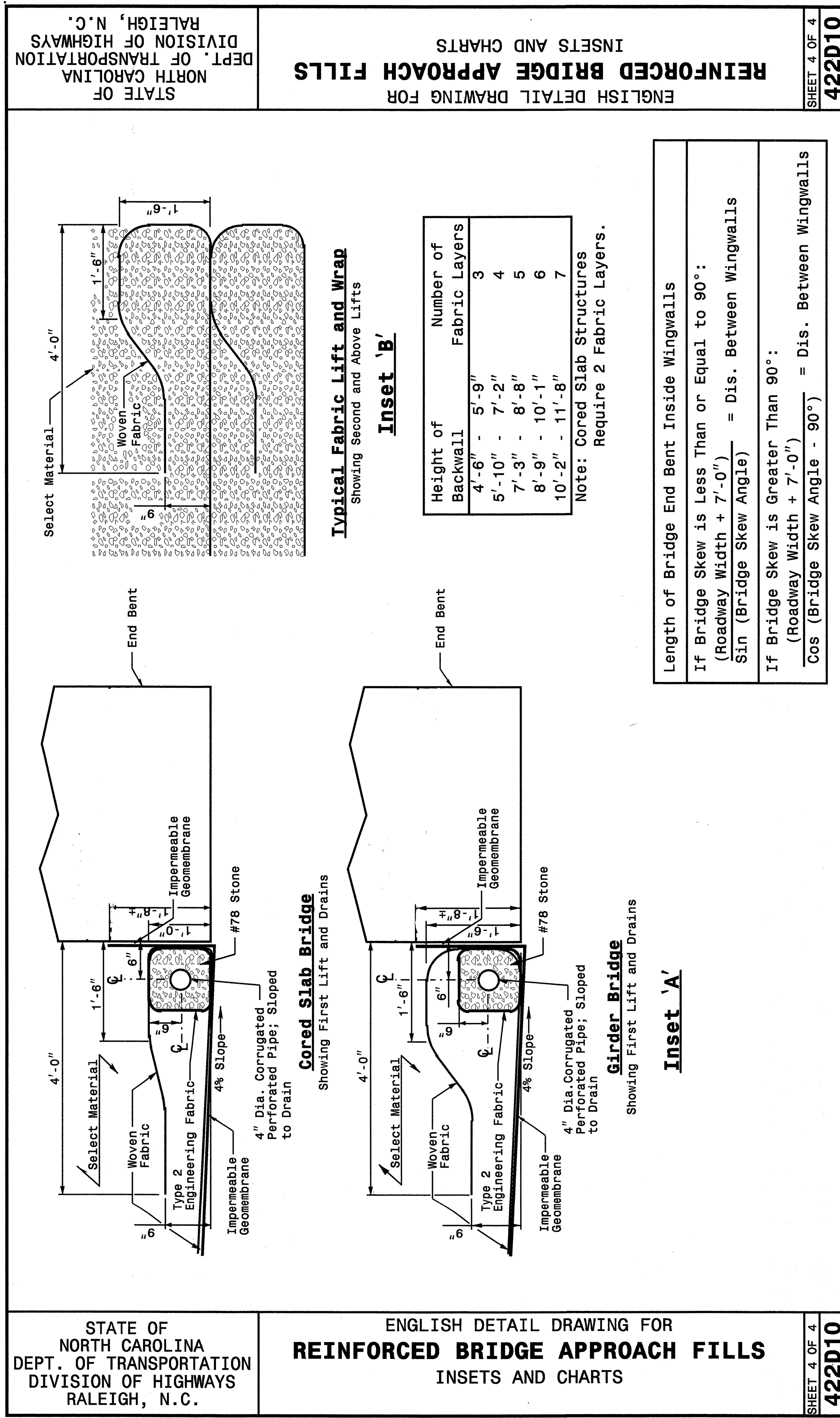
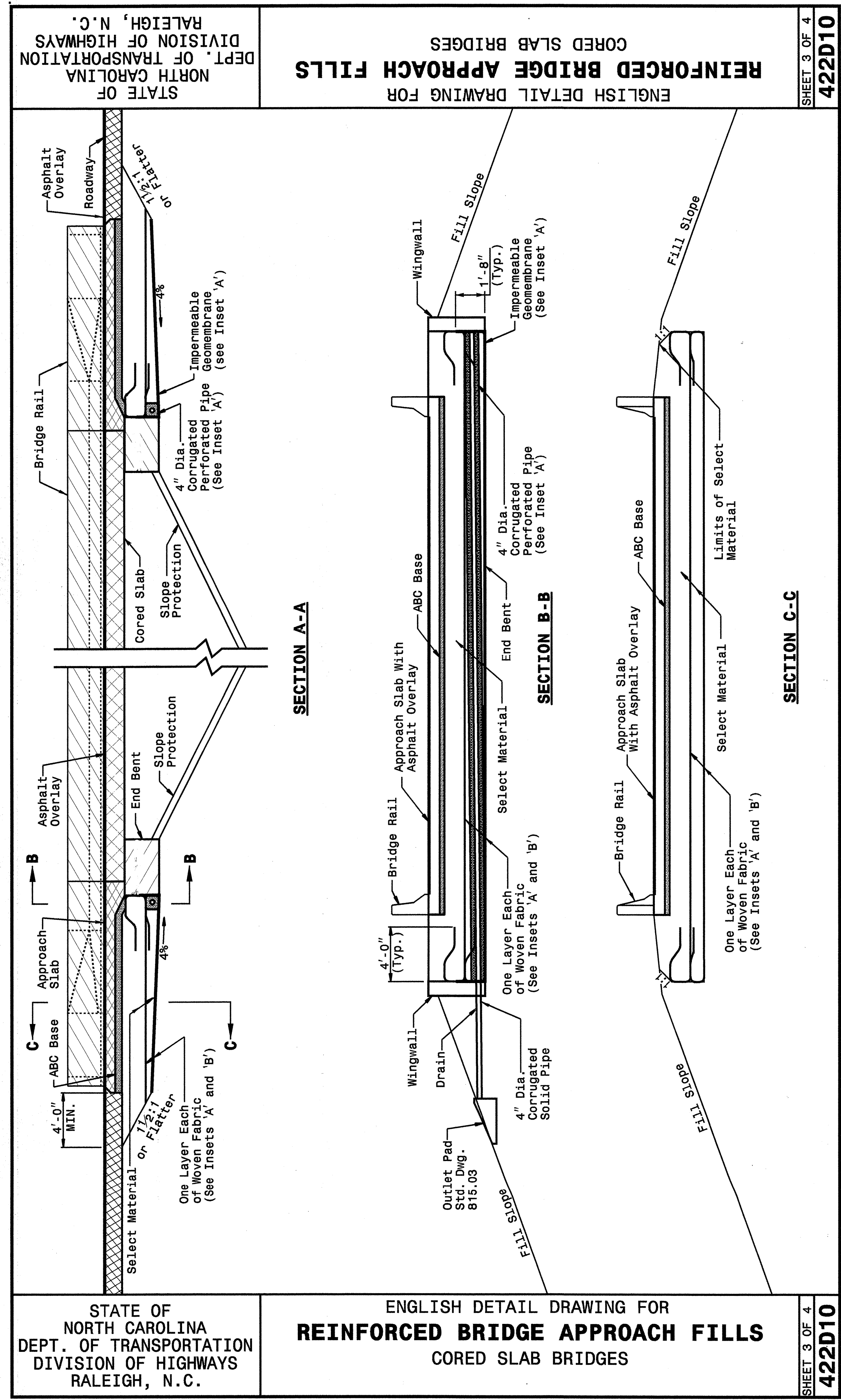


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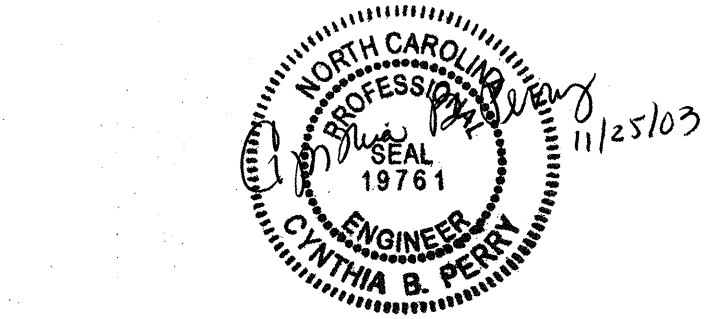


Length of Bridge End Bent Inside Wingwalls
 If Bridge Skew is Less Than or Equal to 90°:

$$\frac{(\text{Roadway Width} + 7'-0")}{\sin(\text{Bridge Skew Angle})} = \text{Dis. Between Wingwalls}$$

 If Bridge Skew is Greater Than 90°:

$$\cos(\text{Bridge Skew Angle} - 90^\circ) = \text{Dis. Between Wingwalls}$$



**DESIGN SERVICES UNIT
STANDARDS AND SPECIAL DESIGN**
Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: 2002 STANDARDS DATE: 01-15-02
 MODIFIED BY: E.E. WARD DATE: 03-26-03
 CHECKED BY: *[Signature]* DATE: 3-27-03
 FILE SPEC.: stds\02stdstodetals/english\422d10.dgn