

**EXPANSION JOINT DETAILS
SECTION B-B AT BENT 1**

SUGGESTED REPAIR INSTALLATION PROCEDURE

1. LOOSEN THE EXISTING BOLTS AND HOLD-DOWN PLATES TO REMOVE AND REPLACE THE EXISTING GLAND.
2. REMOVE EXISTING BOLTS, COVER-PLATES, HOLD-DOWN PLATES AND GLAND AND CLEAN EXISTING BOLTS AND HOLD-DOWN PLATES FOR RE-USE.
3. REMOVE THE EXISTING NEOPRENE SEALANT AND CLEAN THE EXISTING BASE ANGLE AND BOLT HOLES OF OIL, GREASE AND OTHER LATENTS.
4. LAY THE NEW GLAND ON THE BASE ANGLE AND FIELD MARK THE NEW GLAND FOR THE BOLT HOLES. HOLES IN THE NEW GLAND SHALL BE PUNCHED 7/8" IN DIAMETER WITH A HAND PUNCH.
5. IN ORDER TO CHECK FOR PROPER ALIGNMENT, PLACE THE NEW GLAND AND HOLD-DOWN PLATES ON THE BASE ANGLE. DO NOT APPLY NEW NEOPRENE SEALANT. BOLT THE HOLD-DOWN PLATES TO THE BASE ANGLE, BUT DO NOT TIGHTEN. THE ENGINEER WILL INSPECT THE JOINT SEAL DEVICE FOR PROPER ALIGNMENT.
6. AFTER INSPECTION, REMOVE THE HOLD-DOWN PLATES AND NEW GLAND. APPLY NEW NEOPRENE SEALANT TO THE BASE ANGLE IN ACCORDANCE WITH THE "INSTALLATION SKETCH". PLACE NEW GLAND AND HOLD-DOWN PLATES ON THE BASE ANGLE. BOLT THE HOLD-DOWN PLATES TO THE BASE ANGLE ASSEMBLY AND TORQUE THE BOLTS TO 88 FT-LBS WITH A TORQUE WRENCH. CHECK THE TORQUE AFTER THREE (3) HOURS AND, IF NECESSARY, RETIGHTEN TO 88 FT-LBS. A FINAL CHECK SHALL BE MADE AT SEVEN (7) DAYS. TORQUE SHALL NOT BE LESS THAN 80 FT-LBS AFTER SEVEN (7) DAYS.
7. AFTER PROPER TORQUING, CLEAN THE BOLT HOLE RECESSES AND THE RECESS BETWEEN THE JOINT SEAL DEVICE AND CONCRETE. COMPLETELY FILL THESE RECESSES WITH NEW NEOPRENE SEALANT.
8. CONDUCT WATER-TIGHTNESS TEST.

GENERAL NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPENING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN 1/4", NOTIFY THE ENGINEER.

THE MANUFACTURER IS TO PROVIDE THE NOMINAL GLAND SIZE BASED ON EXISTING JOINT OPENINGS AND ANTICIPATED MOVEMENTS.

THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE, WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

RETAIN ALL EXISTING HOLD-DOWN PLATES AND HARDWARE. CLEAN AND REPAIR AS NEEDED. CONTRACTOR SHALL REPLACE DAMAGED HOLD-DOWN PLATES AND/OR HARDWARE AS NEEDED OR DIRECTED BY THE ENGINEER AT NO EXTRA COST TO THE DEPARTMENT.

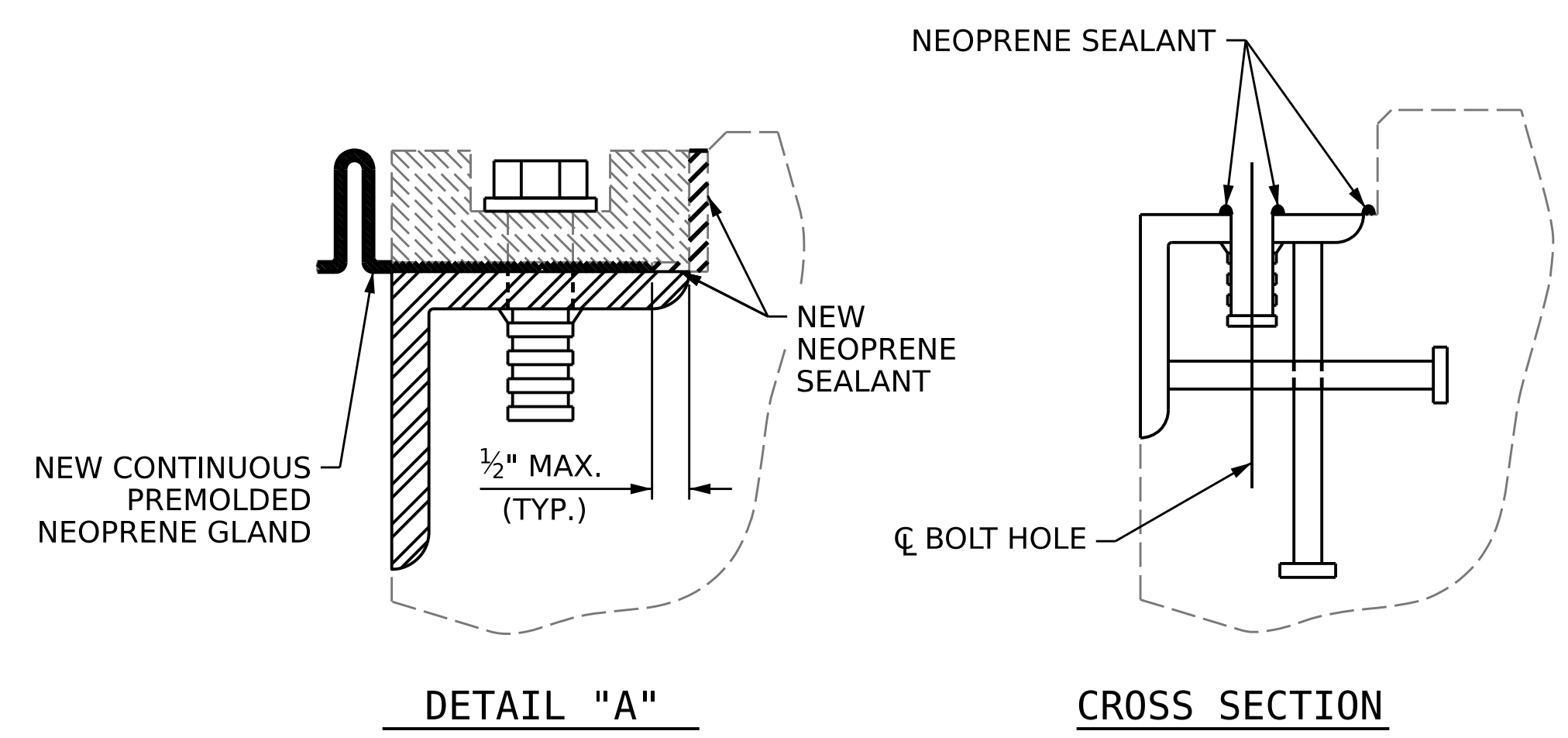
ALL HOLD-DOWN BOLTS SHALL CONFORM TO ASTM F593 ALLOY 304 STAINLESS STEEL AND WASHERS SHALL CONFORM TO ASTM F844 EXCEPT THEY SHALL BE MADE FROM ALLOY 304 STAINLESS STEEL.

FOR EXPANSION JOINT SEAL FOR PRESERVATION, SEE SPECIAL PROVISIONS.

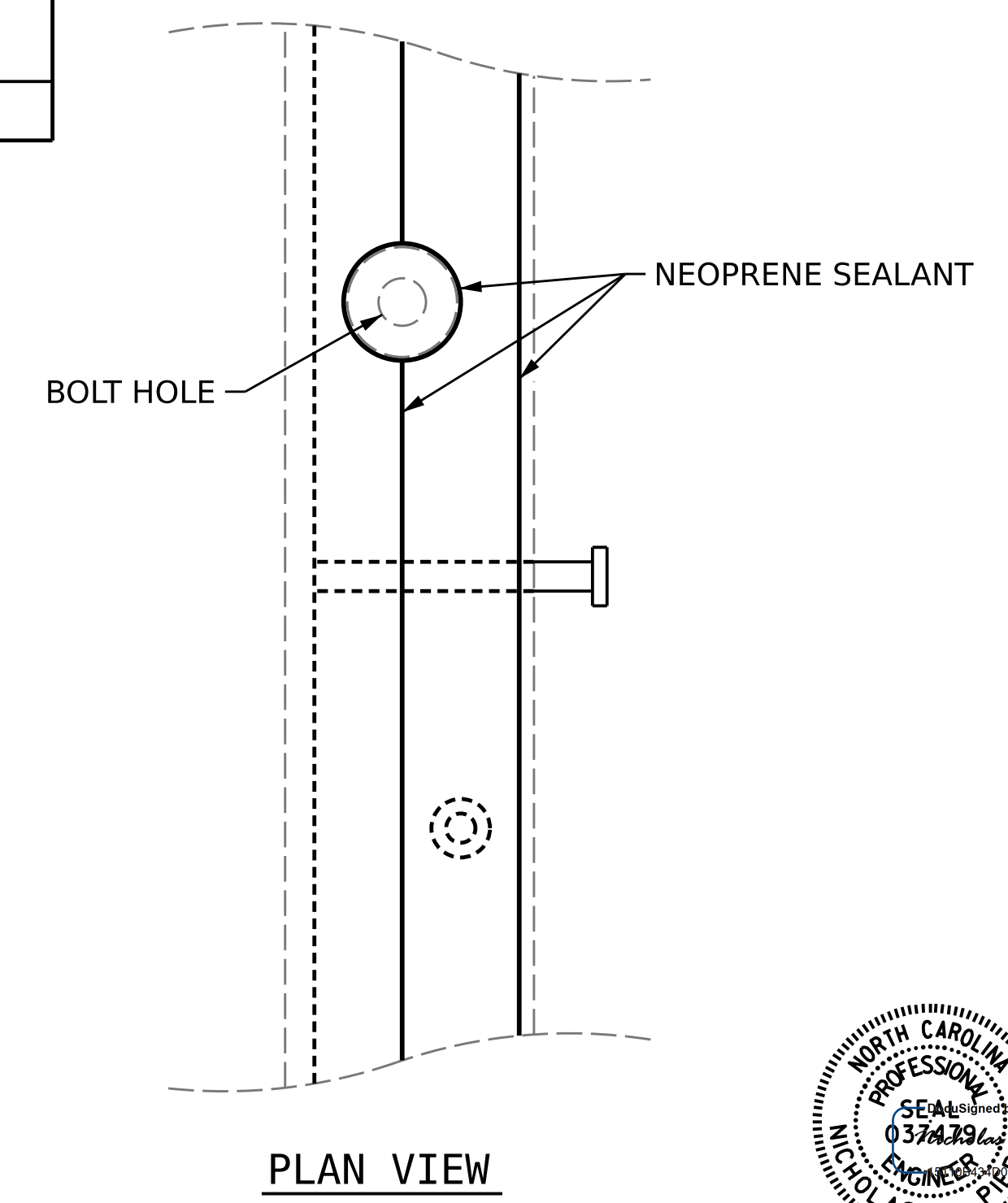
NO SEPARATE PAYMENT WILL BE MADE FOR REMOVING AND REINSTALLING MEDIAN, SIDEWALK AND BARRIER RAIL COVER PLATES. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE LINEAR FEET PRICE BID FOR "EXPANSION JOINT SEALS FOR PRESERVATION".

MOVEMENT AND SETTING AT JOINT					
LOCATION	SKIEW ANGLE	TOTAL MOVEMENT (ALONG ϕ RDWY)	PERPENDICULAR JOINT OPENING AT 30°F	PERPENDICULAR JOINT OPENING AT 60°F	PERPENDICULAR JOINT OPENING AT 90°F
BENT 1	54°11'31"	2 3/8"	3 1/2"	3"	2 1/2"

JOINT REPAIR QUANTITY TABLE		
	ESTIMATED	ACTUAL
EXPANSION JOINT SEALS FOR PRESERVATION	138.8 LIN. FT.	



INSTALLATION SKETCH



DRAWN BY : N.A. PIERCE DATE : 03/2022
 CHECKED BY : A.Y.GODFREY DATE : 10/2022
 DESIGN ENGINEER OF RECORD: N.A. PIERCE DATE : 12/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. **15BPR.59**
DURHAM COUNTY
 BRIDGE NO. **310306**

SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD

EXPANSION JOINT SEAL REPAIR DETAILS



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S1-06
2			4			TOTAL SHEETS 15