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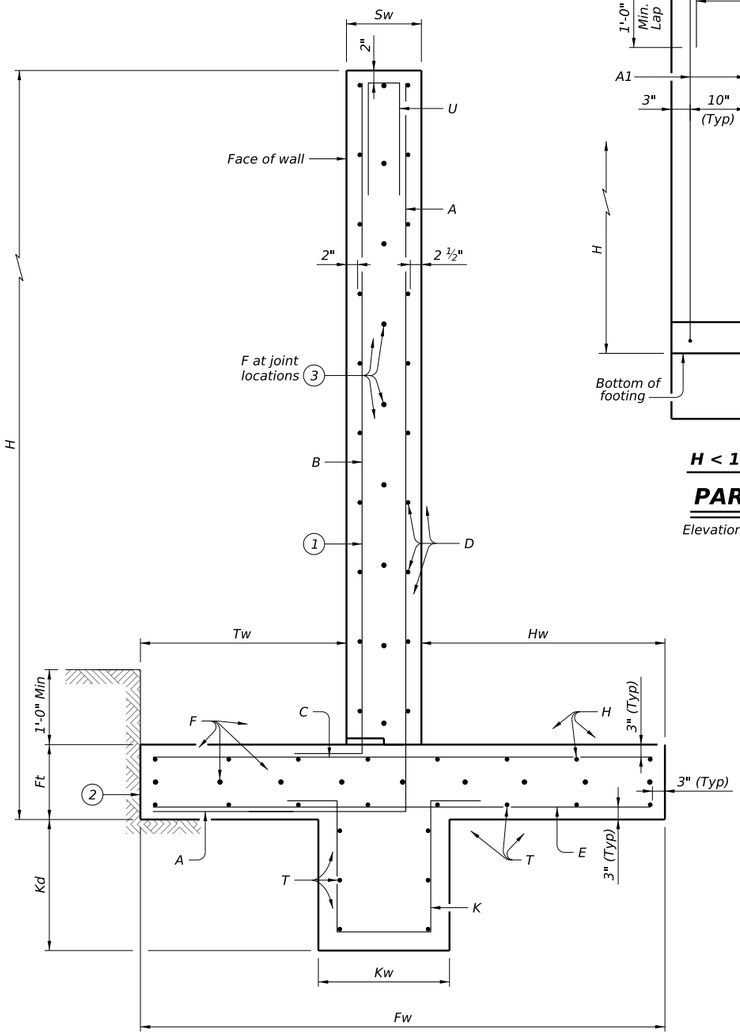
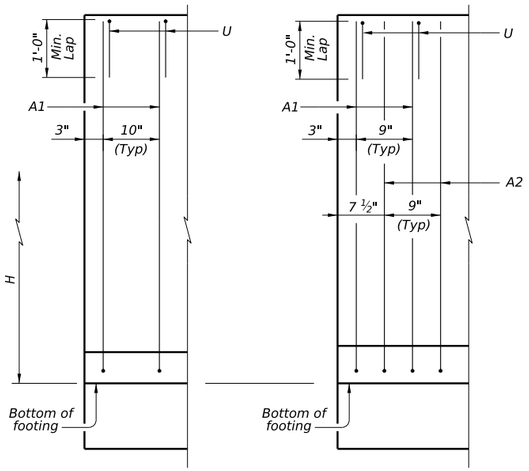
REINFORCING STEEL FOR ONE 32' PANEL (DESIGN B)

Wall Height "H"	PROPERTIES							MAX SOIL PRESS	Bars A1					Bars A2					Bars B					Bars C					Bars E					Bars K					D (#5) at 12" Max.		Dowel F at 12" Max.		H (#5) at 12" Max.		T (#5) at 12" Max.		U ~ #5 (5)		QUANTITY FOR ONE 32' PANEL		Wall Height "H"
	WALL DIMENSIONS								No.	Size	Spa.	Length	Weight	No.	Size	Spa.	Length	Weight	No.	Size	Spa.	Length	Weight	No.	Size	Spa.	Length	Weight	No.	Size	Spa.	Length	Weight	No.	Size	Spa.	Length	Weight	No.	Weight	No.	Weight	No.	Weight	No.	Weight	No.	Weight	Conc (CY)	REINF (LB)	
(Ft)	Fw	Tw	Sw	Hw	Ft	Kw	Kd	T/SF																																										(Ft)
2	1'- 4"	0'- 4"	1'- 0"	0'- 0"	0'- 9"	0'- 9"	0'- 9"	0.175	39	#4	10"	2'- 6"	66						39	#4	10"	2'- 2"	57											39	#4	10"	3'- 7"	94	6	198	5	41	2	66	2	66	2'- 5"	99	3.4	687	2
4	2'- 5"	0'- 8"	1'- 0"	0'- 9"	1'- 0"	0'- 9"	0'- 9"	0.317	39	#4	10"	4'- 10"	126						39	#4	10"	3'- 11"	103	39	#4	10"	1'- 11"	50	39	#4	10"	1'- 11"	50	39	#4	10"	3'- 7"	94	8	263	7	57	3	99	3	99	6'- 0"	245	7.1	1186	4
6	4'- 2"	1'- 3"	1'- 0"	1'- 11"	1'- 0"	0'- 9"	0'- 9"	0.390	39	#4	10"	7'- 5"	194						39	#4	10"	5'- 11"	155	39	#4	10"	3'- 8"	96	39	#4	10"	3'- 8"	96	39	#4	10"	3'- 7"	94	12	395	11	89	5	165	5	165	8'- 5"	343	11.6	1792	6
8	6'- 3"	1'- 8"	1'- 0"	3'- 7"	1'- 0"	0'- 9"	0'- 9"	0.492	39	#4	10"	9'- 10"	257						39	#4	10"	7'- 11"	207	39	#4	10"	5'- 9"	150	39	#4	10"	5'- 9"	150	39	#4	10"	3'- 7"	94	16	526	15	121	7	230	7	230	8'- 5"	343	16.4	2308	8
10	8'- 4"	2'- 4"	1'- 1"	4'- 11"	1'- 2"	1'- 0"	1'- 0"	0.593	39	#5	10"	12'- 7"	512						39	#4	10"	9'- 9"	255	39	#5	10"	7'- 10"	319	39	#4	10"	7'- 10"	205	39	#4	10"	4'- 4"	113	20	658	19	153	9	296	9	296	8'- 6"	346	24.1	3153	10
12	10'- 6"	3'- 0"	1'- 2"	6'- 4"	1'- 4"	1'- 3"	1'- 3"	0.720	44	#4	9"	15'- 4"	441	44	#4	9"	15'- 4"	441	44	#4	9"	11'- 7"	341	44	#6	9"	10'- 0"	661	44	#4	9"	10'- 0"	294	44	#4	9"	5'- 1"	150	24	789	23	185	11	362	11	362	8'- 7"	385	33.2	4420	12
14	12'- 1"	3'- 7"	1'- 3"	7'- 3"	1'- 7"	1'- 6"	1'- 6"	0.833	44	#5	9"	18'- 0"	808	44	#5	9"	18'- 0"	808	44	#4	9"	13'- 4"	392	44	#7	9"	11'- 7"	1042	44	#4	9"	11'- 7"	341	44	#4	9"	5'- 10"	172	28	920	27	217	13	428	13	428	8'- 8"	389	43.8	5954	14
16	13'- 11"	4'- 2"	1'- 5"	8'- 4"	1'- 9"	1'- 9"	1'- 9"	0.951	44	#6	9"	20'- 9"	1341	44	#5	9"	20'- 9"	931	44	#4	9"	15'- 2"	446	44	#8	9"	13'- 5"	1586	44	#4	9"	13'- 5"	397	44	#4	9"	6'- 7"	194	32	1052	31	249	15	493	15	493	8'- 10"	397	56.5	7588	16
18	15'- 9"	4'- 11"	1'- 8"	9'- 2"	2'- 0"	2'- 0"	2'- 0"	1.065	44	#6	9"	23'- 9"	1534	44	#6	9"	23'- 9"	1534	44	#4	9"	16'- 11"	498	44	#8	9"	15'- 3"	1792	44	#4	9"	15'- 3"	449	44	#4	9"	7'- 4"	216	34	1118	34	273	17	559	17	559	9'- 1"	408	73.7	8949	18
20	17'- 6"	5'- 5"	1'- 9"	10'- 4"	2'- 3"	2'- 0"	2'- 0"	1.182	44	#7	9"	26'- 4"	2315	44	#7	9"	26'- 4"	2315	44	#4	9"	18'- 8"	549	44	#9	9"	17'- 0"	2544	44	#4	9"	17'- 0"	500	44	#4	9"	7'- 4"	216	38	1249	37	297	18	592	18	592	9'- 2"	412	88.3	11590	20



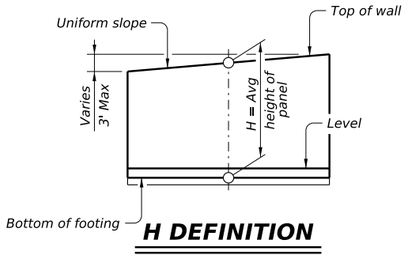
SECTION



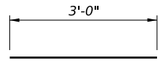
H < 12' **H ≥ 12'**

PARTIAL WALL ELEVATIONS

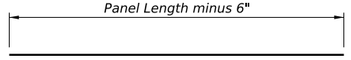
Elevation shows vertical reinforcing pattern in back face.



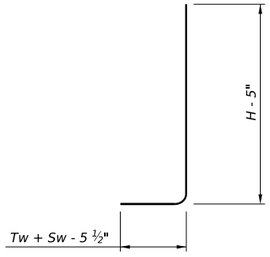
H DEFINITION



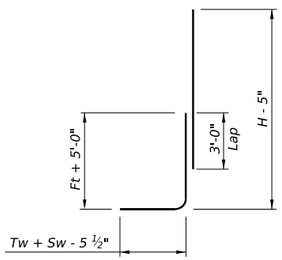
BARS F (3)



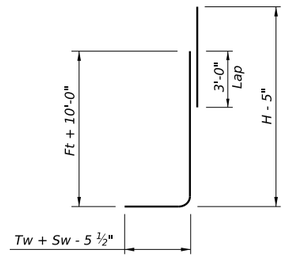
BARS D, H, and T



BARS A1 & A2

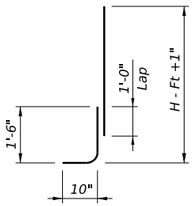


OPTIONAL BARS A1 (4)

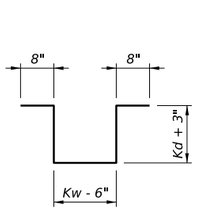


OPTIONAL BARS A2 (4)

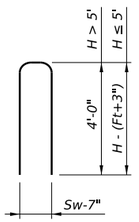
BARS B



OPTIONAL BARS B (4)



BARS K



BARS U

1. Place vertical bars inside of horizontal bars (Typical both faces).
2. Place footing toe against undisturbed soil.
3. See Retaining Wall Miscellaneous Details (RW(SF)) standard for size.
4. Optional bars splices not included in above table.
5. Bars U lapped with Bars A1:
   H ≤ 10'-0", 10" Max Spa, 39 bars.
   H ≤ 10'-0", 9" Max Spa, 44 bars.

MATERIAL NOTES:

Provide Class C concrete (f'c=3,600 psi.)
Provide Grade 60 reinforcing steel.

GENERAL NOTES:

Designed according to AASHTO LRFD Bridge Design Specifications.
Walls are designed assuming unit weight of soil = 120 pcf and a friction angle = 30 degrees for foundation and retained soil.
See Retaining Wall Miscellaneous Details (RW(SF)) standard for details and notes not shown.
These details provide designs for wall heights of 2 to 20 feet. For heights not shown, round up "H" to determine wall dimensions and reinforcing. (For example, a 9-foot high wall would use the 10-foot high dimensions and reinforcing.)
Quantities are based on "H" being average height of panel.
Retaining walls are designed to be coded as follows on Retaining Wall Layout Sheets:

B - 15 - 32
- Panel length ~ 32 ft. is standard; 28 ft. requires special quantities.
- Average height (H) of panel.

Design A = No surcharge or slope above wall.
Design B = No surcharge; slopes to 3:1.
Design C = Traffic surcharge; no slope above wall.

Cover dimensions are clear dimensions, unless noted otherwise.
Reinforcing bar dimensions shown are out-to-out of bar.

Texas Department of Transportation

Bridge Division Standard

SPREAD FOOTING RETAINING WALL

RW(SFB)

FILE: RW-SFB-25.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2025	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.

DATE:
FILE: