

Seismic Qualification Test Protocol (111024)													
Test No.		Target S _s (g)		Test Direct.		Test Description		Test Date	PGA _H (g)	PGA _V (g)	FA _H (g)	FA _V (g)	Remarks
Calibration & Set up (Bare Frame)													
0	NS	1108	-	--	--	--	Assembly		--	--	--	--	
0	NS	1108	-	--	--	--	Metal adjustments		--	--	--	--	Install Roof connection plates, Hori. Angles, & Safety connections for Ext.
0	NS	1108	-	--	--	--	Instrumentation (Permanent Channels)		--	--	--	--	Take pictures
Identification Testing (East Bare Frame - #02 Frame)													
1	NS	1108	A	whn	--	EW	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/18/2011	--	--	--	--	Random Frequency Search (x1: 11.75hz, x2: 11.75hz)
2	NS	1108	A	whb	--	NS	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/18/2011	--	--	--	--	Random Frequency Search (y1: 12.00hz, y2: 12.25hz)
3	NS	1108	A	whc	--	Vert.	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/18/2011	--	--	--	--	Random Frequency Search (z1: 21.75hz, z2: 21.88hz)
4	NS	1108	A	100nm	1.00	3D	Acceleration History Test (AC156-Random)	8/18/2011	0.27	0.18	0.43	0.18	Uncompensated motion ((shake table gain was controlled by Mart to reduce the oil column res
5	NS	1108	A	100ym	1.00	3D	Acceleration History Test (AC156-Random)	8/18/2011	0.27	0.18	0.43	0.18	Uncompensated motion (1st table compensation)
6	NS	1108	A	--	--	--	Check Instrumentation & Data		--	--	--	--	Fund. Frequency, Roof vibration, & Instrumentation
7	NS	1108	A	100b	1.00	3D	Acceleration History Test (AC156-Random)	8/18/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108A100ym) - filtered
8	NS	1108	A	100c	1.00	3D	Acceleration History Test (AC156-Random)	8/18/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108A100ym) - filtered
9	NS	1108	A	100d	1.00	3D	Acceleration History Test (AC156-Random)	8/18/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108A100nm) - filtered
10	NS	1108	A	100e	1.00	3D	Acceleration History Test (AC156-Random)	8/18/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108A100nm) - filtered
11	NS	1108	A	100f	1.00	3D	Acceleration History Test (AC156-Random)	8/19/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108A100ym) - no filter
12	NS	1108	A	100g	1.00	3D	Acceleration History Test (AC156-Random)	8/19/2011	0.27	0.18	0.43	0.18	Uncompensated motion (iterated table compensation)
13	NS	1108	A	100h	1.00	3D	Acceleration History Test (AC156-Random)	8/19/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108A100ym) - no filter
14	NS	1108	A	100i	1.00	3D	Acceleration History Test (AC156-Random)	8/19/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108A100ym) - no filter
15	NS	1108	A	100j	1.00	3D	Acceleration History Test (AC156-Random)	8/19/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108A100ym) - filtered
16	NS	1108	A	100k	1.00	3D	Acceleration History Test (AC156-Random)	8/19/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108A100ym) - filtered

Identification Testing (West Bare Frame - #01 Frame)													
17	NS	1108	B	wha	--	EW	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/22/2011	--	--	--	Random Frequency Search	
18	NS	1108	B	whb	--	NS	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/22/2011	--	--	--	Random Frequency Search	
19	NS	1108	B	whc	--	Vert.	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/22/2011	--	--	--	Random Frequency Search	
20	NS	1108	B	100nm	1.00	3D	Acceleration History Test (AC156-Random)	8/22/2011	0.27	0.18	0.43	0.18	Uncompensated motion (NO table compensation)
21	NS	1108	B	100ym	1.00	3D	Acceleration History Test (AC156-Random)	8/22/2011	0.27	0.18	0.43	0.18	Uncompensated motion (iterated table compensation)
22	NS	1108	B	100b	1.00	3D	Acceleration History Test (AC156-Sweep)	8/22/2011	0.27	0.18	0.43	0.18	Uncompensated motion (NO table compensation)
23	NS	1108	B	100c	1.00	3D	Acceleration History Test (AC156-Sweep)	8/22/2011	0.27	0.18	0.43	0.18	Uncompensated motion (iterated table compensation)
24	NS	1108	B	100d	1.00	3D	Acceleration History Test (AC156-Sweep-Modified)	8/22/2011	0.27	0.18	0.43	0.18	Uncompensated motion (iterated table compensation)
25	NS	1108	B	--	--	--	Check Instrumentation & Data	8/22/2011	--	--	--	--	Fund. Frequency, Roof vibration, & Instrumentation
26	NS	1108	B	100e	1.00	3D	Acceleration History Test (AC156-Random)	8/22/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108B100nm)
27	NS	1108	B	100f	1.00	3D	Acceleration History Test (AC156-Random)	8/22/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108B100nm)
28	NS	1108	B	100g	1.00	3D	Acceleration History Test (AC156-Random)	8/22/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108B100ym)
29	NS	1108	B	100h	1.00	3D	Acceleration History Test (AC156-Random)	8/22/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108B100ym)
30	NS	1108	B	100i	1.00	3D	Acceleration History Test (AC156-Sweep)	8/22/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108B100b)
31	NS	1108	B	100j	1.00	3D	Acceleration History Test (AC156-Sweep)	8/22/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108B100b)
32	NS	1108	B	100k	1.00	3D	Acceleration History Test (AC156-Sweep)	8/22/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108B100c)
33	NS	1108	B	100l	1.00	3D	Acceleration History Test (AC156-Sweep)	8/22/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108B100c)
34	NS	1108	B	100m	1.00	3D	Acceleration History Test (AC156-Sweep)	8/22/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108B100d)
35	NS	1108	B	100n	1.00	3D	Acceleration History Test (AC156-Sweep)	8/22/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108B100d)
Identification Testing (Tandem Bare Frame- No Link Frame)													
36	NS	1108	C	wha	--	EW	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/23/2011	--	--	--	--	Random Frequency Search (x1: 11.81hz, x2: 11.81hz)
37	NS	1108	C	whb	--	NS	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/23/2011	--	--	--	--	Random Frequency Search (y1: 12.25hz, y2: 12.25hz)
38	NS	1108	C	whc	--	Vert.	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/23/2011	--	--	--	--	Random Frequency Search (z1: 21.75hz, z2: 22.00hz, $\xi_2=1\%$)
Identification Testing (Tandem Bare Frame with Link Frame & Ceiling System)													
39	NS	1108	D	wha	--	EW	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/31/2011	--	--	--	--	Random Frequency Search (x1: 14.50hz, x2: 14.50hz, x3: 14.50hz)
40	NS	1108	D	whb	--	NS	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/31/2011	--	--	--	--	Random Frequency Search (y1: 11.00hz, y2: 12.00hz, y3: 13.00hz)
41	NS	1108	D	whc	--	Vert.	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	8/31/2011	--	--	--	--	Random Frequency Search (z1: 23.25hz, z2: 23.50hz, z3: 23.00hz)
42	NS	1108	D	100nm	1.00	3D	Acceleration History Test (AC156-Random)	9/1/2011	0.27	0.18	0.43	0.18	Uncompensated motion (NO table compensation)
43	NS	1108	D	100ym	1.00	3D	Acceleration History Test (AC156-Random)-Drive	9/1/2011	0.27	0.18	0.43	0.18	Uncompensated motion (iterated table compensation)
44	NS	1108	D	--	--	--	Check Instrumentation & Data		--	--	--	--	Fund. Frequency, Roof vibration, & Instrumentation
45	NS	1108	D	100b	1.00	3D	Acceleration History Test (AC156-Random)	9/1/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108D100nm)
46	NS	1108	D	100c	1.00	3D	Acceleration History Test (AC156-Random)	9/1/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108D100nm)
47	NS	1108	D	100d	1.00	3D	Acceleration History Test (AC156-Random)	9/1/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108D100ym)
48	NS	1108	D	100e	1.00	3D	Acceleration History Test (AC156-Random)	9/1/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108D100ym)
49	NS	1108	D	--	--	--	Compensation Iteration	skipped	--	--	--	--	Generate Iterated Compensated Motion
50	NS	1108	D	100f	1.00	3D	Acceleration History Test (AC156-Random)	skipped	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center (from NS1108D100b)
51	NS	1108	D	100g	1.00	3D	Acceleration History Test (AC156-Random)	skipped	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners (from NS1108D100b)

Input Motion Study (Uncompensation-Bare Frame) - Full instrumentation (except specific area)													
52	NS	1108	E	100	1.00	3D	Acceleration History Test (AC156-Random)	9/7/2011	0.27	0.18	0.43	0.18	Uncompensated motion (NO table compensation)
53	NS	1108	E	100b	1.00	3D	Acceleration History Test (AC156-Sweep)	9/7/2011	0.27	0.18	0.43	0.18	Uncompensated motion (NO table compensation)
54	NS	1108	E	100c	1.00	3D	Acceleration History Test (Recorded Floor)	9/7/2011	0.27	0.18	0.43	0.18	Uncompensated motion (NO table compensation)
55	NS	1108	E	--	--	--	Compensation		--	--	--	--	Generate Compensated Motions
Input Motion Study (Compensation-Bare Frame) - 100%RRS													
56	NS	1108	F	100	1.00	3D	Acceleration History Test (AC156-Random)	9/7/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center
57	NS	1108	F	100b	1.00	3D	Acceleration History Test (AC156-Random)	9/7/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners
58	NS	1108	F	100c	1.00	3D	Acceleration History Test (AC156-Sweep)	9/8/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center - Test Stopped - 1 shear bolt failed
59	NS	1108	F	100d	1.00	3D	Acceleration History Test (AC156-Sweep)	skipped	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners
Link Platform was relocated (0.2in below)													
60	NS	1108	G	wha	--	EW	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	9/9/2011	--	--	--	--	Random Frequency Search (x1: 13.75hz, x2: 13.75hz, x3: 13.75hz)
61	NS	1108	G	whb	--	NS	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	9/9/2011	--	--	--	--	Random Frequency Search (x1: 12.00hz, x2: 11.75hz, x3: 13.00hz)
62	NS	1108	G	whc	--	Vert.	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	9/9/2011	--	--	--	--	Random Frequency Search (x1: 23.25hz, x2: 23.25hz, x3: 22.25hz)
63	NS	1108	G	100	1.00	3D	Acceleration History Test (AC156-Random)	9/9/2011	0.27	0.18	0.43	0.18	Uncompensated motion (NO table compensation)
64	NS	1108	G	100b	1.00	3D	Acceleration History Test (Recorded Floor)	9/9/2011	0.27	0.18	0.43	0.18	Uncompensated motion (NO table compensation) = E100c - First Fallen Tile (A7)
--	NS	1108	G	--	--	--	Inspection	9/9/2011	--	--	--	--	see the work sheet - Result in Detail.
65	NS	1108	G	100c	1.00	3D	Acceleration History Test (AC156-Random)	9/9/2011	0.27	0.18	0.43	0.18	Compensated motion @ Roof Center - A7 - not replaced
66	NS	1108	G	100d	1.00	3D	Acceleration History Test (AC156-Random)	9/9/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners - A6
67	NS	1108	G	100e	1.00	3D	Acceleration History Test (Recorded Floor)	9/9/2011	0.27	0.18	0.43	0.18	Compensated motion @ Frame Top Corners
68	NS	1108	G	--	--	--	Check Data	9/9/2011	--	--	--	--	Check the response of compensation
Vertical Input Effect Study - 100%RRS													
69	NS	1108	H	--	--	--	Check Data	9/9/2011	--	--	--	--	Check the response of compensation
70	NS	1108	H	100	1.00	3D	Acceleration History Test (Vert. 6)	9/9/2011	0.27	0.18	0.43	0.18	Compensated motion-Vertical Input Generation @ Roof Center
71	NS	1108	H	100b	1.00	3D	Acceleration History Test (Vert. 8)	9/9/2011	0.27	0.18	0.43	0.18	Compensated motion-Vertical Input Generation @ Roof Center
72	NS	1108	H	100c	1.00	3D	Acceleration History Test (Vert. 10)	9/9/2011	0.27	0.18	0.43	0.18	Compensated motion-Vertical Input Generation @ Roof Center
73	NS	1108	H	100d	1.00	3D	Acceleration History Test (Vert. 12)	9/9/2011	0.27	0.18	0.43	0.18	Compensated motion-Vertical Input Generation @ Roof Center
74	NS	1108	H	100e	1.00	3D	Acceleration History Test (Vert. 14)	9/9/2011	0.27	0.18	0.43	0.18	Compensated motion-Vertical Input Generation @ Roof Center
Vertical Input Effect Study - 150%RRS (J series was conducted first than I series)													
75	NS	1108	J	150	1.50	3D	Acceleration History Test (Vert. 6)	9/9/2011	0.40	0.27	0.64	0.27	Compensated motion-Vertical Input Generation @ Roof Center - B6,B7
--	NS	1108	J	--	--	--	Inspection	9/9/2011	--	--	--	--	see the work sheet - Result in Detail.
76	NS	1108	J	150b	1.50	3D	Acceleration History Test (Vert. 8)	9/9/2011	0.40	0.27	0.64	0.27	Compensated motion-Vertical Input Generation @ Roof Center - C6,C7
77	NS	1108	J	150c	1.50	3D	Acceleration History Test (Vert. 10)	9/9/2011	0.40	0.27	0.64	0.27	Compensated motion-Vertical Input Generation @ Roof Center
78	NS	1108	J	150d	1.50	3D	Acceleration History Test (Vert. 12)	9/9/2011	0.40	0.27	0.64	0.27	Compensated motion-Vertical Input Generation @ Roof Center
79	NS	1108	J	150e	1.50	3D	Acceleration History Test (Vert. 14)	9/9/2011	0.40	0.27	0.64	0.27	Compensated motion-Vertical Input Generation @ Roof Center
Input Motion Study (Compensation-Bare Frame) - 150%RRS													
80	NS	1108	I	150	1.50	3D	Acceleration History Test (AC156-Random)	9/9/2011	0.40	0.27	0.64	0.27	Compensated motion @ Frame Top Corners- input from g100d
81	NS	1108	I	-	1.50	3D	Acceleration History Test (AC156-Sweep)	skipped	0.40	0.27	0.64	0.27	Compensated motion @ Frame Top Corners
82	NS	1108	I	150b	1.50	3D	Acceleration History Test (Recorded Floor)	9/9/2011	0.40	0.27	0.64	0.27	Compensated motion @ Frame Top Corners - input from g100e - Test Stopped due to the Dis
--	NS	1108	I	--	--	--	Inspection (Test ended)	9/9/2011	--	--	--	--	see the work sheet - Result in Detail.

Seismic Qualification Test Protocol (#2) - 110920

Test No.				Target S _s (g)	Test Direct.	Test Description	Test Date	PGA _H (g)	PGA _V (g)	FA _H (g)	FA _V (g)	Remarks <small>(inspection legend: R-failed Rivet, J-broken tee Joint)</small>	
TEST #2. Bi-axial Input: Ceiling Weight/Size: 1.0 lbs/2"x2", Bracing/Comp.Strut: Yes/Yes, P.Angle Type: 2", Condition: SDC D													
83	NS	1108	K	--	--	--	Ceiling system installation	9/16/2011	--	--	--	--	Take pictures
84	NS	1108	K	--	--	--	Instrumentation (Removable Channels)	9/16/2011	--	--	--	--	Take pictures
85	NS	1108	K	whn	--	3D	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	9/16/2011	--	--	--	--	AC156-Random Frequency Search - 3D , test started at 11:47 am
86	NS	1108	K	tbi	--	EW, NS, V	Table Impulse Test	skipped	--	--	--	--	Freq. from Whn test
87	NS	1108	K	--	--	--	Check Instrumentation & Data	9/16/2011	--	--	--	--	Fund. Frequency & Instrumentation
88	NS	1108	K	100	1.00	EW	Acceleration History Test (AC156-Random)	9/16/2011	0.27	0.18	0.43	0.18	UnCompensated motion
89	NS	1108	K	100b	1.00	EW, Vert	Acceleration History Test (AC156-Random)	9/16/2011	0.27	0.18	0.43	0.18	UnCompensated motion
90	NS	1108	K	100c	1.00	3D	Acceleration History Test (AC156-Random)	9/16/2011	0.27	0.18	0.43	0.18	UnCompensated motion
91	NS	1108	K	--	--	--	Inspection	9/16/2011	--	--	--	--	3 rivets got pulled out - replaced (Inspec. #1); Tightened splay wires
92	NS	1108	K	--	--	--	Compensation	9/16/2011	--	--	--	--	Generate Compensated Motions
93	NS	1108	K	50	0.50	EW	Acceleration History Test (AC156-Random)	9/16/2011	0.13	0.09	0.21	0.09	Compensated motion @ Frame Top Corners
94	NS	1108	K	--	--	--	Inspection	9/16/2011	--	--	--	--	no damage
95	NS	1108	K	50b	0.50	EW, Vert	Acceleration History Test (AC156-Random)	9/16/2011	0.13	0.09	0.21	0.09	Compensated motion @ Frame Top Corners
96	NS	1108	K	--	--	--	Inspection	9/16/2011	--	--	--	--	no damage
97	NS	1108	K	50c	0.50	3D	Acceleration History Test (AC156-Random)	9/16/2011	0.13	0.09	0.21	0.09	Compensated motion @ Frame Top Corners
98	NS	1108	K	--	--	--	Check Data	9/16/2011	--	--	--	--	no damage
99	NS	1108	K	75	0.75	EW, Vert	Acceleration History Test (AC156-Random)	9/16/2011	0.20	0.13	0.32	0.13	Compensated motion / Destructive testing
100	NS	1108	K	--	--	--	Inspection	9/16/2011	--	--	--	--	no damage
101	NS	1108	K	100d	1.00	EW, Vert	Acceleration History Test (AC156-Random)	9/19/2011	0.27	0.18	0.43	0.18	Compensated motion
102	NS	1108	K	--	--	--	Inspection	9/19/2011	--	--	--	--	no damage
103	NS	1108	K	--	--	--	Compensation Iteration (if necessary)	skipped	--	--	--	--	Generate Iterated Compensated Motion - Not needed
104	NS	1108	K	125	1.25	EW, Vert	Acceleration History Test (AC156-Random)	9/19/2011	0.33	0.22	0.53	0.22	Compensated motion
105	NS	1108	K	--	--	--	Inspection	9/19/2011	--	--	--	--	Failure - 1 R, 1 J (Inspec. #3); Changed all rivets to screws; Tightened splay wires
106	NS	1108	K	150	1.50	EW, Vert	Acceleration History Test (AC156-Random)	9/19/2011	0.40	0.27	0.64	0.27	Compensated motion
--	--	--	--	--	--	--	Inspection	9/19/2011	--	--	--	--	Failure - 1 R, 2 J (Inspec. #4); Installed stabilizer bars
107	NS	1108	K	175	1.75	EW, Vert	Acceleration History Test (AC156-Random)	9/20/2011	0.47	0.31	0.75	0.31	Compensated motion
108	NS	1108	K	--	--	--	Inspection	9/20/2011	--	--	--	--	Failure - 2 R, 2 J (Inspec. #4)
109	NS	1108	K	200	2.00	EW, Vert	Acceleration History Test (AC156-Random)	9/20/2011	0.53	0.36	0.85	0.36	Compensated motion
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110	NS	1108	K	225	2.25	EW, Vert	Acceleration History Test (AC156-Random)	9/20/2011	0.60	0.40	0.96	0.40	Compensated motion
111	NS	1108	K	--	--	--	Inspection	9/20/2011	--	--	--	--	(Inspec. #5)
112	NS	1108	K	250	2.50	EW, Vert	Acceleration History Test (AC156-Random)	9/20/2011	0.67	0.44	1.07	0.44	Compensated motion
113	NS	1108	K	--	--	--	Inspection	9/20/2011	--	--	--	--	(Inspec. #5)
114	NS	1108	K	275	2.75	EW, Vert	Acceleration History Test (AC156-Random)	9/20/2011	0.73	0.49	1.17	0.49	Compensated motion
115	NS	1108	K	--	--	--	Inspection (Test ended)	9/20/2011	--	--	--	--	System collaped in South-East (Inspec. #6)

Seismic Qualification Test Protocol (#3) - 110922

Test No.		Target S _s (g)	Test Direct.	Test Description		Test Date	PGA _H (g)	PGA _V (g)	FA _H (g)	FA _V (g)	Remarks (inspection legend: R-failed Rivet, J-broken tee Joint)	
TEST #3. Uniaxial Input: Ceiling Weight/Size: 1.0 lbs/2"x2", Bracing/Comp.Strut: Yes/Yes, P.Angle Type: 2", Condition: SDC D												
115	NS 1108	L	--	--	--	Ceiling system installation	9/21/2011	--	--	--	--	Take pictures
116	NS 1108	L	--	--	--	Instrumentation (Removable Channels)	9/21/2011	--	--	--	--	Added two accelerometers; a01x, a02x for out of plane (East Wall); 4 acc. (afnrx,y,z nwx) mc
117	NS 1108	L	whn	--	3D	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	9/22/2011	--	--	--	--	AC156-Random Frequency Search - 3D
118	NS 1108	L	--	--	--	Check Instrumentation & Data	9/22/2011	--	--	--	--	Fund. Frequency & Instrumentation
119	NS 1108	L	50	0.50	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.13	0.09	0.21	0.09	UnCompensated motion
120	NS 1108	L	50b	0.50	EW, Vert	Acceleration History Test (AC156-Random)	9/22/2011	0.13	0.09	0.21	0.09	UnCompensated motion
121	NS 1108	L	50c	0.50	3D	Acceleration History Test (AC156-Random)	9/22/2011	0.13	0.09	0.21	0.09	UnCompensated motion
122	NS 1108	L	--	--	--	Inspection	9/22/2011	--	--	--	--	Take pictures & mark any damage
123	NS 1108	L	--	--	--	Compensation	9/22/2011	--	--	--	--	Generate Compensated Motions @ Roof Center
124	NS 1108	L	50d	0.50	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
125	NS 1108	L	50e	0.50	EW, Vert	Acceleration History Test (AC156-Random)	9/22/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
126	NS 1108	L	50f	0.50	3D	Acceleration History Test (AC156-Random)	9/22/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
127	NS 1108	L	--	--	--	Check Data	9/22/2011	--	--	--	--	Check the response of compensation & Force and Acc.
128	NS 1108	L	75	0.75	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.20	0.13	0.32	0.13	Compensated motion / Destructive testing
129	NS 1108	L	100	1.00	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.27	0.18	0.43	0.18	Compensated motion
130	NS 1108	L	--	--	--	Inspection	9/22/2011	--	--	--	--	no damage
131	NS 1108	L	125	1.25	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.33	0.22	0.53	0.22	Compensated motion
132	NS 1108	L	--	--	--	Inspection	9/22/2011	--	--	--	--	no damage
133	NS 1108	L	150	1.50	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.40	0.27	0.64	0.27	Compensated motion
134	NS 1108	L	--	--	--	Inspection	9/22/2011	--	--	--	--	Failure - 4 R (Inspec. #2)- Changed all rivets to screws;
135	NS 1108	L	175	1.75	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.47	0.31	0.75	0.31	Compensated motion
136	NS 1108	L	--	--	--	Inspection	9/22/2011	--	--	--	--	Failure - 1 R, 1J (Inspec. #3);
137	NS 1108	L	200	2.00	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.53	0.36	0.85	0.36	Compensated motion
138	NS 1108	L	--	--	--	Inspection	9/22/2011	--	--	--	--	Failure - 4 R, 2J (Inspec. #4);
139	NS 1108	L	225	2.25	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.60	0.40	0.96	0.40	Compensated motion
140	NS 1108	L	--	--	--	Inspection	9/22/2011	--	--	--	--	Failure - 7 R, 1J, 1 fallen cross tee (Inspec. #5);
141	NS 1108	L	250	2.50	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.67	0.44	1.07	0.44	Compensated motion
142	NS 1108	L	--	--	--	Inspection	9/22/2011	--	--	--	--	Failure - 7 R, 6J, 1 fallen cross tee, 1 fallen tile, 2 broken main runner splices (Inspec. #6);
143	NS 1108	L	275	2.75	EW	Acceleration History Test (AC156-Random)	9/22/2011	0.73	0.49	1.17	0.49	Compensated motion
144	NS 1108	L	--	--	--	Inspection (Test ended)	9/22/2011	--	--	--	--	System collapsed in South-East (Inspec. #7)

Seismic Qualification Test Protocol (#4) - 110927

Test No.		Target S _s (g)	Test Direct.	Test Description			Test Date	PGA _H (g)	PGA _V (g)	FA _H (g)	FA _V (g)	Remarks (inspection legend: R-failed Rivet, J-broken tee Joint)	
TEST #4. Tri-axial Input: Ceiling Weight/Size: 1.0 lbs/2"x2", Bracing/Comp.Strut: Yes/Yes, P.Angle Type: 2", Condition: SDC D													
144	NS 1108 M	--	--	--	Ceiling system installation			9/26/2011	--	--	--	--	Take pictures
145	NS 1108 M	--	--	--	Instrumentation (Removable Channels)			9/26/2011	--	--	--	--	Take pictures
146	NS 1108 M	whn	--	3D	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)			9/27/2011	--	--	--	--	AC156-Random Frequency Search - 3D
147	NS 1108 M	50	0.50	EW	Acceleration History Test (AC156-Random)			9/27/2011	0.13	0.09	0.21	0.09	UnCompensated motion
148	NS 1108 M	50b	0.50	EW, Vert	Acceleration History Test (AC156-Random)			9/27/2011	0.13	0.09	0.21	0.09	UnCompensated motion
149	NS 1108 M	50c	0.50	3D	Acceleration History Test (AC156-Random)			9/27/2011	0.13	0.09	0.21	0.09	UnCompensated motion
150	NS 1108 M	--	--	--	Inspection			9/27/2011	--	--	--	--	Take pictures & mark any damage
151	NS 1108 M	--	--	--	Compensation			9/27/2011	--	--	--	--	Generate Compensated Motions @ Roof Center; Added 3 accelerometers (at12x2, x3, x4)
152	NS 1108 M	50d	0.50	EW	Acceleration History Test (AC156-Random)			9/27/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
153	NS 1108 M	50e	0.50	EW, Vert	Acceleration History Test (AC156-Random)			9/27/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
154	NS 1108 M	50f	0.50	3D	Acceleration History Test (AC156-Random)			9/27/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
155	NS 1108 M	--	--	--	Check Data			9/27/2011	--	--	--	--	Check the response of compensation & Force and Acc.
156	NS 1108 M	75	0.75	3D	Acceleration History Test (AC156-Random)			9/27/2011	0.20	0.13	0.32	0.13	Compensated motion / Destructive testing
157	NS 1108 M	100	1.00	3D	Acceleration History Test (AC156-Random)			9/27/2011	0.27	0.18	0.43	0.18	Compensated motion
158	NS 1108 M	--	--	--	Inspection			9/27/2011	--	--	--	--	no damage
159	NS 1108 M	125	1.25	3D	Acceleration History Test (AC156-Random)			9/27/2011	0.33	0.22	0.53	0.22	Compensated motion
160	NS 1108 M	--	--	--	Inspection			9/27/2011	--	--	--	--	no damage
161	NS 1108 M	150	1.50	3D	Acceleration History Test (AC156-Random)			9/27/2011	0.40	0.27	0.64	0.27	Compensated motion
162	NS 1108 M	--	--	--	Inspection			9/27/2011	--	--	--	--	Failure - 4 R, 1J (Inspec. #1);
163	NS 1108 M	175	1.75	3D	Acceleration History Test (AC156-Random)			9/27/2011	0.47	0.31	0.75	0.31	Compensated motion
164	NS 1108 M	--	--	--	Inspection			9/27/2011	--	--	--	--	Failure - 4 R, 4J (Inspec. #2);
165	NS 1108 M	200	2.00	3D	Acceleration History Test (AC156-Random)			9/27/2011	0.53	0.36	0.85	0.36	Compensated motion
166	NS 1108 M	--	--	--	Inspection			9/27/2011	--	--	--	--	Failure - 5 R, 6J, 1 fallen tee, 2 dislodged tiles, 1 main runner (EW34) got forced (Inspec. #2);
167	NS 1108 M	225	2.25	3D	Acceleration History Test (AC156-Random)			9/27/2011	0.60	0.40	0.96	0.40	Compensated motion
168	NS 1108 M	--	--	--	Inspection (Test ended)			9/27/2011	--	--	--	--	System collaped in the line of MainRunner - EW34 (Inspec. #4);

Seismic Qualification Test Protocol (#5) - 110930

Test No.		Target S _s (g)	Test Direct.	Test Description			Test Date	PGA _H (g)	PGA _V (g)	FA _H (g)	FA _V (g)	Remarks (inspection legend: R-failed Rivet, J-broken tee Joint)
TEST #5. Tri-axial Input: Ceiling Weight/Size: 1.0 lbs/2"x2", Bracing/Comp.Strut: No/No, P.Angle Type: 2", Condition: SDC D												
171	NS 1108	n	--	--	--	Ceiling system installation	9/29/2011	--	--	--	--	Take pictures
172	NS 1108	n	--	--	--	Instrumentation (Removable Channels)	9/30/2011	--	--	--	--	Take pictures
173	NS 1108	n	whn	--	3D	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	9/30/2011	--	--	--	--	AC156-Random Frequency Search - 3D
174	NS 1108	n	50	0.50	EW	Acceleration History Test (AC156-Random)	9/30/2011	0.13	0.09	0.21	0.09	UnCompensated motion
175	NS 1108	n	50b	0.50	EW, Vert	Acceleration History Test (AC156-Random)	9/30/2011	0.13	0.09	0.21	0.09	UnCompensated motion
176	NS 1108	n	50c	0.50	3D	Acceleration History Test (AC156-Random)	9/30/2011	0.13	0.09	0.21	0.09	UnCompensated motion
177	NS 1108	n	--	--	--	Inspection	9/30/2011	--	--	--	--	Take pictures & mark any damage
178	NS 1108	n	--	--	--	Compensation	9/30/2011	--	--	--	--	Generate Compensated Motions @ Roof Center
179	NS 1108	n	50d	0.50	EW	Acceleration History Test (AC156-Random)	9/30/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
180	NS 1108	n	50e	0.50	EW, Vert	Acceleration History Test (AC156-Random)	9/30/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
181	NS 1108	n	50f	0.50	3D	Acceleration History Test (AC156-Random)	9/30/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
182	NS 1108	n	--	--	--	Check Data	9/30/2011	--	--	--	--	Check the response of compensation & Force and Acc.
183	NS 1108	n	75	0.75	3D	Acceleration History Test (AC156-Random)	9/30/2011	0.20	0.13	0.32	0.13	Compensated motion / Destructive testing
184	NS 1108	n	--	--	--	Inspection	9/30/2011	--	--	--	--	no damage
185	NS 1108	n	100	1.00	3D	Acceleration History Test (AC156-Random)	9/30/2011	0.27	0.18	0.43	0.18	Compensated motion
186	NS 1108	n	--	--	--	Inspection	9/30/2011	--	--	--	--	Failure - 1 R, 1J (Inspec. #1);
187	NS 1108	n	125	1.25	3D	Acceleration History Test (AC156-Random)	9/30/2011	0.33	0.22	0.53	0.22	Compensated motion
188	NS 1108	n	--	--	--	Inspection	9/30/2011	--	--	--	--	Failure - 5 R, 3J (Inspec. #2);
189	NS 1108	n	150	1.50	3D	Acceleration History Test (AC156-Random)	9/30/2011	0.40	0.27	0.64	0.27	Compensated motion
190	NS 1108	n	--	--	--	Inspection	9/30/2011	--	--	--	--	Failure - 8 R, 9J (Inspec. #3);
191	NS 1108	n	175	1.75	3D	Acceleration History Test (AC156-Random)	9/30/2011	0.47	0.31	0.75	0.31	Compensated motion
192	NS 1108	n	--	--	--	Inspection	9/30/2011	--	--	--	--	Failure - 8 R, 12J (Inspec. #4);
193	NS 1108	n	200	2.00	3D	Acceleration History Test (AC156-Random)	9/30/2011	0.53	0.36	0.85	0.36	Compensated motion
194	NS 1108	n	--	--	--	Inspection (Test ended)	9/30/2011	--	--	--	--	System collaped in the east area (Inspec. #5);

Seismic Qualification Test Protocol (#6) - 111004

Test No.		Target S _s (g)	Test Direct.	Test Description		Test Date	PGA _H (g)	PGA _V (g)	FA _H (g)	FA _V (g)	Remarks (inspection legend: R-failed Rivet, J-broken tee Joint)	
TEST #5. Tri-axial Input: Ceiling Weight/Size: 4.0 lbs/2"x2", Bracing/Comp.Strut: Yes/Yes, P.Angle Type: 2", Condition: SDC D												
201	NS 1108	o	--	--	--	Ceiling system installation	10/3/2011	--	--	--	--	Take pictures
202	NS 1108	o	--	--	--	Instrumentation (Removable Channels)	10/4/2011	--	--	--	--	Take pictures
203	NS 1108	o	whn	--	3D	White Noise Test (0-50HZ, ZPA=0.02g, 80sec.)	10/4/2011	--	--	--	--	AC156-Random Frequency Search - 3D
204	NS 1108	o	10	0.10	EW	Acceleration History Test (AC156-Random)	10/4/2011	0.03	0.02	0.04	0.02	UnCompensated motion
205	NS 1108	o	10b	0.10	EW, Vert	Acceleration History Test (AC156-Random)	10/4/2011	0.03	0.02	0.04	0.02	UnCompensated motion
206	NS 1108	o	10c	0.10	3D	Acceleration History Test (AC156-Random)	10/4/2011	0.03	0.02	0.04	0.02	UnCompensated motion
207	NS 1108	o	10g	0.10	3D	Acceleration History Test (AC156-Random)	10/4/2011	0.03	0.02	0.04	0.02	UnCompensated motion (repeated test due to amplified input motion caused by cold oil.)
207	NS 1108	o	--	--	--	Inspection	10/4/2011	--	--	--	--	Take pictures & mark any damage
208	NS 1108	o	--	--	--	Compensation	10/4/2011	--	--	--	--	Generate Compensated Motions @ Roof Center
209	NS 1108	o	10d	0.10	EW	Acceleration History Test (AC156-Random)	10/5/2011	0.03	0.02	0.04	0.02	Compensated motion @ Roof Center
210	NS 1108	o	10e	0.10	EW, Vert	Acceleration History Test (AC156-Random)	10/5/2011	0.03	0.02	0.04	0.02	Compensated motion @ Roof Center
211	NS 1108	o	10f	0.10	3D	Acceleration History Test (AC156-Random)	10/5/2011	0.03	0.02	0.04	0.02	Compensated motion @ Roof Center
212	NS 1108	o	--	--	--	Check Data	10/5/2011	--	--	--	--	Check the response of compensation & Force and Acc.
213	NS 1108	o	25	0.25	3D	Acceleration History Test (AC156-Random)	10/5/2011	0.07	0.04	0.11	0.04	Compensated motion / Destructive testing
214	NS 1108	o	--	--	--	Inspection	10/5/2011	--	--	--	--	no damage
215	NS 1108	o	50	0.50	3D	Acceleration History Test (AC156-Random)	10/5/2011	0.13	0.09	0.21	0.09	Compensated motion
216	NS 1108	o	--	--	--	Inspection	10/5/2011	--	--	--	--	some tee joints got twisted (Inspec. #1)
217	NS 1108	o	75	0.75	3D	Acceleration History Test (AC156-Random)	10/5/2011	0.20	0.13	0.32	0.13	Compensated motion
218	NS 1108	o	--	--	--	Inspection	10/5/2011	--	--	--	--	same as 50%
219	NS 1108	o	100	1.00	3D	Acceleration History Test (AC156-Random)	10/5/2011	0.27	0.18	0.43	0.18	Compensated motion
220	NS 1108	o	--	--	--	Inspection	10/5/2011	--	--	--	--	Failure - 6 R (Inspec. #3);
221	NS 1108	o	125	1.25	3D	Acceleration History Test (AC156-Random)	10/5/2011	0.33	0.22	0.53	0.22	Compensated motion
222	NS 1108	o	--	--	--	Inspection	10/5/2011	--	--	--	--	System collaped in the middle and the line of - EW45 (Inspec. #4);
223	NS 1108	o	150	1.50	3D	Acceleration History Test (AC156-Random)	10/5/2011	0.40	0.27	0.64	0.27	Compensated motion
224	NS 1108	o	--	--	--	Inspection (Test ended)	10/5/2011	--	--	--	--	Entire sytem collapsed except fixed side perimeter ceilings

Seismic Qualification Test Protocol (#7) - 111007

Test No.		Target S _s (g)	Test Direct.	Test Description			Test Date	PGA _H (g)	PGA _V (g)	FA _H (g)	FA _V (g)	Remarks <small>(inspection legend: R-failed Rivet, J-broken tee Joint)</small>
TEST #8. Tri-axial Input: Ceiling Weight/Size: 1.0 lbs/2'x2', Bracing/Comp.Strut: No/No, P.Angle Type: 7/8" + Seismic Clip, Condition: SDC D												
218	NS 1108	p	--	--	--	Ceiling system installation	10/7/2011	--	--	--	--	Take pictures
219	NS 1108	p	--	--	--	Instrumentation (Removable Channels)	10/7/2011	--	--	--	--	Take pictures
220	NS 1108	p	whn	--	3D	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	10/7/2011	--	--	--	--	AC156-Random Frequency Search - 3D
221	NS 1108	p	50	0.50	EW	Acceleration History Test (AC156-Random)	skipped	0.13	0.09	0.21	0.09	UnCompensated motion
222	NS 1108	p	50b	0.50	EW, Vert	Acceleration History Test (AC156-Random)	skipped	0.13	0.09	0.21	0.09	UnCompensated motion
223	NS 1108	p	50c	0.50	3D	Acceleration History Test (AC156-Random)	skipped	0.13	0.09	0.21	0.09	UnCompensated motion
224	NS 1108	p	--	--	--	Inspection	skipped	--	--	--	--	Take pictures & mark any damage
225	NS 1108	p	--	--	--	Compensation (from NS1108N 50d, 50e, 50f)	skipped	--	--	--	--	Generate Compensated Motions @ Roof Center
226	NS 1108	p	50d	0.50	EW	Acceleration History Test (AC156-Random)	10/7/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
227	NS 1108	p	50e	0.50	EW, Vert	Acceleration History Test (AC156-Random)	10/7/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
228	NS 1108	p	50f	0.50	3D	Acceleration History Test (AC156-Random)	10/7/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
229	NS 1108	p	--	--	--	Check Data	10/7/2011	--	--	--	--	Check the response of compensation & Force and Acc.
230	NS 1108	p	75	0.75	3D	Acceleration History Test (AC156-Random)	10/7/2011	0.20	0.13	0.32	0.13	Compensated motion / Destructive testing
231	NS 1108	p	--	--	--	Inspection	10/7/2011	--	--	--	--	no damage (Inspec. #1);
232	NS 1108	p	100	1.00	3D	Acceleration History Test (AC156-Random)	10/7/2011	0.27	0.18	0.43	0.18	Compensated motion
233	NS 1108	p	--	--	--	Inspection	10/7/2011	--	--	--	--	no damage (Inspec. #2);
234	NS 1108	p	125	1.25	3D	Acceleration History Test (AC156-Random)	10/7/2011	0.33	0.22	0.53	0.22	Compensated motion
235	NS 1108	p	--	--	--	Inspection	10/7/2011	--	--	--	--	Failure - 1J (Inspec. #3);
236	NS 1108	p	150	1.50	3D	Acceleration History Test (AC156-Random)	10/7/2011	0.40	0.27	0.64	0.27	Compensated motion
237	NS 1108	p	--	--	--	Inspection	10/7/2011	--	--	--	--	Failure - 2J (Inspec. #4);
238	NS 1108	p	175	1.75	3D	Acceleration History Test (AC156-Random)	10/7/2011	0.47	0.31	0.75	0.31	Compensated motion
239	NS 1108	p	--	--	--	Inspection	10/7/2011	--	--	--	--	Failure - 3J (Inspec. #5);
240	NS 1108	p	200	2.00	3D	Acceleration History Test (AC156-Random)	10/7/2011	0.53	0.36	0.85	0.36	Compensated motion
241	NS 1108	p	--	--	--	Inspection	10/7/2011	--	--	--	--	Failure - 9J (Inspec. #6);
242	NS 1108	p	225	2.25	3D	Acceleration History Test (AC156-Random)	10/7/2011	0.60	0.40	0.96	0.40	Compensated motion
243	NS 1108	p	--	--	--	Inspection (Test ended)	10/7/2011	--	--	--	--	System collaped in the east side (Inspec. #7);

Seismic Qualification Test Protocol (#8) - 111011

Test No.		Target S _s (g)	Test Direct.	Test Description			Test Date	PGA _H (g)	PGA _V (g)	FA _H (g)	FA _V (g)	Remarks <small>(inspection legend: R-failed Rivet, J-broken tee Joint, LS-end grid Lost Seats)</small>
TEST #9. Tri-axial Input: Ceiling Weight/Size: 1.0 lbs/2'x2', Bracing/Comp.Strut: No/No, P.Angle Type: 7/8", Condition: SDC C, Intermediate Duty Grid & No Clip												
244	NS 1108	q	--	--	--	Ceiling system installation	10/10/2011	--	--	--	--	Take pictures
245	NS 1108	q	--	--	--	Instrumentation (Removable Channels)	10/11/2011	--	--	--	--	Take pictures
246	NS 1108	q	whn	--	3D	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	10/11/2011	--	--	--	--	AC156-Random Frequency Search - 3D
247	NS 1108	q	50	0.50	EW	Acceleration History Test (AC156-Random)	skipped	0.13	0.09	0.21	0.09	UnCompensated motion
248	NS 1108	q	50b	0.50	EW, Vert	Acceleration History Test (AC156-Random)	skipped	0.13	0.09	0.21	0.09	UnCompensated motion
249	NS 1108	q	50c	0.50	3D	Acceleration History Test (AC156-Random)	skipped	0.13	0.09	0.21	0.09	UnCompensated motion
250	NS 1108	q	--	--	--	Inspection	skipped	--	--	--	--	Take pictures & mark any damage
251	NS 1108	q	--	--	--	Compensation (from NS1108N 50d, 50e, 50f)	skipped	--	--	--	--	Generate Compensated Motions @ Roof Center
252	NS 1108	q	50d	0.50	EW	Acceleration History Test (AC156-Random)	10/11/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
253	NS 1108	q	50e	0.50	EW, Vert	Acceleration History Test (AC156-Random)	10/11/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
254	NS 1108	q	50f	0.50	3D	Acceleration History Test (AC156-Random)	10/11/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
255	NS 1108	q	--	--	--	Check Data	10/11/2011	--	--	--	--	Check the response of compensation & Force and Acc.
256	NS 1108	q	75	0.75	3D	Acceleration History Test (AC156-Random)	10/11/2011	0.20	0.13	0.32	0.13	Compensated motion / Destructive testing
257	NS 1108	q	--	--	--	Inspection	10/11/2011	--	--	--	--	Failure - 3LS (Inspec. #1);
258	NS 1108	q	100	1.00	3D	Acceleration History Test (AC156-Random)	10/11/2011	0.27	0.18	0.43	0.18	Compensated motion
259	NS 1108	q	--	--	--	Inspection	10/11/2011	--	--	--	--	Failure - 8LS (Inspec. #2);
260	NS 1108	q	125	1.25	3D	Acceleration History Test (AC156-Random)	10/11/2011	0.33	0.22	0.53	0.22	Compensated motion
261	NS 1108	q	--	--	--	Inspection	10/11/2011	--	--	--	--	Failure - 16LS, 1J, 1 FallenTile (Inspec. #3);
262	NS 1108	q	150	1.50	3D	Acceleration History Test (AC156-Random)	10/11/2011	0.40	0.27	0.64	0.27	Compensated motion
263	NS 1108	q	--	--	--	Inspection	10/11/2011	--	--	--	--	Failure - 28LS, 1J, 1 FallenTile (Inspec. #4);
264	NS 1108	q	175	1.75	3D	Acceleration History Test (AC156-Random)	10/11/2011	0.47	0.31	0.75	0.31	Compensated motion
265	NS 1108	q	--	--	--	Inspection	10/11/2011	--	--	--	--	System collaped in the middle south/north sides (Inspec. #5);
266	NS 1108	q	200	2.00	3D	Acceleration History Test (AC156-Random)	10/11/2011	0.53	0.36	0.85	0.36	Compensated motion
267	NS 1108	q	--	--	--	Inspection (Test ended)	10/11/2011	--	--	--	--	System collaped in the middle (Inspec. #6);

Seismic Qualification Test Protocol (#9) - 111013

Test No.		Target S _s (g)	Test Direct.	Test Description			Test Date	PGA _H (g)	PGA _V (g)	FA _H (g)	FA _V (g)	Remarks <small>(inspection legend: R-failed Rivet, J-broken tee Joint)</small>
TEST #10. Tri-axial Input: 2'x4' Light Fixtures, Ceiling Weight/Size: 1.0 lbs/2"x2", Bracing/Comp.Strut: Yes/Yes, P.Angle Type: 2", Condition: SDC D												
268	NS 1108	r	--	--	--	Ceiling system installation	10/12/2011	--	--	--	--	Take pictures
269	NS 1108	r	--	--	--	Instrumentation (Removable Channels)	10/13/2011	--	--	--	--	Take pictures
270	NS 1108	r	whn	--	3D	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	10/13/2011	--	--	--	--	AC156-Random Frequency Search - 3D
271	NS 1108	r	50	0.50	EW	Acceleration History Test (AC156-Random)	skipped	0.13	0.09	0.21	0.09	UnCompensated motion
272	NS 1108	r	50b	0.50	EW, Vert	Acceleration History Test (AC156-Random)	skipped	0.13	0.09	0.21	0.09	UnCompensated motion
273	NS 1108	r	50c	0.50	3D	Acceleration History Test (AC156-Random)	skipped	0.13	0.09	0.21	0.09	UnCompensated motion
274	NS 1108	r	--	--	--	Inspection	skipped	--	--	--	--	Take pictures & mark any damage
275	NS 1108	r	--	--	--	Compensation (from NS1108M 50d, 50e, 50f)	skipped	--	--	--	--	Generate Compensated Motions @ Roof Center
276	NS 1108	r	50d	0.50	EW	Acceleration History Test (AC156-Random)	10/13/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
277	NS 1108	r	50e	0.50	EW, Vert	Acceleration History Test (AC156-Random)	10/13/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
278	NS 1108	r	50f	0.50	3D	Acceleration History Test (AC156-Random)	10/13/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
279	NS 1108	r	--	--	--	Check Data	10/13/2011	--	--	--	--	Check the response of compensation & Force and Acc.
280	NS 1108	r	75	0.75	3D	Acceleration History Test (AC156-Random)	10/13/2011	0.20	0.13	0.32	0.13	Compensated motion / Destructive testing
281	NS 1108	r	--	--	--	Inspection	10/13/2011	--	--	--	--	no damage
282	NS 1108	r	100	1.00	3D	Acceleration History Test (AC156-Random)	10/13/2011	0.27	0.18	0.43	0.18	Compensated motion
283	NS 1108	r	--	--	--	Inspection	10/13/2011	--	--	--	--	no damage
284	NS 1108	r	125	1.25	3D	Acceleration History Test (AC156-Random)	10/13/2011	0.33	0.22	0.53	0.22	Compensated motion
285	NS 1108	r	--	--	--	Inspection	10/13/2011	--	--	--	--	no damage
286	NS 1108	r	150	1.50	3D	Acceleration History Test (AC156-Random)	10/13/2011	0.40	0.27	0.64	0.27	Compensated motion
287	NS 1108	r	--	--	--	Inspection	10/13/2011	--	--	--	--	Failure - 1R (Inspec. #1);
288	NS 1108	r	175	1.75	3D	Acceleration History Test (AC156-Random)	10/13/2011	0.47	0.31	0.75	0.31	Compensated motion
289	NS 1108	r	--	--	--	Inspection	10/13/2011	--	--	--	--	Failure - 3R (Inspec. #2);
290	NS 1108	r	200	2.00	3D	Acceleration History Test (AC156-Random)	10/13/2011	0.53	0.36	0.85	0.36	Compensated motion
291	NS 1108	r	--	--	--	Inspection	10/13/2011	--	--	--	--	Failure - 4R, 1J (Inspec. #3);
292	NS 1108	r	225	2.25	3D	Acceleration History Test (AC156-Random)	10/13/2011	0.60	0.40	0.96	0.40	Compensated motion
293	NS 1108	r	--	--	--	Inspection	10/13/2011	--	--	--	--	Failure - 7R, 3J, 1 MainRunnerSplice (Inspec. #4);
294	NS 1108	r	250	2.50	3D	Acceleration History Test (AC156-Random)	10/13/2011	0.67	0.44	1.07	0.44	Compensated motion
295	NS 1108	r	--	--	--	Inspection	10/13/2011	--	--	--	--	Failure - 8R, 16J, 2 MainRunnerSplices, 1 FallenTile (Inspec. #5);
296	NS 1108	r	275	2.75	3D	Acceleration History Test (AC156-Random)	10/13/2011	0.73	0.49	1.17	0.49	Compensated motion
297	NS 1108	r	--	--	--	Inspection (Test ended)	10/13/2011	--	--	--	--	System collapsed in the Entire West, Center Middle, & East-South (Inspec. #6);

Seismic Qualification Test Protocol (#10) - 111017

Test No.		Target S _s (g)	Test Direct.	Test Description		Test Date	PGA _H (g)	PGA _V (g)	FA _H (g)	FA _V (g)	Remarks (inspection legend: R-failed Rivet, J-broken tee Joint, LS-end grid Lost Seats)	
TEST #11. Tri-axial Input: Deep Plenum, Ceiling Weight/Size: 1.0 lbs/2"x2", Bracing/Comp.Strut: Yes/Yes, P.Angle Type: 7/8"+Seismic Clips, Condition: SDC D												
298	NS 1108	s	--	--	--	Ceiling system installation	10/17/2011	--	--	--	--	Take pictures
299	NS 1108	s	--	--	--	Instrumentation (Removable Channels)	10/18/2011	--	--	--	--	Take pictures
300	NS 1108	s	whn	--	3D	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	10/18/2011	--	--	--	--	AC156-Random Frequency Search - 3D
301	NS 1108	s	50	0.50	EW	Acceleration History Test (AC156-Random)	10/18/2011	0.13	0.09	0.21	0.09	UnCompensated motion
302	NS 1108	s	50b	0.50	EW, Vert	Acceleration History Test (AC156-Random)	10/18/2011	0.13	0.09	0.21	0.09	UnCompensated motion
303	NS 1108	s	50c	0.50	3D	Acceleration History Test (AC156-Random)	10/18/2011	0.13	0.09	0.21	0.09	UnCompensated motion
304	NS 1108	s	--	--	--	Inspection	10/18/2011	--	--	--	--	Take pictures & mark any damage
305	NS 1108	s	--	--	--	Compensation	10/18/2011	--	--	--	--	Generate Compensated Motions @ Roof Center
306	NS 1108	s	50d	0.50	EW	Acceleration History Test (AC156-Random)	10/18/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
307	NS 1108	s	50e	0.50	EW, Vert	Acceleration History Test (AC156-Random)	10/18/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
308	NS 1108	s	50f	0.50	3D	Acceleration History Test (AC156-Random)	10/18/2011	0.13	0.09	0.21	0.09	Compensated motion @ Roof Center
309	NS 1108	s	--	--	--	Check Data	10/18/2011	--	--	--	--	Check the response of compensation & Force and Acc.
310	NS 1108	s	75	0.75	3D	Acceleration History Test (AC156-Random)	10/18/2011	0.20	0.13	0.32	0.13	Compensated motion / Destructive testing
311	NS 1108	s	--	--	--	Inspection	10/18/2011	--	--	--	--	no damage
312	NS 1108	s	100	1.00	3D	Acceleration History Test (AC156-Random)	10/18/2011	0.27	0.18	0.43	0.18	Compensated motion
313	NS 1108	s	--	--	--	Inspection	10/18/2011	--	--	--	--	no damage
314	NS 1108	s	125	1.25	3D	Acceleration History Test (AC156-Random)	10/18/2011	0.33	0.22	0.53	0.22	Compensated motion
315	NS 1108	s	--	--	--	Inspection	10/18/2011	--	--	--	--	no damage (Inspec. #1);
316	NS 1108	s	150	1.50	3D	Acceleration History Test (AC156-Random)	10/18/2011	0.40	0.27	0.64	0.27	Compensated motion
317	NS 1108	s	--	--	--	Inspection	10/18/2011	--	--	--	--	Failure - 1LS (Inspec. #2);
318	NS 1108	s	175	1.75	3D	Acceleration History Test (AC156-Random)	10/18/2011	0.47	0.31	0.75	0.31	Compensated motion
319	NS 1108	s	--	--	--	Inspection	10/18/2011	--	--	--	--	Failure - 2LS (Inspec. #3);
320	NS 1108	s	200	2.00	3D	Acceleration History Test (AC156-Random)	10/18/2011	0.53	0.36	0.85	0.36	Compensated motion
321	NS 1108	s	--	--	--	Inspection	10/18/2011	--	--	--	--	Failure - 2J, 2LS (Inspec. #4); chage of 2 accelerometer locations (a02x,aext3sz)
322	NS 1108	s	225	2.25	3D	Acceleration History Test (AC156-Random)	10/18/2011	0.60	0.40	0.96	0.40	Compensated motion
323	NS 1108	s	--	--	--	Inspection	10/18/2011	--	--	--	--	Failure - 6 dislodged tiles, 9J, 3LS (Inspec. #5);
324	NS 1108	s	250	2.50	3D	Acceleration History Test (AC156-Random)	10/18/2011	0.67	0.44	1.07	0.44	Compensated motion
325	NS 1108	s	--	--	--	Inspection (Test ended)	10/18/2011	--	--	--	--	System collaped in the Entire Middle, & West-North (Inspec. #6);
Identification Testing (Tandem Bare Frame- withLink Frame)												
326	NS 1108	t	wha	--	EW	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	10/19/2011	--	--	--	--	Random Frequency Search (x1: 13.25hz, x2: 13.50hz)
327	NS 1108	t	whb	--	NS	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	10/19/2011	--	--	--	--	Random Frequency Search (y1: 11.00hz, y2: 11.00hz)
328	NS 1108	t	whc	--	Vert.	White Noise Test (0-50HZ, ZPA=0.1g, 80sec.)	10/19/2011	--	--	--	--	Random Frequency Search (z1: 22.00hz, z2: 22.00hz)