



4/26/2017

Attn: Mr. Marshall Green
Quick Mount PV
2700 Mitchell Dr.
Walnut Creek, CA, 94598

RE: Quick Mount PV TRM System for use with Everest CrossRail 48 PV Panel Mounting System SEI Project No.: 17054.00

Dear Mr. Green

Structural Enginuity Inc. (SEI) has completed its review of the Quickmount PV Tile Replacement Mount System for use in conjunction with the Everest CrossRail 48 PV Panel Mounting System. The TRM product line includes the option of a 4.5" and 5.5" post.

The review was based on the following reference data:

- Moment Engineering+Design, CrossRail PV Panel Mounting System Evaluation, January 13, 2017
- Construction Testing Services, Quick Mount PV Load Testing – Tile Replacement Mount [QMPV# 1-28-2016-Rev C], Job Number 11304, April 29, 2016
- Construction Testing Services, Quick Mount PV Load Testing – Tile Replacement Mount [QMPV# 1-28-2016-Rev C], Job Number 11304, January 6, 2017
- Structural Enginuity, Inc., Quick Mount PV Tile Replacement Mount, Project Number 16411.00, November 16, 2016
- Structural Enginuity, Inc., Quick Mount PV Tile Replacement Mount 5.5" Extension Post TRM Assembly Certification, Project Number 16473.00, January 11, 2017

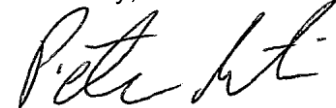
SEI has determined that the Tile Replacement Mount is suitable for use with the Everest CrossRail 48 System. The approved installation and allowable loads for the Quick Mount PV TRM products is outlined in the Structural Enginuity, Inc. letters referenced above. The allowable load values are shown below, no additional load duration factors may be applied to these values.

Table 1: TRM Allowable Loads		
Load Direction	Post Height	Allowable Load
Uplift	4.5"	623
	5.5"	623
Lateral	4.5"	197
	5.5"	195
Compression	4.5"	659
	5.5"	659

SEI has prepared allowable rail span charts for the Everest CrossRail 48 System used in conjunction with the Quick Mount PV TRM products. These span tables serve as a quick reference for looking up maximum rail spans based on building and site conditions and follow the 2016 CBC, 2015 IBC/IRC and applicable ASCE 7-10 load cases. The tables take into account the strength of the rail system as well as the allowable tension, compression, and lateral forces of the Tile Replacement Mount. A site specific analysis is required if the site conditions or building characteristics do not meet the requirements listed in the attached tables. In all cases, the tables are meant to be used in conjunction with Everest CrossRail System Structural Report and Calculations and all requirements listed are still applicable for these tables including edge zones and edge distances.

Please contact our office if you have any further questions relating to this matter.

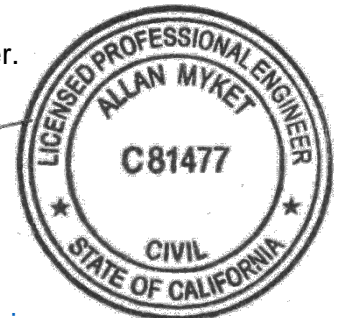
Sincerely,



Peter Martin
Engineer II
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Allan T. Myket, P.E.
President/Founder
amyket@structuralenginuityinc.com



4/26/17

Structural Enginuity Inc.

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 1A		Roof Height: 0 - 30 feet						Post Height: 4.5"											
		Roof Angle: 7 - 27 degrees																	
Exposure B	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	96	89	78	66	57	47	90	89	78	66	57	47	78	78	78	66	57	47
	115	96	89	78	66	57	47	87	87	78	66	57	47	75	75	75	66	57	47
	120	96	89	78	66	57	47	85	85	78	66	57	47	71	71	71	66	57	47
	130	95	88	77	66	57	47	80	80	77	66	57	47	66	66	66	66	57	47
	140	92	87	76	66	57	47	69	69	69	66	57	47	57	57	57	57	57	47
	150	88	85	74	66	57	47	69	69	69	66	57	47	53	53	53	53	53	47
	160	84	84	73	64	57	47	65	65	65	64	57	47	47	47	47	47	47	47
	170	80	80	71	63	57	47	61	61	61	61	57	47	41	41	41	41	41	41
	180	76	76	70	62	57	47	57	57	57	57	57	47	36	36	36	36	36	36
	200	69	69	66	60	55	47	45	45	45	45	45	45	29	29	29	29	29	29

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 1B		Roof Height: 0 - 30 feet						Post Height: 5.5"											
		Roof Angle: 7 - 27 degrees																	
Exposure B	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	96	89	78	66	56	46	90	89	78	66	56	46	78	78	78	66	56	46
	115	96	89	78	66	56	46	87	87	78	66	56	46	75	75	75	66	56	46
	120	96	89	78	66	56	46	85	85	78	66	56	46	71	71	71	66	56	46
	130	95	88	77	66	56	46	80	80	77	66	56	46	66	66	66	66	56	46
	140	92	87	76	66	56	46	69	69	69	66	56	46	57	57	57	57	56	46
	150	88	85	74	66	56	46	69	69	69	66	56	46	53	53	53	53	53	46
	160	84	84	73	64	56	46	65	65	65	64	56	46	47	47	47	47	47	46
	170	80	80	71	63	56	46	61	61	61	61	56	46	41	41	41	41	41	41
	180	76	76	70	62	56	46	57	57	57	57	56	46	36	36	36	36	36	36
	200	69	69	66	60	55	46	45	45	45	45	45	45	29	29	29	29	29	29

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 2A		Roof Height: 0 - 30 feet						Post Height: 4.5"											
		Roof Angle: 7 - 27 degrees																	
Exposure C	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	95	88	77	66	57	47	80	80	77	66	57	47	66	66	66	66	57	47
	115	93	87	77	66	57	47	77	77	77	66	57	47	63	63	63	63	57	47
	120	91	87	76	66	57	47	73	73	73	66	57	47	60	60	60	60	57	47
	130	86	85	74	65	57	47	68	68	68	65	57	47	50	50	50	50	50	47
	140	82	82	72	64	57	47	63	63	63	63	57	47	43	43	43	43	43	43
	150	78	78	70	62	57	47	58	58	58	58	57	47	38	38	38	38	38	38
	160	73	73	68	61	56	47	51	51	51	51	51	47	33	33	33	33	33	33
	170	68	68	66	60	55	47	45	45	45	45	45	45	29	29	29	29	29	29
	180	64	64	64	59	54	47	40	40	40	40	40	40	26	26	26	26	26	26
	200	58	58	58	56	52	47	32	32	32	32	32	32	21	21	21	21	21	21

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 2B		Roof Height: 0 - 30 feet						Post Height: 5.5"											
		Roof Angle: 7 - 27 degrees																	
Exposure C	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	95	88	77	66	56	46	80	80	77	66	56	46	66	66	66	66	56	46
	115	93	87	77	66	56	46	77	77	77	66	56	46	63	63	63	63	56	46
	120	91	87	76	66	56	46	73	73	73	66	56	46	60	60	60	60	56	46
	130	86	85	74	65	56	46	68	68	68	65	56	46	50	50	50	50	50	46
	140	82	82	72	64	56	46	63	63	63	63	56	46	43	43	43	43	43	43
	150	78	78	70	62	56	46	58	58	58	58	56	46	38	38	38	38	38	38
	160	73	73	68	61	56	46	51	51	51	51	51	46	33	33	33	33	33	33
	170	68	68	66	60	55	46	45	45	45	45	45	45	29	29	29	29	29	29
	180	64	64	64	59	54	46	40	40	40	40	40	40	26	26	26	26	26	26
	200	58	58	58	56	52	46	32	32	32	32	32	32	21	21	21	21	21	21

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 3A		Roof Height: 0 - 30 feet						Post Height: 4.5"											
		Roof Angle: 7 - 27 degrees																	
Exposure D	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	92	87	76	66	57	47	73	73	76	66	57	47	60	60	60	60	57	47
	115	89	86	75	66	57	47	70	70	70	66	57	47	55	55	55	55	55	47
	120	86	85	74	65	57	47	67	67	67	65	57	47	50	50	50	50	50	47
	130	81	81	72	64	57	47	62	62	62	62	57	47	42	42	42	42	42	42
	140	76	76	70	62	57	47	57	57	57	57	57	47	36	36	36	36	36	36
	150	71	71	68	61	56	47	49	49	49	49	49	47	32	32	32	32	32	32
	160	67	67	66	59	55	47	43	43	43	43	43	43	28	28	28	28	28	28
	170	63	63	63	58	53	47	38	38	38	38	38	38	24	24	24	24	24	24
	180	59	59	59	56	52	47	34	34	34	34	34	34	22	22	22	22	22	22
	200	52	52	52	52	50	46	27	27	27	27	27	27	18	18	18	18	18	18

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 3B		Roof Height: 0 - 30 feet						Post Height: 5.5"											
		Roof Angle: 7 - 27 degrees																	
Exposure D	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >7° to 27°	110	92	87	76	66	56	46	73	73	76	66	56	46	60	60	60	60	56	46
	115	89	86	75	66	56	46	70	70	70	66	56	46	55	55	55	55	55	46
	120	86	85	74	65	56	46	67	67	67	65	56	46	50	50	50	50	50	46
	130	81	81	72	64	56	46	62	62	62	62	56	46	42	42	42	42	42	42
	140	76	76	70	62	56	46	57	57	57	57	56	46	36	36	36	36	36	36
	150	71	71	68	61	56	46	49	49	49	49	49	46	32	32	32	32	32	32
	160	67	67	66	59	55	46	43	43	43	43	43	43	28	28	28	28	28	28
	170	63	63	63	58	53	46	38	38	38	38	38	38	24	24	24	24	24	24
	180	59	59	59	56	52	46	34	34	34	34	34	34	22	22	22	22	22	22
	200	52	52	52	52	50	46	27	27	27	27	27	27	18	18	18	18	18	18

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 4A		Roof Height: 0 - 30 feet						Post Height: 4.5"											
		Roof Angle: 27 - 45 degrees																	
Exposure B	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	93	88	75	60	48	39	93	88	75	60	48	39	93	88	75	60	48	39
	115	91	87	74	60	48	39	91	87	74	60	48	39	91	87	74	60	48	39
	120	89	86	73	60	48	39	86	86	73	60	48	39	89	86	73	60	48	39
	130	86	84	71	60	48	39	86	84	71	60	48	39	86	84	71	60	48	39
	140	83	81	69	60	48	39	83	81	69	60	48	39	83	81	69	60	48	39
	150	81	78	68	60	48	39	80	78	68	60	48	39	80	78	68	60	48	39
	160	79	75	66	59	48	39	76	75	66	59	48	39	76	75	66	59	48	39
	170	75	72	64	58	48	39	71	71	64	58	48	39	71	71	64	58	48	39
	180	71	70	62	57	48	39	67	67	62	57	48	39	67	67	62	57	48	39
	200	65	65	59	54	48	39	60	60	59	54	48	39	60	60	59	54	48	39

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 4B		Roof Height: 0 - 30 feet						Post Height: 5.5"											
		Roof Angle: 27 - 45 degrees																	
Exposure B	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	93	88	75	60	47	39	93	88	75	60	47	39	93	88	75	60	47	39
	115	91	87	74	60	47	39	91	87	74	60	47	39	91	87	74	60	47	39
	120	89	86	73	60	47	39	86	86	73	60	47	39	89	86	73	60	47	39
	130	86	84	71	60	47	39	86	84	71	60	47	39	86	84	71	60	47	39
	140	83	81	69	60	47	39	83	81	69	60	47	39	83	81	69	60	47	39
	150	81	78	68	60	47	39	80	78	68	60	47	39	80	78	68	60	47	39
	160	79	75	66	59	47	39	76	75	66	59	47	39	76	75	66	59	47	39
	170	75	72	64	58	47	39	71	71	64	58	47	39	71	71	64	58	47	39
	180	71	70	62	57	47	39	67	67	62	57	47	39	67	67	62	57	47	39
	200	65	65	59	54	47	39	60	60	59	54	47	39	60	60	59	54	47	39

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 5A		Roof Height: 0 - 30 feet						Post Height: 4.5"											
		Roof Angle: 27 - 45 degrees																	
Exposure C	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	86	84	71	60	48	39	86	84	71	60	48	39	86	84	71	60	48	39
	115	85	82	70	60	48	39	85	82	70	60	48	39	85	82	70	60	48	39
	120	83	80	69	60	48	39	83	80	69	60	48	39	83	80	69	60	48	39
	130	80	77	67	60	48	39	79	77	67	60	48	39	79	77	67	60	48	39
	140	77	73	65	58	48	39	73	73	65	58	48	39	73	73	65	58	48	39
	150	72	70	63	57	48	39	68	68	63	57	48	39	68	68	63	57	48	39
	160	68	67	61	55	48	39	64	64	61	55	48	39	64	64	61	55	48	39
	170	65	65	59	54	48	39	60	60	59	54	48	39	60	60	59	54	48	39
	180	61	61	57	52	48	39	57	57	57	52	48	39	57	57	57	52	48	39
	200	55	55	53	49	46	39	46	46	46	46	46	39	46	46	46	46	46	39

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 5B		Roof Height: 0 - 30 feet						Post Height: 5.5"											
		Roof Angle: 27 - 45 degrees																	
Exposure C	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	86	84	71	60	47	39	86	84	71	60	47	39	86	84	71	60	47	39
	115	85	82	70	60	47	39	85	82	70	60	47	39	85	82	70	60	47	39
	120	83	80	69	60	47	39	83	80	69	60	47	39	83	80	69	60	47	39
	130	80	77	67	60	47	39	79	77	67	60	47	39	79	77	67	60	47	39
	140	77	73	65	58	47	39	73	73	65	58	47	39	73	73	65	58	47	39
	150	72	70	63	57	47	39	68	68	63	57	47	39	68	68	63	57	47	39
	160	68	67	61	55	47	39	64	64	61	55	47	39	64	64	61	55	47	39
	170	65	65	59	54	47	39	60	60	59	54	47	39	60	60	59	54	47	39
	180	61	61	57	52	47	39	57	57	57	52	47	39	57	57	57	52	47	39
	200	55	55	53	49	46	39	46	46	46	46	46	39	46	46	46	46	46	39

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 6A		Roof Height: 0 - 30 feet						Post Height: 4.5"											
		Roof Angle: 27 - 45 degrees																	
Exposure D	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	83	80	69	60	48	39	83	80	69	60	48	39	83	80	69	60	48	39
	115	81	78	68	60	48	39	81	78	68	60	48	39	81	78	68	60	48	39
	120	80	76	67	60	48	39	78	76	67	60	48	39	78	76	67	60	48	39
	130	76	73	64	58	48	39	72	72	64	58	48	39	72	72	64	58	48	39
	140	71	70	62	56	48	39	67	67	62	56	48	39	67	67	62	56	48	39
	150	67	67	60	55	48	39	62	62	60	55	48	39	62	62	60	55	48	39
	160	63	63	58	53	48	39	58	58	58	53	48	39	58	58	58	53	48	39
	170	60	60	56	52	48	39	54	54	54	52	48	39	54	54	54	52	47	39
	180	56	56	54	50	47	39	48	48	48	48	47	39	48	48	48	48	47	39
	200	47	47	47	47	44	39	39	39	39	39	39	39	39	39	39	39	39	39

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"

Rail Spans (in.) for Everest Crossrail 48 Roof Mount for use with TRM Products

Table 6B		Roof Height: 0 - 30 feet						Post Height: 5.5"											
		Roof Angle: 27 - 45 degrees																	
Exposure D	Ultimate Wind Speed, V (mph)	Roof Wind Pressure Zone 1						Roof Wind Pressure Zone 2						Roof Wind Pressure Zone 3					
		Roof Snow Load (psf)						Roof Snow Load (psf)						Roof Snow Load (psf)					
		0	10	20	30	40	50	0	10	20	30	40	50	0	10	20	30	40	50
Roofs >27° to 45°	110	83	80	69	60	47	39	83	80	69	60	47	39	83	80	69	60	47	39
	115	81	78	68	60	47	39	81	78	68	60	47	39	81	78	68	60	47	39
	120	80	76	67	60	47	39	78	76	67	60	47	39	78	76	67	60	47	39
	130	76	73	64	58	47	39	72	72	64	58	47	39	72	72	64	58	47	39
	140	71	70	62	56	47	39	67	67	62	56	47	39	67	67	62	56	47	39
	150	67	67	60	55	47	39	62	62	60	55	47	39	62	62	60	55	47	39
	160	63	63	58	53	47	39	58	58	58	53	47	39	58	58	58	53	47	39
	170	60	60	56	52	47	39	54	54	54	52	47	39	54	54	54	52	47	39
	180	56	56	54	50	47	39	48	48	48	48	47	39	48	48	48	48	47	39
	200	47	47	47	47	44	39	39	39	39	39	39	39	39	39	39	39	39	39

Notes:

1. Tables are based on critical rail span for load combinations as specified in chapter 2 of the ASCE 7-10 and allowable uplift and lateral values of Quick Mount products per test reports.
2. Panels are assumed to be in portrait orientation with a maximum length of 66"