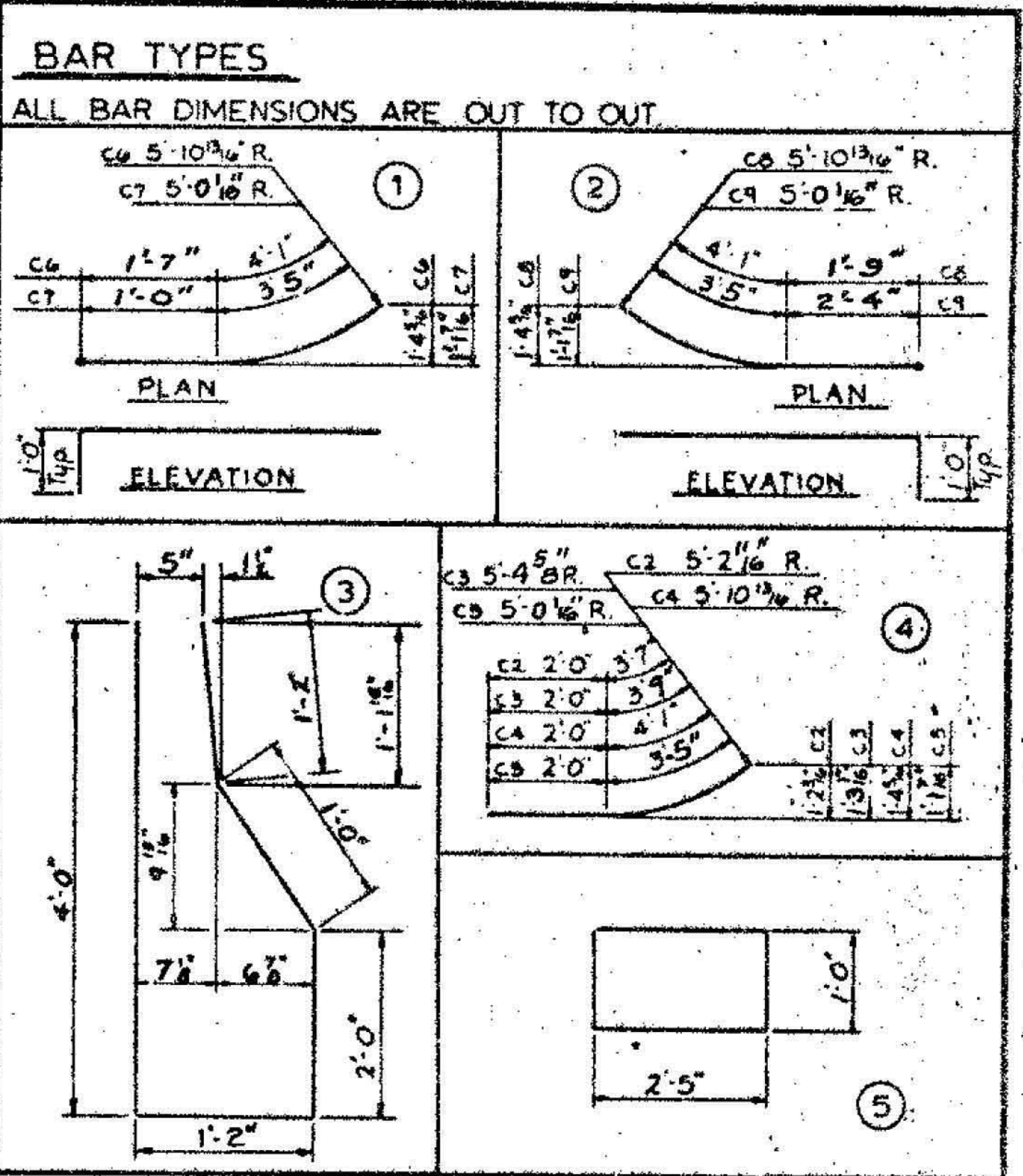


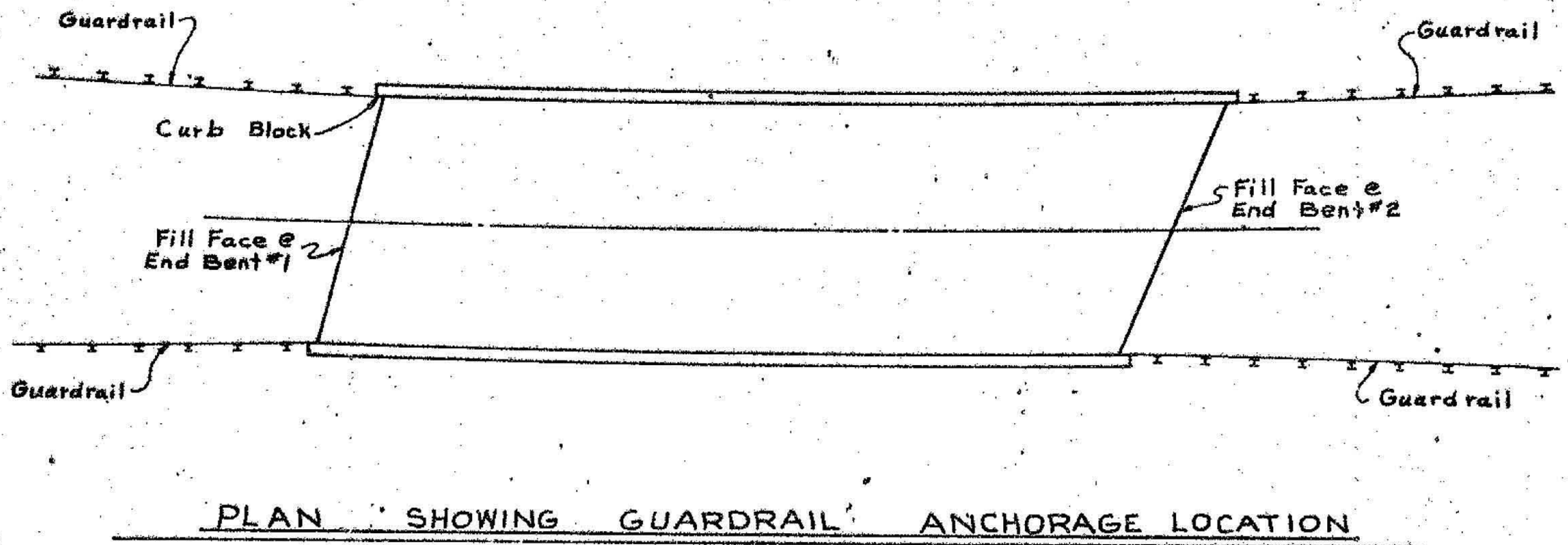
**BILL OF MATERIAL FOR FOUR CURVED END BLOCKS**

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
C1	24	#5	3	9'-4"	234
C2	4	#6	4	5'-7"	34
C3	4	#6	4	5'-9"	35
C4	4	#6	4	6'-1"	37
C5	12	#6	4	5'-5"	98
C6	4	#6	1	6'-8"	40
C7	4	#6	1	5'-5"	33
C8	4	#6	2	6'-10"	41
C9	4	#6	2	6'-9"	41

Reinforcing Steel - Lbs. - 593  
Class "A" Concrete - Cu. Yds. - 2.9



- THE 4-BOLT INSERT ASSEMBLY UNIT SHALL CONSIST OF THE FOLLOWING COMPONENTS:
  - FERRULES SHALL BE MADE FROM STEEL MEETING THE REQUIREMENTS OF ASTM A108, GRADE 12L14 AND SHALL HAVE A MINIMUM LENGTH OF THREADS OF 1 1/2".
  - 4 - 7/8" Ø x 2 3/4" BOLTS WITH WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307. BOLTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" Ø x 2 3/4" GALVANIZED BOLTS 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.)
  - WIRE STRUTS SHOWN IN THE INSERT ASSEMBLY DETAIL ARE MINIMUM ALLOWABLE SIZE AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 100,000 P.S.I.
- THE INSERT ASSEMBLY WITH BOLTS SHALL BE ASSEMBLED IN THE SHOP. BOLT THREADS MAY BE RECURT AS NECESSARY TO INSURE FIT.
- THE COST OF THE 4-BOLT INSERT ASSEMBLY UNIT COMPLETE IN PLACE, SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CONCRETE BARRIER RAIL.
- THE 4-BOLT INSERT ASSEMBLY UNIT IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END POSTS. FOR POINTS OF ATTACHMENT, SEE PLANS.
- CURVED END BLOCKS ARE REQUIRED AT ALL END POSTS.
- THE COST OF THE EXCAVATION AND BACKFILL FOR THE CURVED END BLOCKS SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CLASS "A" CONCRETE.



**BILL OF MATERIAL FOR CURB BLOCK**

	Reinforcing Steel - Lbs.					
	BAR	NO.	SIZE	TYPE	WEIGHT	
1 Block	C10	2	#5	5	6'-10"	14
2 Blocks	C10	4	#5	5	6'-10"	29
3 Blocks	C10	6	#5	5	6'-10"	43
4 Blocks	C10	8	#5	5	6'-10"	57

**TOTAL BILL OF MATERIAL**

Reinforcing Steel - Lbs. - 593  
Class "A" Concrete - Cu. Yds. - 2.9

FOR INFORMATION ONLY

DRAWING  
**C18**  
OF 24

PROJECT No. 8.2522503  
DURHAM COUNTY  
STATION: 19+82.5-L

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
STANDARD  
CURVED END BLOCK, GUARDRAIL ANCHORAGE, AND CURB BLOCK  
JULY FOR BARRIER RAIL 1978

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1			2		
2			3		
3			4		

5-11  
23

REVISED 10-22-80 BY: MEB, VBY: R.D.U.  
 Revised 10-17-79 BY: CEK, VBY: D.A.J.  
 Revised 2-28-79 BY: RAK, VBY: F.D.U.  
 Revised 1-17-78 BY: BEK, VBY: F.D.U.  
 Revised 1-13-82 BY: E.H.I., VBY: R.D.U.

DRAWN BY: BOSS EDWARD KUBERT DATE: 6-10-76  
CHECKED BY: R.C. Martin DATE: June-76  
ASSEMBLED BY: A.R. Bissette DATE: 1-11-83  
CHECKED BY: DATE: