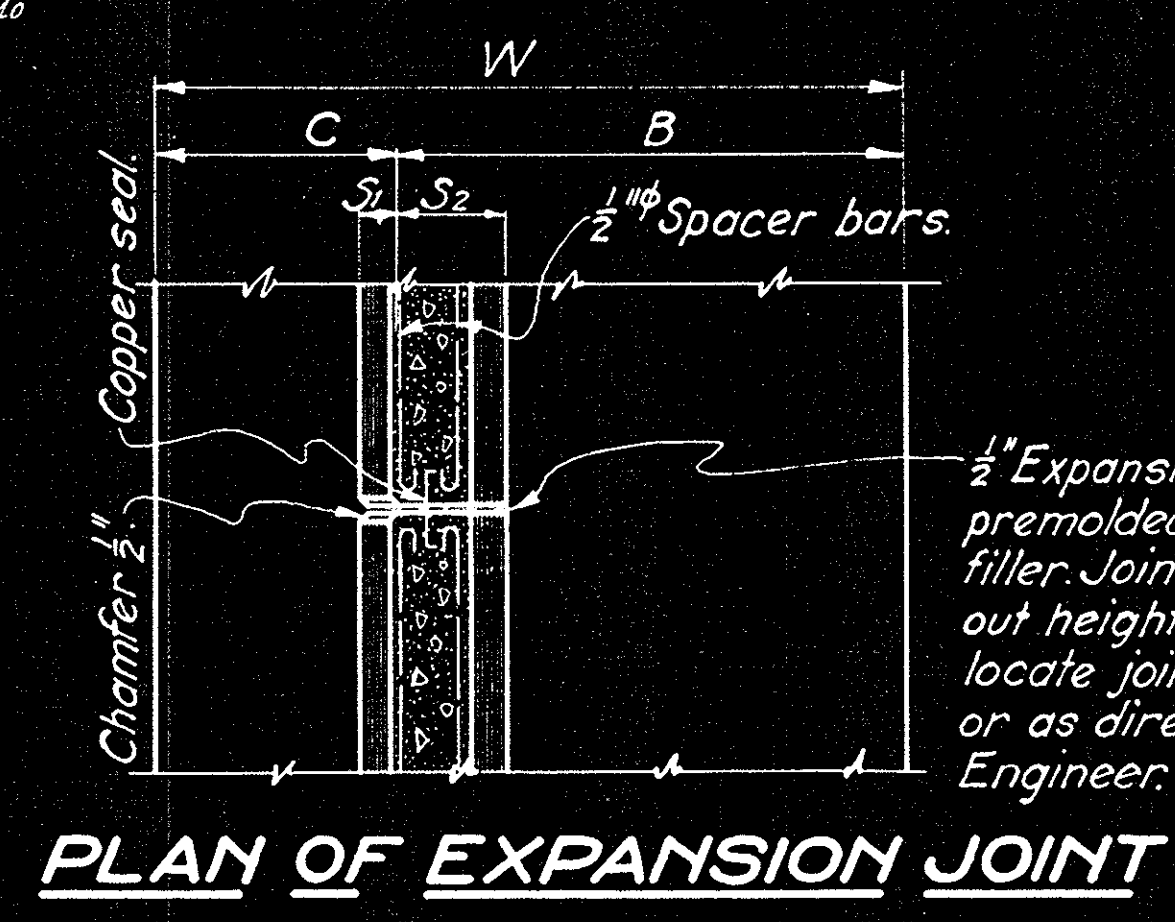
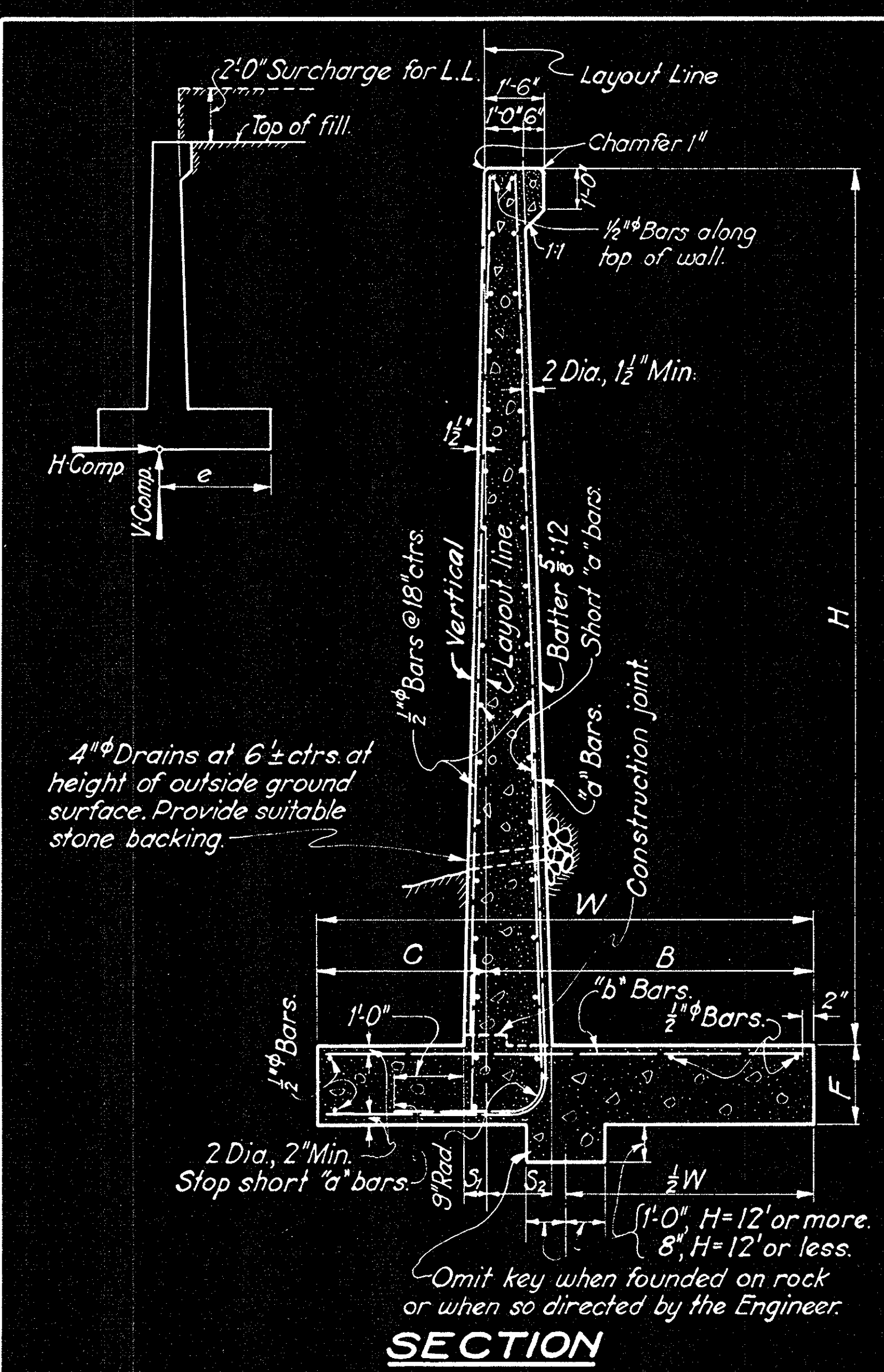
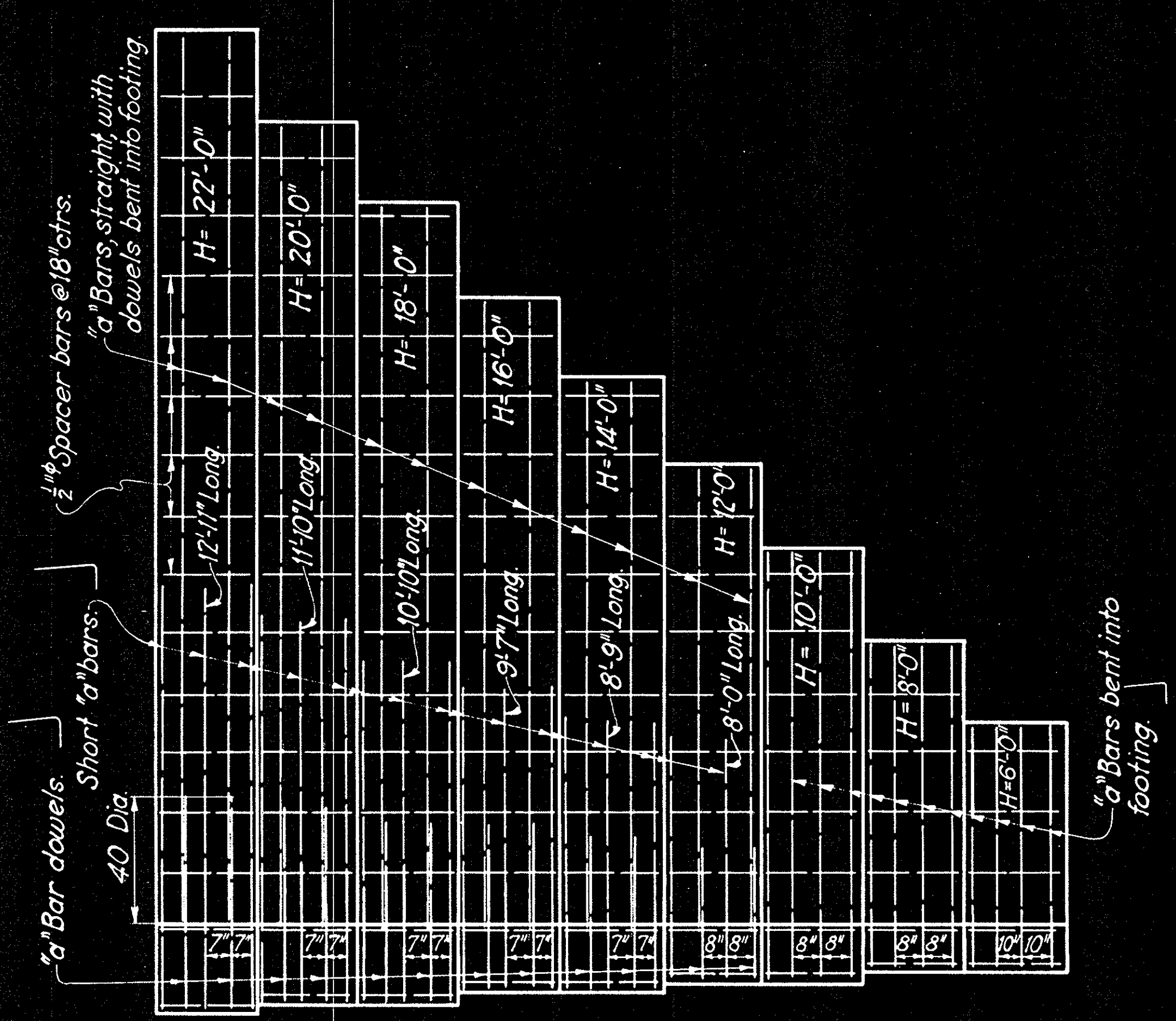


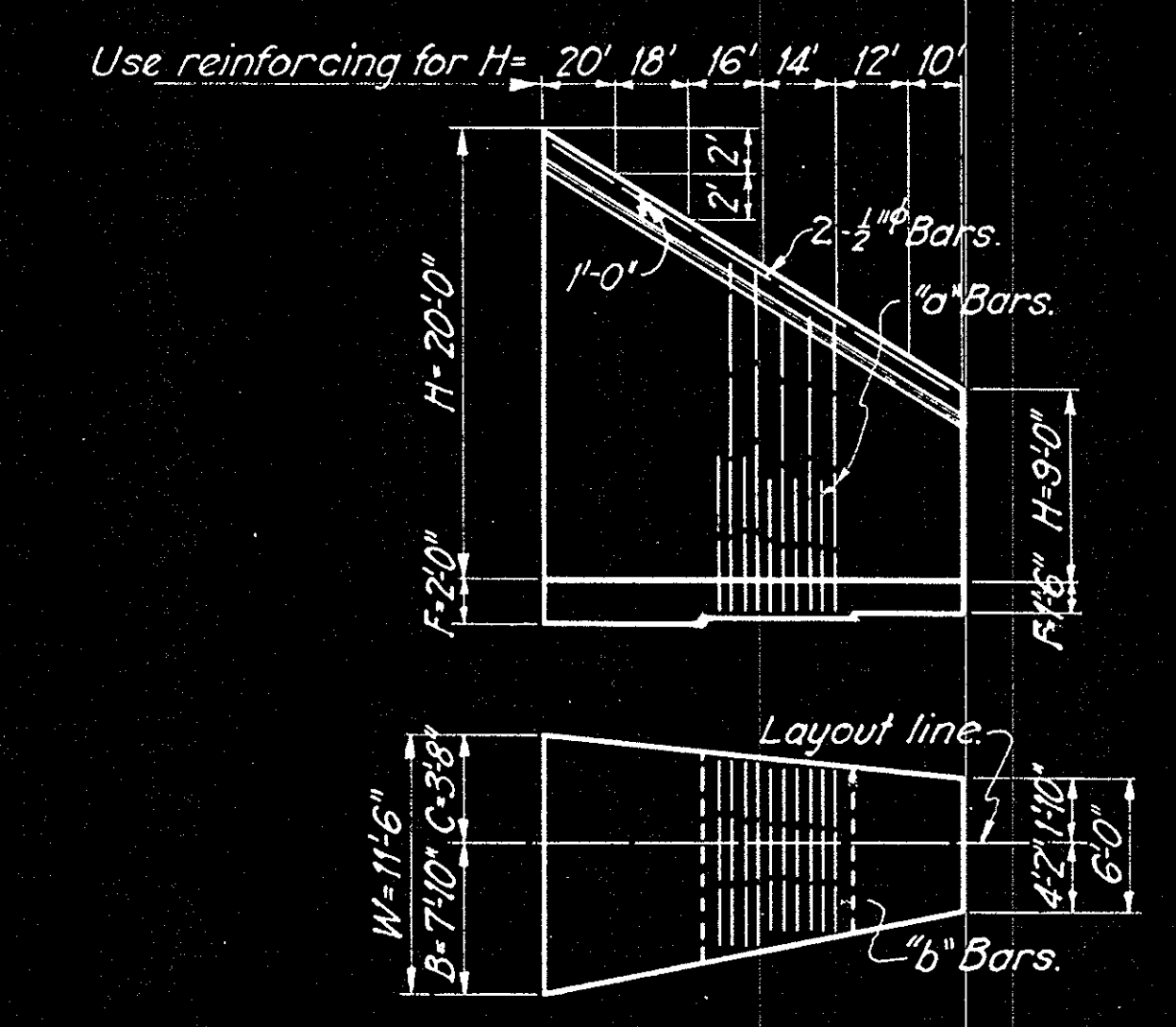
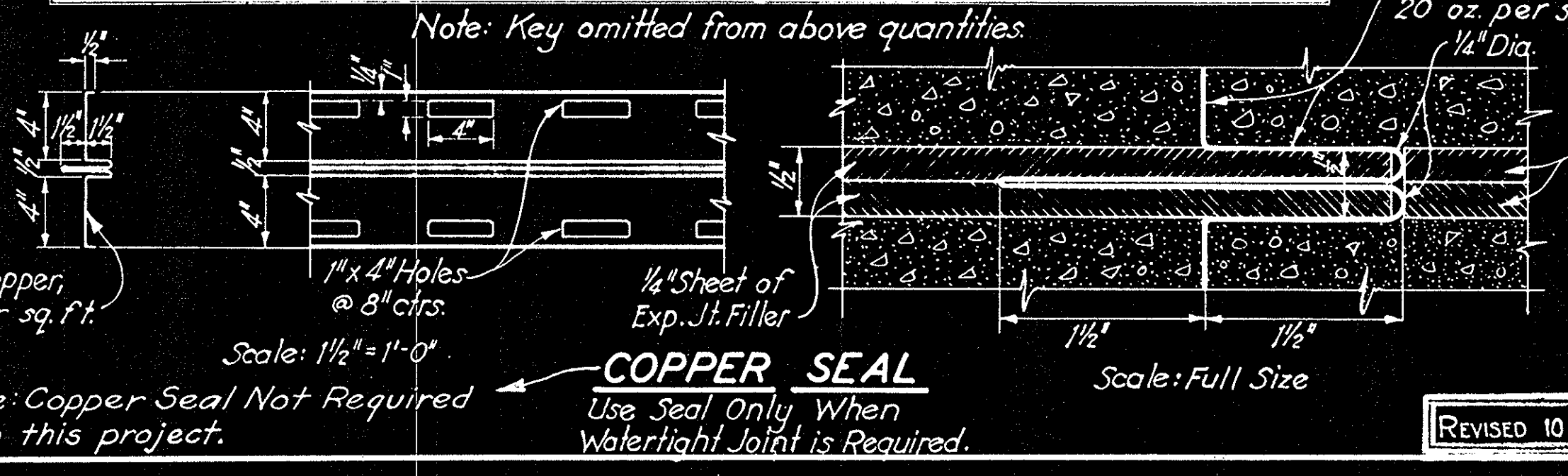


PLAN OF EXPANSION JOINT



ELEVATION

H	22'	20'	18'	16'	14'	12'	10'	8'	6'
W	12'-6"	11'-6"	10'-6"	9'-6"	8'-6"	7'-6"	6'-6"	5'-6"	4'-6"
C	4'-0"	3'-8"	3'-4"	3'-0"	2'-8"	2'-4"	2'-0"	1'-8"	1'-4"
B	8'-6"	7'-10"	7'-2"	6'-6"	5'-10"	5'-2"	4'-6"	3'-10"	3'-2"
F	2'-2"	2'-0"	2'-0"	1'-8"	1'-8"	1'-6"	1'-6"	1'-2"	1'-2"
S ₁	5 1/2"	5"	4 1/2"	4"	3 1/2"	3"	2 1/2"	2"	1 1/2"
S ₂	1'-8 1/2"	1'-7 1/2"	1'-6 3/4"	1'-6"	1'-5 1/4"	1'-4 1/2"	1'-3 3/4"	1'-3"	1'-2 1/4"
"a" Bars	1/2" @ 7"	1/2" @ 7"	1/2" @ 7"	1/2" @ 7"	1/2" @ 7"	1/2" @ 8"	1/2" @ 8"	1/2" @ 8"	1/2" @ 10"
"b" Bars	1/2" @ 7"	1/2" @ 7"	1/2" @ 7"	1/2" @ 7"	1/2" @ 7"	1/2" @ 8"	1/2" @ 8"	1/2" @ 8"	1/2" @ 10"
Conc. C.F./ft.	62.25	54.07	48.01	39.07	33.84	27.57	22.92	16.65	13.65
Steel Lbs./ft.	354.70	269.71	205.79	147.66	107.97	69.31	50.87	33.58	25.20
Toe Pres.	4,700	4,300	3,900	3,550	3,200	2,800	2,350	1,900	1,500
H Comp. Lbs.	12,100	10,300	8,640	6,890	5,550	4,250	3,210	2,175	1,440
V Comp. Lbs.	29,700	25,500	21,300	17,600	14,000	11,000	8,300	6,150	4,000
e	8.25'	7.55'	6.80'	6.15'	5.50'	4.85'	4.15'	3.50'	2.80'



TYPICAL LAYOUT EXAMPLE

55 C-43
 State Highway Bridge
 Sheet 10 of 12
 Red. 22.5:1 Scale: none
 Blueprint

NOTES

All concrete to be Class "A" concrete.
 All reinforcing steel to be of structural-steel grade deformed bars and where bars are spliced they shall lap at least 40 diameters.
 When the footing rests on a rock foundation "W" may be decreased to 0.4 (H+F+2') making all the reduction in "B" leaving "C", "S₁" and "S₂" unchanged.
 Design data: $f_c = 1000 \text{ #/sq. in.}$, $f_s = 18,000 \text{ #/sq. in.}$, $u = 150 \text{ #/sq. in.}$, $n = 10$, earth = 120 lbs./cu. ft. and equivalent fluid = 36 lbs./sq. ft./ft. of height.
 Wall is designed for 2'-0" surcharge. For a greater surcharge a special design will be required.
 Vertical bars to be doweled only when they extend more than 10' above top of footing.

BRIDGE ACROSS SANTIAGO CREEK	
STANDARD RETAINING WALL	
SCALE. NONE	FILE NO.
BRIDGE NO. 55-33	DRAWING NO. C-1144-9

6-HM 4-40

Design Dept.	Initial Date
Designed by	W. R. R. 1936
Checked by	W. R. R. 1936
Drawn by	
Traced by	T. K. M. 1936
Checked by	
Quantities by	P. G. G. 5-36
Quant. Rev. by	P. G. G. 10-39
Design Correct	
Prints to Dist. Engr.	
Reply from Dist. Engr.	
Prints to Const. Engr.	
Const. Engr. Initial	
Quantities Chkd.	
Field Data Chkd.	
Const. Details Correct.	
Const. Engr. Bridges	

STATE OF CALIFORNIA
 DEPARTMENT OF HIGHWAYS
 BRIDGE DEPARTMENT