

**NOTES**

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 6mm HOLD DOWN PLATE AND 7 - 22.23mm  $\varnothing$  BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 250. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

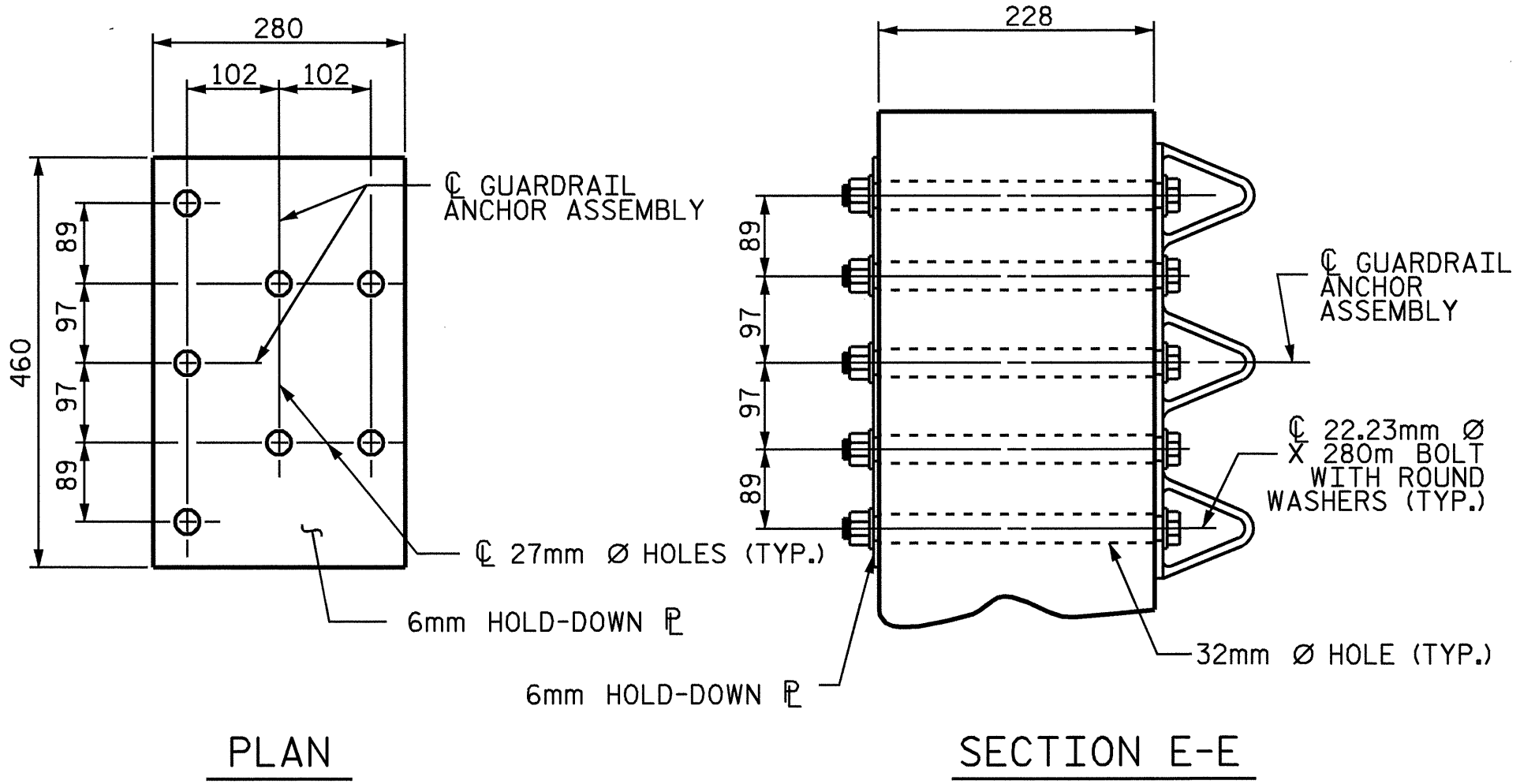
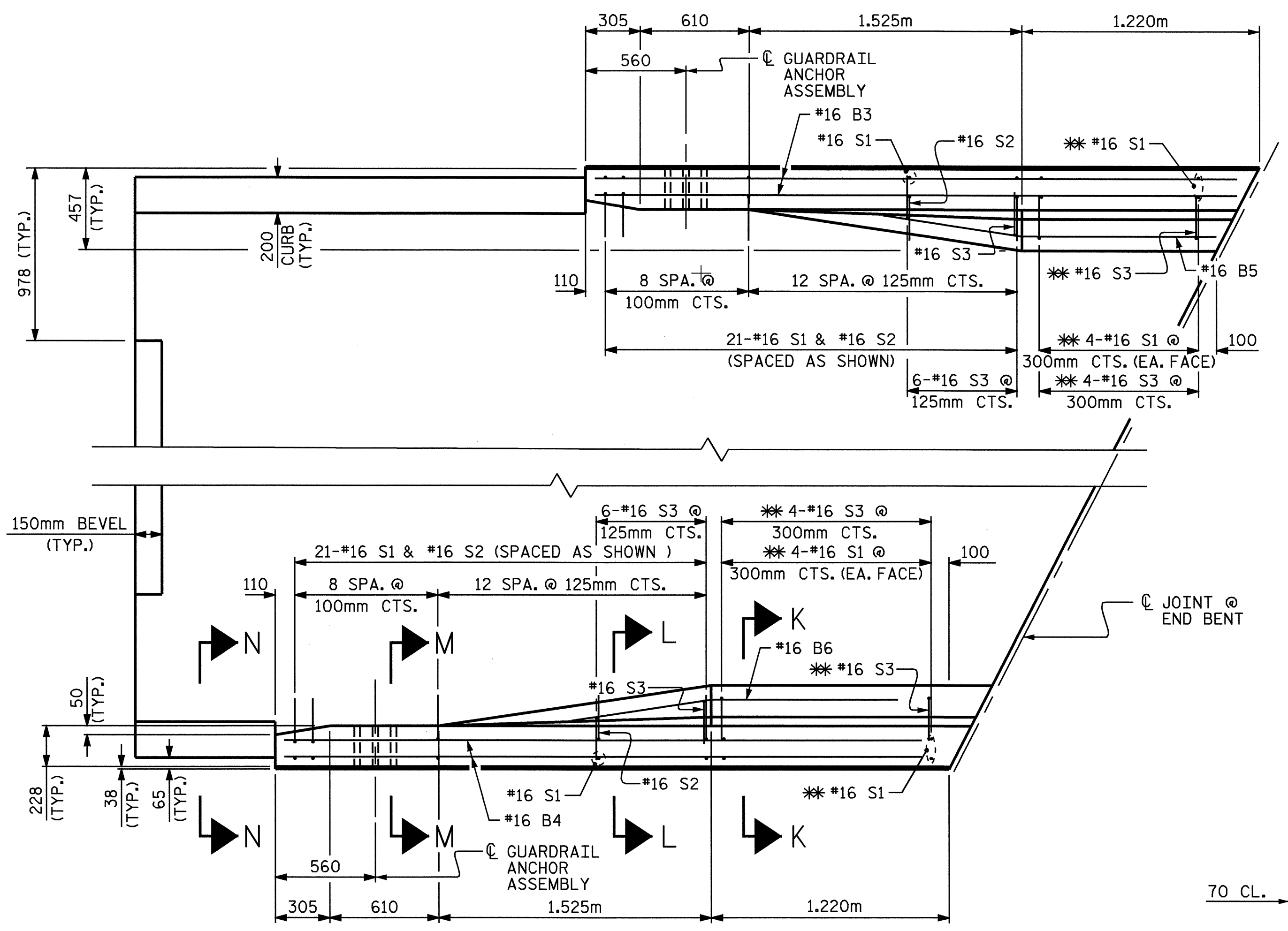
BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291M. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 22.23mm  $\varnothing$  GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

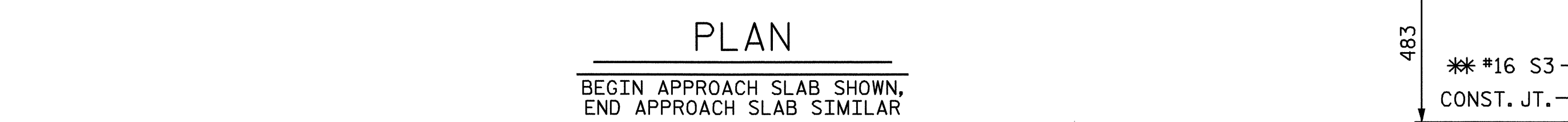
THE COST OF THE GUARDRAIL ANCHOR ASSEMBLIES WITH BOLTS, NUTS AND WASHERS COMPLETE IN PLACE, SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE BID FOR BRIDGE APPROACH SLABS.

THE 32mm  $\varnothing$  HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

THE #16 S1 AND #16 S3 BARS SHALL BE INSTALLED, WHERE NOTED ON THE PLANS, USING AN ADHESIVE ANCHORING SYSTEM AFTER SAWING THE JOINT. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. THE YIELD LOAD FOR THE #16 S1 AND #16 S3 BARS IS 82.7 kN. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

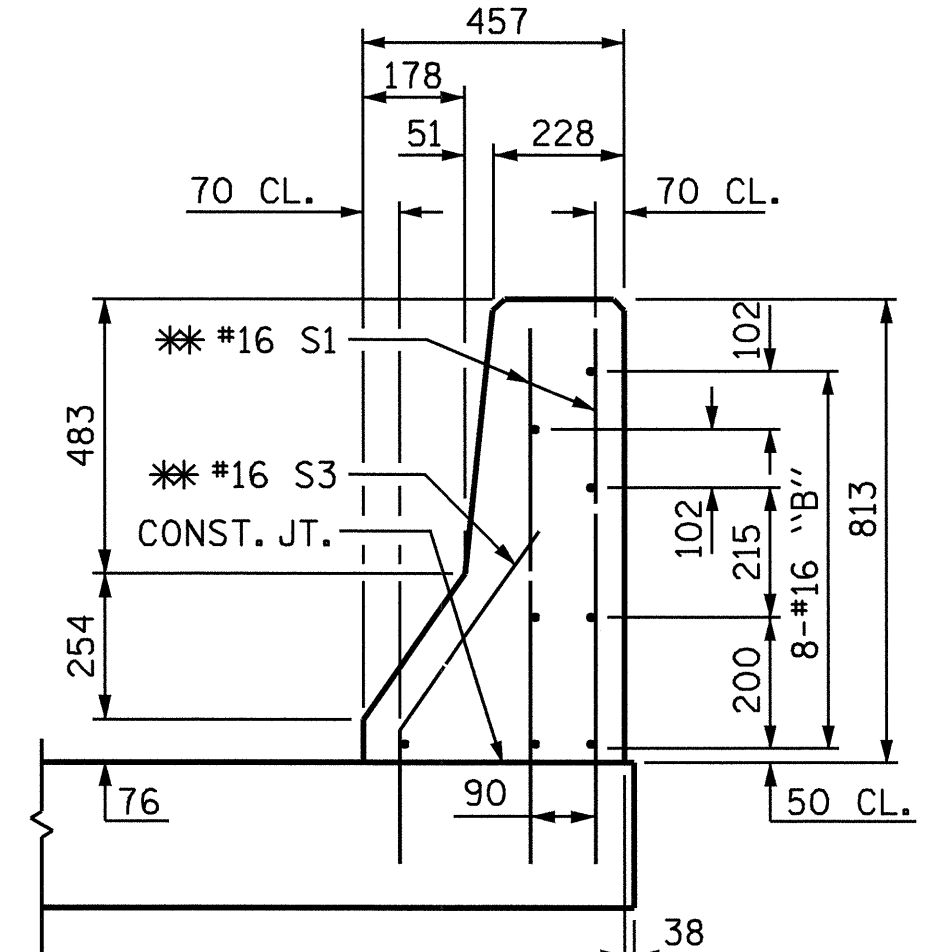


**GUARDRAIL ANCHOR ASSEMBLY DETAILS**



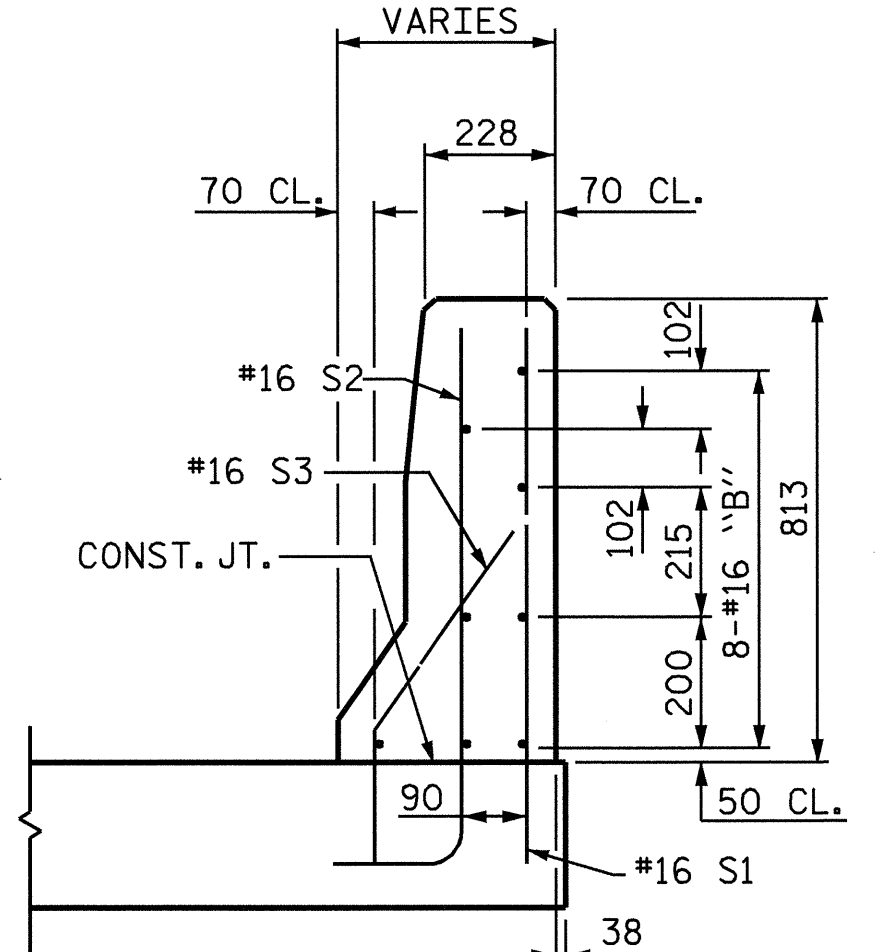
**PLAN**

BEGIN APPROACH SLAB SHOWN, END APPROACH SLAB SIMILAR

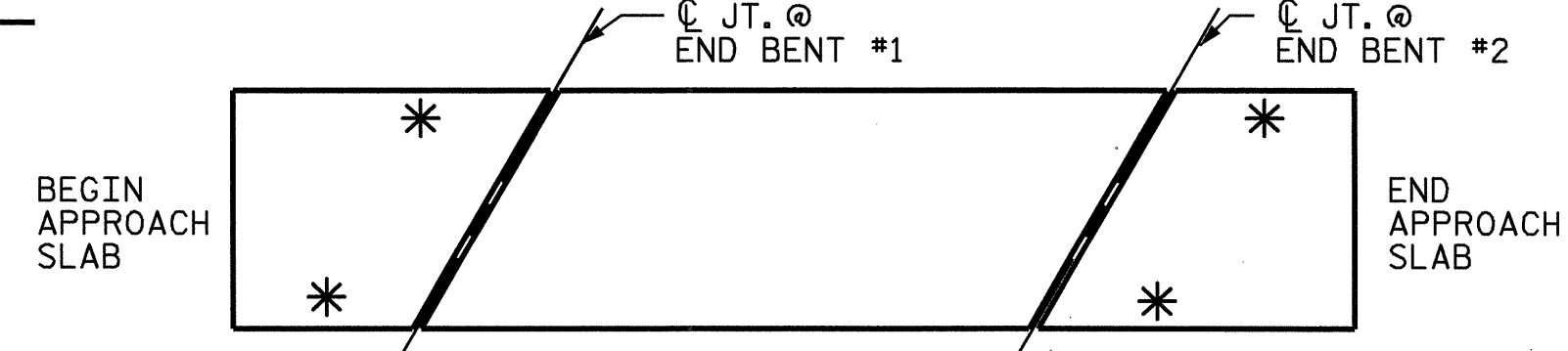


**SECTION K-K**

\* ADHESIVELY ANCHORED

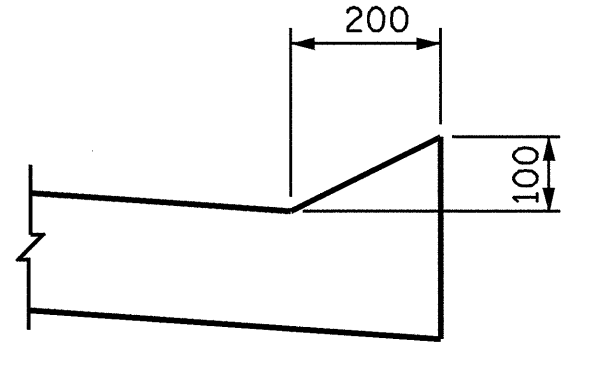


**SECTION L-L**

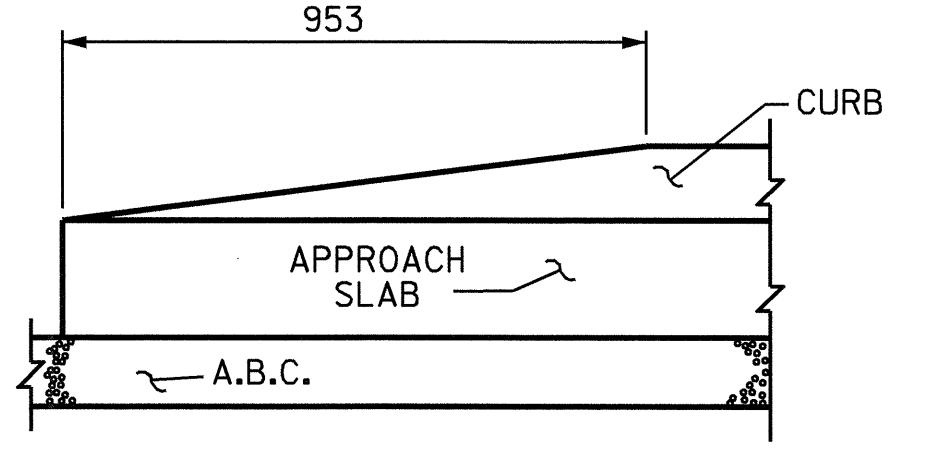


**SKETCH SHOWING POINTS OF ATTACHMENT**

\* INDICATES POINTS OF ATTACHMENT

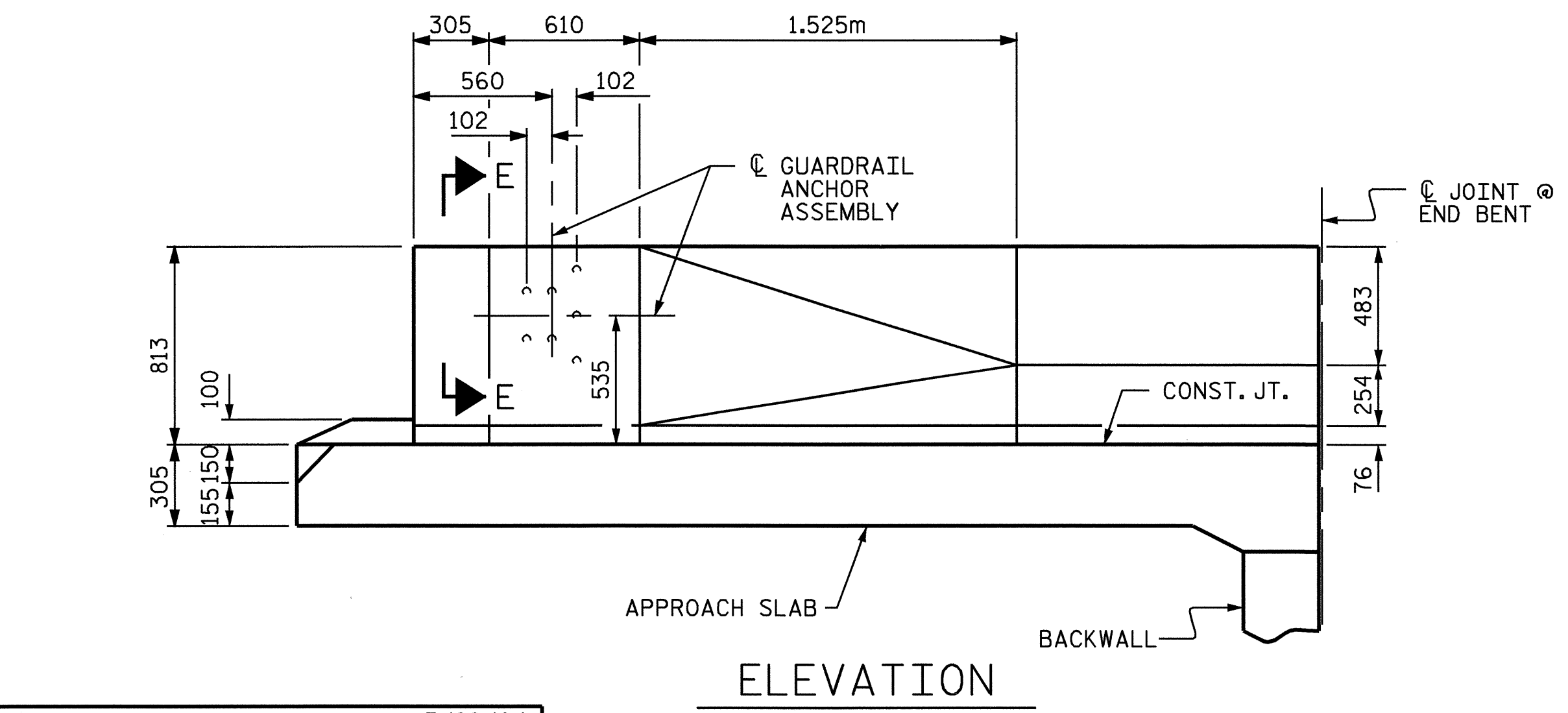


**SECTION N-N**

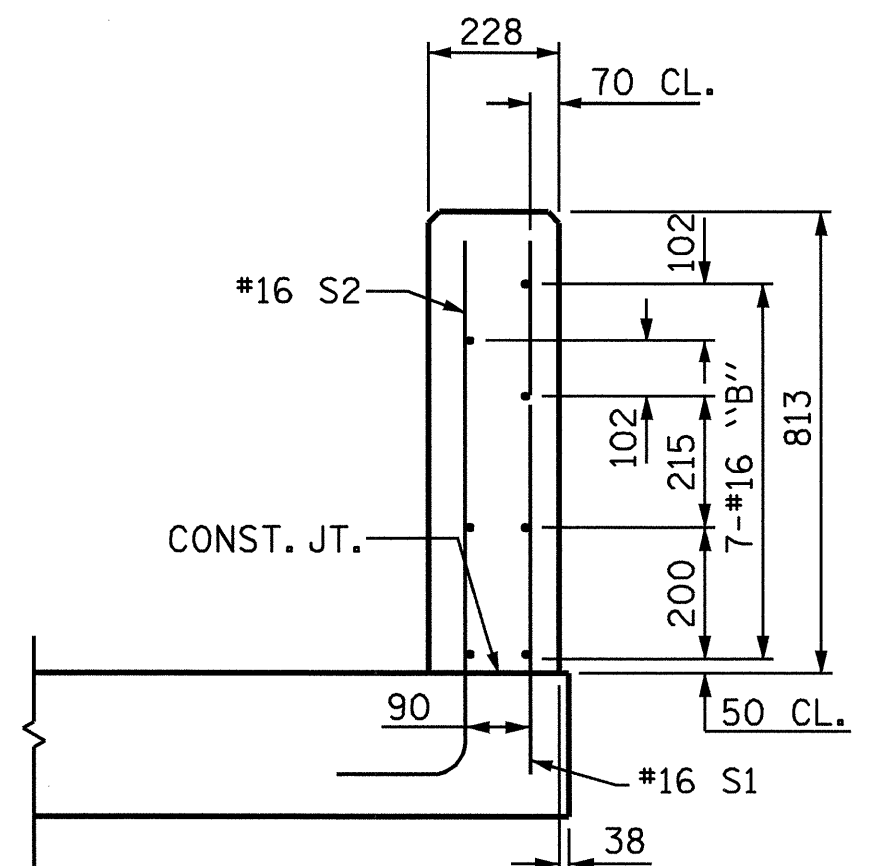


**END OF CURB WITHOUT SHOULDER BERM GUTTER**

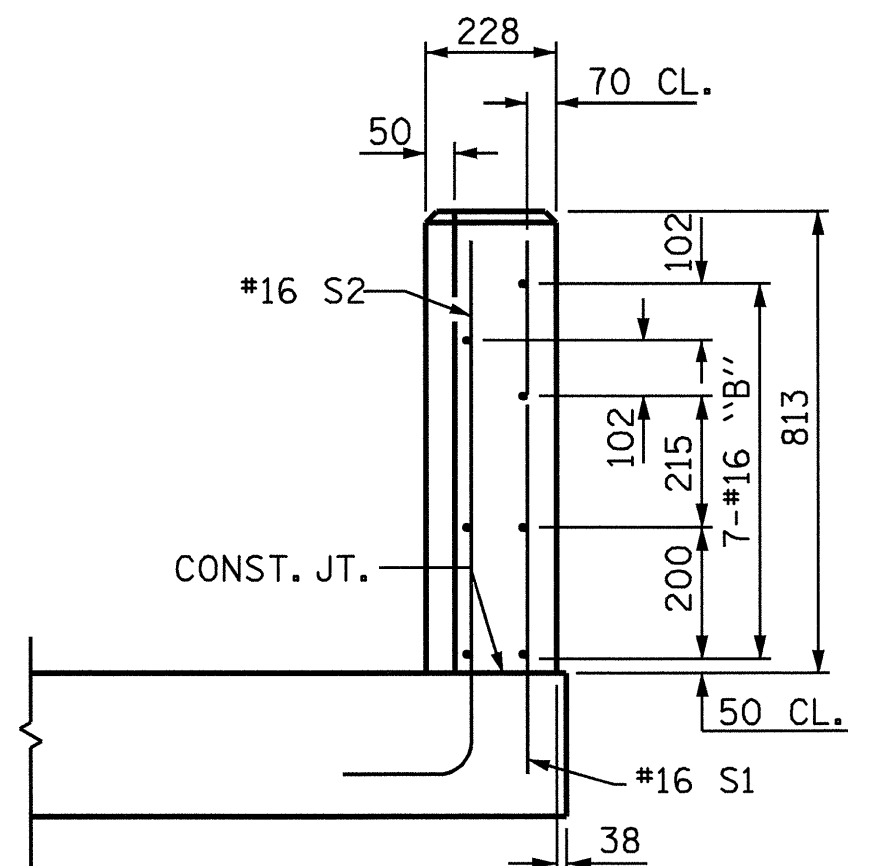
**CURB DETAILS**



**ELEVATION**



**SECTION M-M**

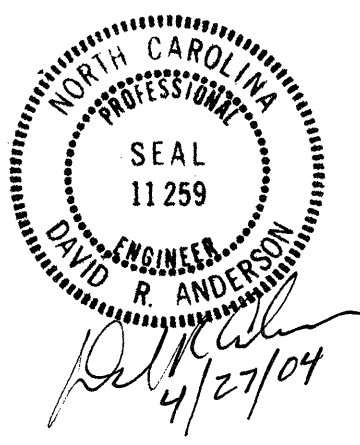


**END VIEW**

PROJECT NO. R-513C  
ROBESON COUNTY  
 STATION: 310+10.648 -L-

SHEET 3 OF 5

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 STANDARD  
 BRIDGE APPROACH SLAB  
 DETAILS WITH BARRIER RAIL



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-310
1			3			TOTAL SHEETS
2			4			312

ASSEMBLED BY: H.A. LUCAS DATE: 3/22/04  
 CHECKED BY: W.K. FISCHER DATE: 4/01/04  
 DRAWN BY: RWW 8/01 REV. 5/7/03 RWW/JTE  
 CHECKED BY: LES 8/01