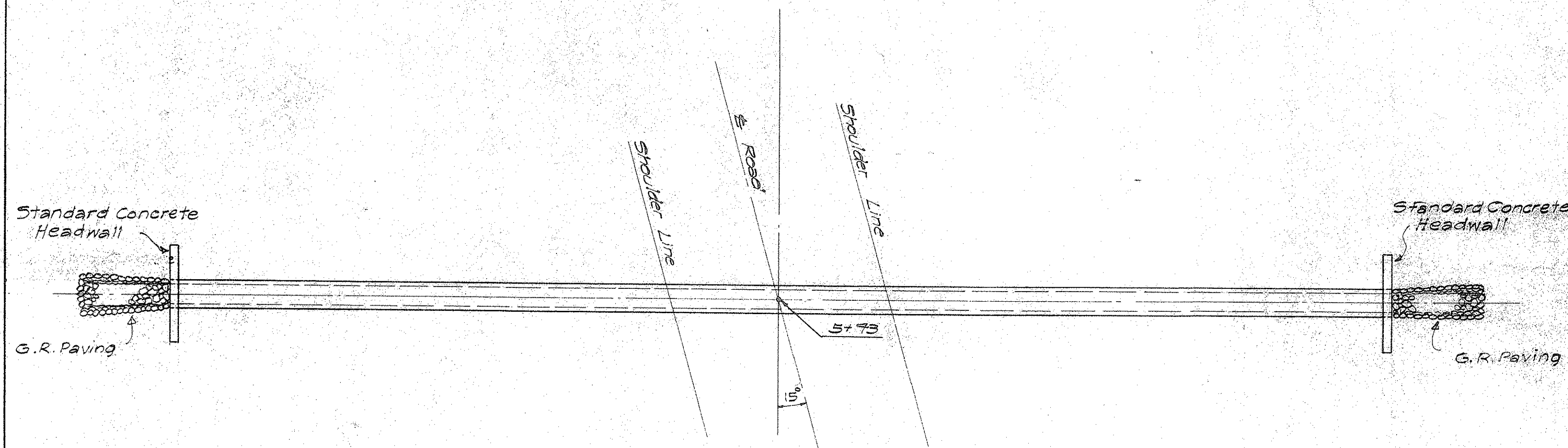
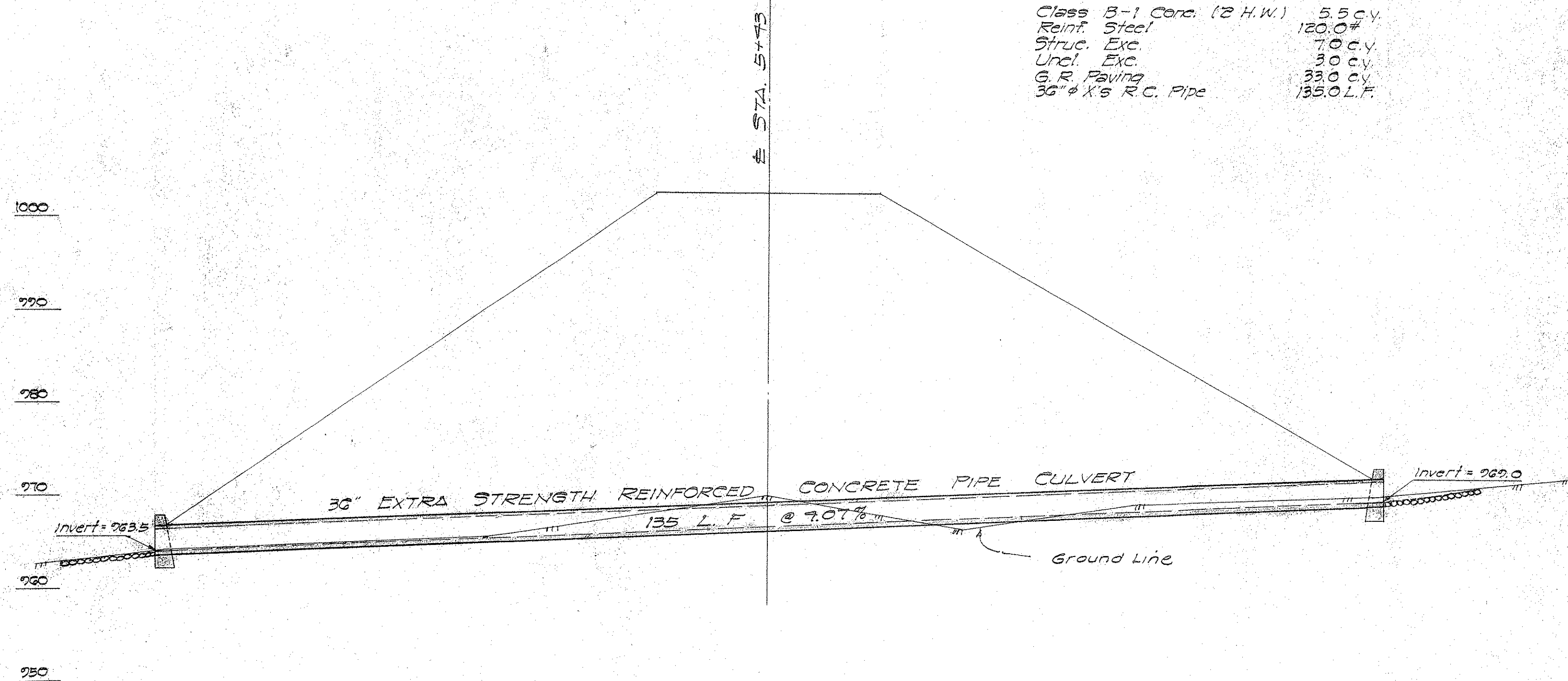




PLAN
Scale: 1" = 10'

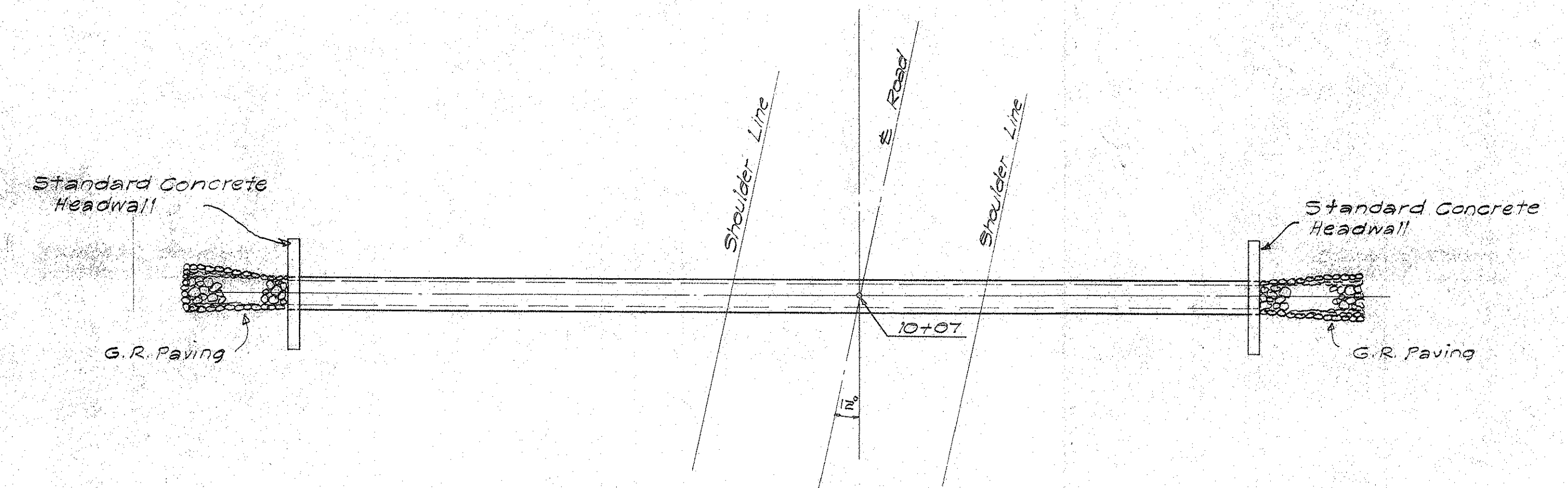
Estimated Quantities

Class B-1 Conc. (2 H.W.)	5.5 CY
Reinf. Steel	120.0 #
Struc. Exc.	7.0 CY
Uncl. Exc.	3.0 CY
G.R. Paving	33.0 CY
36" x 6' R.C. Pipe	135.0 L.F.



SECTION
Scale: 1" = 10'

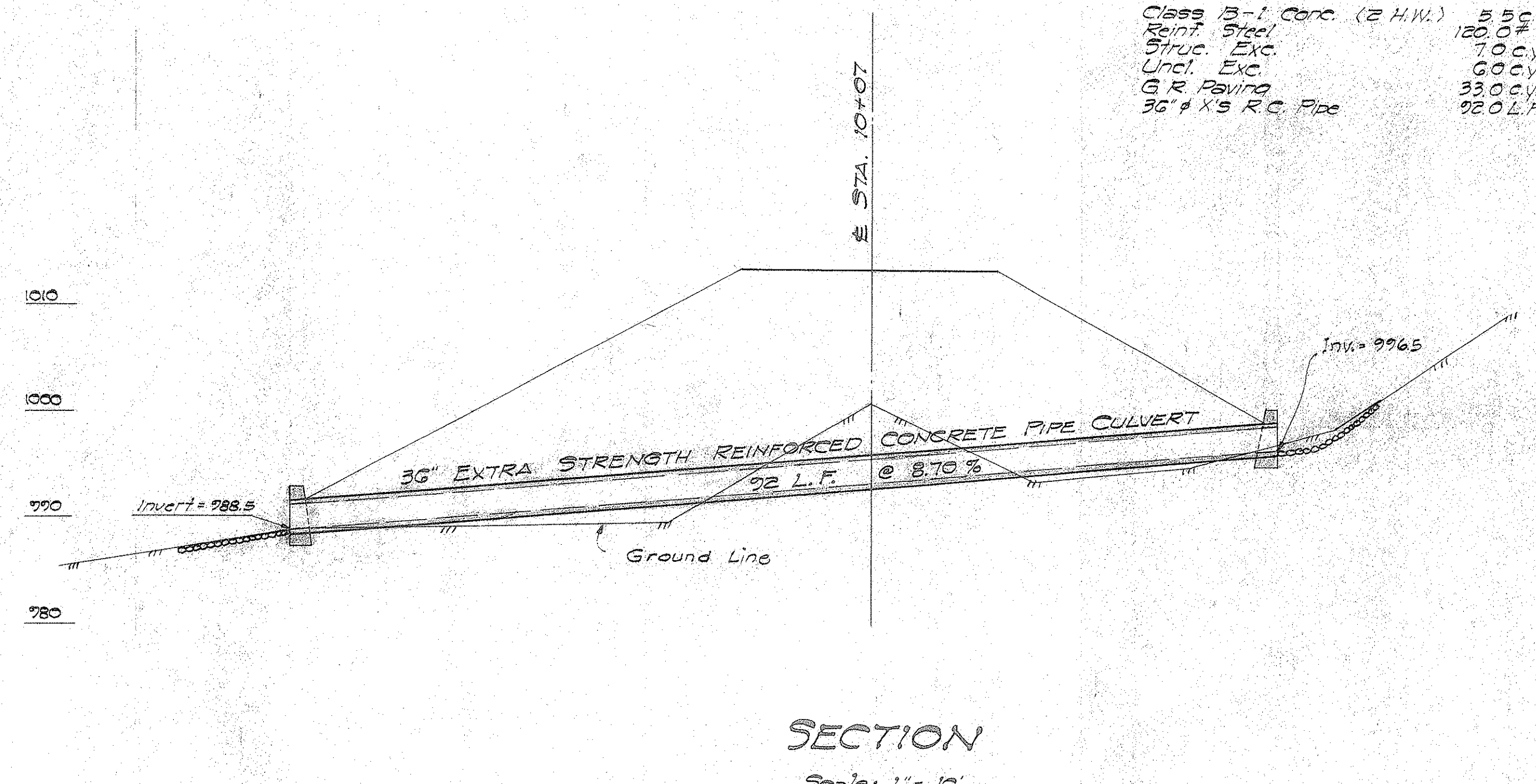
36" R.C. CULVERT AT & STA. 5+93



PLAN
Scale: 1" = 10'

Estimated Quantities

Class B-1 Conc. (2 H.W.)	5.5 CY
Reinf. Steel	120.0 #
Struc. Exc.	7.0 CY
Uncl. Exc.	3.0 CY
G.R. Paving	33.0 CY
36" x 6' R.C. Pipe	135.0 L.F.



SECTION
Scale: 1" = 10'

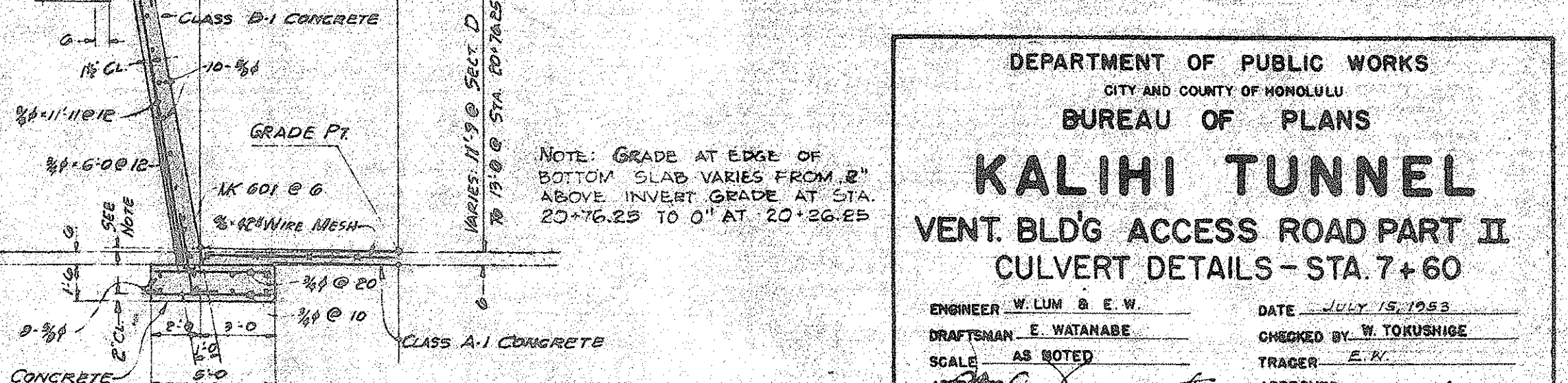
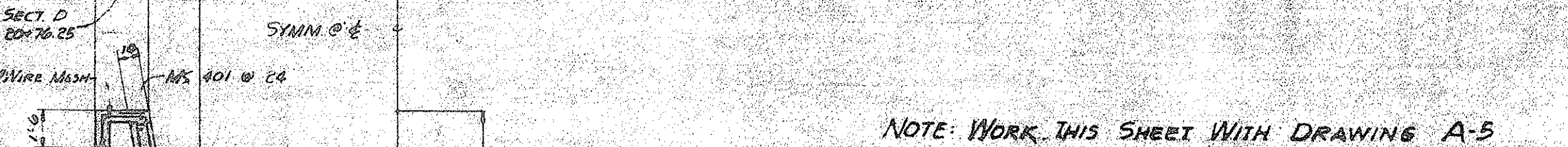
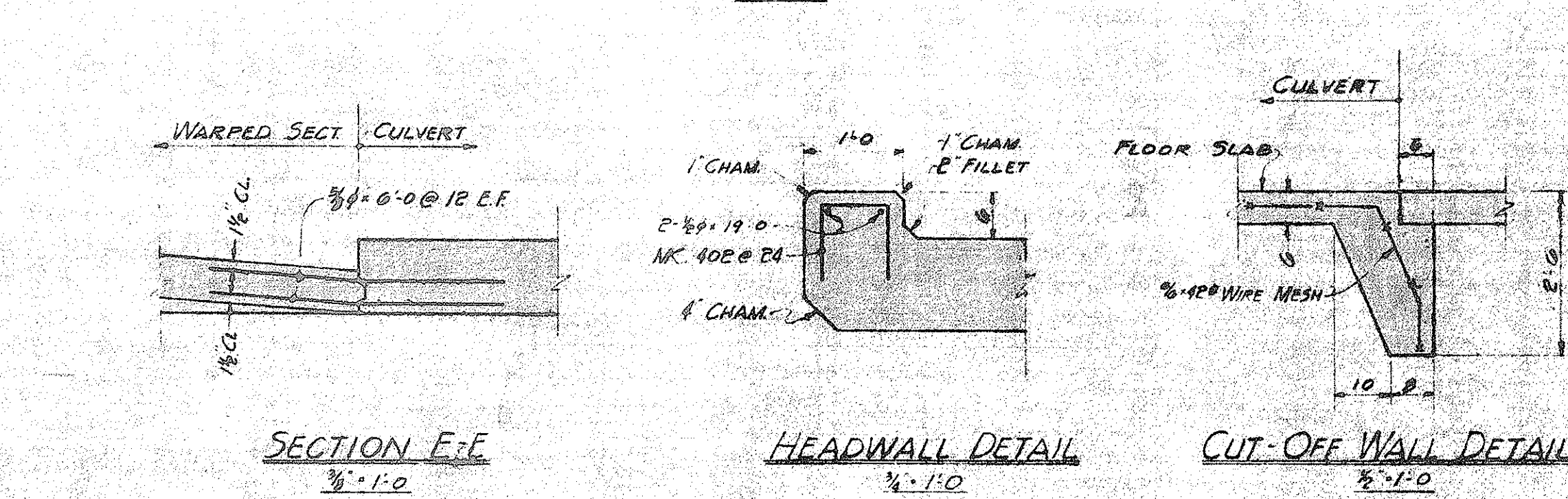
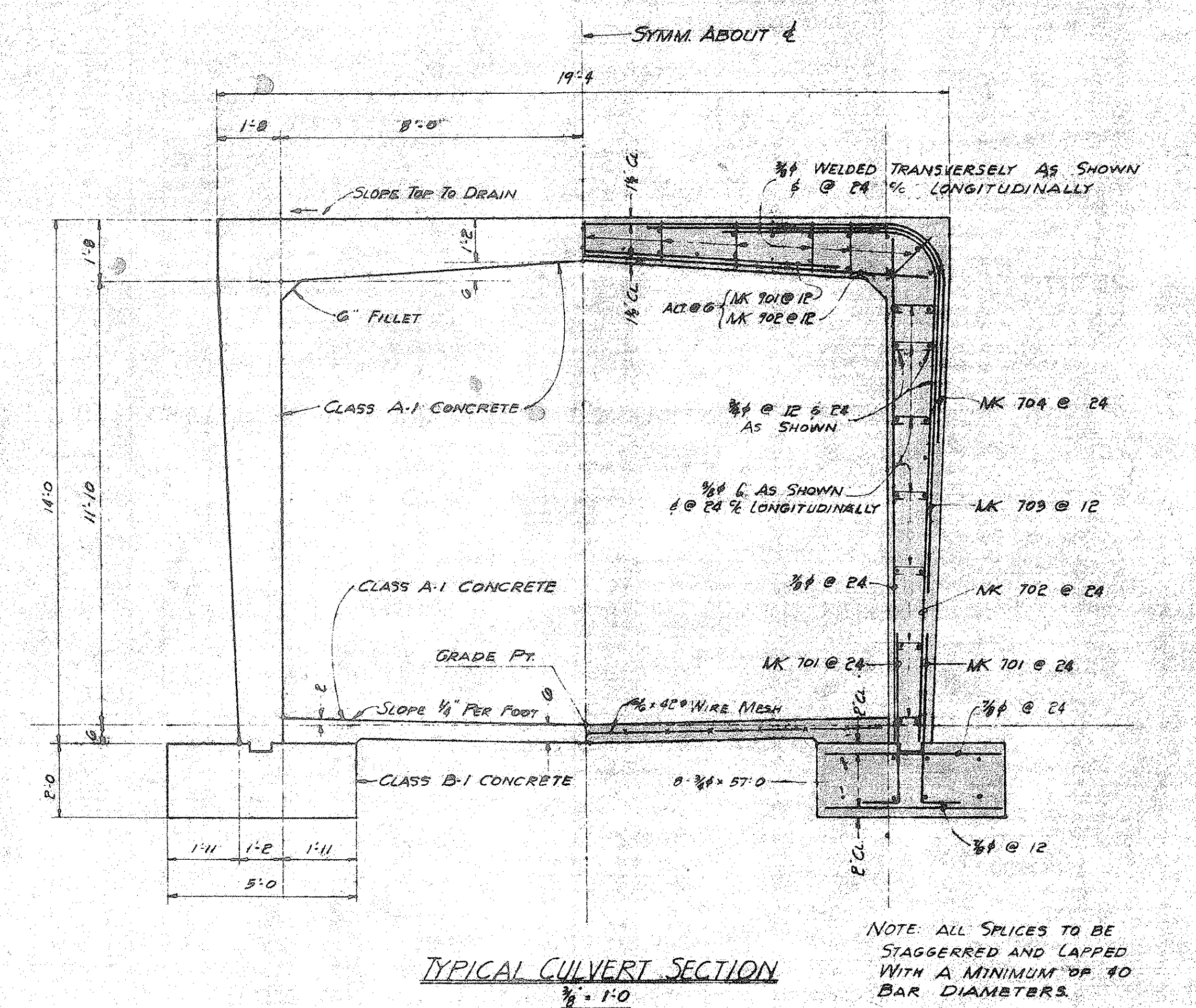
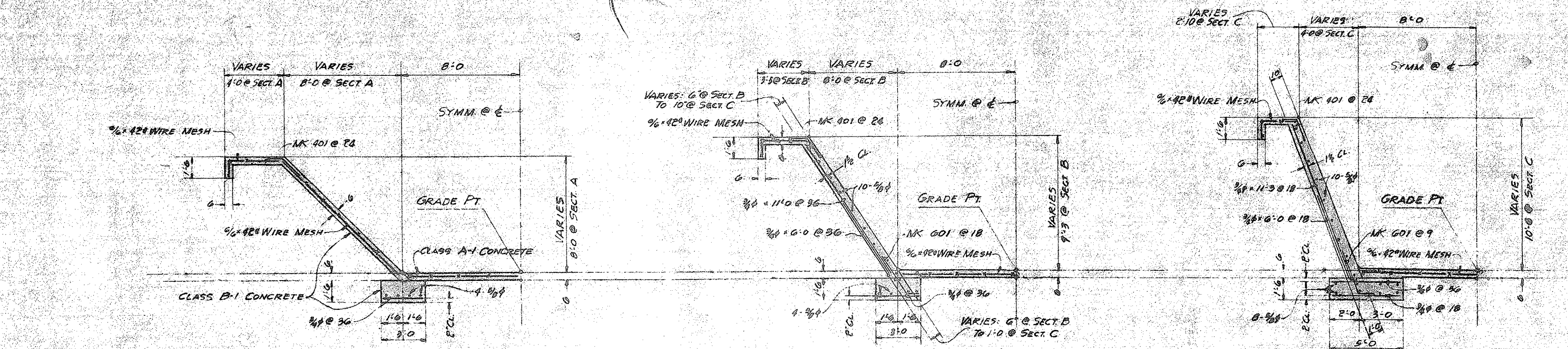
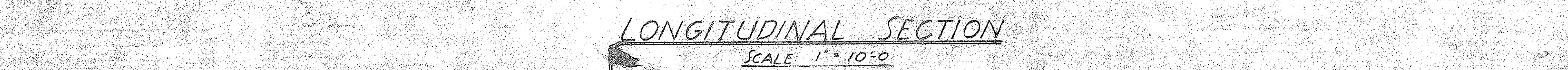
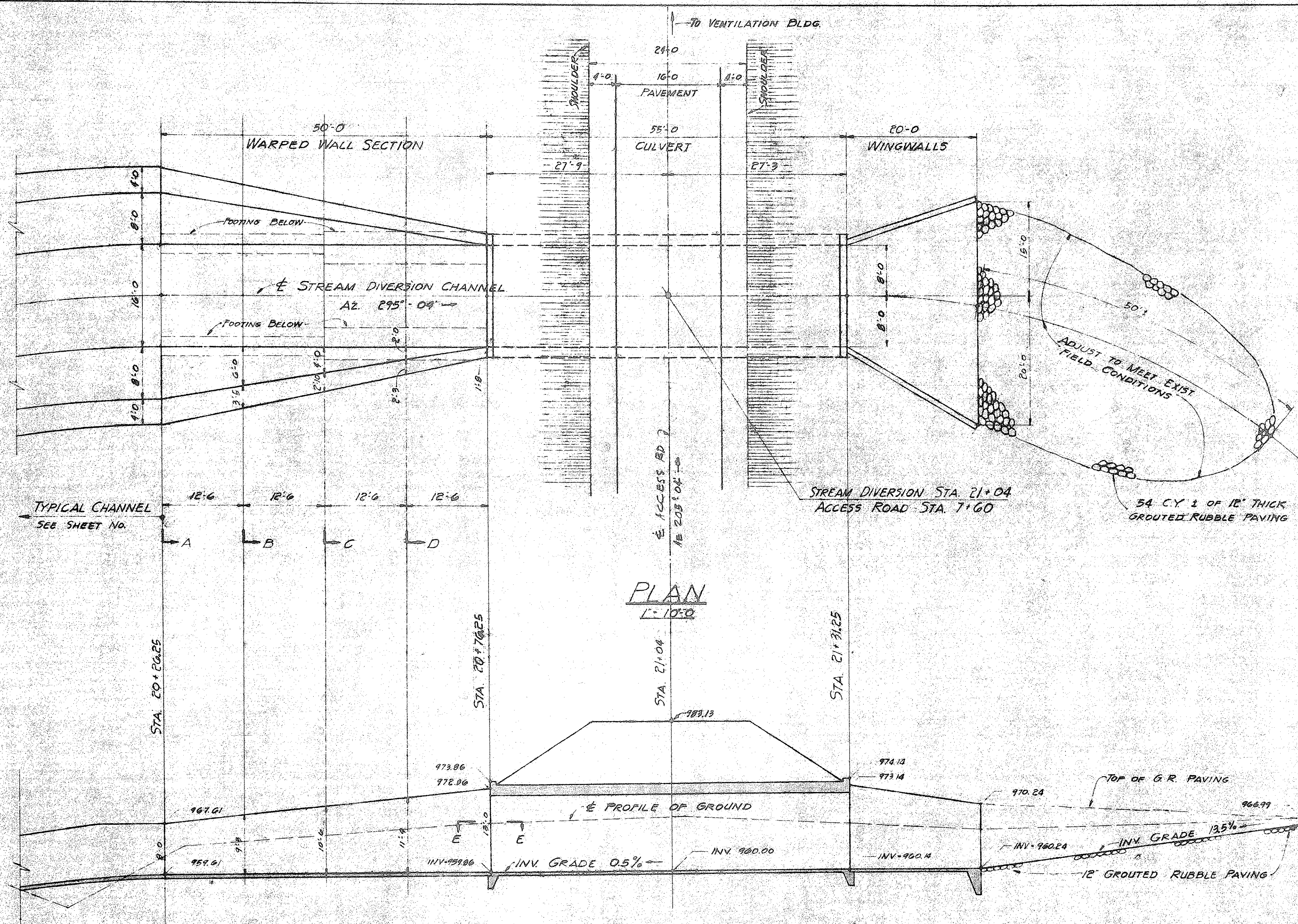
36" R.C. CULVERT AT & STA. 10+07

DEPARTMENT OF PUBLIC WORKS CITY AND COUNTY OF HONOLULU			
BUREAU OF PLANS			
KALIHI TUNNEL			
VENTILATION BUILDING ACCESS RD.			
PART - 2			
CULVERTS			
ENGINEER	S.O.H. RM	DATE	JULY 15, 1982
DRAFTSMAN	G.L.	CHECKED BY	S.O.H. RM
SCALE	1" = 10'	TRACER	J.S.
APPROVED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>
CHIEF ENGINEER		BUREAU ENGINEER	
C.B.	PROFILE	C.B.	
CH. SEC.	F.B.	S.B.	
W.M.BY.	F.W.BY.	S.BY.	

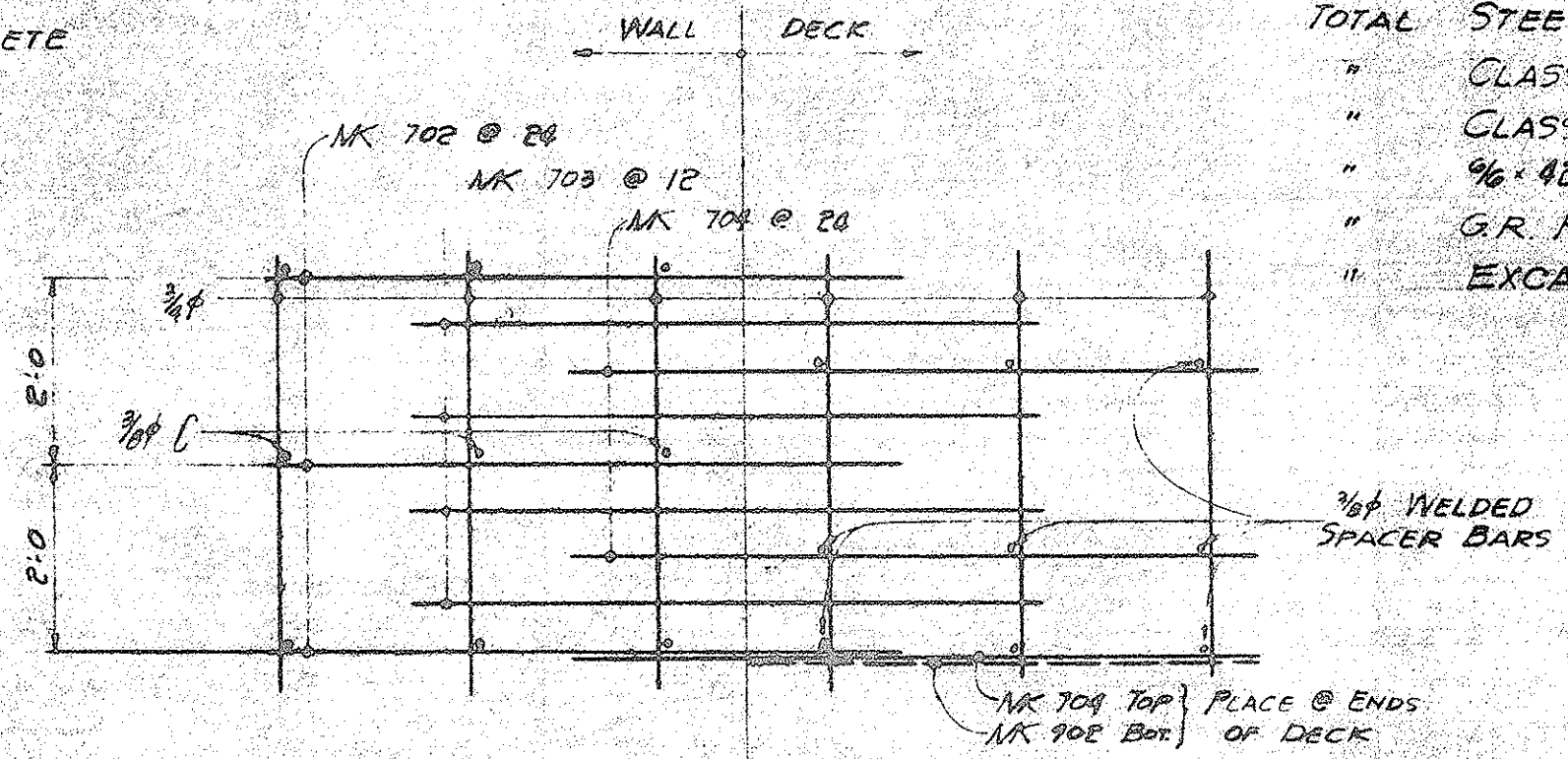
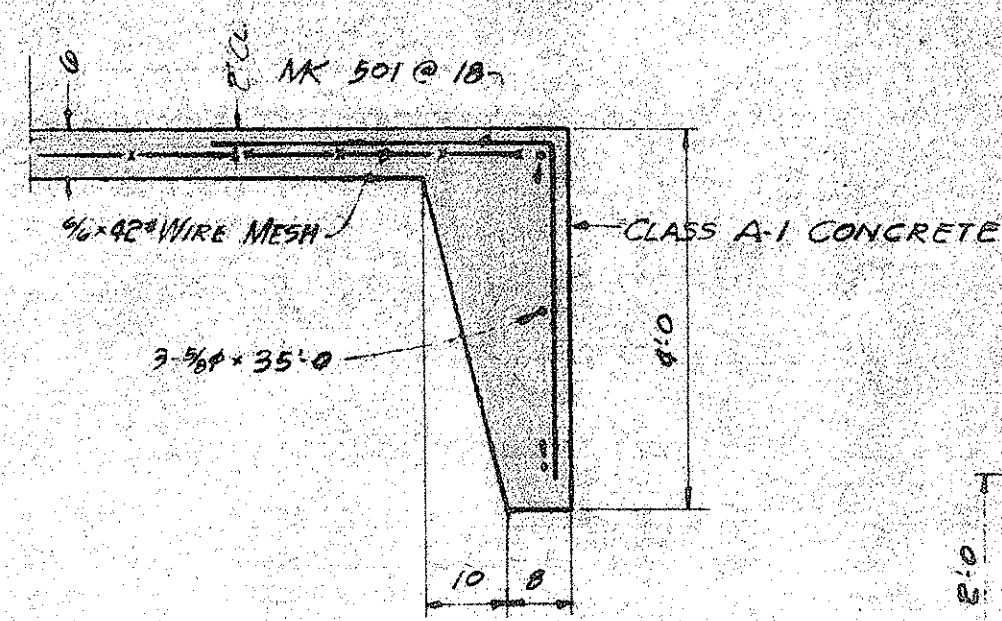
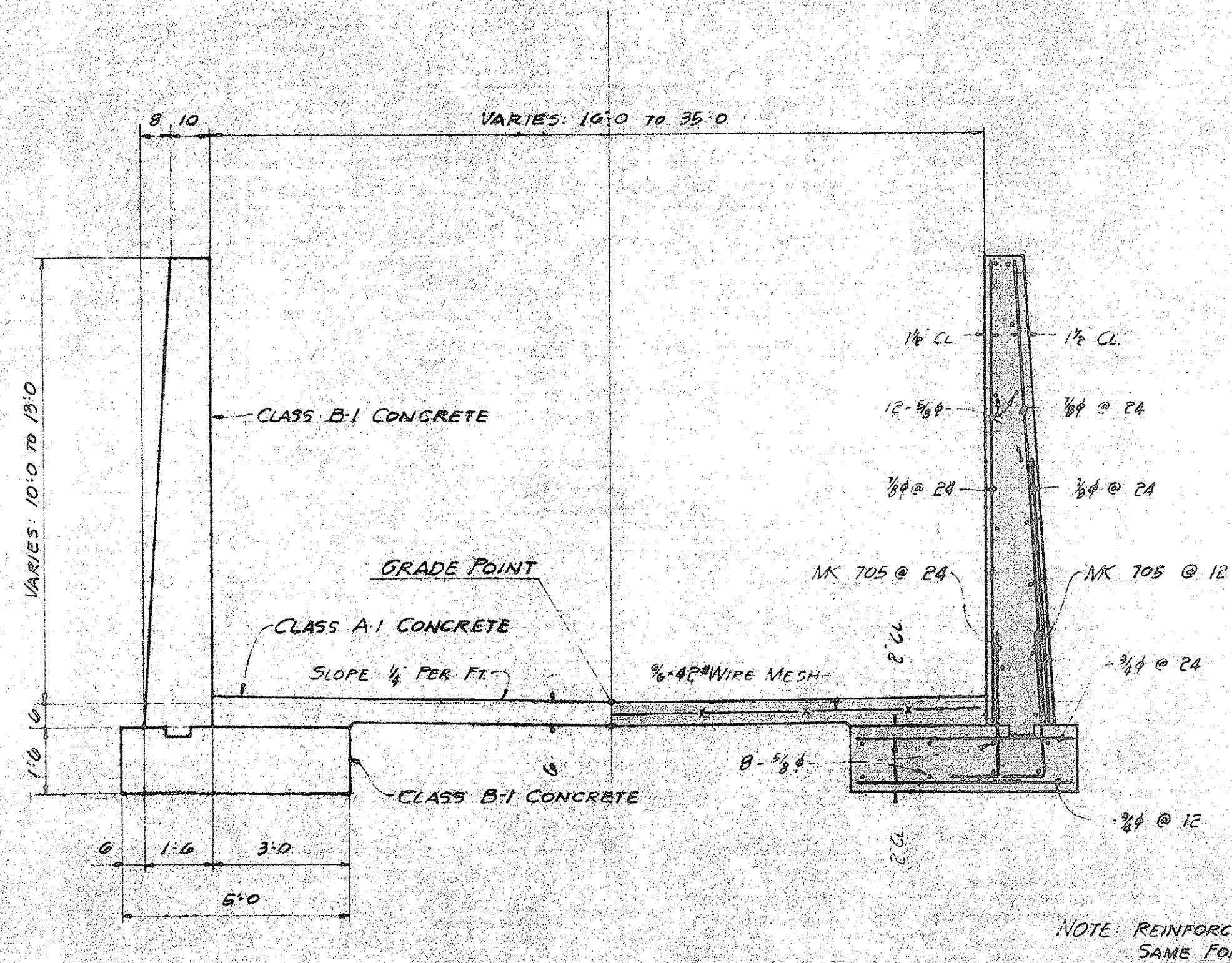
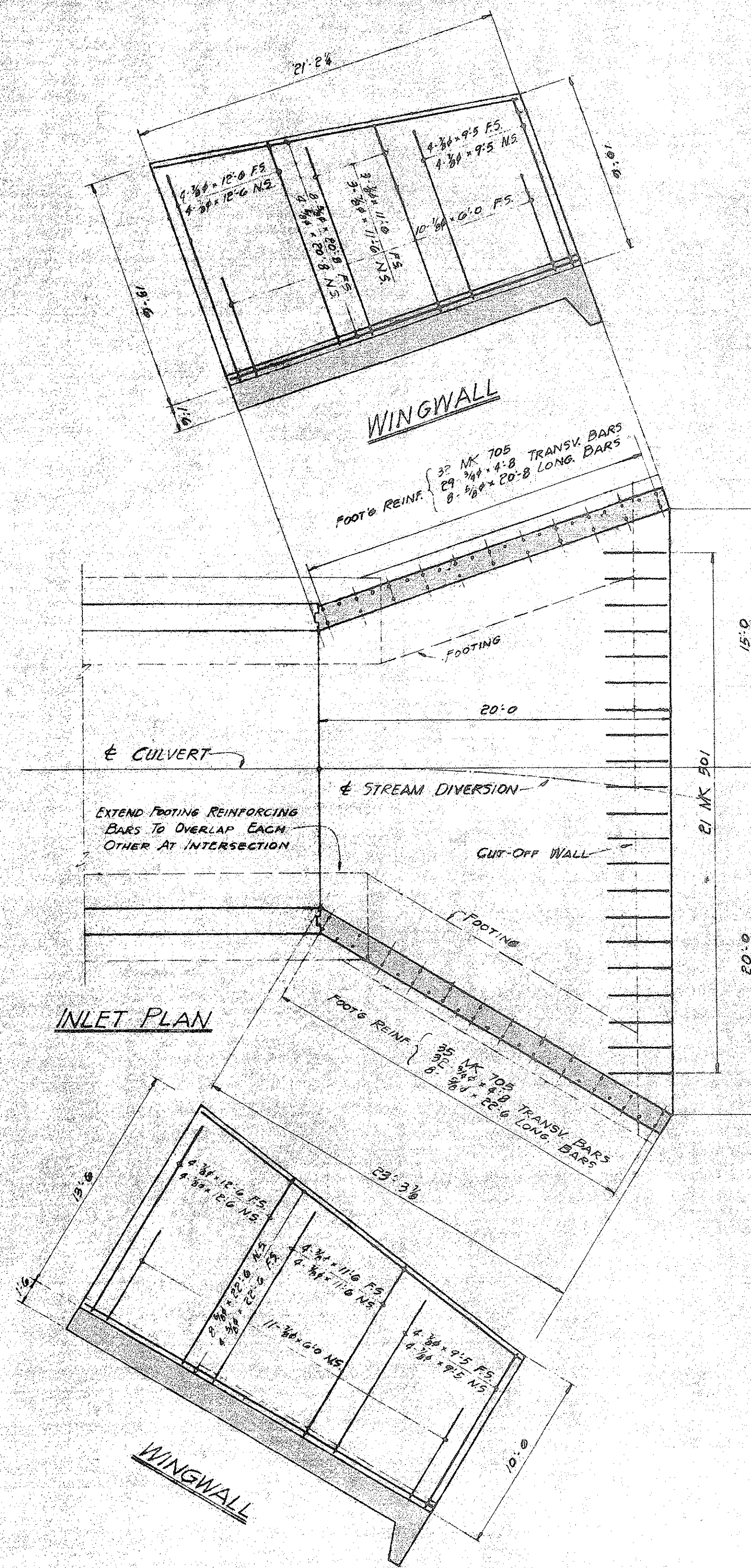
SECTION C JOB NO. 26 - 53 DWG. A - 3

Sheet No 48 of 252 Sheets

FILE	POCKET	FOLDER	NO.
7	5	2	11



DEPARTMENT OF PUBLIC WORKS		
CITY AND COUNTY OF HONOLULU		
BUREAU OF PLANS		
KALIHI TUNNEL		
VENT. BLD'G ACCESS ROAD PART II		
CULVERT DETAILS - STA. 7+60		
ENGINEER <u>W. LUM & E. W.</u>	DATE <u>JULY 15, 1953</u>	
DRAFTSMAN <u>E. WATABAKE</u>	CHECKED BY <u>W. TOKUSHIGE</u>	
SCALE <u>AS NOTED</u>	TRACER <u>E. W.</u>	
APPROVED <u>[Signature]</u>	APPROVED <u>[Signature]</u>	
CHIEF ENGINEER	BUREAU ENGINEER	



LIST OF MATERIALS									
BENDING DIAGRAMS ALL DIMENSIONS OUT TO OUT	MARK	NO. REQ'D	SIZE	LENGTH	REMARKS	LBS. STEEL	CY. CONC.	CLASS CONC.	
	701	116	1/2"	5'-3"	FOOTING			B-1	
	702	58	1/2"	19'-1"	WALLS			B-1	
	703	110	1/2"	17'-1"	WALLS			B-1	
	704	89	1/2"	29'-7"	WALLS			B-1	
	705	58	1/2"	13'-9"	WALLS			B-1	
	706	50	1/2"	6'-0"	WALLS			B-1	
	707	38	1/2"	50'-8"	WALLS			B-1	
	708	406	3/8"	VARIES	CULVERT			B-1	
	709	55	1"	13'-6"	WALLS			B-1	
	710	56	1"	18'-10"	WALLS			B-1	
	701	55	1"	13'-6"	WALLS			B-1	
	702	56	1"	18'-10"	WALLS			B-1	
	703	34	3/4"	54'-8"	WALLS			B-1	
	704	319	3/8"	VARIES	CULVERT			B-1	
	705	22	1/2"	2'-3"	WALLS			B-1	
	706	4	1/2"	19'-0"	WALLS			B-1	
	707	67	1/2"	4'-6"	FOOTING			B-1	
	708	67	1/2"	4'-6"	FOOTING			B-1	
	709	8	1/2"	20'-8"	WALLS			B-1	
	710	8	1/2"	22'-6"	WALLS			B-1	
	701	10	1/2"	12'-6"	WALLS			B-1	
	702	14	1/2"	11'-6"	WALLS			B-1	
	703	16	1/2"	9'-5"	WALLS			B-1	
	704	21	1/2"	6'-0"	WALLS			B-1	
	705	12	1/2"	20'-8"	WALLS			B-1	
	706	12	1/2"	22'-6"	WALLS			B-1	
	707	501	21	7'-0"	WALLS			B-1	
	708	3	3/8"	35'-0"	WALLS			B-1	
	709	601	102	4'-3"	FOOTING			B-1	
	710	74	1/2"	4'-8"	FOOTING			B-1	
	701	18	3/4"	2'-8"	WALLS			B-1	
	702	8	3/4"	25'-0"	WALLS			B-1	
	703	8	3/4"	50'-0"	WALLS			B-1	
	704	50	1/2"	2'-6"	WALLS			B-1	
	705	26	3/4"	11'-11"	WALLS			B-1	
	706	10	3/4"	11'-3"	WALLS			B-1	
	707	10	1/2"	1'-0"	WALLS			B-1	
	708	50	1/2"	6'-0"	WALLS			B-1	
	709	20	3/4"	38'-10"	WALLS			B-1	
	710	601	102	4'-3"	FOOTING			B-1	

ESTIMATED QUANTITIES	
TOTAL STEEL REQ'D	92,850 LBS.
" CLASS A-1 CONCRETE REQ'D	180 CY.
" CLASS B-1 CONCRETE REQ'D	138 CY.
" 1/2" x 1/2" WIRE MESH REQ'D	1250 LBS.
" G.R. PAVING REQ'D	54 CY.
" EXCAVATION FOR STRUCTURE	800 CY.

NOTE: WORK THIS SHEET WITH DRAWING A-4

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
BUREAU OF PLANS
KALIHI TUNNEL
VENT. BLDG ACCESS ROAD PART II
CULVERT DETAILS - STA. 7+60

ENGINEER: W. LUM & E. W. DATE: JULY 19, 1933
DRAFTSMAN: E. WATANABE
SCALE: AS NOTED
CHECKED BY: W. TORUSHIGE
TRACER: E. K.
APPROVED: *W. L. Lum*
CHIEF ENGINEER
APPROVED: *H. W. Butz*
BUREAU ENGINEER

APPROVED: *W. L. Lum*
ENGINEER, KALIHI TUNNEL

SECTION C JOB NO. 26-53 DWG. A-5