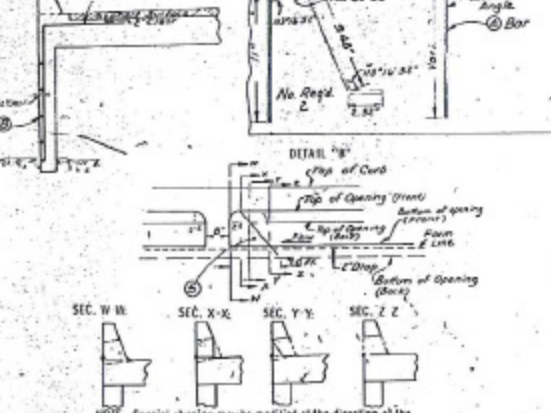
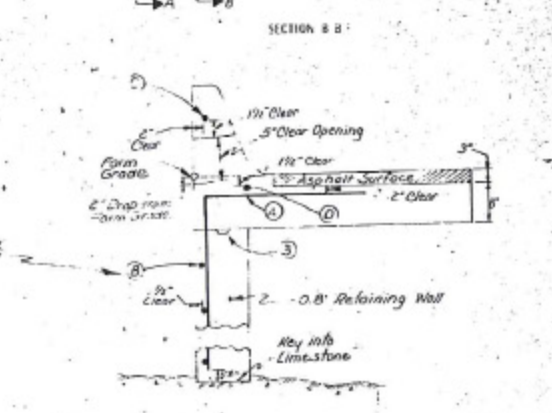
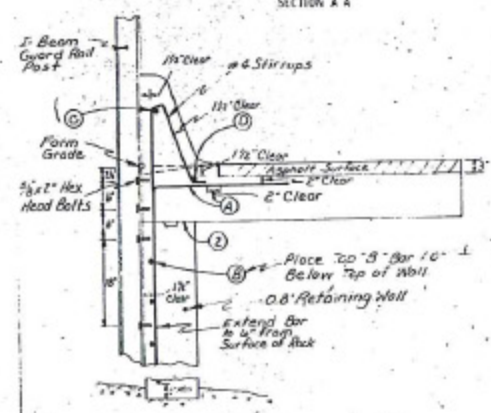
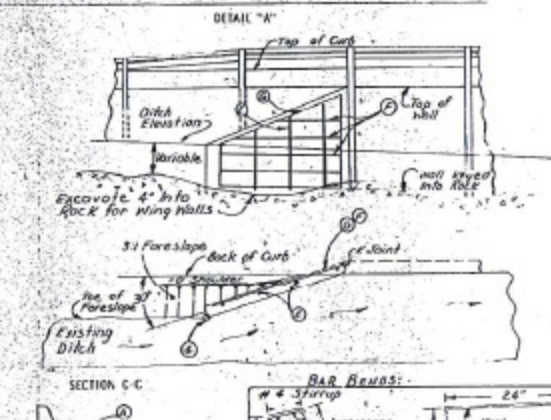
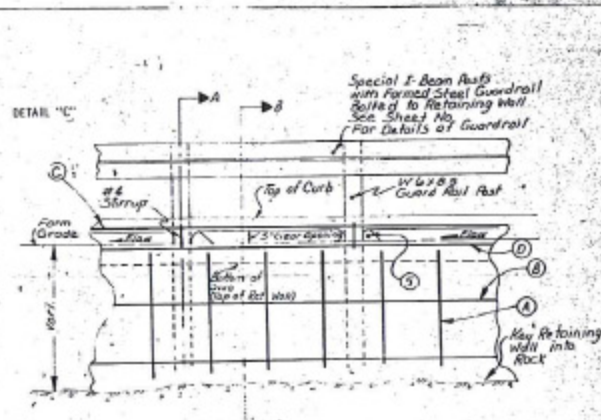
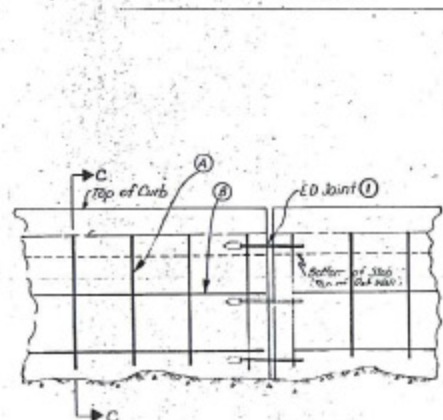
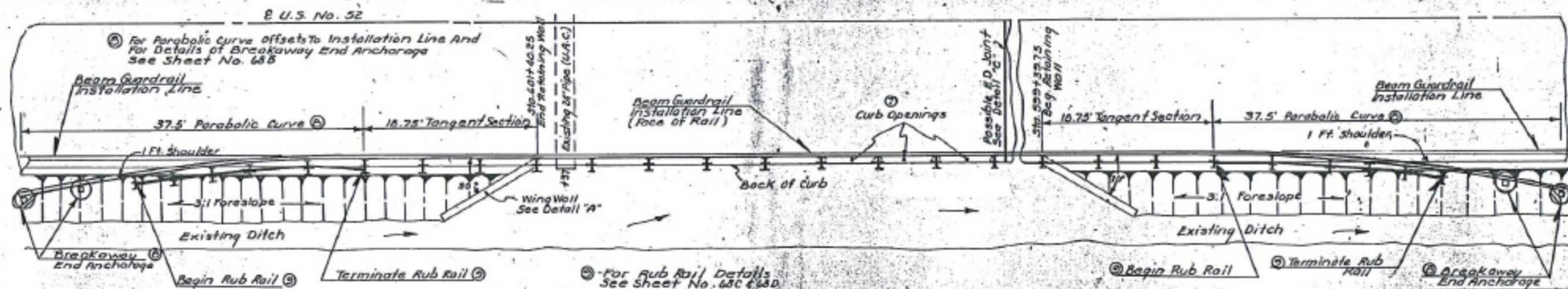


PLAN VIEW RETAINING WALL WITH CURB OPENING AND GUARDRAIL



This design will be used in confined areas where there is limited room for proper installation of RA-3 Intakes, i.e. Narrow Shoulders & Shallow Ditches.
The intended use of this design is to skirt the curb water directly into the ditch adjacent to the slab via curb openings.

- 1 The curb openings are spaced on 6'-3\"/>
- 2 Special shaping on the downstream location of the openings, is necessary to eliminate direct flow of storm water on the I-beam guard rail posts bolted to the back of pavement and retaining wall.
- 3 60' min., 20' max. spacing on expansion joints and 20' min. on contraction joints.
- 4 Note: Space contraction joints so that near the top of the guard rail posts.
- 5 Elevation of top of retaining wall is elevation of bottom of widening unit (See typ. detail).
- 6 Key retaining wall to widening unit.
- 7 Place forms for wing walls at intersection of toe of forelope and inside edge of ditch. (See Detail A).
- 8 Special shaping of downstream portion of curb openings to eliminate direct flow of storm water onto guard rail posts. (See Detail 'B' for Development).
- 9 Guard rail placed at approach and exit identical.
- 10 Effective curb opening of the three curb slits equals 13'-9\"/>

REINFORCING SCHEDULE

MARK	SIZE	LENGTH	SPACING	NO. REQ'D	REMARKS
(A)	#3	Vert.	12'-Min. to 15'-Max.	**200	
(B)	#4	14'			
(C)	#4	20'			
(D)	#4	20'			
(E)	#4	Vert.	12'-Min. to 15'-Max.	Vert.	
(F)	#6	Vert.	30'	Vert.	
(G)	#6	Vert.		2	

* Overlapping bar lengths not included in above lengths.
** Based on 12" Spacing.

DETAILS FOR SPECIAL CURB OPENINGS
CASE B: RETAINING WALL WITH SPECIAL I-BEAM POSTS AND GUARDRAIL

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Clayton COBBY
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