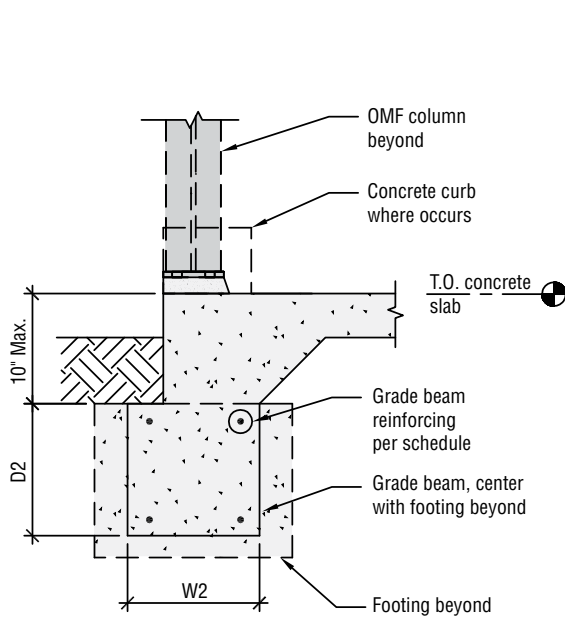
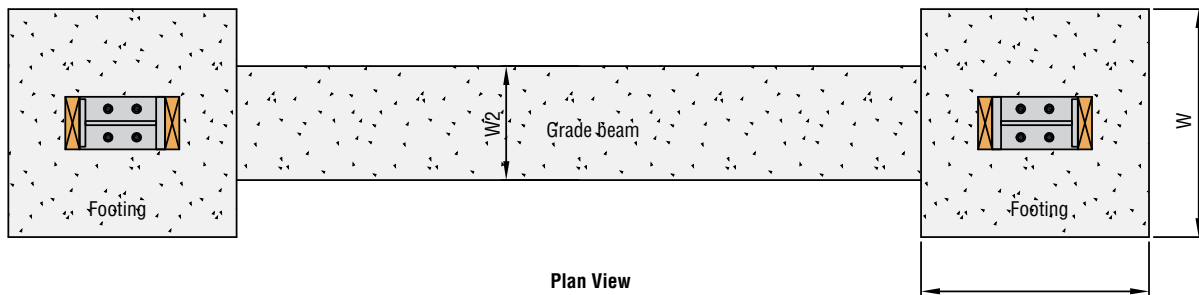
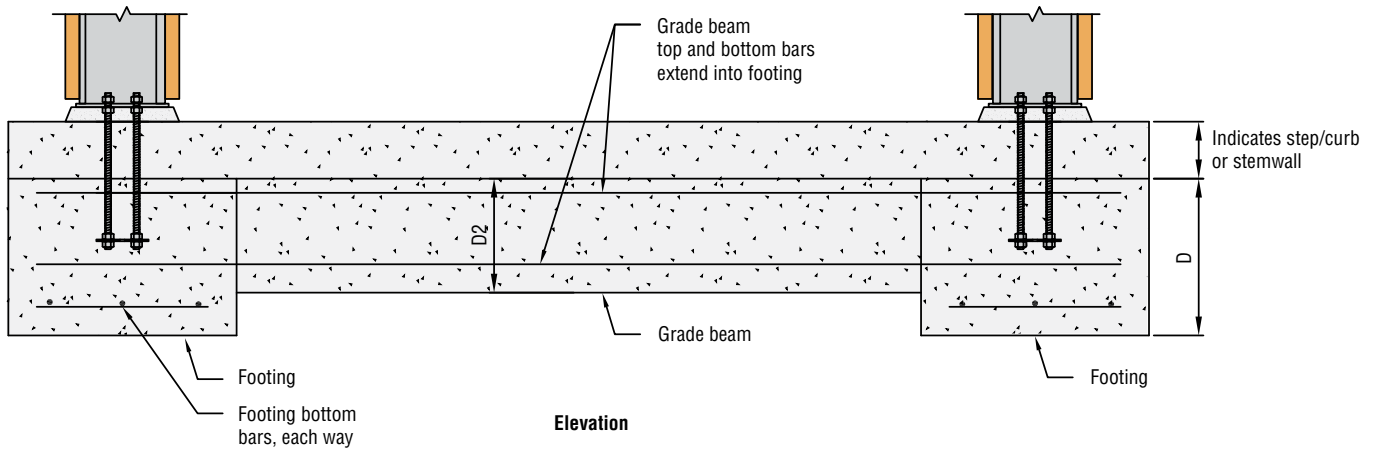


Wall Bracing Solutions for Footing and Grade Beam

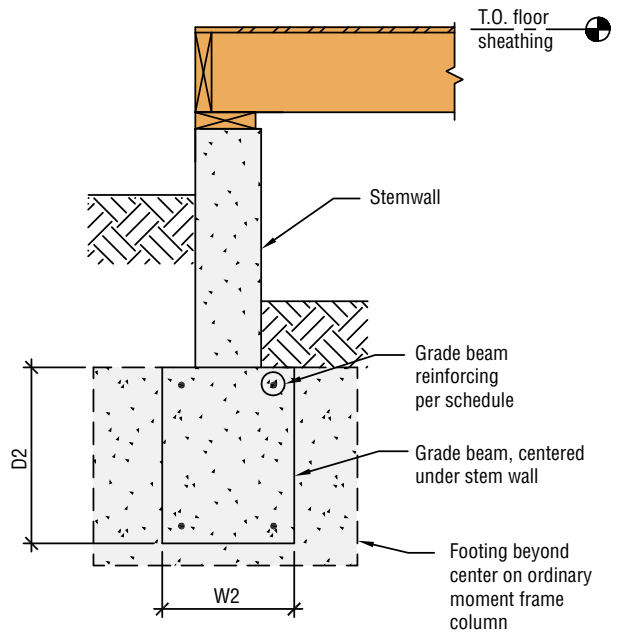
FOOTING								
Equivalent Wall Bracing Length (ft)	Load Type	Height (ft)	1 story			1st of 2 or 3 stories ¹		
			Width W (in)	Depth D (in)	Bottom Rebar	Width W (in)	Depth D (in)	Bottom Rebar
8	Wind	8 to 12	18	12	2-#4	22	14	2-#4
12	Wind	8 to 12	20	14	2-#4	26	14	2-#4
20	Wind	8 to 12	—	—	—	30	16	3-#4
8	Seismic	8 to 12	22	14	2-#4	28	16	3-#4
12	Seismic	8 to 9	24	16	2-#4	32	16	3-#4
		10 to 12	24	16	2-#4	36	16	3-#4
20	Seismic	8 to 9	—	—	—	38	18	3-#4
		10 to 12	—	—	—	44	18	3-#4
GRADE BEAM ²								
Equivalent Wall Bracing Length	Load Type	Height (ft)	1 story			1st of 2 or 3 stories ³		
			Width W2 (in)	Depth D2 (in)	Top and Bottom Rebar	Width W2 (in)	Depth D2 (in)	Top and Bottom Rebar
8	Wind	8 to 12	12	12	2-#4	15	14	2-#4
12	Wind	8 to 12	12	12	2-#4	15	14	2-#4
20	Wind	8 to 12	—	—	—	15	14	3-#4
8	Seismic	8 to 12	12	14	2-#4	15	14	2-#4
12	Seismic	8 to 12	12	14	2-#4	15	16	3-#4
20	Seismic	8 to 12	—	—	—	15	18	3-#4
BALLON FRAMED SOLUTIONS								
Equivalent Wall Bracing Length	Load Type	Height (ft)	Footing			Grade Beam		
			Width W (in)	Depth D (in)	Bottom Rebar	Width W2 (in)	Depth D2 (in)	T&B Bars
8	Wind	18 to 19	22	14	2-#4	12	12	2-#4
8	Seismic	18 to 19	32	16	3-#4	12	12	2-#4
12	Seismic	18 to 19	38	16	3-#4	15	14	3-#4

- Increase footing size by 6" on each side for 1st of 3-story application.
 - Grade beam shall meet minimum width of IRC Table R403.1 for brick veneer over light-frame application.
 - Grade beam for 1st of 3 stories shall meet minimum width of IRC Table R403.1.
- Footing and grade-beam design assumptions:
- Soil bearing pressure = 2000 psf (1500 psf with 1/3 increase for wind and seismic loads)
 - Concrete compressive strength, f'_c , = 2500 psi
 - Concrete reinforcement tensile strength, f_y = 60 ksi

Wall Bracing Solutions for Footing and Grade Beam



Grade Beam at Slab-On-Grade/Curbs



Grade Beam at Stemwall