEMENT OF B BEARINGS."

SEE SPECIAL PROVISIONS FOR "BRIDGE JACKING". SEE SPECIAL PROVISIONS FOR "SPAN REPOSITION

DRAWN BY : S. T. SANDOR DATE : DEC./2009 CHECKED BY : A. ABRAHA DATE : JAN./2010

> \$\$\$\$\$\$\$SYSTIME\$\$\$\$ \$\$\$\$USERNAME\$\$\$



ELASTOMERIC BEARING						
TYPE		TOTAL NO.	LOCATION			
	ELASTOMERIC PAD	15				
P1	SOLE PLATE	15	BT. 33, 34, 35.			
	ANCHOR BOLTS	30				
P2 *		10	BT. 33, 34, 35.			
P3 *		10	BT.34 & 35.			

* STEEL SOLE PLATE VULCANIZE BONDED TO ELASTOMER

PLATE IN THE R OTHER SUITABLE SOLE PLATE S MAY DAMAGE THE							
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G AGENT. AND 1/2 TURN. BURRED							
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"EPOXY	ST.	ΔΤΤΟ)N:		N/A	<u> </u>	
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∑ X ¹ / ₂ ″ PLATE	PROJECT NO. <u>B-4700AS</u> COUNTY: <u>CARTERET</u> STATION: <u>N/A</u> BRIDGE NO. <u>68</u>
→	

- € BENT CAP





ING							
"							
HP 12×53							
✓ /⁄₂″ PLATE							
<u>3½"</u>							
A490-F BOLT							
PRECAST DECK PANE	ĒL						
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STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

PLAN FOR PROPOSED TRAFFIC CONTROL

CARTERET COUNTY

LOCATION: BRIDGE NO. 68 SR 1182 (MOREHEAD AVENUE) OVER BOGUE SOUND TYPE OF WORK: TRAFFIC CONTROL FOR BRIDGE SPAN JACKING

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE	
1110.02	PORTABLE WORK ZONE SIGNS	
1115.01	FLASHING ARROW PANELS	
1130.01	DRUMS	
1145.01	BARRICADES	-
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR	

INDEX OF SI	HEETS
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SHEET NO.	TITLE	
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, INDEX OF SHEETS	LEGEN
TCP-2	GENERAL NOTES AND TRAFFIC CONTROL PHASING	
TCP-3	RIGHT LANE CLOSURE FROM US 70 APPROACH	
TCP-4	RIGHT LANE CLOSURE FROM NC 58 APPROACH	
TCP-5	ROAD CLOSURE DETOUR ROUTE	S.
TCP-6	ROAD CLOSURE DETAIL US 70 APPROACH	
TCP-7	ROAD CLOSURE DETAIL NC 58 APPROACH	
-		



GENERA	L NOTES	
NGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL	LANE AND SHOULDER CLOSURE REQUIREMENTS	
WINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO T FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.	D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE, WHEN A LANE CLOSURE IS NO LONGER NEEDED OR WHEN APPLICABLE LANE CLOSURE TIME RESTRICTIONS APPLY AND AT ANY OTHER TIME WHEN DIRECTED BY THE ENGINEER.	<u>STE</u> PRI AND
FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OFTHE ISTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR RECTED BY THE ENGINEER.	E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.	CHA BEF AS
<u>IE RESTRICTIONS</u>		KEF
DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:	TRAFFIC PATTERN ALTERATIONS	STE
DAY AND TIME RESTRICTIONS 1182 7:00 A.M9:00 A.M. MONDAY THRU THURSDAY 7:00 A.M. FRIDAY THRU 7:00 A.M. MONDAY	F) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.	PER (TC
DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL	SIGNING	STE
EVENTS AS FOLLOWS:	G) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING	INT
1182	TO THE TRAFFIC CONTROL PLANS. COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.	CON
LIDAY	H) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.	WEI DUF
FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.		HOP
FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 P.M. DECEMBER 31st TO	MISCELLANEOUS	ЗA
7:00 A.M. JANÚARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 A.M. THE FOLLOWING TUESDAY.	I) USE LAW ENFORCEMENT TO DIRECT TRAFFIC AND ENFORCE ROAD CLOSURES. LOCATIONS SHOWN IN THE PLANS ARE APPROXIMATE AND MAY BE REVISED AS	3B
FOR EASTER, BETWEEN THE HOURS OF 6:00 P.M. THURSDAY AND 7:00 A.M. MONDAY.	THE OFFICER OR THE ENGINEER DEEM NECESSARY.	3C
FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 P.M. FRIDAY TO 7:00 A.M. TUESDAY.	J) ALL DIMENSIONS AND STATIONS IN THE TRAFFIC CONTROL PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.	3D
FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 A.M. THE DAY AFTER INDEPENDENCE DAY	K) MAINTAIN DRIVEWAY ACCESS AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY ENGINEER.	
IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.	L) PLACE ALL CHANGEABLE MESSAGE SIGNS AS NEEDED IN THE LOCATIONS AND WITH THE WORD MESSAGES AS SHOWN IN THE TCP OR AS DIRECTED BY THE ENGINEER TO PROVIDE ADVANCE WARNING TO THE PUBLIC DURING CONSTRUCTION.	
FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 P.M. FRIDAY AND 7:00 A.M. TUESDAY.	M) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.	
FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 P.M. TUESDAY TO 7:00 A.M. MONDAY.		
FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.		
DO NOT CLOSE ROADS AS FOLLOWS:		
AD NAME DAY AND TIME RESTRICTIONS 1182 4:00 A.M11:59 P.M. MONDAY THRU WEDNESDAY 4:00 A.M. THURSDAY THRU 11:59 P.M. SUNDAY		

B-4700AS Car dkarageorge

Т	PROJECT REFERENCE NO.	SHEET NO.
	B-4700AS	TCP-2

TRAFFIC CONTROL PHASING

BEGINNING ANY BRIDGE WORK, INSTALL CHANGEABLE MESSAGE SIGNS AM MESSAGES FOR PUBLIC INFORMATION.

MESSAGE SIGNS SHOULD BE INSTALLED APPROXIMATELY ONE WEEK GINNING WORK. INSTALL SIGN IN LOCATIONS AND WITH MESSAGES ED BY THE ENGINEER.

SHEETS TCP 3-7 FOR CMS USE DURING LANE AND ROAD CLOSURES.

NSTALLATION OF SPAN BLOCKING USING RIGHT LANE CLOSURES CP-4).

ATE CONTRACT TIME SPECIAL PROVISION

THE WORK REQUIRED OF STEPS 3A-3D USING NIGHTLY ROAD CLOSURES HE HOURS OF 12 A.M. MIDNITE TO 4 A.M. ON A MONDAY, TUESDAY OR THURSDAY. A MAXIMUM OF SIX (6) ROAD CLOSURE PERIODS ABOVE MENTIONED HOURS WILL BE ALLOWED TO COMPLETE JACKING (REPOSITIONING) OF THE SPANS.

LL ROAD CLOSURE SIGNS, REVISE CHANGEABLE SIGN MESSAGES AND RE LAW ENFORCEMENT IS PREPARED TO BE IN PLACE.

LAW ENFORCEMENT IN PLACE INSTALL TYPE III BARRICADES WITH CLOSURE SIGNS AND CLOSE BRIDGE #68 (SR 1182) TO THRU TRAFFIC.

RM SPAN JACKING OPERATIONS.

E TYPE III BARRICADES THEN REMOVE ROAD CLOSURE SIGNS AND PEN SR 1182 TO THE EXISTING TRAFFIC PATTERN. REVISE CHANGEABLE MESSAGES.











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