Product Info

MiTek®

Better Technology. Better Building.℠

TIE-DOWN SYSTEM

MiTek®
100 Industrial Road, Bradford, ON L3Z 3G7
Tel: 800-268-3434 Fax: 905-952-2901

TIE-DOWN SYSTEM

Cinch Nut

Model No.	Connecting Rod Diameter (in)	Factored Resistance lb	Factored Resistance kN	Deflection at Factored Resistance (in)	Travel and Seating Increment (in)
Z4-CNX3	3/8	7,455	33.16	0.0157	0.029
Z4-CNX4	1/2	13,255	58.96	0.0217	0.048
Z4-CNX5	5/8	20,255	90.10	0.0187	0.0514
Z4-CNX6	3/4	24,395	108.51	0.0224	0.0578
Z4-CNX7	7/8	40,590	180.55	0.0234	0.0506
Z4-CNX8	1	42,170	187.58	0.0241	0.0549
Z4-CNX9	1-1/8	60,965	271.19	0.0233	0.0524
Z4-CNX10	1-1/4	78,035	347.12	0.0287	0.0754
Z4-CNX11	1-3/8	73,575	327.28	0.0268	0.0804
Z4-CNX12	1-1/2	119,280	530.58	0.0361	0.0717

All CNX models fit within a nominal 4" wall depth.

CNX code report: ICC-ES ESR-2190

Z-Rod, Threaded Rod

Model No.	Rod Diameter (in)	Effective Area (in^2)	Factored Tensile Resistance lb	Factored Tensile Resistance kN	Model No.	Rod Diameter (in)	Effective Area (in^2)	Factored Tensile Resistance lb	Factored Tensile Resistance kN
Z4-ZR3STD TR-A36-03	3/8	0.0913	3,535	15.72	Z4-ZR3HS TR-B7-03	3/8	0.0913	8,285	36.85
Z4-ZR4STD TR-A36-04	1/2	0.1651	6,390	28.42	Z4-ZR4HS TR-B7-04	1/2	0.1651	14,725	65.50
Z4-ZR5STD TR-A36-05	5/8	0.2493	9,650	42.93	Z4-ZR5HS TR-B7-05	5/8	0.2493	23,010	102.35
Z4-ZR6STD TR-A36-06	3/4	0.3652	14,135	62.88	Z4-ZR6HS TR-B7-06	3/4	0.3652	33,135	147.39
Z4-ZR7STD TR-A36-07	7/8	0.5011	19,395	86.27	Z4-ZR7HS TR-B7-07	7/8	0.5011	45,100	200.61
Z4-ZR8STD TR-A36-08	1	0.6570	25,425	113.10	Z4-ZR8HS TR-B7-08	1	0.6570	58,905	262.02
Z4-ZR9STD TR-A36-09	1-1/8	0.8294	32,095	142.77	Z4-ZR9HS TR-B7-09	1-1/8	0.8294	74,550	331.61
Z4-ZR10STD TR-A36-10	1-1/4	1.0423	40,335	179.42	Z4-ZR10HS TR-B7-10	1-1/4	1.0423	92,040	409.41
Z4-ZR11STD TR-A36-11	1-3/8	1.2528	48,485	215.67	Z4-ZR11HS TR-B7-11	1-3/8	1.2528	111,365	495.38
Z4-ZR12STD TR-A36-12	1-1/2	1.5162	58,675	261.00	Z4-ZR12HS TR-B7-12	1-1/2	1.5162	132,535	589.54

1. Factored tensile resistances are based on CSA S16-14 Clause 13.2 (a) (i), (iii), and Clause 13.12.1.3.
2. ZR_STD and TR-A36 are plain finish and conform to ASTM A36, with minimum F_y = 43,000 psi and F_u = 60,000 psi.
3. ZR_HS and TR-B7 are zinc plated and conform to ASTM A193 Grade B7, with minimum F_y = 105,000 psi and F_u = 125,000 psi.

Bearing Plate Washer

Model No.	Width x Length (in)	Thickness (in)	Hole Diameter (in)	Norminal Wall Depth (in)	Factored Bearing Resistance D.Fir-L lb	D.Fir-L kN	S-P-F lb	S-P-F kN
Z4-BPW5	3 x 3	1/4	1-5/16	4	8,215	36.54	6,220	27.67
Z4-BPW6	3-1/4 x 3-3/8	3/8	1-9/16		9,720	43.24	7,360	32.74
Z4-BPW7	3-1/4 x 4-3/8	1/2			13,215	58.78	10,005	44.50
Z4-BPW9	3-1/4 x 5	5/8			15,395	68.48	11,655	51.84
Z4-BPW11	3-1/4 x 5-7/8	3/4			18,450	82.07	13,970	62.14
Z4-BPW15	3-1/4 x 7-7/8	7/8			25,430	113.12	19,255	85.65
Z4-BPW20	3-1/4 x 10-1/4	1-1/4			33,725	150.02	25,535	113.59
Z4-BPW25	3-1/2 x 11-3/4	1-1/2			42,115	187.34	31,885	141.83
Z4-BPW30	3-1/2 x 14	1-3/4			50,575	224.97	38,290	170.32
Z4-BPW17-6	5 x 5-7/8	5/8	1-9/16	6	29,495	131.20	22,330	99.33
Z4-BPW27-6	5 x 9	1			46,275	205.84	35,040	155.87
Z4-BPW36-6	5 x 12	1-1/2			62,390	277.52	47,240	210.13
Z4-BPW43-6	5 x 14	1-3/4			73,130	325.30	55,370	246.30
Z4-BPW46-6	5 x 15	1-7/8			78,500	349.19	59,435	264.38

1. Bearing Plate Washer are fabricated from ASTM A36 steel.
2. Tabulated factored resistances are based on CSA O86-14 Clause 6.5.7 and CSA S16-14 Clause 13.5.
3. Table values include K_D = 1.15 load increase for short-term loads and Size Factor for Bearing $K_{Zcp.}$
4. Table values assume Bearing Plate Washer installed on 2x wall plates.
5. Factored Bearing Resistance of BPW5 installed on D.Fir-L wall plate is 6260 lb when used with CNX3, 6685 lb when used with CNX4, 7230 lb when used with CNX5, 7780 lb when used with CNX6.

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Factored Compressive Resistance for D Fir-L

Framing	No. of Studs (2x_)	Stud Location	Perp. to Grain Qr [2,3]		Parallel to Grain, Pr [2,4,5] Stud Height									
			lb	kN	8 ft (lb)	2.44 m (kN)	9 ft (lb)	2.74 m (kN)	10 ft (lb)	3.05 m (kN)	11 ft (lb)	3.35 m (kN)	12 ft (lb)	3.66 m (kN)
2x4 WALL	1	either side	5,639	25.08	4,741	21.09	3,695	16.44	2,900	12.90	2,298	10.22	1,841	8.19
	2		11,278	50.17	9,482	42.18	7,390	32.87	5,800	25.80	4,596	20.44	3,682	16.38
	3		16,918	75.25	14,223	63.27	11,085	49.31	8,700	38.70	6,894	30.67	5,523	24.57
	4		22,557	100.34	18,964	84.36	14,780	65.74	11,600	51.60	9,192	40.89	7,364	32.76
	5		28,196	125.42	23,705	105.45	18,475	82.18	14,500	64.50	11,490	51.11	9,205	40.95
	1	each side	11,278	50.17	9,482	42.18	7,390	32.87	5,800	25.80	4,596	20.44	3,682	16.38
	2		22,557	100.34	18,964	84.36	14,780	65.74	11,600	51.60	9,192	40.89	7,364	32.76
	3		33,835	150.51	28,446	126.53	22,170	98.62	17,400	77.40	13,788	61.33	11,046	49.14
	4		45,113	200.67	37,928	168.71	29,560	131.49	23,200	103.20	18,384	81.78	14,728	65.51
	5		56,392	250.84	47,410	210.89	36,950	164.36	29,000	129.00	22,980	102.22	18,410	81.89
2x6 WALL	1	either side	8,862	39.42	13,943	62.02	12,182	54.19	10,551	46.93	9,086	40.42	7,799	34.69
	2		17,723	78.84	27,886	124.04	24,364	108.38	21,102	93.87	18,172	80.83	15,598	69.38
	3		26,585	118.25	41,829	186.06	36,546	162.56	31,653	140.80	27,258	121.25	23,397	104.08
	4		35,446	157.67	55,772	248.09	48,728	216.75	42,204	187.73	36,344	161.67	31,196	138.77
	5		44,308	197.09	69,715	310.11	60,910	270.94	52,755	234.67	45,430	202.08	38,995	173.46
	1	each side	17,723	78.84	27,886	124.04	24,364	108.38	21,102	93.87	18,172	80.83	15,598	69.38
	2		35,446	157.67	55,772	248.09	48,728	216.75	42,204	187.73	36,344	161.67	31,196	138.77
	3		53,169	236.51	83,658	372.13	73,092	325.13	63,306	281.60	54,516	242.50	46,794	208.15
	4		70,893	315.35	111,544	496.17	97,456	433.51	84,408	375.47	72,688	323.33	62,392	277.53
	5		88,616	394.18	139,430	620.22	121,820	541.88	105,510	469.33	90,860	404.17	77,990	346.92

1. Factored resistances are based on CSA O86-14 Clause 6.5.6 and Clause 6.5.7.
2. Perpendicular-to-grain and parallel-to-grain values include K_D = 1.15 load increase for short-term loads.
3. Perpendicular to grain values include Size Factor for Bearing $K_{Zcp.}$
4. Parallel to grain values assume K_H = 1.10 with wall sheathing fastened to the narrow edge of the stud (fastening details to be provided by others).
5. Parallel to grain values are based on Effective Length Factor K_e = 1.0.
6. Table values are based on 2x_ D.Fir-L No.1/No.2 solid sawn lumber.

Factored Compressive Resistance for S-P-F

Framing	No. of Studs (2x_)	Stud Location	Perp. to Grain Qr [2,3]		Parallel to Grain, Pr [2,4,5] Stud Height									
			lb	kN	8 ft (lb)	2.44 m (kN)	9 ft (lb)	2.74 m (kN)	10 ft (lb)	3.05 m (kN)	11 ft (lb)	3.35 m (kN)	12 ft (lb)	3.66 m (kN)
2x4 WALL	1	either side	4,270	18.99	4,213	18.74	3,313	14.74	2,618	11.65	2,086	9.28	1,678	7.46
	2		8,539	37.98	8,426	37.48	6,626	29.47	5,236	23.29	4,172	18.56	3,356	14.93
	3		12,809	56.98	12,639	56.22	9,939	44.21	7,854	34.94	6,258	27.84	5,034	22.39
	4		17,079	75.97	16,852	74.96	13,252	58.95	10,472	46.58	8,344	37.12	6,712	29.86
	5		21,348	94.96	21,065	93.70	16,565	73.68	13,090	58.23	10,430	46.39	8,390	37.32
	1	each side	8,539	37.98	8,426	37.48	6,626	29.47	5,236	23.29	4,172	18.56	3,356	14.93
	2		17,079	75.97	16,852	74.96	13,252	58.95	10,472	46.58	8,344	37.12	6,712	29.86
	3		25,618	113.95	25,278	112.44	19,878	88.42	15,708	69.87	12,516	55.67	10,068	44.78
	4		34,157	151.94	33,704	149.92	26,504	117.90	20,944	93.16	16,688	74.23	13,424	59.71
	5		42,697	189.92	42,130	187.40	33,130	147.37	26,180	116.45	20,860	92.79	16,780	74.64
2x6 WALL	1	either side	6,709	29.85	11,887	52.88	10,482	46.63	9,161	40.75	7,955	35.39	6,880	30.60
	2		13,419	59.69	23,774	105.75	20,964	93.25	18,322	81.50	15,910	70.77	13,760	61.21
	3		20,128	89.54	35,661	158.63	31,446	139.88	27,483	122.25	23,865	106.16	20,640	91.81
	4		26,838	119.38	47,548	211.50	41,928	186.50	36,644	163.00	31,820	141.54	27,520	122.42
	5		33,547	149.23	59,435	264.38	52,410	233.13	45,805	203.75	39,775	176.93	34,400	153.02
	1	each side	13,419	59.69	23,774	105.75	20,964	93.25	18,322	81.50	15,910	70.77	13,760	61.21
	2		26,838	119.38	47,548	211.50	41,928	186.50	36,644	163.00	31,820	141.54	27,520	122.42
	3		40,257	179.07	71,322	317.26	62,892	279.76	54,966	244.50	47,730	212.31	41,280	183.62
	4		53,676	238.76	95,096	423.01	83,856	373.01	73,288	326.00	63,640	283.08	55,040	244.83
	5		67,095	298.45	118,870	528.76	104,820	466.26	91,610	407.50	79,550	353.86	68,800	306.04

1. Factored resistances are based on CSA O86-14 Clause 6.5.6 and Clause 6.5.7.
2. Perpendicular-to-grain and parallel-to-grain values include K_D = 1.15 load increase for short-term loads.
3. Perpendicular to grain values include Size Factor for Bearing $K_{Zcp.}$
4. Parallel to grain values assume K_H = 1.10 with wall sheathing fastened to the narrow edge of the stud (fastening details to be provided by others).
5. Parallel to grain values are based on Effective Length Factor K_e = 1.0.
6. Table values are based on 2x_ S-P-F No.1/No.2 solid sawn lumber.

Z4 Pre-Engineered Quick Connect Runs (CAN/LSD)

	No. of Runs	Rod Sizes (in)
1 storey	5	5/8, 3/4, 7/8, 1, 1 1/8
2 storey	6	5/8, 3/4, 7/8, 1, 1 1 7/8HS
3 storey	7	5/8, 3/4, 7/8, 1, 1 1 7/8HS, 1 1/8HS
4 storey	7	5/8, 3/4, 7/8, 1, 1 1 7/8HS, 1 1/8HS
5 storey	7	3/4, 7/8, 1, 1 1/8 7/8HS, 1 1/8HS, 1 1/4HS
6 storey	7	3/4, 7/8, 1, 1 1/8 7/8HS, 1 1/8HS, 1 1/4HS
Total	39	

- Standard rods: Fy = 43 ksi min, Fu = 60 ksi min
- High strength rods: Fy = 105 ksi min, Fu = 125 ksi
- Plate Washers: sized to fit 2x4 wall plates

QC1-(5/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
1			ZR5STD	9,085	9,085	9,085	9,085
0			ZR5STD				

QC1-(3/4)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW11					
1			ZR6STD	13,445	13,445	13,445	13,445
0			ZR6STD				

QC1-(7/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW15					
1			ZR7STD	18,560	18,560	18,560	18,560
0			ZR7STD				

QC1-(1)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX8	BPW15					
1			ZR8STD	24,350	19,255	24,350	19,255
0			ZR8STD				

QC1-(1-1/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX9	BPW15					
1			ZR9STD	25,430	19,225	25,430	19,255
0			ZR9STD				

QC2-(5/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
2	CNX5	BPW7	ZR5STD	9,085	9,085	9,085	9,085
1			ZR5STD	9,085	9,085	9,085	9,085
0			ZR5STD				

QC2-(3/4)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
2	CNX6	BPW7	ZR5STD	9,650	9,650	9,650	9,650
1			ZR6STD	13,215	10,005	13,445	13,445
0			ZR6STD				

QC2-(7/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
2	CNX7	BPW11	ZR5STD	9,650	9,650	9,650	9,650
1			ZR7STD	18,450	13,970	18,560	18,560
0			ZR7STD				

QC2-(1)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW11					
2	CNX8	BPW11	ZR6STD	14,135	13,970	14,135	13,970
1			ZR8STD	18,450	13,970	24,350	24,350
0			ZR8STD				

QC2-(1-1/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW15					
2	CNX9	BPW11	ZR7STD	19,395	19,255	19,395	19,255
1			ZR9STD	18,450	13,970	30,685	30,685
0			ZR9STD				

QC2-(7/8HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW15					
2	CNX7	BPW11	ZR7STD	19,395	19,255	19,395	19,255
1			ZR7HS	18,450	13,970	37,845	33,225
0			ZR7HS				

QC3-(5/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
3	CNX5	BPW7	ZR5STD	9,085	9,085	9,085	9,085
2	CNX5	BPW7	ZR5STD	9,085	9,085	9,085	9,085
1			ZR5STD	9,085	9,085	9,085	9,085
0			ZR5STD				

QC3-(3/4)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
3	CNX6	BPW7	ZR5STD	9,650	9,650	9,650	9,650
2	CNX6	BPW7	ZR6STD	13,215	10,005	13,445	13,445
1			ZR6STD	13,215	10,005	13,445	13,445
0			ZR6STD				

QC3-(7/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
3	CNX7	BPW11	ZR5STD	9,650	9,650	9,650	9,650
2	CNX7	BPW11	ZR7STD	18,450	13,970	18,560	18,560
1			ZR7STD	18,450	13,970	18,560	18,560
0			ZR7STD				

QC3-(1)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW11					
3	CNX8	BPW11	ZR6STD	14,135	13,970	14,135	13,970
2	CNX8	BPW11	ZR8STD	18,450	13,970	24,350	24,350
1			ZR8STD	18,450	13,970	24,350	24,350
0			ZR8STD				

QC3-(1-1/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW11					
3	CNX9	BPW11	ZR7STD	18,450	13,970	18,450	13,970
2	CNX9	BPW11	ZR9STD	18,450	13,970	30,685	30,685
1			ZR9STD	18,450	13,970	30,685	30,685
0			ZR9STD				

QC3-(7/8HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW11					
3	CNX7	BPW11	ZR6STD	14,135	13,970	14,135	13,970
2	CNX7	BPW15	ZR7HS	18,450	13,970	32,585	27,940
1			ZR7HS	25,430	19,255	37,845	37,845
0			ZR7HS				

QC3-(1-1/8HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW15					
3	CNX7	BPW11	ZR7STD	19,395	19,255	19,395	19,255
2	CNX9	BPW15	ZR7HS	18,450	13,970	37,845	33,225
1			ZR9HS	25,430	19,255	62,710	62,710
0			ZR9HS				

QC4-(5/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
4	CNX5	BPW7	ZR5STD	9,085	9,085	9,085	9,085
3	CNX5	BPW7	ZR5STD	9,085	9,085	9,085	9,085
2	CNX5	BPW7	ZR5STD	9,085	9,085	9,085	9,085
1			ZR5STD	9,085	9,085	9,085	9,085
0			ZR5STD				

QC4-(3/4)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
4	CNX5	BPW7	ZR5STD	9,650	9,650	9,650	9,650
3	CNX6	BPW7	ZR5STD	9,650	9,650	9,650	9,650
2	CNX6	BPW7	ZR6STD	13,215	10,005	13,445	13,445
1			ZR6STD	13,215	10,005	13,445	13,445
0			ZR6STD				

QC4-(7/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
4	CNX5	BPW7	ZR5STD	9,650	9,650	9,650	9,650
3	CNX7	BPW11	ZR5STD	9,650	9,650	9,650	9,650
2	CNX7	BPW11	ZR7STD	18,450	13,970	18,560	18,560
1			ZR7STD	18,450	13,970	18,560	18,560
0			ZR7STD				

QC4-(1)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW11					
4	CNX7	BPW11	ZR6STD	14,135	13,970	14,135	13,970
3	CNX8	BPW11	ZR7STD	18,450	13,970	19,395	19,395
2	CNX8	BPW11	ZR8STD	18,450	13,970	24,350	24,350
1			ZR8STD	18,450	13,970	24,350	24,350
0			ZR8STD				

QC4-(1-1/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW11					
4	CNX7	BPW11	ZR6STD	14,135	13,970	14,135	13,970
3	CNX9	BPW11	ZR7STD	18,450	13,970	19,395	19,395
2	CNX9	BPW11	ZR9STD	18,450	13,970	30,685	30,685
1			ZR9STD	18,450	13,970	30,685	30,685
0			ZR9STD				

QC4-(7/8HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW11					
4	CNX7	BPW11	ZR6STD	14,135	13,970	14,135	13,970
3	CNX7	BPW15	ZR7STD	18,450	13,970	19,395	19,395
2	CNX7	BPW15	ZR7HS	25,430	19,255	37,845	37,845
1			ZR7HS	25,430	19,255	37,845	37,845
0			ZR7HS				

QC4-(1-1/8HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW15					
4	CNX7	BPW11	ZR7STD	19,395	19,255	19,395	19,255
3	CNX7	BPW15	ZR7HS	18,450	13,970	37,845	33,225
2	CNX9	BPW15	ZR7HS	25,430	19,255	45,100	45,100
1			ZR9HS	25,430	19,255	62,710	62,710
0			ZR9HS				

QC5-(3/4)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW7					
5	CNX6	BPW7	ZR6STD	13,215	10,005	13,215	10,005
4	CNX6	BPW7	ZR6STD	13,215	10,005	13,445	13,445
3	CNX6	BPW7	ZR6STD	13,215	10,005	13,445	13,445
2	CNX6	BPW7	ZR6STD	13,215	10,005	13,445	13,445
1			ZR6STD	13,215	10,005	13,445	13,445
0			ZR6STD				

QC5-(7/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
5	CNX6	BPW7	ZR5STD	9,650	9,650	9,650	9,650
4	CNX6	BPW11	ZR6STD	13,215	10,005	14,135	14,135
3	CNX7	BPW11	ZR6STD	14,135	13,970	14,135	14,135
2	CNX7	BPW11	ZR7STD	18,450	13,970	18,560	18,560
1			ZR7STD	18,450	13,970	18,560	18,560
0			ZR7STD				

QC5-(1)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW11					
5	CNX7	BPW11	ZR6STD	14,135	13,970	14,135	13,970
4	CNX7	BPW11	ZR7STD	18,450	13,970	19,395	19,395
3	CNX8	BPW11	ZR7STD	18,450	13,970	19,395	19,395
2	CNX8	BPW11	ZR8STD	18,450	13,970	24,350	24,350
1			ZR8STD	18,450	13,970	24,350	24,350
0			ZR8STD				

QC5-(1-1/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW11					
5	CNX8	BPW11	ZR7STD	18,450	13,970	18,450	13,970
4	CNX8	BPW11	ZR8STD	18,450	13,970	25,425	25,425
3	CNX9	BPW11	ZR8STD	18,450	13,970	25,425	25,425
2	CNX9	BPW11	ZR9STD	18,450	13,970	30,685	30,685
1			ZR9STD	18,450	13,970	30,685	30,685
0			ZR9STD				

QC5-(7/8HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW15					
5	CNX7	BPW11	ZR7STD	19,395	19,255	19,395	19,255
4	CNX7	BPW15	ZR7STD	18,450	13,970	19,395	19,395
3	CNX7	BPW15	ZR7HS	25,430	19,255	37,845	37,845
2	CNX7	BPW15	ZR7HS	25,430	19,255	37,845	37,845
1			ZR7HS	25,430	19,255	37,845	37,845
0			ZR7HS				

QC5-(1-1/8HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW15					
5	CNX7	BPW11	ZR7STD	19,395	19,255	19,395	19,255
4	CNX7	BPW15	ZR7HS	18,450	13,970	37,845	33,225
3	CNX9	BPW15	ZR7HS	25,430	19,255	45,100	45,100
2	CNX9	BPW15	ZR9HS	25,430	19,255	62,710	62,710
1			ZR9HS	25,430	19,255	62,710	62,710
0			ZR9HS				

QC5-(1-1/4HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW11					
5	CNX7	BPW11	ZR7STD	18,450	13,970	18,450	13,970
4	CNX7	BPW15	ZR7HS	18,450	13,970	36,900	27,940
3	CNX9	BPW15	ZR7HS	25,430	19,255	45,100	45,100
2	CNX10	BPW15	ZR9HS	25,430	19,255	70,530	64,355
1			ZR10HS	25,430	19,255	79,765	79,765
0			ZR10HS				

QC6-(3/4)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW7					
6	CNX6	BPW7	ZR6STD	13,215	10,005	13,215	10,005
5	CNX6	BPW7	ZR6STD	13,215	10,005	13,445	13,445
4	CNX6	BPW7	ZR6STD	13,215	10,005	13,445	13,445
3	CNX6	BPW7	ZR6STD	13,215	10,005	13,445	13,445
2	CNX6	BPW7	ZR6STD	13,215	10,005	13,445	13,445
1			ZR6STD	13,215	10,005	13,445	13,445
0			ZR6STD				

QC6-(7/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX5	BPW7					
6	CNX5	BPW7	ZR5STD	9,650	9,650	9,650	9,650
5	CNX6	BPW11	ZR5STD	9,650	9,650	9,650	9,650
4	CNX6	BPW11	ZR6STD	14,135	13,970	14,135	14,135
3	CNX7	BPW11	ZR6STD	14,135	13,970	14,135	14,135
2	CNX7	BPW11	ZR7STD	18,450	13,970	18,560	18,560
1			ZR7STD	18,450	13,970	18,560	18,560
0			ZR7STD				

QC6-(1)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX6	BPW11					
6	CNX6	BPW11	ZR6STD	14,135	13,970	14,135	13,970
5	CNX7	BPW11	ZR6STD	14,135	13,970	14,135	14,135
4	CNX7	BPW11	ZR7STD	18,450	13,970	19,395	19,395
3	CNX8	BPW11	ZR7STD	18,450	13,970	19,395	19,395
2	CNX8	BPW11	ZR8STD	18,450	13,970	24,350	24,350
1			ZR8STD	18,450	13,970	24,350	24,350
0			ZR8STD				

QC6-(1-1/8)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW11					
6	CNX7	BPW11	ZR7STD	18,450	13,970	18,450	13,970
5	CNX8	BPW11	ZR7STD	18,450	13,970	19,395	19,395
4	CNX8	BPW11	ZR8STD	18,450	13,970	25,425	25,425
3	CNX9	BPW11	ZR8STD	18,450	13,970	25,425	25,425
2	CNX9	BPW11	ZR9STD	18,450	13,970	30,685	30,685
1			ZR9STD	18,450	13,970	30,685	30,685
0			ZR9STD				

QC6-(7/8HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW15					
6	CNX7	BPW11	ZR7STD	19,395	19,255	19,395	19,255
5	CNX7	BPW15	ZR7STD	18,450	13,970	19,395	19,395
4	CNX7	BPW15	ZR7HS	25,430	19,255	37,845	37,845
3	CNX7	BPW15	ZR7HS	25,430	19,255	37,845	37,845
2	CNX7	BPW15	ZR7HS	25,430	19,255	37,845	37,845
1			ZR7HS	25,430	19,255	37,845	37,845
0			ZR7HS				

QC6-(1-1/8HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW15					
6	CNX7	BPW11	ZR7STD	19,395	19,255	19,395	19,255
5	CNX7	BPW15	ZR7STD	18,450	13,970	19,395	19,395
4	CNX7	BPW15	ZR7HS	25,430	19,255	44,825	38,650
3	CNX9	BPW15	ZR7HS	25,430	19,255	45,100	45,100
2	CNX9	BPW15	ZR9HS	25,430	19,255	62,710	62,710
1			ZR9HS	25,430	19,255	62,710	62,710
0			ZR9HS				

QC6-(1-1/4HS)

				Factored Resistance (lb)			
				Level		Accumulated	
Level	Device	Z4 Plate	Rod	DF	SPF	DF	SPF
Roof	CNX7	BPW15					
6	CNX7	BPW11	ZR7STD	19,395	19,255	19,395	19,255
5	CNX7	BPW15	ZR7STD	18,450	13,970	19,395	19,395
4	CNX7	BPW15	ZR7HS	25,430	19,255	44,825	38,650
3	CNX9	BPW15	ZR7HS	25,430	19,255	45,100	45,100
2	CNX10	BPW15	ZR9HS	25,430	19,255	70,530	64,355
1			ZR10HS	25,430	19,255	79,765	79,765
0			ZR10HS				

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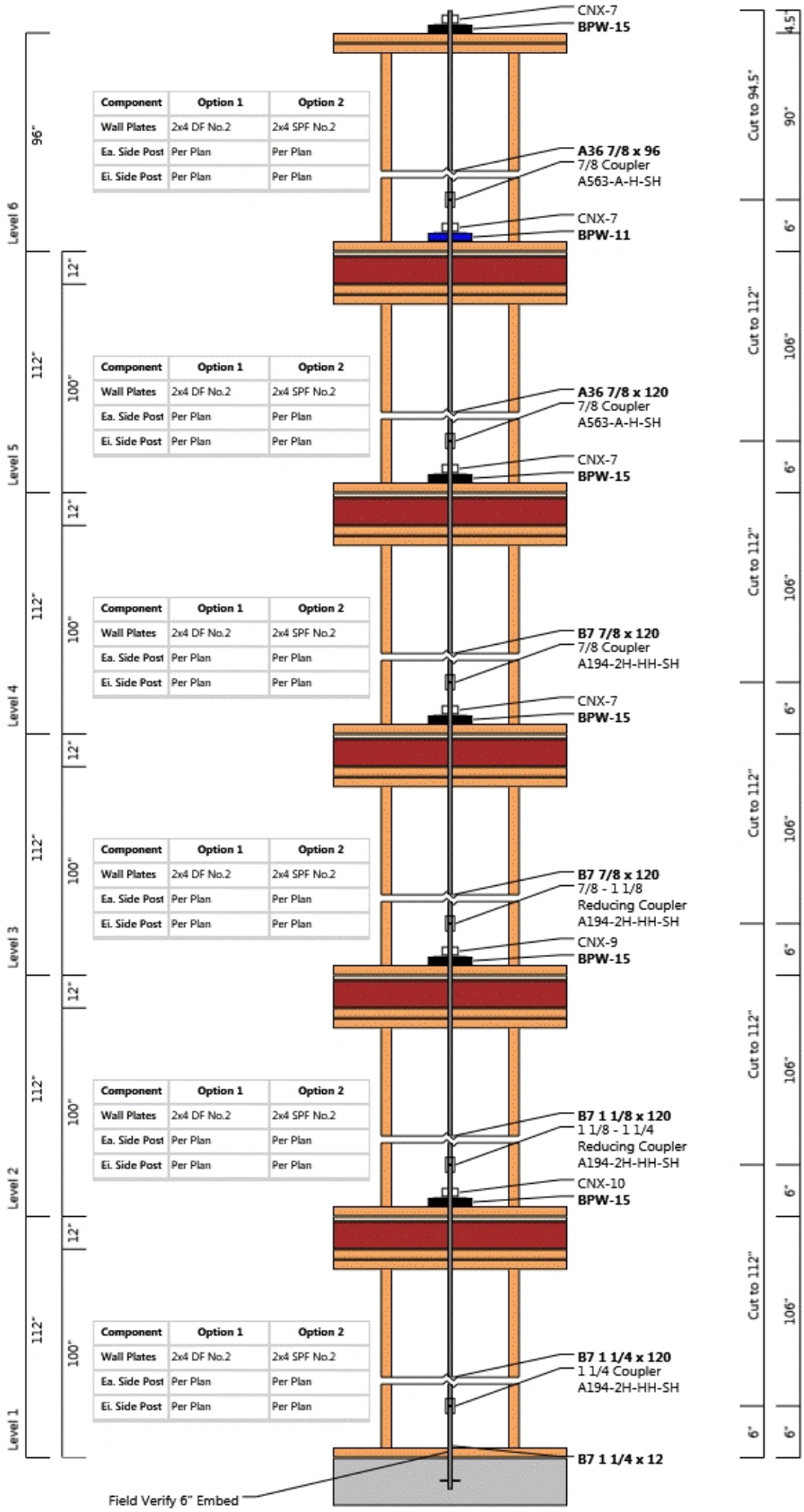
TIE-DOWN SYSTEM



Component	Option 1	Option 2
Wall Plates	2x4 DF No.2	2x4 SPF No.2
Ea. Side Post	Per Plan	Per Plan
Ei. Side Post	Per Plan	Per Plan

	Capacity / Factored Resistance (lb)	
	D.Fir	S-P-F
Level Tension	19,395	19,255
Accumulated Tension	19,395	19,255

Component	Option 1	Option 2
Wall Plates	2x4 DF No.2	2x4 SPF No.2
Ea. Side Post	Per Plan	Per Plan
Ei. Side Post	Per Plan	Per Plan

	Capacity / Factored Resistance (lb)	
	D.Fir	S-P-F
Level Tension	18,450	13,970
Accumulated Tension	19,395	19,395

Component	Option 1	Option 2
Wall Plates	2x4 DF No.2	2x4 SPF No.2
Ea. Side Post	Per Plan	Per Plan
Ei. Side Post	Per Plan	Per Plan

	Capacity / Factored Resistance (lb)	
	D.Fir	S-P-F
Level Tension	25,430	19,255
Accumulated Tension	44,825	38,650

Component	Option 1	Option 2
Wall Plates	2x4 DF No.2	2x4 SPF No.2
Ea. Side Post	Per Plan	Per Plan
Ei. Side Post	Per Plan	Per Plan

	Capacity / Factored Resistance (lb)	
	D.Fir	S-P-F
Level Tension	25,430	19,255
Accumulated Tension	45,100	45,100

Component	Option 1	Option 2
Wall Plates	2x4 DF No.2	2x4 SPF No.2
Ea. Side Post	Per Plan	Per Plan
Ei. Side Post	Per Plan	Per Plan

	Capacity / Factored Resistance (lb)	
	D.Fir	S-P-F
Level Tension	25,430	19,255
Accumulated Tension	70,530	64,355

Component	Option 1	Option 2
Wall Plates	2x4 DF No.2	2x4 SPF No.2
Ea. Side Post	Per Plan	Per Plan
Ei. Side Post	Per Plan	Per Plan

	Capacity / Factored Resistance (lb)	
	D.Fir	S-P-F
Level Tension	25,430	19,255
Accumulated Tension	79,765	79,765

QC6 - (1-1/4HS) (QTY: 1)