

EXHIBIT 4

April 27, 2022



Centerline Communications
750 West Center Street, Suite #301
West Bridgewater, MA 02379

RE: Site Number: CT5416
 FA Number: 10070922
 PACE Number: MRCTB055137
 PT Number: 2051A11KPA
 Site Name: BEACON FALLS NE
 Site Address: 10 Teresa Road
 Beacon Falls, CT 06403

To Whom It May Concern:

Hudson Design Group LLC (HDG) has been authorized by Centerline Communications to perform a mount analysis on the existing AT&T antenna/RRH mounts to determine their capability of supporting the following additional loading:

- (3) 800-10965 Antennas (78.7"x20.0"x6.9" – Wt. = 109 lbs. /each)
- (3) RRUS-32 B30 RRH's (27.2"x12.1"x7.0" – Wt. = 60 lbs. /each) (tower mounted)
- (3) 4449 B5/B12 RRH's (17.9"x13.2"x9.4" – Wt. = 73 lbs. /each) (tower mounted)
- (3) B2/B66A 8843 RRH's (14.9"x13.2"x10.9" – Wt. = 72 lbs. /each) (tower mounted)
- (2) DC6-48-60-18 Surge Arrestors (31.4"x10.2"Ø – Wt. = 29 lbs. /each) (tower mounted)
- **(3) AIR6449 Antennas (30.4"x15.9"x8.1" – Wt. = 82 lbs. /each)**
- **(3) AIR6419 Antennas (28.3"x16.1"x7.9" – Wt. = 66 lbs. /each)**
- **(2) DMP65R-BU6EA-K Antennas (71.2"x20.7"x9.7" – Wt. = 116 lbs. /each)**
- **(1) DMP65R-BU8EA-K Antenna (96.0"x20.7"x7.7" – Wt. = 143 lbs. /each)**
- **(3) B14 4478 RRH's (18.1"x13.4"x8.3" – Wt. = 60 lbs. /each)**
- **(1) DC9-48-60-24-8C-EV Surge Arrestor (31.4"x10.2"Ø – Wt. = 29 lbs. / each)**

**Proposed equipment shown in bold*

Mount fabrication drawings prepared by SitePro1, P/N RMV12-3XX, dated July 1, 2015 and SitePro1, P/N RMV12-NP, dated July 1, 2015 were used to perform this analysis. HDG conducted a ground audit of the existing AT&T antenna mounts on December 16, 2021.

Mount Analysis Methods:

- This analysis was conducted in accordance with EIA/TIA-222-H, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, the International Building Code 2015 with 2018 Connecticut State Building Code, and AT&T Mount Technical Directive – R16.
- HDG considers this mount to be asymmetrical and has applied wind loads in 30 degree increments all around the mount. Per TIA-222-H and Appendix N of the Connecticut State Building Code, the max basic wind speed for this site is equal to 125 mph with a max basic wind speed with ice of 50 mph and a max ice thickness of 1.0 in. An escalated ice thickness of 1.15 in was used for this analysis.
- HDG considers this site to be exposure category B; tower is located in an urban/suburban or wooded area with numerous closely spaced obstructions.
- HDG considers this site to be topographic category 1; tower is located on flat terrain or the bottom of a hill or ridge.
- HDG considers this site to have a spectral response acceleration parameter at short periods, S_S , of 0.192 and a spectral response acceleration parameter at a period of 1 second, S_1 , of 0.064.
- The mount has been analyzed with load combinations consisting of 500 lbs live load using a service wind speed of 30 mph wind on the worst case antenna. Analysis performed on each antenna pipe to determine worst case location; worst case location was antenna position 1.
- The mount has been analyzed with load combinations consisting of a 250 lbs live load in a worst case location on the mount.
- The existing mounts are secured to the existing monopole with ring mounts and threaded rods. HDG considers the threaded rods to be the governing connection member.

Based on our evaluation, we have determined that the existing mounts **ARE CAPABLE** of supporting the proposed installation.

	Component	Controlling Load Case	Stress Ratio	Pass/Fail
Existing Mount Rating	4	LC51	83%	PASS

Reference Documents:

- Fabrication drawings prepared by SitePro1, P/N RMV12-3XX, dated July 1, 2015.
- Fabrication drawings prepared by SitePro1, P/N RMV12-NP, dated July 1, 2015.

This determination was based on the following limitations and assumptions:

1. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
2. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities.
3. All antennas, coax cables and waveguide cables are assumed to be properly installed and supported as per the manufacturer's requirements.
4. The existing mounts have been adequately secured to the tower structure per the mount manufacturer's specifications.
5. All components pertaining to AT&T's mounts must be tightened and re-plumbed prior to the installation of new appurtenances.
6. HDG performed a localized analysis on the mount itself and not on the supporting tower structure.

Please feel free to contact our office should you have any questions.

Respectfully Submitted,
Hudson Design Group LLC

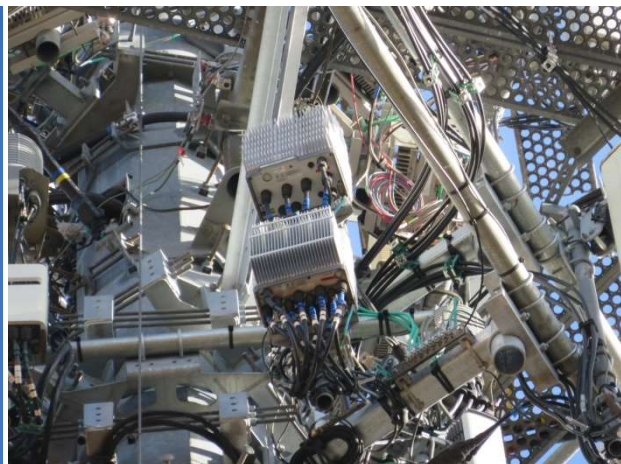
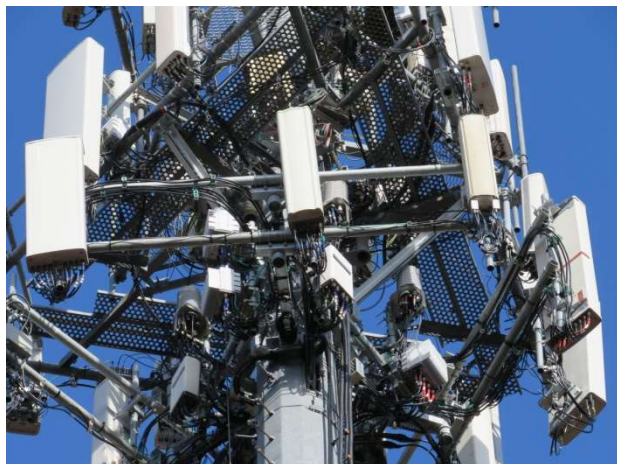


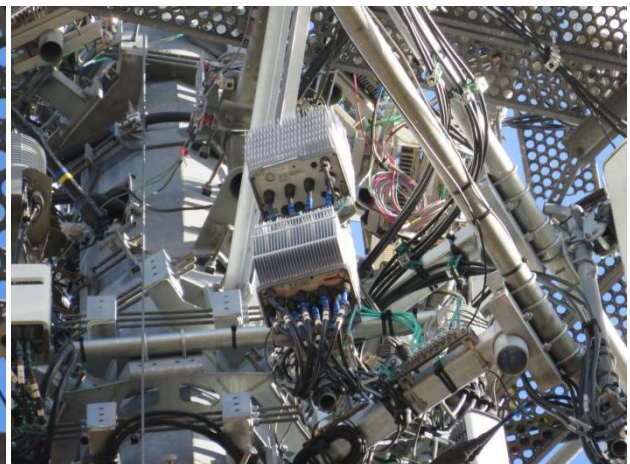
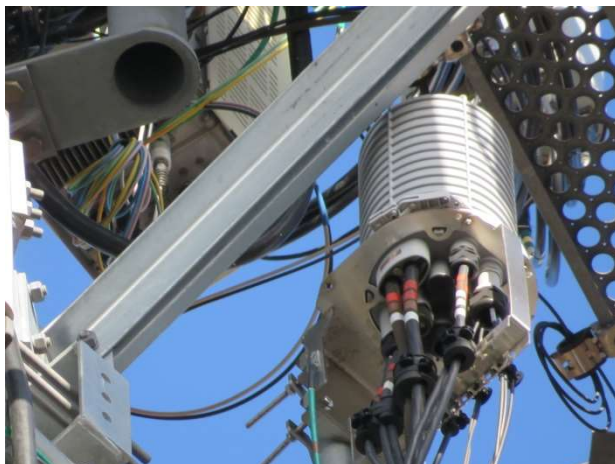
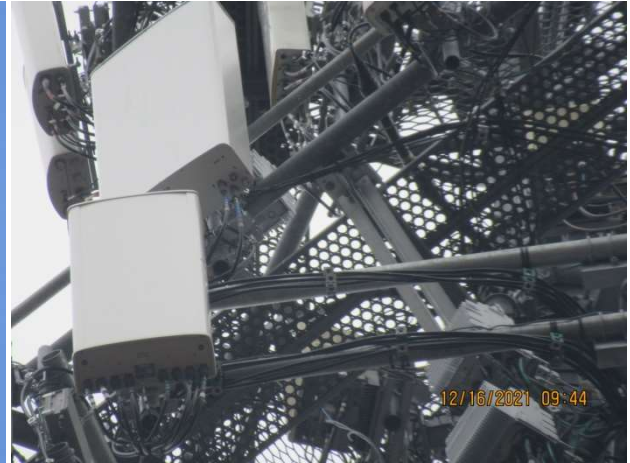
Michael Cabral
Vice President



Daniel P. Hamm, PE
Principal

FIELD PHOTOS:







HUDSON
Design Group LLC

**Wind & Ice
Calculations**

Date: 4-27-2022
 Project Name: BEACON FALLS NE
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 Designed By: SR Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

$K_z = 2.01 (z/z_g)^{2/\alpha}$

$K_z =$ **1.072**

$z =$ 133 (ft)
 $z_g =$ 1200 (ft)
 $\alpha =$ 7.0

$K_{zmin} \leq K_z \leq 2.01$

Table 2-4

Exposure	Z_g	α	K_{zmin}	K_c
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.2 Topographic Factor:

Table 2-5

Topo. Category	K_t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$K_{zt} = [1 + (K_c K_t / K_h)]^2$

$K_h = e^{(fz/H)}$

$K_{zt} =$ **1**

$K_h =$ 1
 $K_c =$ 0.9 (from Table 2-4)
 $K_t =$ 0 (from Table 2-5)
 $f =$ 0 (from Table 2-5)
 $z =$ 133
 $z_s =$ 623 (Mean elevation of base of structure above sea level)
 $H =$ 0 (Ht. of the crest above surrounding terrain)
 $K_{zt} =$ 1.00 (from 2.6.6.2.1)
 $K_e =$ 0.98 (from 2.6.8)

(If Category 1 then $K_{zt} = 1.0$)

Category = **1**

2.6.10 Design Ice Thickness

Max Ice Thickness =
 Importance Factor =

$t_i =$ 1.00 in
 $I =$ 1.0 (from Table 2-3)
 $K_{iz} =$ 1.15 (from Sec. 2.6.10)

$t_{iz} = t_i * I * K_{iz} * (K_{zt})^{0.35}$

$t_{iz} =$ 1.15 in

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2.6.9 Gust Effect Factor

2.6.9.1 Self Supporting Lattice Structures

$G_h = 1.0$ Latticed Structures > 600 ft

$G_h = 0.85$ Latticed Structures 450 ft or less

$G_h = 0.85 + 0.15 [h/150 - 3.0]$

h= ht. of structure

h= 160

$G_h = 0.85$

2.6.9.2 Guyed Masts

$G_h = 0.85$

2.6.9.3 Pole Structures

$G_h = 1.1$

2.6.9 Appurtenances

$G_h = 1.0$

2.6.9.4 Structures Supported on Other Structures

(Cantilevered tubular or latticed spines, pole, structures on buildings (ht. : width ratio > 5)

$G_h = 1.35$

$G_h = 1.00$

2.6.11.2 Design Wind Force on Appurtenances

$F = q_z * G_h * (EPA)_A$

$q_z = 0.00256 * K_z * K_{zt} * K_s * K_e * K_d * V_{max}^2$

$q_z =$	39.83
$q_z (ice) =$	6.37
$q_z (30) =$	2.29

$K_z =$	1.072 (from 2.6.5.2)
$K_{zt} =$	1.0 (from 2.6.6.2.1)
$K_s =$	1.0 (from 2.6.7)
$K_e =$	0.98 (from 2.6.8)
$K_d =$	0.95 (from Table 2-2)
$V_{max} =$	125 mph (Ultimate Wind Speed)
$V_{max (ice)} =$	50 mph
$V_{30} =$	30 mph

Table 2-2

Structure Type	Wind Direction Probability Factor, Kd
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95
Tubular pole structures supporting antennas enclosed within a cylindrical shroud	1.00

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Determine Ca:

Table 2-9

Force Coefficients (Ca) for Appurtenances				
Member Type		Aspect Ratio ≤ 2.5	Aspect Ratio = 7	Aspect Ratio ≥ 25
		Ca	Ca	Ca
Flat		1.2	1.4	2.0
Square/Rectangular HSS		1.2 - 2.8(r _s) ≥ 0.85	1.4 - 4.0(r _s) ≥ 0.90	2.0 - 6.0(r _s) ≥ 1.25
Round	C < 39 (Subcritical)	0.7	0.8	1.2
	39 ≤ C ≤ 78 (Transitional)	4.14/(C ^{0.485})	3.66/(C ^{0.415})	46.8/(C ^{1.0})
	C > 78 (Supercritical)	0.5	0.6	0.6

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
 (Aspect ratio is independent of the spacing between support points of a linear appurtenance.)
 Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = **1.15 in** Angle = **0 (deg)** Equivalent Angle = **180 (deg)**

Appurtenances	Height	Width	Depth	Flat Area	Aspect Ratio	Ca	Force (lbs)	Force (lbs) (w/ Ice)	Force (lbs) (30 mph)
800-10965 Antenna	78.7	20.0	6.9	10.93	3.94	1.26	550	101	32
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.91	1.20	160	32	9
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.76	1.20	151	30	9
DMP65R-BU6EA-K Antenna	71.2	20.7	9.7	10.24	3.44	1.24	506	93	29
DMP65R-BU8EA-K Antenna	96.0	20.7	7.7	13.80	4.64	1.30	712	130	41
B14 4478 RRH	18.1	13.4	8.3	1.68	1.35	1.20	81	17	5
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	2.25	1.20	109	23	6
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.36	1.20	78	17	5
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.20	54	12	3
DC9-48-60-24-8C-EV Surge Arrestor	31.4	10.2	10.2	2.22	3.08	0.70	62	13	4
DC6-48-60-18 Surge Arrestor	31.4	10.2	10.2	2.22	3.08	0.70	62	13	4
2" Pipe	2.4	12.0		0.20	0.20	1.20	9		
2 1/2" Pipe	2.9	12.0		0.24	0.24	1.20	11		
3" Pipe	3.5	12.0		0.29	0.29	1.20	14		
4" Pipe	4.5	12.0		0.38	0.38	1.20	18		
HSS 4x4	4.0	12.0		0.33	0.33	2.00	27		

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WIND LOADS

Angle = 30 (deg) Ice Thickness = 1.15 in. Equivalent Angle = 210 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Aspect Ratio	Aspect Ratio	Ca (normal)	Ca (side)	Force (lbs)	Force (lbs)	Force (lbs)
800-10965 Antenna	78.7	20.0	6.9	10.93	3.77	3.94	11.41	1.26	1.55	550	232	471
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.71	1.91	3.75	1.20	1.26	160	86	142
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.55	1.76	3.58	1.20	1.25	151	77	133
DMP65R-BU6EA-K Antenna	71.2	20.7	9.7	10.24	4.80	3.44	7.34	1.24	1.41	506	270	447
DMP65R-BU8EA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	712	324	615
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	81	50	73
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	109	66	99
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	78	56	73
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	54	65	57

WIND LOADS WITH ICE:

80010965 Antenna	81.0	22.3	9.2	12.54	5.17	3.63	8.81	1.25	1.46	100	48	87
AIR6449 Antenna	32.7	18.2	10.4	4.13	2.36	1.80	3.14	1.20	1.23	32	18	28
AIR6419 Antenna	30.6	18.4	10.2	3.91	2.17	1.66	3.00	1.20	1.22	30	17	27
DMP65R-BU6EA-K Antenna	73.5	23.0	12.0	11.74	6.12	3.20	6.13	1.23	1.36	92	53	82
DMP65R-BU8EA-K Antenna	98.3	23.0	10.0	15.70	6.83	4.27	9.83	1.28	1.49	128	65	112
B14 4478 RRH	20.4	15.7	10.6	2.22	1.50	1.30	1.92	1.20	1.20	17	11	16
RRUS-32 B30 RRH	29.5	14.4	9.3	2.95	1.90	2.05	3.17	1.20	1.23	23	15	21
B5/B12 4449 RRH	20.2	15.5	11.7	2.17	1.64	1.30	1.73	1.20	1.20	17	13	16
B2/B66A 8843 RRH	17.2	13.2	15.5	1.58	1.85	1.30	1.11	1.20	1.20	12	14	13

WIND LOADS AT 30 MPH:

80010965 Antenna	78.7	20.0	6.9	10.93	3.77	3.94	11.41	1.26	1.55	32	13	27
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.71	1.91	3.75	1.20	1.26	9	5	8
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.55	1.76	3.58	1.20	1.25	9	4	8
DMP65R-BU6EA-K Antenna	71.2	20.7	9.7	10.24	4.80	3.44	7.34	1.24	1.41	29	16	26
DMP65R-BU8EA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	41	19	35
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	5	3	4
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	6	4	6
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	4
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	3	4	3

Date: 4-27-2022
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WIND LOADS

Angle = 60 (deg)

Ice Thickness = 1.15 in.

Equivalent Angle = 240 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs)	Force (lbs)	Force (lbs)
800-10965 Antenna	78.7	20.0	6.9	10.93	3.77	3.94	11.41	1.26	1.55	550	232	312
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.71	1.91	3.75	1.20	1.26	160	86	104
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.55	1.76	3.58	1.20	1.25	151	77	96
DMP65R-BU6EA-K Antenna	71.2	20.7	9.7	10.24	4.80	3.44	7.34	1.24	1.41	506	270	329
DMP65R-BU8EA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	712	324	421
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	81	50	58
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	109	66	77
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	78	56	61
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	54	65	62

WIND LOADS WITH ICE:

80010965 Antenna	81.0	22.3	9.2	12.54	5.17	3.63	8.81	1.25	1.46	100	48	61
AIR6449 Antenna	32.7	18.2	10.4	4.13	2.36	1.80	3.14	1.20	1.23	32	18	22
AIR6419 Antenna	30.6	18.4	10.2	3.91	2.17	1.66	3.00	1.20	1.22	30	17	20
DMP65R-BU6EA-K Antenna	73.5	23.0	12.0	11.74	6.12	3.20	6.13	1.23	1.36	92	53	63
DMP65R-BU8EA-K Antenna	98.3	23.0	10.0	15.70	6.83	4.27	9.83	1.28	1.49	128	65	81
B14 4478 RRH	20.4	15.7	10.6	2.22	1.50	1.30	1.92	1.20	1.20	17	11	13
RRUS-32 B30 RRH	29.5	14.4	9.3	2.95	1.90	2.05	3.17	1.20	1.23	23	15	17
B5/B12 4449 RRH	20.2	15.5	11.7	2.17	1.64	1.30	1.73	1.20	1.20	17	13	14
B2/B66A 8843 RRH	17.2	13.2	15.5	1.58	1.85	1.30	1.11	1.20	1.20	12	14	14

WIND LOADS AT 30 MPH:

80010965 Antenna	78.7	20.0	6.9	10.93	3.77	3.94	11.41	1.26	1.55	32	13	18
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.71	1.91	3.75	1.20	1.26	9	5	6
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.55	1.76	3.58	1.20	1.25	9	4	6
DMP65R-BU6EA-K Antenna	71.2	20.7	9.7	10.24	4.80	3.44	7.34	1.24	1.41	29	16	19
DMP65R-BU8EA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	41	19	24
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	5	3	3
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	6	4	4
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	4
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	3	4	4

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WIND LOADS

Angle = 90 (deg)

Ice Thickness = 1.15 in.

Equivalent Angle = 270 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs)	Force (lbs)	Force (lbs)
800-10965 Antenna	78.7	20.0	6.9	10.93	3.77	3.94	11.41	1.26	1.55	550	232	232
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.71	1.91	3.75	1.20	1.26	160	86	86
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.55	1.76	3.58	1.20	1.25	151	77	77
DMP65R-BU6EA-K Antenna	71.2	20.7	9.7	10.24	4.80	3.44	7.34	1.24	1.41	506	270	270
DMP65R-BU8EA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	712	324	324
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	81	50	50
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	109	66	66
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	78	56	56
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	54	65	65

WIND LOADS WITH ICE:

80010965 Antenna	81.0	22.3	9.2	12.54	5.17	3.63	8.81	1.25	1.46	100	48	48
AIR6449 Antenna	32.7	18.2	10.4	4.13	2.36	1.80	3.14	1.20	1.23	32	18	18
AIR6419 Antenna	30.6	18.4	10.2	3.91	2.17	1.66	3.00	1.20	1.22	30	17	17
DMP65R-BU6EA-K Antenna	73.5	23.0	12.0	11.74	6.12	3.20	6.13	1.23	1.36	92	53	53
DMP65R-BU8EA-K Antenna	98.3	23.0	10.0	15.70	6.83	4.27	9.83	1.28	1.49	128	65	65
B14 4478 RRH	20.4	15.7	10.6	2.22	1.50	1.30	1.92	1.20	1.20	17	11	11
RRUS-32 B30 RRH	29.5	14.4	9.3	2.95	1.90	2.05	3.17	1.20	1.23	23	15	15
B5/B12 4449 RRH	20.2	15.5	11.7	2.17	1.64	1.30	1.73	1.20	1.20	17	13	13
B2/B66A 8843 RRH	17.2	13.2	15.5	1.58	1.85	1.30	1.11	1.20	1.20	12	14	14

WIND LOADS AT 30 MPH:

80010965 Antenna	78.7	20.0	6.9	10.93	3.77	3.94	11.41	1.26	1.55	32	13	13
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.71	1.91	3.75	1.20	1.26	9	5	5
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.55	1.76	3.58	1.20	1.25	9	4	4
DMP65R-BU6EA-K Antenna	71.2	20.7	9.7	10.24	4.80	3.44	7.34	1.24	1.41	29	16	16
DMP65R-BU8EA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	41	19	19
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	5	3	3
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	6	4	4
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	3
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	3	4	4

Date: 4-27-2022
 Project Name: BEACON FALLS NE
 Project No.: CT5416
 Designed By: SR Checked By: MSC



WIND LOADS

Angle = 120 (deg) Ice Thickness = 1.15 in. Equivalent Angle = 300 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs)	Force (lbs)	Force (lbs)
800-10965 Antenna	78.7	20.0	6.9	10.93	3.77	3.94	11.41	1.26	1.55	550	232	312
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.71	1.91	3.75	1.20	1.26	160	86	104
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.55	1.76	3.58	1.20	1.25	151	77	96
DMP65R-BU6EA-K Antenna	71.2	20.7	9.7	10.24	4.80	3.44	7.34	1.24	1.41	506	270	329
DMP65R-BU8EA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	712	324	421
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	81	50	58
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	109	66	77
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	78	56	61
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	54	65	62

WIND LOADS WITH ICE:

80010965 Antenna	81.0	22.3	9.2	12.54	5.17	3.63	8.81	1.25	1.46	100	48	61
AIR6449 Antenna	32.7	18.2	10.4	4.13	2.36	1.80	3.14	1.20	1.23	32	18	22
AIR6419 Antenna	30.6	18.4	10.2	3.91	2.17	1.66	3.00	1.20	1.22	30	17	20
DMP65R-BU6EA-K Antenna	73.5	23.0	12.0	11.74	6.12	3.20	6.13	1.23	1.36	92	53	63
DMP65R-BU8EA-K Antenna	98.3	23.0	10.0	15.70	6.83	4.27	9.83	1.28	1.49	128	65	81
B14 4478 RRH	20.4	15.7	10.6	2.22	1.50	1.30	1.92	1.20	1.20	17	11	13
RRUS-32 B30 RRH	29.5	14.4	9.3	2.95	1.90	2.05	3.17	1.20	1.23	23	15	17
B5/B12 4449 RRH	20.2	15.5	11.7	2.17	1.64	1.30	1.73	1.20	1.20	17	13	14
B2/B66A 8843 RRH	17.2	13.2	15.5	1.58	1.85	1.30	1.11	1.20	1.20	12	14	14

WIND LOADS AT 30 MPH:

80010965 Antenna	78.7	20.0	6.9	10.93	3.77	3.94	11.41	1.26	1.55	32	13	18
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.71	1.91	3.75	1.20	1.26	9	5	6
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.55	1.76	3.58	1.20	1.25	9	4	6
DMP65R-BU6EA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	41	19	24
DMP65R-BU8EA-K Antenna	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	5	3	3
B14 4478 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	4
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	6	4	4
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	4
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	3	4	4

Date: 4-27-2022
 Project Name: BEACON FALLS NE
 Project No.: CT5416
 Designed By: SR Checked By: MSC



WIND LOADS

Angle = 150 (deg) Ice Thickness = 1.15 in. Equivalent Angle = 330 (deg)

WIND LOADS WITH NO ICE:

Appurtenances	Height	Width	Depth	Flat Area (normal)	Flat Area (side)	Ratio (normal)	Ratio (side)	Ca (normal)	Ca (side)	Force (lbs)	Force (lbs)	Force (lbs)
800-10965 Antenna	78.7	20.0	6.9	10.93	3.77	3.94	11.41	1.26	1.55	550	232	471
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.71	1.91	3.75	1.20	1.26	160	86	142
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.55	1.76	3.58	1.20	1.25	151	77	133
DMP65R-BU6EA-K Antenna	71.2	20.7	9.7	10.24	4.80	3.44	7.34	1.24	1.41	506	270	447
DMP65R-BU8EA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	712	324	615
B14 4478 RRH	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	81	50	73
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	109	66	99
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	78	56	73
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	54	65	57

WIND LOADS WITH ICE:

80010965 Antenna	81.0	22.3	9.2	12.54	5.17	3.63	8.81	1.25	1.46	100	48	87
AIR6449 Antenna	32.7	18.2	10.4	4.13	2.36	1.80	3.14	1.20	1.23	32	18	28
AIR6419 Antenna	30.6	18.4	10.2	3.91	2.17	1.66	3.00	1.20	1.22	30	17	27
DMP65R-BU6EA-K Antenna	73.5	23.0	12.0	11.74	6.12	3.20	6.13	1.23	1.36	92	53	82
DMP65R-BU8EA-K Antenna	98.3	23.0	10.0	15.70	6.83	4.27	9.83	1.28	1.49	128	65	112
B14 4478 RRH	20.4	15.7	10.6	2.22	1.50	1.30	1.92	1.20	1.20	17	11	16
RRUS-32 B30 RRH	29.5	14.4	9.3	2.95	1.90	2.05	3.17	1.20	1.23	23	15	21
B5/B12 4449 RRH	20.2	15.5	11.7	2.17	1.64	1.30	1.73	1.20	1.20	17	13	16
B2/B66A 8843 RRH	17.2	13.2	15.5	1.58	1.85	1.30	1.11	1.20	1.20	12	14	13

WIND LOADS AT 30 MPH:

80010965 Antenna	78.7	20.0	6.9	10.93	3.77	3.94	11.41	1.26	1.55	32	13	27
AIR6449 Antenna	30.4	15.9	8.1	3.36	1.71	1.91	3.75	1.20	1.26	9	5	8
AIR6419 Antenna	28.3	16.1	7.9	3.16	1.55	1.76	3.58	1.20	1.25	9	4	8
DMP65R-BU6EA-K Antenna	96.0	20.7	7.7	13.80	5.13	4.64	12.47	1.30	1.58	41	19	35
DMP65R-BU8EA-K Antenna	18.1	13.4	8.3	1.68	1.04	1.35	2.18	1.20	1.20	5	3	4
B14 4478 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	4
RRUS-32 B30 RRH	27.2	12.1	7.0	2.29	1.32	2.25	3.89	1.20	1.26	6	4	6
B5/B12 4449 RRH	17.9	13.2	9.4	1.64	1.17	1.36	1.90	1.20	1.20	5	3	4
B2/B66A 8843 RRH	14.9	10.9	13.2	1.13	1.37	1.37	1.13	1.20	1.20	3	4	3

Date: 4-27-2022
 Project Name: BEACON FALLS NE
 Project No.: CT5416
 Designed By: SR Checked By: MSC



ICE WEIGHT CALCULATIONS

Thickness of ice: 1.15 in.
 Density of ice: 56 pcf

800-10965 Antenna

Weight of ice based on total radial SF area:
 Height (in): 78.7
 Width (in): 20.0
 Depth (in): 6.9
 Total weight of ice on object: 206 lbs
 Weight of object: 109.0 lbs
 Combined weight of ice and object: 315 lbs

AIR6449 Antenna

Weight of ice based on total radial SF area:
 Height (in): 30.4
 Width (in): 15.9
 Depth (in): 8.1
 Total weight of ice on object: 68 lbs
 Weight of object: 82.0 lbs
 Combined weight of ice and object: 150 lbs

AIR6419 Antenna

Weight of ice based on total radial SF area:
 Height (in): 28.3
 Width (in): 16.1
 Depth (in): 7.9
 Total weight of ice on object: 63 lbs
 Weight of object: 66.0 lbs
 Combined weight of ice and object: 129 lbs

DMP65R-BU6EA-K Antenna

Weight of ice based on total radial SF area:
 Height (in): 71.2
 Width (in): 20.7
 Depth (in): 9.7
 Total weight of ice on object: 200 lbs
 Weight of object: 116.0 lbs
 Combined weight of ice and object: 316 lbs

DMP65R-BU8EA-K Antenna

Weight of ice based on total radial SF area:
 Height (in): 96.0
 Width (in): 20.7
 Depth (in): 7.7
 Total weight of ice on object: 261 lbs
 Weight of object: 143.0 lbs
 Combined weight of ice and object: 404 lbs

B14 4478 RRH

Weight of ice based on total radial SF area:
 Height (in): 18.1
 Width (in): 13.4
 Depth (in): 8.3
 Total weight of ice on object: 36 lbs
 Weight of object: 60.0 lbs
 Combined weight of ice and object: 96 lbs

RRUS-32 B30 RRH

Weight of ice based on total radial SF area:
 Height (in): 27.2
 Width (in): 12.1
 Depth (in): 7.0
 Total weight of ice on object: 48 lbs
 Weight of object: 60.0 lbs
 Combined weight of ice and object: 108 lbs

4449 B5/B12 RRH

Weight of ice based on total radial SF area:
 Height (in): 17.9
 Width (in): 13.2
 Depth (in): 9.4
 Total weight of ice on object: 36 lbs
 Weight of object: 73.0 lbs
 Combined weight of ice and object: 109 lbs

B2/B66A 8843 RRH

Weight of ice based on total radial SF area:
 Height (in): 14.9
 Width (in): 13.2
 Depth (in): 10.9
 Total weight of ice on object: 32 lbs
 Weight of object: 72.0 lbs
 Combined weight of ice and object: 104 lbs

DC9-48-60-24-8C-EV Surge Arrestor

Weight of ice based on total radial SF area:
 Depth (in): 31.4
 Diameter(in): 10.2
 Total weight of ice on object: 42 lbs
 Weight of object: 29 lbs
 Combined weight of ice and object: 71 lbs

DC6-48-60-18 Surge Arrestor

Weight of ice based on total radial SF area:
 Depth (in): 31.4
 Diameter(in): 10.2
 Total weight of ice on object: 42 lbs
 Weight of object: 29 lbs
 Combined weight of ice and object: 71 lbs

HSS 4x4

Weight of ice based on total radial SF area:
 Height (in): 4
 Width (in): 4
 Per foot weight of ice on object: 10 plf

2" Pipe

Per foot weight of ice:
 diameter (in): 2.38
 Per foot weight of ice on object: 5 plf

3" Pipe

Per foot weight of ice:
 diameter (in): 3.5
 Per foot weight of ice on object: 7 plf

2 1/2" Pipe

Per foot weight of ice:
 diameter (in): 2.88
 Per foot weight of ice on object: 6 plf

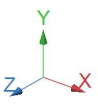
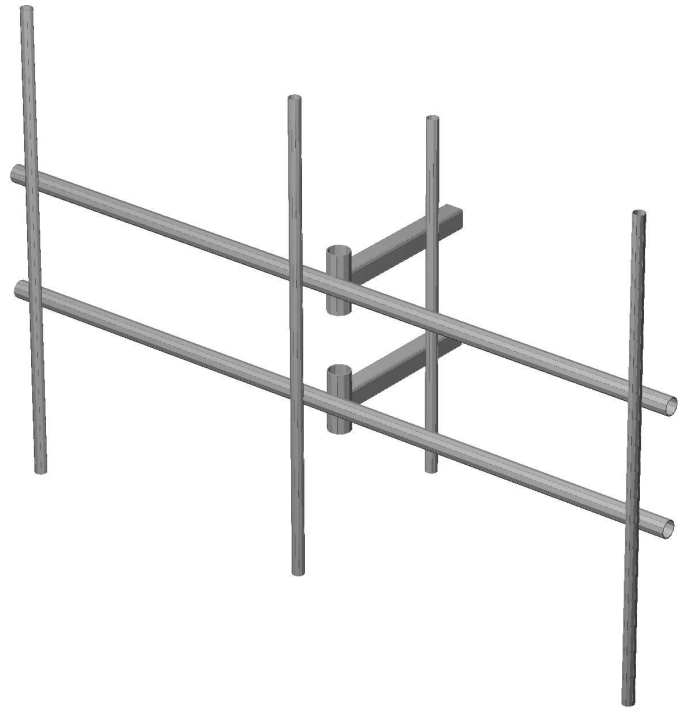
4" Pipe

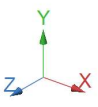
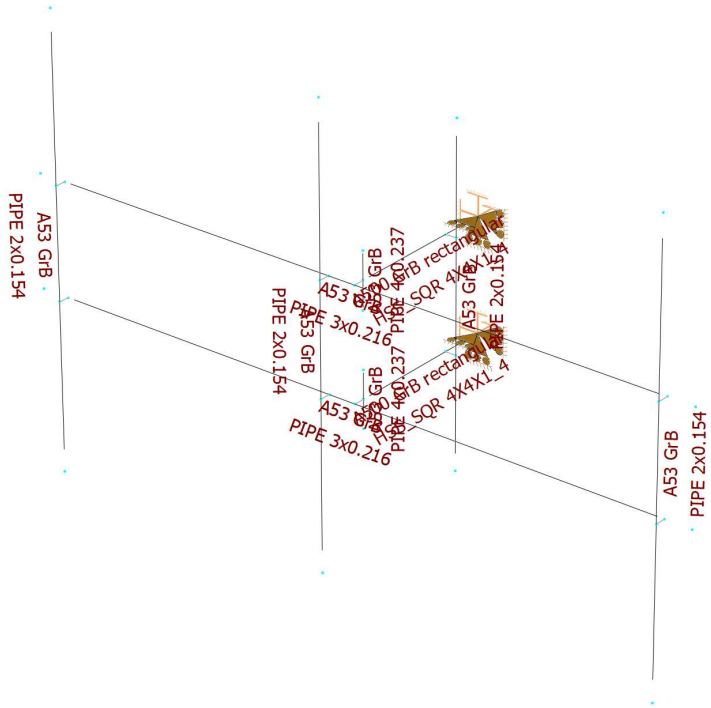
Per foot weight of ice:
 diameter (in): 4.5
 Per foot weight of ice on object: 8 plf



HUDSON
Design Group LLC

**Mount Calculations
(Existing Conditions)**

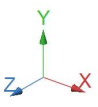
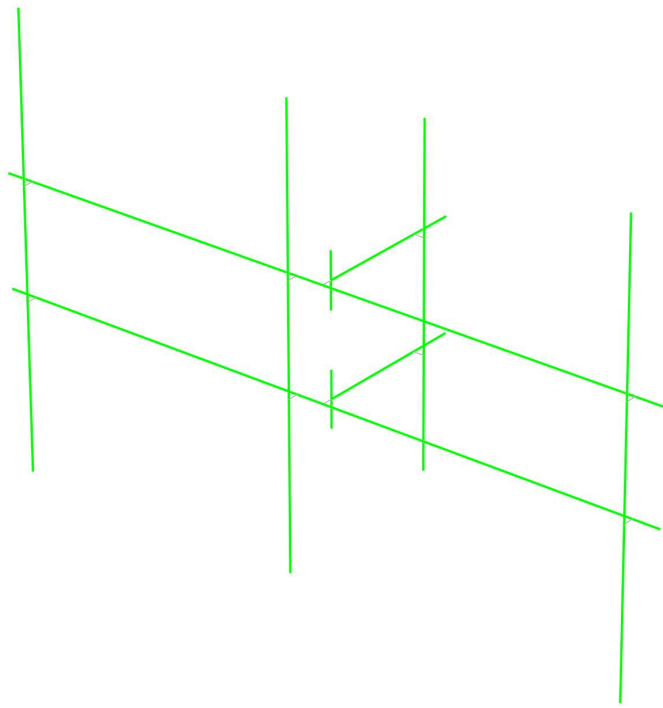


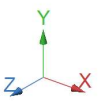
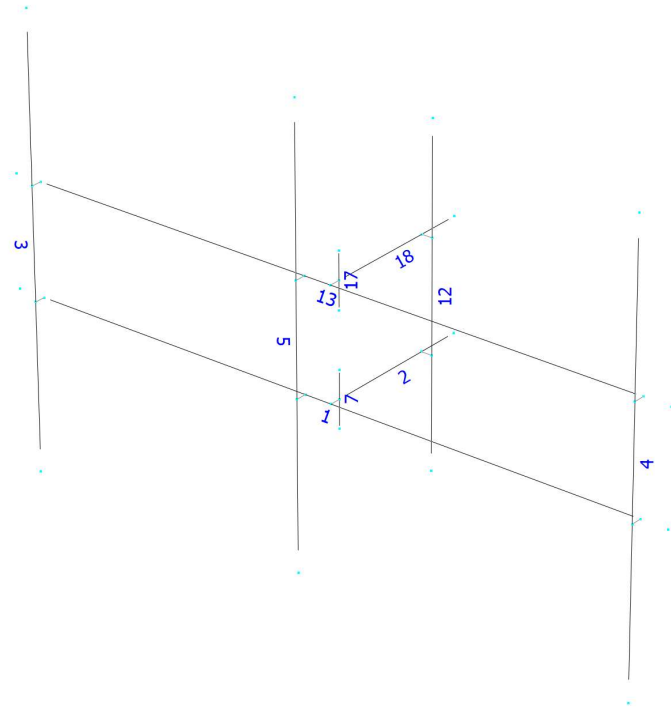




Design status

- Not designed
- Error on design
- Design O.K.
- With warnings





Load data

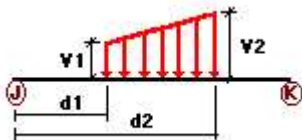
GLOSSARY

Comb : Indicates if load condition is a load combination

Load Conditions

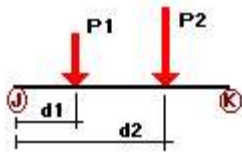
Condition	Description	Comb.	Category																																																							
D	Dead Load	No	DL																																																							
Wo	Wind Load (NO ICE)	No	WIND																																																							
W30	WL 30deg	No	WIND																																																							
W60	WL 60deg	No	WIND																																																							
W90	WL 90deg	No	WIND																																																							
W120	WL 120deg	No	WIND																																																							
W150	WL 150deg	No	WIND																																																							
Di	Ice Load	No	LL																																																							
WI0	WL ICE 0deg	No	WIND																																																							
WI30	WL ICE 30deg	No	WIND																																																							
WI60	WL ICE 60deg	No	WIND																																																							
WI90	WL ICE 90deg	No </tr <tr> <td>WI120</td> <td>WL ICE 120deg</td> <td>No</td> <td>WIND</td> </tr> <tr> <td>WI150</td> <td>WL ICE 150deg</td> <td>No</td> <td>WIND</td> </tr> <tr> <td>WL0</td> <td>WL 30 mph 0deg</td> <td>No</td> <td>WIND</td> </tr> <tr> <td>WL30</td> <td>WL 30 mph 30deg</td> <td>No</td> <td>WIND</td> </tr> <tr> <td>WL60</td> <td>WL 30 mph 60deg</td> <td>No</td> <td>WIND</td> </tr> <tr> <td>WL90</td> <td>WL 30 mph 90deg</td> <td>No</td> <td>WIND</td> </tr> <tr> <td>WL120</td> <td>WL 30 mph 120deg</td> <td>No</td> <td>WIND</td> </tr> <tr> <td>WL150</td> <td>WL 30 mph 150deg</td> <td>No</td> <td>WIND</td> </tr> <tr> <td>LL1</td> <td>250 lb Live Load Center of Mount</td> <td>No</td> <td>LL</td> </tr> <tr> <td>LL2</td> <td>250 lb Live Load Right End of Mount</td> <td>No</td> <td>LL</td> </tr> <tr> <td>LL3</td> <td>250 lb Live Load Left End of Mount</td> <td>No</td> <td>LL</td> </tr> <tr> <td>LLa1</td> <td>500 lb Live Load Antenna 1</td> <td>No</td> <td>LL</td> </tr> <tr> <td>LLa2</td> <td>500 lb Live Load Antenna 2</td> <td>No</td> <td>LL</td> </tr> <tr> <td>LLa3</td> <td>500 lb Live Load Antenna 3</td> <td>No</td> <td>LL</td> </tr>	WI120	WL ICE 120deg	No	WIND	WI150	WL ICE 150deg	No	WIND	WL0	WL 30 mph 0deg	No	WIND	WL30	WL 30 mph 30deg	No	WIND	WL60	WL 30 mph 60deg	No	WIND	WL90	WL 30 mph 90deg	No	WIND	WL120	WL 30 mph 120deg	No	WIND	WL150	WL 30 mph 150deg	No	WIND	LL1	250 lb Live Load Center of Mount	No	LL	LL2	250 lb Live Load Right End of Mount	No	LL	LL3	250 lb Live Load Left End of Mount	No	LL	LLa1	500 lb Live Load Antenna 1	No	LL	LLa2	500 lb Live Load Antenna 2	No	LL	LLa3	500 lb Live Load Antenna 3	No	LL
WI120	WL ICE 120deg	No	WIND																																																							
WI150	WL ICE 150deg	No	WIND																																																							
WL0	WL 30 mph 0deg	No	WIND																																																							
WL30	WL 30 mph 30deg	No	WIND																																																							
WL60	WL 30 mph 60deg	No	WIND																																																							
WL90	WL 30 mph 90deg	No	WIND																																																							
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WL150	WL 30 mph 150deg	No	WIND																																																							
LL1	250 lb Live Load Center of Mount	No	LL																																																							
LL2	250 lb Live Load Right End of Mount	No	LL																																																							
LL3	250 lb Live Load Left End of Mount	No	LL																																																							
LLa1	500 lb Live Load Antenna 1	No	LL																																																							
LLa2	500 lb Live Load Antenna 2	No	LL																																																							
LLa3	500 lb Live Load Antenna 3	No	LL																																																							

Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
Wo	1	z	-0.014	0.00	0.00	No	0.00	No
	7	z	-0.018	0.00	0.00	No	0.00	No
	12	z	-0.009	0.00	0.00	No	0.00	No
	13	z	-0.014	0.00	0.00	No	0.00	No
	17	z	-0.018	0.00	0.00	No	0.00	No
W30	1	z	-0.014	0.00	0.00	No	0.00	No
	7	z	-0.018	0.00	0.00	No	0.00	No
	12	z	-0.009	0.00	0.00	No	0.00	No
	13	z	-0.014	0.00	0.00	No	0.00	No
	17	z	-0.018	0.00	0.00	No	0.00	No
W60	2	x	-0.027	0.00	0.00	No	0.00	No
	3	x	-0.009	0.00	0.00	No	0.00	No
	4	x	-0.009	0.00	0.00	No	0.00	No
	5	x	-0.009	0.00	0.00	No	0.00	No
	7	x	-0.018	0.00	0.00	No	0.00	No
	12	x	-0.009	0.00	0.00	No	0.00	No
	17	x	-0.018	0.00	0.00	No	0.00	No
	18	x	-0.027	0.00	0.00	No	0.00	No
	18	x	-0.027	0.00	0.00	No	0.00	No
W90	2	x	-0.027	0.00	0.00	No	0.00	No
	3	x	-0.009	0.00	0.00	No	0.00	No
	4	x	-0.009	0.00	0.00	No	0.00	No
	5	x	-0.009	0.00	0.00	No	0.00	No
	7	x	-0.018	0.00	0.00	No	0.00	No
	12	x	-0.009	0.00	0.00	No	0.00	No
	17	x	-0.018	0.00	0.00	No	0.00	No
	18	x	-0.027	0.00	0.00	No	0.00	No
	18	x	-0.027	0.00	0.00	No	0.00	No
W120	2	x	-0.027	0.00	0.00	No	0.00	No
	3	x	-0.009	0.00	0.00	No	0.00	No
	4	x	-0.009	0.00	0.00	No	0.00	No
	5	x	-0.009	0.00	0.00	No	0.00	No
	7	x	-0.018	0.00	0.00	No	0.00	No
	12	x	-0.009	0.00	0.00	No	0.00	No
	17	x	-0.018	0.00	0.00	No	0.00	No
	18	x	-0.027	0.00	0.00	No	0.00	No
	18	x	-0.027	0.00	0.00	No	0.00	No
W150	1	z	0.014	0.00	0.00	No	0.00	No
	3	z	0.009	0.00	0.00	No	0.00	No
	4	z	0.009	0.00	0.00	No	0.00	No
	5	z	0.009	0.00	0.00	No	0.00	No
	7	z	0.018	0.00	0.00	No	0.00	No
	12	z	0.009	0.00	0.00	No	0.00	No
	13	z	0.014	0.00	0.00	No	0.00	No
	17	z	0.018	0.00	0.00	No	0.00	No
	17	z	0.018	0.00	0.00	No	0.00	No
Di	1	y	-0.007	0.00	0.00	No	0.00	No
	2	y	-0.01	0.00	0.00	No	0.00	No
	3	y	-0.005	0.00	0.00	No	0.00	No
	4	y	-0.005	0.00	0.00	No	0.00	No
	5	y	-0.005	0.00	0.00	No	0.00	No
	7	y	-0.008	0.00	0.00	No	0.00	No
	12	y	-0.005	0.00	0.00	No	0.00	No
	13	y	-0.007	0.00	0.00	No	0.00	No
	17	y	-0.008	0.00	0.00	No	0.00	No
	18	y	-0.01	0.00	0.00	No	0.00	No

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%	
D	3	y	-0.072	10.00	Yes	
		y	-0.072	85.00	Yes	
	4	y	-0.055	10.00	Yes	
		y	-0.055	85.00	Yes	
	5	y	-0.041	10.00	Yes	
		y	-0.041	40.00	Yes	
		y	-0.033	60.00	Yes	
		y	-0.033	90.00	Yes	
	12	y	-0.06	60.00	Yes	
		y	-0.029	90.00	Yes	
	Wo	3	z	-0.356	10.00	Yes
			z	-0.356	85.00	Yes
4		z	-0.275	10.00	Yes	
		z	-0.275	85.00	Yes	
5		z	-0.08	10.00	Yes	
		z	-0.08	40.00	Yes	
		z	-0.076	60.00	Yes	
		z	-0.076	90.00	Yes	
12		z	-0.081	60.00	Yes	
		z	-0.062	90.00	Yes	
W30		3	3	-0.308	10.00	Yes
			3	-0.308	85.00	Yes
	4	3	-0.235	10.00	Yes	
		3	-0.235	85.00	Yes	
	5	3	-0.071	10.00	Yes	
		3	-0.071	40.00	Yes	
		3	-0.066	60.00	Yes	
		3	-0.066	90.00	Yes	
	12	3	-0.073	60.00	Yes	
		3	-0.062	90.00	Yes	
	W60	3	3	-0.211	10.00	Yes
			3	-0.211	85.00	Yes
4		3	-0.156	10.00	Yes	
		3	-0.156	85.00	Yes	
5		3	-0.052	10.00	Yes	
		3	-0.052	40.00	Yes	
		3	-0.048	60.00	Yes	
		3	-0.048	90.00	Yes	
12		3	-0.058	60.00	Yes	
		3	-0.062	90.00	Yes	
W90		3	x	-0.162	10.00	Yes
			x	-0.162	85.00	Yes
	4	x	-0.116	10.00	Yes	
		x	-0.116	85.00	Yes	
	5	x	-0.043	10.00	Yes	
		x	-0.043	40.00	Yes	
		x	-0.039	60.00	Yes	
		x	-0.039	90.00	Yes	
	12	x	-0.05	60.00	Yes	
		x	-0.062	90.00	Yes	
	W120	3	2	-0.211	10.00	Yes
			2	-0.211	85.00	Yes
4		2	-0.156	10.00	Yes	
		2	-0.156	85.00	Yes	

	5	2	-0.052	10.00	Yes
		2	-0.052	40.00	Yes
		2	-0.048	60.00	Yes
		2	-0.048	90.00	Yes
	12	2	-0.058	60.00	Yes
		2	-0.062	90.00	Yes
W150	3	2	-0.308	10.00	Yes
		2	-0.308	85.00	Yes
	4	2	-0.235	10.00	Yes
		2	-0.235	85.00	Yes
	5	2	-0.071	10.00	Yes
		2	-0.071	40.00	Yes
		2	-0.066	60.00	Yes
		2	-0.066	90.00	Yes
	12	2	-0.073	60.00	Yes
		2	-0.062	90.00	Yes
Di	3	y	-0.131	10.00	Yes
		y	-0.131	85.00	Yes
	4	y	-0.103	10.00	Yes
		y	-0.103	85.00	Yes
	5	y	-0.034	10.00	Yes
		y	-0.034	40.00	Yes
		y	-0.032	60.00	Yes
		y	-0.032	90.00	Yes
	12	y	-0.036	60.00	Yes
		y	-0.029	90.00	Yes
W10	3	z	-0.065	10.00	Yes
		z	-0.065	85.00	Yes
	4	z	-0.051	10.00	Yes
		z	-0.051	85.00	Yes
	5	z	-0.016	10.00	Yes
		z	-0.016	40.00	Yes
		z	-0.015	60.00	Yes
		z	-0.015	90.00	Yes
	12	z	-0.017	60.00	Yes
		z	-0.013	90.00	Yes
W130	3	3	-0.056	10.00	Yes
		3	-0.056	85.00	Yes
	4	3	-0.044	10.00	Yes
		3	-0.044	85.00	Yes
	5	3	-0.014	10.00	Yes
		3	-0.014	40.00	Yes
		3	-0.014	60.00	Yes
		3	-0.014	90.00	Yes
	12	3	-0.016	60.00	Yes
		3	-0.013	90.00	Yes
W160	3	3	-0.041	10.00	Yes
		3	-0.041	85.00	Yes
	4	3	-0.031	10.00	Yes
		3	-0.031	85.00	Yes
	5	3	-0.011	10.00	Yes
		3	-0.011	40.00	Yes
		3	-0.01	60.00	Yes
		3	-0.01	90.00	Yes
	12	3	-0.013	60.00	Yes
		3	-0.013	90.00	Yes
W190	3	x	-0.033	10.00	Yes
		x	-0.033	85.00	Yes
	4	x	-0.024	10.00	Yes
		x	-0.024	85.00	Yes

	5	x	-0.009	10.00	Yes
		x	-0.009	40.00	Yes
		x	-0.009	60.00	Yes
		x	-0.009	90.00	Yes
	12	x	-0.011	60.00	Yes
		x	-0.013	90.00	Yes
W1120	3	2	-0.041	10.00	Yes
		2	-0.041	85.00	Yes
	4	2	-0.031	10.00	Yes
		2	-0.031	85.00	Yes
	5	2	-0.011	10.00	Yes
		2	-0.011	40.00	Yes
		2	-0.01	60.00	Yes
		2	-0.01	90.00	Yes
	12	2	-0.013	60.00	Yes
		2	-0.013	90.00	Yes
W1150	3	2	-0.056	10.00	Yes
		2	-0.056	85.00	Yes
	4	2	-0.044	10.00	Yes
		2	-0.044	85.00	Yes
	5	2	-0.014	10.00	Yes
		2	-0.014	40.00	Yes
		2	-0.014	60.00	Yes
		2	-0.014	90.00	Yes
	12	2	-0.016	60.00	Yes
		2	-0.013	90.00	Yes
W10	3	z	-0.021	10.00	Yes
		z	-0.021	85.00	Yes
	4	z	-0.016	10.00	Yes
		z	-0.016	85.00	Yes
	5	z	-0.005	10.00	Yes
		z	-0.005	40.00	Yes
		z	-0.005	60.00	Yes
		z	-0.005	90.00	Yes
	12	z	-0.005	60.00	Yes
		z	-0.004	90.00	Yes
W130	3	3	-0.018	10.00	Yes
		3	-0.018	85.00	Yes
	4	3	-0.014	10.00	Yes
		3	-0.014	85.00	Yes
	5	3	-0.004	10.00	Yes
		3	-0.004	40.00	Yes
		3	-0.004	60.00	Yes
		3	-0.004	90.00	Yes
	12	3	-0.004	60.00	Yes
		3	-0.004	90.00	Yes
W160	3	3	-0.012	10.00	Yes
		3	-0.012	85.00	Yes
	4	3	-0.009	10.00	Yes
		3	-0.009	85.00	Yes
	5	3	-0.003	10.00	Yes
		3	-0.003	40.00	Yes
		3	-0.003	60.00	Yes
		3	-0.004	90.00	Yes
	12	3	-0.003	60.00	Yes
		3	-0.004	90.00	Yes
W190	3	x	-0.02	10.00	Yes
		x	-0.02	85.00	Yes
	4	x	-0.007	10.00	Yes
		x	-0.007	85.00	Yes

	5	x	-0.003	10.00	Yes
		x	-0.003	40.00	Yes
		x	-0.002	60.00	Yes
		x	-0.002	90.00	Yes
	12	x	-0.003	60.00	Yes
		x	-0.004	90.00	Yes
WL120	3	2	-0.012	10.00	Yes
		2	-0.012	85.00	Yes
	4	2	-0.009	10.00	Yes
		2	-0.009	85.00	Yes
	5	2	-0.003	10.00	Yes
		2	-0.003	40.00	Yes
		2	-0.003	60.00	Yes
		2	-0.004	90.00	Yes
	12	2	-0.003	60.00	Yes
		2	-0.004	90.00	Yes
WL150	3	2	-0.018	10.00	Yes
		2	-0.018	85.00	Yes
	4	2	-0.014	10.00	Yes
		2	-0.014	85.00	Yes
	5	2	-0.004	10.00	Yes
		2	-0.004	40.00	Yes
		2	-0.004	60.00	Yes
		2	-0.004	90.00	Yes
	12	2	-0.004	60.00	Yes
		2	-0.004	90.00	Yes
LL1	13	y	-0.25	50.00	Yes
LL2	13	y	-0.25	100.00	Yes
LL3	13	y	-0.25	0.00	Yes
LLa1	4	y	-0.50	50.00	Yes
LLa2	5	y	-0.50	50.00	Yes
LLa3	3	y	-0.50	50.00	Yes

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
D	Dead Load	No	0.00	-1.00	0.00
Wo	Wind Load (NO ICE)	No	0.00	0.00	0.00
W30	WL 30deg	No	0.00	0.00	0.00
W60	WL 60deg	No	0.00	0.00	0.00
W90	WL 90deg	No	0.00	0.00	0.00
W120	WL 120deg	No	0.00	0.00	0.00
W150	WL 150deg	No	0.00	0.00	0.00
Di	Ice Load	No	0.00	0.00	0.00
WI0	WL ICE 0deg	No	0.00	0.00	0.00
WI30	WL ICE 30deg	No	0.00	0.00	0.00
WI60	WL ICE 60deg	No	0.00	0.00	0.00
WI90	WL ICE 90deg	No	0.00	0.00	0.00
WI120	WL ICE 120deg	No	0.00	0.00	0.00
WI150	WL ICE 150deg	No	0.00	0.00	0.00
WL0	WL 30 mph 0deg	No	0.00	0.00	0.00
WL30	WL 30 mph 30deg	No	0.00	0.00	0.00
WL60	WL 30 mph 60deg	No	0.00	0.00	0.00
WL90	WL 30 mph 90deg	No	0.00	0.00	0.00

WL120	WL 30 mph 120deg	No	0.00	0.00	0.00
WL150	WL 30 mph 150deg	No	0.00	0.00	0.00
LL1	250 lb Live Load Center of Mount	No	0.00	0.00	0.00
LL2	250 lb Live Load Right End of Mount	No	0.00	0.00	0.00
LL3	250 lb Live Load Left End of Mount	No	0.00	0.00	0.00
LLa1	500 lb Live Load Antenna 1	No	0.00	0.00	0.00
LLa2	500 lb Live Load Antenna 2	No	0.00	0.00	0.00
LLa3	500 lb Live Load Antenna 3	No	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
D	0.00	0.00	0.00
Wo	0.00	0.00	0.00
W30	0.00	0.00	0.00
W60	0.00	0.00	0.00
W90	0.00	0.00	0.00
W120	0.00	0.00	0.00
W150	0.00	0.00	0.00
Di	0.00	0.00	0.00
WI0	0.00	0.00	0.00
WI30	0.00	0.00	0.00
WI60	0.00	0.00	0.00
WI90	0.00	0.00	0.00
WI120	0.00	0.00	0.00
WI150	0.00	0.00	0.00
WL0	0.00	0.00	0.00
WL30	0.00	0.00	0.00
WL60	0.00	0.00	0.00
WL90	0.00	0.00	0.00
WL120	0.00	0.00	0.00
WL150	0.00	0.00	0.00
LL1	0.00	0.00	0.00
LL2	0.00	0.00	0.00
LL3	0.00	0.00	0.00
LLa1	0.00	0.00	0.00
LLa2	0.00	0.00	0.00
LLa3	0.00	0.00	0.00

Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.2D+Wo
LC2=1.2D+W30
LC3=1.2D+W60
LC4=1.2D+W90
LC5=1.2D+W120
LC6=1.2D+W150
LC7=1.2D-Wo
LC8=1.2D-W30
LC9=1.2D-W60
LC10=1.2D-W90
LC11=1.2D-W120
LC12=1.2D-W150
LC13=0.9D+Wo
LC14=0.9D+W30
LC15=0.9D+W60
LC16=0.9D+W90
LC17=0.9D+W120
LC18=0.9D+W150
LC19=0.9D-Wo
LC20=0.9D-W30
LC21=0.9D-W60
LC22=0.9D-W90
LC23=0.9D-W120
LC24=0.9D-W150
LC25=1.2D+Di+W10
LC26=1.2D+Di+W130
LC27=1.2D+Di+W160
LC28=1.2D+Di+W190
LC29=1.2D+Di+W120
LC30=1.2D+Di+W1150
LC31=1.2D+Di-W10
LC32=1.2D+Di-W130
LC33=1.2D+Di-W160
LC34=1.2D+Di-W190
LC35=1.2D+Di-W120
LC36=1.2D+Di-W1150
LC37=1.2D+1.6LL1
LC38=1.2D+1.6LL2
LC39=1.2D+1.6LL3
LC40=1.2D+W10+1.6LLa1
LC41=1.2D+W130+1.6LLa1
LC42=1.2D+W160+1.6LLa1
LC43=1.2D+W190+1.6LLa1
LC44=1.2D+W120+1.6LLa1
LC45=1.2D+W150+1.6LLa1
LC46=1.2D-W10+1.6LLa1
LC47=1.2D-W130+1.6LLa1
LC48=1.2D-W160+1.6LLa1
LC49=1.2D-W190+1.6LLa1
LC50=1.2D-W120+1.6LLa1
LC51=1.2D-W150+1.6LLa1
LC52=1.2D+W10+1.6LLa2
LC53=1.2D+W130+1.6LLa2
LC54=1.2D+W160+1.6LLa2

LC55=1.2D+WL90+1.6LLa2
 LC56=1.2D+WL120+1.6LLa2
 LC57=1.2D+WL150+1.6LLa2
 LC58=1.2D-WL0+1.6LLa2
 LC59=1.2D-WL30+1.6LLa2
 LC60=1.2D-WL60+1.6LLa2
 LC61=1.2D-WL90+1.6LLa2
 LC62=1.2D-WL120+1.6LLa2
 LC63=1.2D-WL150+1.6LLa2
 LC64=1.2D+WL0+1.6LLa3
 LC65=1.2D+WL30+1.6LLa3
 LC66=1.2D+WL60+1.6LLa3
 LC67=1.2D+WL90+1.6LLa3
 LC68=1.2D+WL120+1.6LLa3
 LC69=1.2D+WL150+1.6LLa3
 LC70=1.2D-WL0+1.6LLa3
 LC71=1.2D-WL30+1.6LLa3
 LC72=1.2D-WL60+1.6LLa3
 LC73=1.2D-WL90+1.6LLa3
 LC74=1.2D-WL120+1.6LLa3
 LC75=1.2D-WL150+1.6LLa3
 LC76=1.2D+WL0
 LC77=1.2D+WL30
 LC78=1.2D+WL60
 LC79=1.2D+WL90
 LC80=1.2D+WL120
 LC81=1.2D+WL150
 LC82=1.2D-WL0
 LC83=1.2D-WL30
 LC84=1.2D-WL60
 LC85=1.2D-WL90
 LC86=1.2D-WL120
 LC87=1.2D-WL150

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 4X4X1_4	2	LC71 at 0.00%	0.32	OK	
		18	LC65 at 0.00%	0.32	OK	
	PIPE 2x0.154	3	LC67 at 37.50%	0.82	OK	
		4	LC51 at 37.50%	0.83	OK	
		5	LC70 at 37.50%	0.28	OK	
		12	LC42 at 33.33%	0.18	OK	
	PIPE 3x0.216	1	LC1 at 48.75%	0.49	OK	
		13	LC7 at 48.75%	0.50	OK	
	PIPE 4x0.237	7	LC10 at 50.00%	0.00	OK	
		17	LC17 at 50.00%	0.00	OK	

Geometry data

GLOSSARY

- Cb22, Cb33 : Moment gradient coefficients
- Cm22, Cm33 : Coefficients applied to bending term in interaction formula
- d0 : Tapered member section depth at J end of member
- DJX : Rigid end offset distance measured from J node in axis X
- DJY : Rigid end offset distance measured from J node in axis Y
- DJZ : Rigid end offset distance measured from J node in axis Z
- DKX : Rigid end offset distance measured from K node in axis X
- DKY : Rigid end offset distance measured from K node in axis Y
- DKZ : Rigid end offset distance measured from K node in axis Z
- dL : Tapered member section depth at K end of member
- Ig factor : Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
- K22 : Effective length factor about axis 2
- K33 : Effective length factor about axis 3
- L22 : Member length for calculation of axial capacity
- L33 : Member length for calculation of axial capacity
- LB pos : Lateral unbraced length of the compression flange in the positive side of local axis 2
- LB neg : Lateral unbraced length of the compression flange in the negative side of local axis 2
- RX : Rotation about X
- RY : Rotation about Y
- RZ : Rotation about Z
- TO : 1 = Tension only member 0 = Normal member
- TX : Translation in X
- TY : Translation in Y
- TZ : Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
1	-6.25	0.00	0.00	0
2	6.25	0.00	0.00	0
3	0.00	0.00	-0.20	0
4	0.00	0.00	-3.00	0
5	-5.75	-3.00	0.20	0
6	-5.75	5.00	0.20	0
7	5.75	5.00	0.20	0
8	-0.50	5.00	0.20	0
9	5.75	-3.00	0.20	0
10	-0.50	-3.00	0.20	0
11	0.00	0.00	0.00	0
12	0.00	0.50	-0.20	0
13	0.00	-0.50	-0.20	0
14	-5.75	0.00	0.00	0
15	-0.50	0.00	0.00	0
16	5.75	0.00	0.00	0
17	5.75	0.00	0.20	0
18	-0.50	0.00	0.20	0
19	-5.75	0.00	0.20	0
20	0.00	0.00	-2.20	0
21	0.20	0.00	-2.20	0
22	0.20	4.00	-2.20	0
23	0.20	-2.00	-2.20	0

24	-5.75	2.00	0.00	0
25	-5.75	2.00	0.20	0
26	-0.50	2.00	0.00	0
27	-0.50	2.00	0.20	0
28	0.00	2.00	-0.20	0
29	0.00	1.50	-0.20	0
30	5.75	2.00	0.00	0
31	5.75	2.00	0.20	0
32	-6.25	2.00	0.00	0
33	6.25	2.00	0.00	0
34	0.00	2.00	0.00	0
35	0.00	2.50	-0.20	0
36	0.00	2.00	-3.00	0
37	0.00	2.00	-2.20	0
38	0.20	2.00	-2.20	0

Restraints

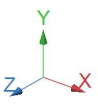
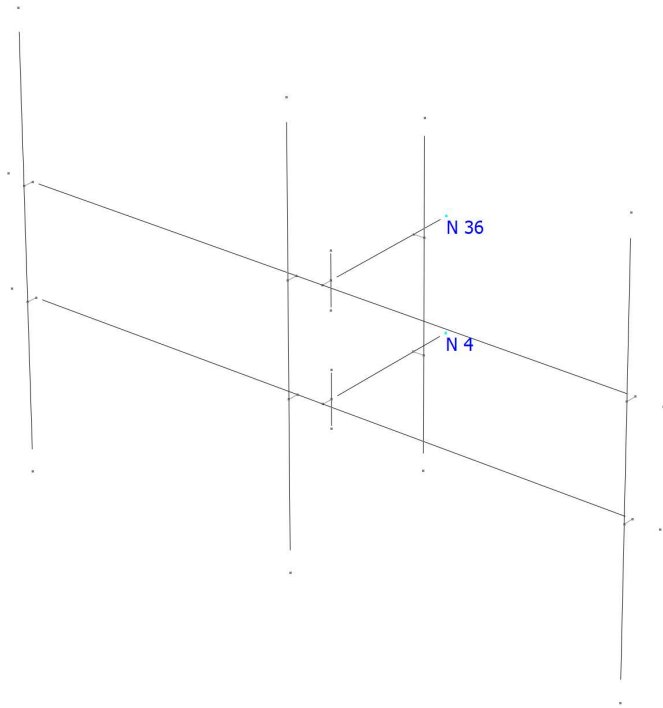
Node	TX	TY	TZ	RX	RY	RZ
4	1	1	1	1	1	1
36	1	1	1	1	1	1

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
1	1	2		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
2	4	3		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00
3	6	5		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
4	7	9		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
5	8	10		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
7	13	12		PIPE 4x0.237	A53 GrB	0.00	0.00	0.00
12	22	23		PIPE 2x0.154	A53 GrB	0.00	0.00	0.00
13	32	33		PIPE 3x0.216	A53 GrB	0.00	0.00	0.00
17	29	35		PIPE 4x0.237	A53 GrB	0.00	0.00	0.00
18	36	28		HSS_SQR 4X4X1_4	A500 GrB rectangular	0.00	0.00	0.00

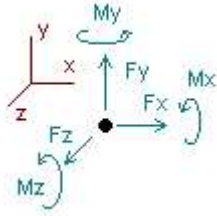
Orientation of local axes

Member	Rotation [Deg]	Axes23	NX	NY	NZ
3	315.00	0	0.00	0.00	0.00
4	315.00	0	0.00	0.00	0.00
5	315.00	0	0.00	0.00	0.00
12	315.00	0	0.00	0.00	0.00



Analysis result

Reactions



Direction of positive forces and moments

Node	Forces [Kip]			Moments [Kip*ft]		
	FX	FY	FZ	MX	MY	MZ
Condition LC1=1.2D+Wo						
4	-0.09559	0.52179	1.37370	-0.97799	0.28500	-0.00035
36	0.09559	0.52651	0.78330	-1.19342	0.76722	-0.12371
SUM	0.00000	1.04830	2.15700	-2.17141	1.05223	-0.12406
Condition LC2=1.2D+W30						
4	0.43180	0.55393	1.04893	-1.02436	1.58426	-0.05230
36	0.62532	0.49436	0.44820	-1.17731	2.21413	-0.09826
SUM	1.05712	1.04830	1.49712	-2.20168	3.79839	-0.15055
Condition LC3=1.2D+W60						
4	0.51648	0.51833	0.68525	-1.04549	1.57996	-0.03597
36	0.68601	0.52996	0.06004	-1.17776	2.14071	-0.09270
SUM	1.20249	1.04830	0.74529	-2.22324	3.72068	-0.12867
Condition LC4=1.2D+W90						
4	0.57112	0.51303	0.29818	-1.09271	1.45009	-0.04930
36	0.71808	0.53527	-0.29818	-1.14567	1.98882	-0.06508
SUM	1.28920	1.04830	0.00000	-2.23838	3.43891	-0.11438
Condition LC5=1.2D+W120						
4	0.51222	0.53133	-0.08910	-1.15405	1.10045	-0.08263
36	0.69027	0.51697	-0.65619	-1.09974	1.63406	-0.03788
SUM	1.20249	1.04830	-0.74529	-2.25379	2.73451	-0.12051
Condition LC6=1.2D+W150						
4	0.42638	0.57301	-0.56060	-1.20764	0.93816	-0.12672
36	0.63075	0.47529	-1.15252	-1.06698	1.53791	-0.01358
SUM	1.05712	1.04830	-1.71312	-2.27462	2.47607	-0.14030

Condition LC7=1.2D-Wo						
4	-0.10360	0.54088	-0.77811	-1.26860	-0.74103	-0.11343
36	0.10360	0.50742	-1.37889	-1.03726	-0.30276	0.00489
SUM	0.00000	1.04830	-2.15700	-2.30587	-1.04379	-0.10854
Condition LC8=1.2D-W30						
4	-0.63080	0.50867	-0.45342	-1.22265	-2.06013	-0.06142
36	-0.42632	0.53962	-1.04370	-1.05368	-1.76993	-0.02046
SUM	-1.05712	1.04830	-1.49712	-2.27633	-3.83007	-0.08188
Condition LC9=1.2D-W60						
4	-0.71560	0.54424	-0.08963	-1.20157	-2.04847	-0.07777
36	-0.48689	0.50406	-0.65566	-1.05325	-1.68906	-0.02602
SUM	-1.20249	1.04830	-0.74529	-2.25482	-3.73753	-0.10379
Condition LC10=1.2D-W90						
4	-0.77031	0.54952	0.29751	-1.15439	-1.91167	-0.06442
36	-0.51889	0.49878	-0.29751	-1.08535	-1.53037	-0.05361
SUM	-1.28920	1.04830	0.00000	-2.23974	-3.44204	-0.11803
Condition LC11=1.2D-W120						
4	-0.71149	0.53124	0.68482	-1.09295	-1.55316	-0.03110
36	-0.49100	0.51706	0.06047	-1.13120	-1.16669	-0.08082
SUM	-1.20249	1.04830	0.74529	-2.22415	-2.71985	-0.11192
Condition LC12=1.2D-W150						
4	-0.62567	0.48958	1.15629	-1.03920	-1.37902	0.01304
36	-0.43145	0.55872	0.55684	-1.16388	-1.05891	-0.10511
SUM	-1.05712	1.04830	1.71312	-2.20308	-2.43792	-0.09207
Condition LC13=0.9D+Wo						
4	-0.07068	0.38897	1.29988	-0.69665	0.34254	0.01385
36	0.07068	0.39726	0.85712	-0.91406	0.70980	-0.10889
SUM	0.00000	0.78622	2.15700	-1.61071	1.05233	-0.09504
Condition LC14=0.9D+W30						
4	0.45660	0.42111	0.97486	-0.74315	1.64141	-0.03829
36	0.60053	0.36511	0.52226	-0.89810	2.15709	-0.08363
SUM	1.05712	0.78622	1.49712	-1.64125	3.79850	-0.12192
Condition LC15=0.9D+W60						
4	0.54129	0.38552	0.61104	-0.76446	1.63713	-0.02194
36	0.66120	0.40071	0.13425	-0.89873	2.08365	-0.07806
SUM	1.20249	0.78622	0.74529	-1.66319	3.72078	-0.10000
Condition LC16=0.9D+W90						
4	0.59592	0.38022	0.22371	-0.81182	1.50725	-0.03527
36	0.69328	0.40601	-0.22371	-0.86679	1.93175	-0.05044
SUM	1.28920	0.78622	0.00000	-1.67861	3.43900	-0.08571

Condition LC17=0.9D+W120						
4	0.53703	0.39852	-0.16383	-0.87331	1.15764	-0.06858
36	0.66546	0.38770	-0.58146	-0.82101	1.57694	-0.02321

SUM	1.20249	0.78622	-0.74529	-1.69433	2.73458	-0.09179
Condition LC18=0.9D+W150						
4	0.45118	0.44021	-0.63552	-0.92715	0.99534	-0.11268
36	0.60595	0.34602	-1.07760	-0.78850	1.48081	0.00107

SUM	1.05712	0.78622	-1.71312	-1.71565	2.47616	-0.11161
Condition LC19=0.9D-W0						
4	-0.07869	0.40808	-0.85323	-0.98819	-0.68343	-0.09917
36	0.07869	0.37814	-1.30377	-0.75887	-0.36030	0.01975

SUM	0.00000	0.78622	-2.15700	-1.74706	-1.04373	-0.07942
Condition LC20=0.9D-W30						
4	-0.60578	0.37588	-0.52830	-0.94211	-2.00214	-0.04697
36	-0.45135	0.41034	-0.96882	-0.77515	-1.82787	-0.00540

SUM	-1.05712	0.78622	-1.49712	-1.71726	-3.83001	-0.05237
Condition LC21=0.9D-W60						
4	-0.69059	0.41144	-0.16437	-0.92084	-1.99050	-0.06334
36	-0.51190	0.37478	-0.58092	-0.77453	-1.74697	-0.01098

SUM	-1.20249	0.78622	-0.74529	-1.69538	-3.73747	-0.07432
Condition LC22=0.9D-W90						
4	-0.74530	0.41672	0.22303	-0.87352	-1.85370	-0.05000
36	-0.54390	0.36950	-0.22303	-0.80648	-1.58827	-0.03856

SUM	-1.28920	0.78622	0.00000	-1.68000	-3.44197	-0.08856
Condition LC23=0.9D-W120						
4	-0.68648	0.39843	0.61061	-0.81193	-1.49522	-0.01670
36	-0.51601	0.38780	0.13468	-0.85218	-1.22454	-0.06580

SUM	-1.20249	0.78622	0.74529	-1.66411	-2.71976	-0.08250
Condition LC24=0.9D-W150						
4	-0.60065	0.35677	1.08226	-0.75794	-1.32106	0.02745
36	-0.45647	0.42946	0.63086	-0.88461	-1.11677	-0.09008

SUM	-1.05712	0.78622	1.71312	-1.64255	-2.43784	-0.06264
Condition LC25=1.2D+Di+W10						
4	-0.21565	0.98328	0.73896	-2.10853	-0.40644	-0.11623
36	0.21565	0.96102	-0.41496	-2.13768	0.59171	-0.14302

SUM	0.00000	1.94430	0.32400	-4.24621	0.18526	-0.25925
Condition LC26=1.2D+Di+W130						
4	-0.11289	0.98837	0.67990	-2.11684	-0.15569	-0.12428
36	0.31441	0.95593	-0.47837	-2.13504	0.86331	-0.13753

SUM	0.20153	1.94430	0.20153	-4.25188	0.70762	-0.26181

Condition LC27=1.2D+Di+WI60						
4	-0.13787	0.98420	0.65464	-2.12172	-0.24303	-0.12376
36	0.28778	0.96010	-0.50474	-2.13308	0.77000	-0.13615

SUM	0.14991	1.94430	0.14991	-4.25480	0.52697	-0.25992
Condition LC28=1.2D+Di+WI90						
4	-0.12261	0.98332	0.57647	-2.13085	-0.25306	-0.12580
36	0.29661	0.96098	-0.57647	-2.12652	0.75139	-0.12989

SUM	0.17400	1.94430	0.00000	-4.25737	0.49833	-0.25569
Condition LC29=1.2D+Di+WI120						
4	-0.13874	0.98684	0.49829	-2.14292	-0.33241	-0.13306
36	0.28864	0.95746	-0.64820	-2.11703	0.67493	-0.12522

SUM	0.14991	1.94430	-0.14991	-4.25994	0.34252	-0.25829
Condition LC30=1.2D+Di+WI150						
4	-0.11382	0.98970	0.47300	-2.14836	-0.26552	-0.13745
36	0.31535	0.95460	-0.67452	-2.11456	0.74757	-0.12263

SUM	0.20153	1.94430	-0.20153	-4.26292	0.48204	-0.26009
Condition LC31=1.2D+Di-WI0						
4	-0.21722	0.98436	0.41388	-2.16214	-0.58793	-0.13761
36	0.21722	0.95994	-0.73788	-2.10657	0.40128	-0.11870

SUM	0.00000	1.94430	-0.32400	-4.26871	-0.18666	-0.25631
Condition LC32=1.2D+Di-WI30						
4	-0.31998	0.97926	0.47293	-2.15384	-0.83927	-0.12956
36	0.11846	0.96504	-0.67446	-2.10922	0.12907	-0.12418

SUM	-0.20153	1.94430	-0.20153	-4.26306	-0.71020	-0.25375
Condition LC33=1.2D+Di-WI60						
4	-0.29500	0.98343	0.49819	-2.14896	-0.75171	-0.13008
36	0.14510	0.96087	-0.64810	-2.11118	0.22261	-0.12556

SUM	-0.14991	1.94430	-0.14991	-4.26014	-0.52910	-0.25564
Condition LC34=1.2D+Di-WI90						
4	-0.31026	0.98432	0.57637	-2.13983	-0.74147	-0.12804
36	0.13626	0.95998	-0.57637	-2.11774	0.24142	-0.13183

SUM	-0.17400	1.94430	0.00000	-4.25758	-0.50005	-0.25987
Condition LC35=1.2D+Di-WI120						
4	-0.29414	0.98079	0.65455	-2.12776	-0.66184	-0.12078
36	0.14423	0.96351	-0.50464	-2.12723	0.31817	-0.13649

SUM	-0.14991	1.94430	0.14991	-4.25499	-0.34367	-0.25727
Condition LC36=1.2D+Di-WI150						
4	-0.31906	0.97794	0.67984	-2.12231	-0.72850	-0.11639
36	0.11753	0.96636	-0.47831	-2.12970	0.24575	-0.13908

SUM	-0.20153	1.94430	0.20153	-4.25201	-0.48275	-0.25547

Condition LC37=1.2D+1.6LL1						
4	-0.10093	0.76828	0.41497	-1.59483	-0.23336	-0.06172
36	0.10093	0.68002	-0.41497	-1.60996	0.23313	-0.05205

SUM	0.00000	1.44830	0.00000	-3.20480	-0.00023	-0.11378
Condition LC38=1.2D+1.6LL2						
4	0.54697	0.71699	0.42156	-1.59707	1.16514	0.55450
36	-0.54697	0.73131	-0.42156	-1.59465	-1.16379	0.53708

SUM	0.00000	1.44830	0.00000	-3.19172	0.00134	1.09159
Condition LC39=1.2D+1.6LL3						
4	-0.77234	0.74109	0.42420	-1.59391	-1.70430	-0.63685
36	0.77234	0.70721	-0.42420	-1.59233	1.70166	-0.63537

SUM	0.00000	1.44830	0.00000	-3.18625	-0.00264	-1.27222
Condition LC40=1.2D+WL0+1.6LLa1						
4	1.07988	0.93356	0.63844	-2.10627	2.32484	1.06658
36	-1.07988	0.91474	-0.53544	-2.11256	-2.25745	1.05844

SUM	0.00000	1.84830	0.10300	-4.21882	0.06739	2.12502
Condition LC41=1.2D+WL30+1.6LLa1						
4	1.11136	0.93519	0.61813	-2.10884	2.39974	1.06389
36	-1.04914	0.91310	-0.55590	-2.11144	-2.17553	1.06029

SUM	0.06223	1.84830	0.06223	-4.22028	0.22421	2.12418
Condition LC42=1.2D+WL60+1.6LLa1						
4	1.10345	0.93339	0.61047	-2.11090	2.37010	1.06506
36	-1.05961	0.91491	-0.56663	-2.11124	-2.21205	1.06137

SUM	0.04384	1.84830	0.04384	-4.22215	0.15805	2.12643
Condition LC43=1.2D+WL90+1.6LLa1						
4	1.11474	0.93517	0.58651	-2.11314	2.39052	1.06122
36	-1.04374	0.91313	-0.58651	-2.10869	-2.17851	1.06163

SUM	0.07100	1.84830	0.00000	-4.22183	0.21201	2.12285
Condition LC44=1.2D+WL120+1.6LLa1						
4	1.10337	0.93428	0.56239	-2.11638	2.34282	1.06214
36	-1.05953	0.91402	-0.60623	-2.10543	-2.24077	1.06459

SUM	0.04384	1.84830	-0.04384	-4.22182	0.10205	2.12673
Condition LC45=1.2D+WL150+1.6LLa1						
4	1.11118	0.93576	0.55478	-2.11855	2.36360	1.05982
36	-1.04896	0.91254	-0.61701	-2.10504	-2.21345	1.06492

SUM	0.06223	1.84830	-0.06223	-4.22358	0.15015	2.12473
Condition LC46=1.2D-WL0+1.6LLa1						
4	1.07959	0.93388	0.53435	-2.12305	2.26048	1.05970
36	-1.07959	0.91442	-0.63735	-2.10223	-2.32457	1.06622

SUM	0.00000	1.84830	-0.10300	-4.22528	-0.06409	2.12592

Condition LC47=1.2D-WL30+1.6LLa1						
4	1.04811	0.93225	0.55465	-2.12048	2.18552	1.06239
36	-1.11034	0.91605	-0.61688	-2.10335	-2.40656	1.06437
SUM	-0.06223	1.84830	-0.06223	-4.22383	-0.22104	2.12676
Condition LC48=1.2D-WL60+1.6LLa1						
4	1.05602	0.93406	0.56231	-2.11842	2.21518	1.06122
36	-1.09986	0.91424	-0.60615	-2.10354	-2.37001	1.06330
SUM	-0.04384	1.84830	-0.04384	-4.22196	-0.15483	2.12451
Condition LC49=1.2D-WL90+1.6LLa1						
4	1.04473	0.93227	0.58627	-2.11618	2.19476	1.06506
36	-1.11573	0.91603	-0.58627	-2.10609	-2.40355	1.06304
SUM	-0.07100	1.84830	0.00000	-4.22227	-0.20879	2.12810
Condition LC50=1.2D-WL120+1.6LLa1						
4	1.05610	0.93316	0.61040	-2.11293	2.24251	1.06414
36	-1.09994	0.91514	-0.56656	-2.10935	-2.34124	1.06007
SUM	-0.04384	1.84830	0.04384	-4.22229	-0.09874	2.12421
Condition LC51=1.2D-WL150+1.6LLa1						
4	1.04829	0.93168	0.61800	-2.11077	2.22175	1.06647
36	-1.11051	0.91661	-0.55578	-2.10975	-2.36854	1.05974
SUM	-0.06223	1.84830	0.06223	-4.22052	-0.14679	2.12621
Condition LC52=1.2D+WL0+1.6LLa2						
4	-0.19508	0.93076	0.63438	-2.11063	-0.39437	-0.15775
36	0.19508	0.91754	-0.53138	-2.11627	0.45957	-0.16760
SUM	0.00000	1.84830	0.10300	-4.22690	0.06519	-0.32534
Condition LC53=1.2D+WL30+1.6LLa2						
4	-0.16369	0.93240	0.61398	-2.11329	-0.31960	-0.16050
36	0.22591	0.91590	-0.55176	-2.11524	0.54163	-0.16581
SUM	0.06223	1.84830	0.06223	-4.22852	0.22203	-0.32631
Condition LC54=1.2D+WL60+1.6LLa2						
4	-0.17159	0.93059	0.60632	-2.11536	-0.34918	-0.15930
36	0.21543	0.91771	-0.56248	-2.11505	0.50506	-0.16471
SUM	0.04384	1.84830	0.04384	-4.23041	0.15588	-0.32401
Condition LC55=1.2D+WL90+1.6LLa2						
4	-0.16017	0.93238	0.58229	-2.11765	-0.32840	-0.16300
36	0.23117	0.91592	-0.58229	-2.11256	0.53825	-0.16430
SUM	0.07100	1.84830	0.00000	-4.23021	0.20986	-0.32731
Condition LC56=1.2D+WL120+1.6LLa2						
4	-0.17174	0.93149	0.55816	-2.12091	-0.37646	-0.16223
36	0.21558	0.91681	-0.60200	-2.10931	0.47638	-0.16149
SUM	0.04384	1.84830	-0.04384	-4.23022	0.09992	-0.32372

Condition LC57=1.2D+WL150+1.6LLa2						
4	-0.16397	0.93297	0.55051	-2.12311	-0.35574	-0.16458
36	0.22620	0.91533	-0.61274	-2.10896	0.50377	-0.16119
SUM	0.06223	1.84830	-0.06223	-4.23207	0.14803	-0.32578
Condition LC58=1.2D-WL0+1.6LLa2						
4	-0.19554	0.93108	0.53010	-2.12760	-0.45874	-0.16464
36	0.19554	0.91722	-0.63310	-2.10613	0.39255	-0.15983
SUM	0.00000	1.84830	-0.10300	-4.23373	-0.06619	-0.32447
Condition LC59=1.2D-WL30+1.6LLa2						
4	-0.22693	0.92944	0.55049	-2.12494	-0.53357	-0.16188
36	0.16471	0.91886	-0.61272	-2.10716	0.31042	-0.16162
SUM	-0.06223	1.84830	-0.06223	-4.23211	-0.22315	-0.32350
Condition LC60=1.2D-WL60+1.6LLa2						
4	-0.21904	0.93125	0.55816	-2.12287	-0.50396	-0.16308
36	0.17520	0.91705	-0.60200	-2.10735	0.34702	-0.16272
SUM	-0.04384	1.84830	-0.04384	-4.23022	-0.15694	-0.32580
Condition LC61=1.2D-WL90+1.6LLa2						
4	-0.23045	0.92946	0.58218	-2.12058	-0.52475	-0.15938
36	0.15945	0.91883	-0.58218	-2.10985	0.31382	-0.16312
SUM	-0.07100	1.84830	0.00000	-4.23043	-0.21093	-0.32251
Condition LC62=1.2D-WL120+1.6LLa2						
4	-0.21888	0.93036	0.60632	-2.11732	-0.47664	-0.16016
36	0.17504	0.91794	-0.56248	-2.11309	0.37574	-0.16594
SUM	-0.04384	1.84830	0.04384	-4.23041	-0.10091	-0.32609
Condition LC63=1.2D-WL150+1.6LLa2						
4	-0.22665	0.92888	0.61396	-2.11512	-0.49734	-0.15780
36	0.16443	0.91942	-0.55174	-2.11345	0.34838	-0.16624
SUM	-0.06223	1.84830	0.06223	-4.22856	-0.14896	-0.32404
Condition LC64=1.2D+WL0+1.6LLa3						
4	-1.33042	0.93152	0.64727	-2.09734	-2.87175	-1.12257
36	1.33042	0.91678	-0.54427	-2.10375	2.93274	-1.13236
SUM	0.00000	1.84830	0.10300	-4.20108	0.06099	-2.25493
Condition LC65=1.2D+WL30+1.6LLa3						
4	-1.29887	0.93316	0.62689	-2.09997	-2.79655	-1.12517
36	1.36110	0.91514	-0.56467	-2.10269	3.01439	-1.13042
SUM	0.06223	1.84830	0.06223	-4.20266	0.21785	-2.25560
Condition LC66=1.2D+WL60+1.6LLa3						
4	-1.30684	0.93135	0.61927	-2.10200	-2.82627	-1.12403
36	1.35068	0.91695	-0.57543	-2.10246	2.97797	-1.12937
SUM	0.04384	1.84830	0.04384	-4.20446	0.15170	-2.25340

Condition LC67=1.2D+WL90+1.6LLa3						
4	-1.29518	0.93314	0.59529	-2.10425	-2.80489	-1.12750
36	1.36618	0.91516	-0.59529	-2.09992	3.01058	-1.12874
SUM	0.07100	1.84830	0.00000	-4.20417	0.20569	-2.25625
Condition LC68=1.2D+WL120+1.6LLa3						
4	-1.30705	0.93224	0.57124	-2.10742	-2.85356	-1.12698
36	1.35089	0.91606	-0.61508	-2.09658	2.94936	-1.12618
SUM	0.04384	1.84830	-0.04384	-4.20400	0.09580	-2.25316
Condition LC69=1.2D+WL150+1.6LLa3						
4	-1.29923	0.93372	0.56361	-2.10960	-2.83271	-1.12929
36	1.36146	0.91458	-0.62583	-2.09622	2.97661	-1.12583
SUM	0.06223	1.84830	-0.06223	-4.20582	0.14390	-2.25513
Condition LC70=1.2D-WL0+1.6LLa3						
4	-1.33101	0.93184	0.54330	-2.11398	-2.93616	-1.12952
36	1.33101	0.91646	-0.64630	-2.09328	2.86586	-1.12465
SUM	0.00000	1.84830	-0.10300	-4.20726	-0.07030	-2.25417
Condition LC71=1.2D-WL30+1.6LLa3						
4	-1.36256	0.93019	0.56368	-2.11135	-3.01142	-1.12691
36	1.30034	0.91811	-0.62591	-2.09434	2.78415	-1.12658
SUM	-0.06223	1.84830	-0.06223	-4.20569	-0.22727	-2.25350
Condition LC72=1.2D-WL60+1.6LLa3						
4	-1.35459	0.93200	0.57130	-2.10932	-2.98167	-1.12806
36	1.31075	0.91629	-0.61514	-2.09457	2.82060	-1.12763
SUM	-0.04384	1.84830	-0.04384	-4.20389	-0.16107	-2.25569
Condition LC73=1.2D-WL90+1.6LLa3						
4	-1.36626	0.93021	0.59528	-2.10707	-3.00305	-1.12458
36	1.29526	0.91809	-0.59528	-2.09711	2.78798	-1.12826
SUM	-0.07100	1.84830	0.00000	-4.20418	-0.21507	-2.25284
Condition LC74=1.2D-WL120+1.6LLa3						
4	-1.35439	0.93111	0.61933	-2.10390	-2.95434	-1.12511
36	1.31054	0.91719	-0.57549	-2.10044	2.84925	-1.13082
SUM	-0.04384	1.84830	0.04384	-4.20434	-0.10508	-2.25593
Condition LC75=1.2D-WL150+1.6LLa3						
4	-1.36220	0.92963	0.62697	-2.10172	-2.97516	-1.12279
36	1.29998	0.91867	-0.56474	-2.10081	2.82202	-1.13117
SUM	-0.06223	1.84830	0.06223	-4.20253	-0.15314	-2.25397
Condition LC76=1.2D-WL0						
4	-0.09939	0.53112	0.35000	-1.11495	-0.19800	-0.05344
36	0.09939	0.51718	-0.24700	-1.12048	0.26352	-0.06325
SUM	0.00000	1.04830	0.10300	-2.23543	0.06552	-0.11670

Condition LC77=1.2D+WL30						
4	-0.06800	0.53276	0.32961	-1.11764	-0.12325	-0.05621
36	0.13023	0.51554	-0.26739	-1.11947	0.34560	-0.06148

SUM	0.06223	1.04830	0.06223	-2.23711	0.22235	-0.11768
Condition LC78=1.2D+WL60						
4	-0.07590	0.53095	0.32195	-1.11973	-0.15282	-0.05500
36	0.11974	0.51735	-0.27811	-1.11930	0.30902	-0.06037

SUM	0.04384	1.04830	0.04384	-2.23902	0.15620	-0.11538
Condition LC79=1.2D+WL90						
4	-0.06449	0.53274	0.29794	-1.12205	-0.13207	-0.05872
36	0.13549	0.51556	-0.29794	-1.11683	0.34225	-0.05998

SUM	0.07100	1.04830	0.00000	-2.23888	0.21018	-0.11870
Condition LC80=1.2D+WL120						
4	-0.07605	0.53185	0.27381	-1.12534	-0.18009	-0.05793
36	0.11990	0.51645	-0.31765	-1.11362	0.28034	-0.05715

SUM	0.04384	1.04830	-0.04384	-2.23896	0.10024	-0.11508
Condition LC81=1.2D+WL150						
4	-0.06828	0.53333	0.26617	-1.12756	-0.15938	-0.06029
36	0.13051	0.51497	-0.32839	-1.11328	0.30773	-0.05685

SUM	0.06223	1.04830	-0.06223	-2.24083	0.14835	-0.11714
Condition LC82=1.2D-WL0						
4	-0.09985	0.53144	0.24576	-1.13208	-0.26234	-0.06033
36	0.09985	0.51685	-0.34876	-1.11048	0.19648	-0.05548

SUM	0.00000	1.04830	-0.10300	-2.24256	-0.06587	-0.11581
Condition LC83=1.2D-WL30						
4	-0.13125	0.52980	0.26615	-1.12939	-0.33715	-0.05756
36	0.06902	0.51850	-0.32837	-1.11149	0.11433	-0.05726

SUM	-0.06223	1.04830	-0.06223	-2.24088	-0.22283	-0.11482
Condition LC84=1.2D-WL60						
4	-0.12335	0.53161	0.27381	-1.12730	-0.30755	-0.05877
36	0.07951	0.51669	-0.31765	-1.11166	0.15093	-0.05836

SUM	-0.04384	1.04830	-0.04384	-2.23897	-0.15662	-0.11713
Condition LC85=1.2D-WL90						
4	-0.13475	0.52982	0.29782	-1.12498	-0.32830	-0.05505
36	0.06375	0.51847	-0.29782	-1.11413	0.11770	-0.05875

SUM	-0.07100	1.04830	0.00000	-2.23911	-0.21061	-0.11381
Condition LC86=1.2D-WL120						
4	-0.12319	0.53072	0.32195	-1.12169	-0.28024	-0.05585
36	0.07935	0.51758	-0.27811	-1.11734	0.17966	-0.06158

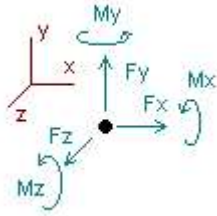
SUM	-0.04384	1.04830	0.04384	-2.23903	-0.10058	-0.11743

Condition **LC87=1.2D-WL150**

4	-0.13096	0.52924	0.32959	-1.11947	-0.30093	-0.05349
36	0.06874	0.51906	-0.26736	-1.11768	0.15229	-0.06188
SUM	-0.06223	1.04830	0.06223	-2.23716	-0.14864	-0.11537

Envelope for nodal reactions

Note.- **Ic** is the controlling load condition



Direction of positive forces and moments

Envelope of nodal reactions for :

- LC1=1.2D+W0
- LC2=1.2D+W30
- LC3=1.2D+W60
- LC4=1.2D+W90
- LC5=1.2D+W120
- LC6=1.2D+W150
- LC7=1.2D-W0
- LC8=1.2D-W30
- LC9=1.2D-W60
- LC10=1.2D-W90
- LC11=1.2D-W120
- LC12=1.2D-W150
- LC13=0.9D+W0
- LC14=0.9D+W30
- LC15=0.9D+W60
- LC16=0.9D+W90
- LC17=0.9D+W120
- LC18=0.9D+W150
- LC19=0.9D-W0
- LC20=0.9D-W30
- LC21=0.9D-W60
- LC22=0.9D-W90
- LC23=0.9D-W120
- LC24=0.9D-W150
- LC25=1.2D+Di+W10
- LC26=1.2D+Di+W130
- LC27=1.2D+Di+W160
- LC28=1.2D+Di+W190
- LC29=1.2D+Di+W120
- LC30=1.2D+Di+W150
- LC31=1.2D+Di-W10
- LC32=1.2D+Di-W130
- LC33=1.2D+Di-W160
- LC34=1.2D+Di-W190
- LC35=1.2D+Di-W120
- LC36=1.2D+Di-W150
- LC37=1.2D+1.6LL1

LC38=1.2D+1.6LL2
 LC39=1.2D+1.6LL3
 LC40=1.2D+WL0+1.6LLa1
 LC41=1.2D+WL30+1.6LLa1
 LC42=1.2D+WL60+1.6LLa1
 LC43=1.2D+WL90+1.6LLa1
 LC44=1.2D+WL120+1.6LLa1
 LC45=1.2D+WL150+1.6LLa1
 LC46=1.2D-WL0+1.6LLa1
 LC47=1.2D-WL30+1.6LLa1
 LC48=1.2D-WL60+1.6LLa1
 LC49=1.2D-WL90+1.6LLa1
 LC50=1.2D-WL120+1.6LLa1
 LC51=1.2D-WL150+1.6LLa1
 LC52=1.2D+WL0+1.6LLa2
 LC53=1.2D+WL30+1.6LLa2
 LC54=1.2D+WL60+1.6LLa2
 LC55=1.2D+WL90+1.6LLa2
 LC56=1.2D+WL120+1.6LLa2
 LC57=1.2D+WL150+1.6LLa2
 LC58=1.2D-WL0+1.6LLa2
 LC59=1.2D-WL30+1.6LLa2
 LC60=1.2D-WL60+1.6LLa2
 LC61=1.2D-WL90+1.6LLa2
 LC62=1.2D-WL120+1.6LLa2
 LC63=1.2D-WL150+1.6LLa2
 LC64=1.2D+WL0+1.6LLa3
 LC65=1.2D+WL30+1.6LLa3
 LC66=1.2D+WL60+1.6LLa3
 LC67=1.2D+WL90+1.6LLa3
 LC68=1.2D+WL120+1.6LLa3
 LC69=1.2D+WL150+1.6LLa3
 LC70=1.2D-WL0+1.6LLa3
 LC71=1.2D-WL30+1.6LLa3
 LC72=1.2D-WL60+1.6LLa3
 LC73=1.2D-WL90+1.6LLa3
 LC74=1.2D-WL120+1.6LLa3
 LC75=1.2D-WL150+1.6LLa3
 LC76=1.2D+WL0
 LC77=1.2D+WL30
 LC78=1.2D+WL60
 LC79=1.2D+WL90
 LC80=1.2D+WL120
 LC81=1.2D+WL150
 LC82=1.2D-WL0
 LC83=1.2D-WL30
 LC84=1.2D-WL60
 LC85=1.2D-WL90
 LC86=1.2D-WL120
 LC87=1.2D-WL150

Node	Forces						Moments						
	Fx	lc	Fy	lc	Fz	lc	Mx	lc	My	lc	Mz	lc	
	[Kip]		[Kip]		[Kip]		[Kip*ft]		[Kip*ft]		[Kip*ft]		
4	Max	1.115	LC43	0.990	LC30	1.374	LC1	-0.69665	LC13	2.39974	LC41	1.06658	LC40
	Min	-1.366	LC73	0.357	LC24	-0.853	LC19	-2.16214	LC31	-3.01142	LC71	-1.12952	LC70
36	Max	1.366	LC67	0.966	LC36	0.857	LC13	-0.75887	LC19	3.01439	LC65	1.06622	LC46
	Min	-1.116	LC49	0.346	LC18	-1.379	LC7	-2.13768	LC25	-2.40656	LC47	-1.13236	LC64



HUDSON
Design Group LLC

Connection Check

Date: 4/27/2022
Project Name: BEACON FALLS NE
Project No.: CT5416
Designed By: SR Checked By: MSC



CHECK CONNECTION CAPACITY (Worst Case)

Reference: AISC Steel Construction Manual 14th Edition (ASD)

Bolt Type = A36 5/8" Threaded Rod

Allowable Tensile Load =

$F_{Tall} = 6673$ lbs.

Allowable Shear Load =

$F_{Vall} = 4004$ lbs.

TENSILE FORCES

Reaction $F = 1379$ lbs. (See Bentley Output)

SHEAR FORCES

Reactions in X direction: 1366 lbs. (See Bentley Output)

Reactions in Y direction: 966 lbs. (See Bentley Output)

Resultant: 1673 lbs.

No. of Supports = 1

No. of Bolts / Support = 4

Tension Design Load /Bolts =

$f_t = 344.75$ lbs. < 6673 lbs. **Therefore, OK !**

Shear Design Load / Bolts=

$f_v = 418.26$ lbs. < 4004 lbs. **Therefore, OK !**

CHECK COMBINED TENSION AND SHEAR

$f_t / F_T + f_v / F_V \leq 1.0$
0.052 + 0.104 = 0.156 < 1.0 **Therefore, OK !**

EXHIBIT 5



Radio Frequency Exposure Analysis Report

August 3, 2022

Centerline on behalf of AT&T

AT&T Site Name: BEACON FALLS NE

AT&T Site Number: CTL05416

FA#: 10070922

USID: 24518

Site Address: 10 TERESA ROAD, BEACON FALLS, CT 06403

Site Compliance Summary

AT&T Compliance Status:	Compliant
Cumulative Calculated Power Density (Ground Level):	18.00920 $\mu\text{W}/\text{cm}^2$
Cumulative General Population % MPE (Ground Level):	1.80103%



August 3, 2022

Centerline
Attn: Jennifer Iliades, Project Manager
750 W Center St, Suite 301
West Bridgewater, MA 02379

RF Exposure Analysis for Site: **BEACON FALLS NE**

Centerline Communications, LLC ("Centerline") was contracted to analyze the proposed AT&T facility at **10 TERESA ROAD, BEACON FALLS, CT 06403** for the purpose of determining whether the predictive exposure from the proposed facility is within specified federal limits.

All information used in this report was analyzed as a percentage of the Maximum Permissible Exposure (% MPE) limits as detailed in 47 CFR § 1.1310 as well as Federal Communications Commission (FCC) OET Bulletin 65 Edition 97-01. The FCC MPE limits are typically expressed in units of milliwatts per square centimeter (mW/cm^2) or microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The exposure limits vary depending upon the frequencies being utilized. The General Population/Uncontrolled MPE limit (in mW/cm^2) for frequencies between 300 and 1500 is defined as frequency (in MHz) divided by 1500 ($f_{\text{MHz}}/1500$). Frequencies between 1500 and 100,000 MHz have a General Population/Uncontrolled MPE limit of $1 \text{ mW}/\text{cm}^2$ ($1000 \mu\text{W}/\text{cm}^2$). The calculated power density at each sample point divided by the limit at each calculated frequency provides a result in % MPE. Summing the calculated % MPE from all contributors provides a cumulative % MPE at a particular sample point. Wireless carriers use different frequency bands with varying MPE limits; therefore, it is useful to report results in terms of % MPE as opposed to power density.

All results were compared to the FCC radio frequency exposure rules as detailed in 47 CFR § 1.1307(b) to determine compliance with the MPE limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits, as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means. Additional details can be found in FCC OET 65.



Calculation Methodology

Centerline Communications, LLC has performed theoretical modeling of the site using a software tool, RoofMaster®, which incorporates calculation methodologies detailed in FCC OET 65. RoofMaster® uses a cylindrical model for conservative power density predictions within the near field of the antenna where the antenna pattern has not truly formed yet. Within this area power density values tend to decrease based upon an inverse distance function. At the point where it is appropriate for modeling to change from near-field calculations to far-field calculations, the power decreases inversely with the square of the distance. The modeling is based on worst-case assumptions in terms of transmitter power and duty cycle. No losses were included in the power calculations unless they were specifically provided for the project.

In OET 65, a far field model is presented to calculate the spatial peak power density. The RoofMaster® implementation of this model incorporates antenna manufacturer's horizontal and vertical pattern data to determine the power density in all directions. This model yields the power density at a single point in space. In order to determine the spatial power density for comparison to the FCC limits, the average of several points calculated within the human profile (0-6') must be conducted. RoofMaster® calculates seven power density values between 0-6' above the specified study plane and performs a linear spatial average.



Data & Results

The following table details the antennas and operating parameters for the AT&T antenna system as well as any other antenna systems at the site. This is based on antenna information provided by the client and data compiled from other sources where necessary. The data below was input into Roofmaster® to perform the theoretical exposure calculations at ground level.

The theoretical calculations performed in Roofmaster® determine the cumulative exposure at all sample points at ground level (0-6' spatial average). The results from highest cumulative sample point at ground level surrounding the site are displayed in the table below. The contribution from directional antennas to the maximum cumulative totals varies greatly depending on location; therefore, the contribution from one antenna sector at the highest calculated exposure point may be greater or less than other sectors since sectorized directional antennas are pointed in different directions and there is not much overlapping exposure.

The contribution to the cumulative power density and % MPE for each antenna/frequency band is listed in the table. The cumulative power density and cumulative % MPE are displayed at the bottom of the table.



Maximum Calculated Cumulative Power Density @ Ground Level (Location: approximately 273' east of site)

Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
AT&T A 1	KATHREIN 80010965	700	12.05	133.00	4.00	40.00	2565.19	0.00005	2333.33	0.00000
AT&T A 1	KATHREIN 80010965	2300	15.75	133.00	4.00	25.00	3758.37	0.00001	5000.00	0.00000
AT&T A 2	ERICSSON AIR6419	3450	23.45	134.50	1.00	108.40	23989.95	0.00046	5000.00	0.00001
AT&T A 3	ERICSSON AIR6449	3700	23.45	131.50	1.00	108.40	23989.95	0.00053	5000.00	0.00001
AT&T A 4	CCI DMP65R-BU6E	700	11.75	133.00	4.00	40.00	2393.98	0.00006	2333.33	0.00000
AT&T A 4	CCI DMP65R-BU6E	850	11.95	133.00	4.00	40.00	2506.80	0.00006	2833.33	0.00000
AT&T A 4	CCI DMP65R-BU6E	1900	15.45	133.00	4.00	40.00	5612.03	0.00004	5000.00	0.00000
AT&T A 4	CCI DMP65R-BU6E	2100	15.95	133.00	4.00	40.00	6296.80	0.00003	5000.00	0.00000
AT&T B 5	KATHREIN 80010965	700	12.05	133.00	4.00	40.00	2565.19	0.00007	2333.33	0.00000
AT&T B 5	KATHREIN 80010965	2300	15.75	133.00	4.00	25.00	3758.37	0.00005	5000.00	0.00000
AT&T B 6	ERICSSON AIR6419	3450	23.45	134.50	1.00	108.40	23989.95	0.00081	5000.00	0.00002
AT&T B 7	ERICSSON AIR6449	3700	23.45	131.50	1.00	108.40	23989.95	0.00083	5000.00	0.00002
AT&T B 8	CCI DMP65R-BU6E	700	11.75	133.00	4.00	40.00	2393.98	0.00008	2333.33	0.00000
AT&T B 8	CCI DMP65R-BU6E	850	11.95	133.00	4.00	40.00	2506.80	0.00005	2833.33	0.00000
AT&T B 8	CCI DMP65R-BU6E	1900	15.55	133.00	4.00	40.00	5742.75	0.00008	5000.00	0.00000
AT&T B 8	CCI DMP65R-BU6E	2100	15.95	133.00	4.00	40.00	6296.80	0.00006	5000.00	0.00000
AT&T C 9	KATHREIN 80010965	700	12.05	133.00	4.00	40.00	2565.19	0.00000	2333.33	0.00000
AT&T C 9	KATHREIN 80010965	2300	15.75	133.00	4.00	25.00	3758.37	0.00000	5000.00	0.00000
AT&T C 10	ERICSSON AIR6419	3450	23.45	134.50	1.00	108.40	23989.95	0.00000	5000.00	0.00000
AT&T C 11	ERICSSON AIR6449	3700	23.45	131.50	1.00	108.40	23989.95	0.00000	5000.00	0.00000
AT&T C 12	CCI DMP65R-BU6E	700	11.75	133.00	4.00	40.00	2393.98	0.00000	2333.33	0.00000
AT&T C 12	CCI DMP65R-BU6E	850	11.95	133.00	4.00	40.00	2506.80	0.00000	2833.33	0.00000
AT&T C 12	CCI DMP65R-BU6E	1900	15.55	133.00	4.00	40.00	5742.75	0.00000	5000.00	0.00000
AT&T C 12	CCI DMP65R-BU6E	2100	15.95	133.00	4.00	40.00	6296.80	0.00000	5000.00	0.00000
T-Mobile A 13	ERICSSON AIR 21	1900	15.54	142.00	2.00	60.00	4297.16	0.00002	5000.00	0.00000
T-Mobile A 14	RFS APXVAARR18_43-U-NA20	600	12.29	142.00	2.00	60.00	2033.21	0.00001	2000.00	0.00000
T-Mobile A 14	RFS APXVAARR18_43-U-NA20	700	12.34	142.00	2.00	60.00	2056.75	0.00002	2333.33	0.00000
T-Mobile A 15	ERICSSON AIR 32	2100	15.65	142.00	2.00	60.00	4407.39	0.00002	5000.00	0.00000
T-Mobile B 16	ERICSSON AIR 21	1900	15.54	142.00	2.00	60.00	4297.16	0.00004	5000.00	0.00000
T-Mobile B 17	RFS APXVAARR18_43-U-NA20	600	12.29	142.00	2.00	60.00	2033.21	0.00006	2000.00	0.00000
T-Mobile B 17	RFS APXVAARR18_43-U-NA20	700	12.34	142.00	2.00	60.00	2056.75	0.00003	2333.33	0.00000
T-Mobile B 18	ERICSSON AIR 32	2100	15.65	142.00	2.00	60.00	4407.39	0.00004	5000.00	0.00000
T-Mobile C 19	ERICSSON AIR 21	1900	15.54	142.00	2.00	60.00	4297.16	0.00000	5000.00	0.00000



Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
T-Mobile C 20	RFS APXVAARR18_43-U-NA20	600	12.29	142.00	2.00	60.00	2033.21	0.00000	2000.00	0.00000
T-Mobile C 20	RFS APXVAARR18_43-U-NA20	700	12.34	142.00	2.00	60.00	2056.75	0.00000	2333.33	0.00000
T-Mobile C 21	ERICSSON AIR 32	2100	15.65	142.00	2.00	60.00	4407.39	0.00000	5000.00	0.00000
Dish A 22	JMA MX08FRO665-21	600	11.35	152.00	4.00	40.00	2183.33	0.00002	2000.00	0.00000
Dish A 22	JMA MX08FRO665-21	700	12.05	152.00	4.00	40.00	2565.19	0.00002	2333.33	0.00000
Dish A 22	JMA MX08FRO665-21	2000	15.75	152.00	4.00	40.00	6013.40	0.00002	5000.00	0.00000
Dish A 22	JMA MX08FRO665-21	2100	16.75	152.00	4.00	40.00	7570.42	0.00002	5000.00	0.00000
Dish B 23	JMA MX08FRO665-21	600	11.35	152.00	4.00	40.00	2183.33	0.00005	2000.00	0.00000
Dish B 23	JMA MX08FRO665-21	700	12.05	152.00	4.00	40.00	2565.19	0.00005	2333.33	0.00000
Dish B 23	JMA MX08FRO665-21	2000	15.75	152.00	4.00	40.00	6013.40	0.00005	5000.00	0.00000
Dish B 23	JMA MX08FRO665-21	2100	16.75	152.00	4.00	40.00	7570.42	0.00006	5000.00	0.00000
Dish C 24	JMA MX08FRO665-21	600	11.35	152.00	4.00	40.00	2183.33	0.00000	2000.00	0.00000
Dish C 24	JMA MX08FRO665-21	700	12.05	152.00	4.00	40.00	2565.19	0.00000	2333.33	0.00000
Dish C 24	JMA MX08FRO665-21	2000	15.75	152.00	4.00	40.00	6013.40	0.00000	5000.00	0.00000
Dish C 24	JMA MX08FRO665-21	2100	16.75	152.00	4.00	40.00	7570.42	0.00000	5000.00	0.00000
Verizon A 25	ANDREW DB846F65ZAXY	850	14.50	162.00	2.00	40.00	2254.71	0.00001	2833.33	0.00000
Verizon A 26	ANDREW DB846F65ZAXY	850	14.50	162.00	2.00	40.00	2254.71	0.00001	2833.33	0.00000
Verizon A 27	COMMSCOPE JAHH-65B-R3B	700	12.11	162.00	2.00	40.00	1300.44	0.00001	2333.33	0.00000
Verizon A 27	COMMSCOPE JAHH-65B-R3B	1900	15.72	162.00	4.00	40.00	5972.00	0.00002	5000.00	0.00000
Verizon A 28	COMMSCOPE JAHH-65B-R3B	700	12.11	162.00	2.00	40.00	1300.44	0.00001	2333.33	0.00000
Verizon A 28	COMMSCOPE JAHH-65B-R3B	2100	15.71	162.00	4.00	40.00	5958.27	0.00002	5000.00	0.00000
Verizon A 29	SAMSUNG MT6407	3700	23.35	162.00	4.00	50.00	43254.37	0.00049	5000.00	0.00001
Verizon B 30	ANDREW DB846F65ZAXY	850	14.50	162.00	2.00	40.00	2254.71	0.00002	2833.33	0.00000
Verizon B 31	ANDREW DB846F65ZAXY	850	14.50	162.00	2.00	40.00	2254.71	0.00002	2833.33	0.00000
Verizon B 32	COMMSCOPE JAHH-65B-R3B	700	12.11	162.00	2.00	40.00	1300.44	0.00002	2333.33	0.00000
Verizon B 32	COMMSCOPE JAHH-65B-R3B	1900	15.72	162.00	4.00	40.00	5972.00	0.00004	5000.00	0.00000
Verizon B 33	COMMSCOPE JAHH-65B-R3B	700	12.11	162.00	2.00	40.00	1300.44	0.00002	2333.33	0.00000
Verizon B 33	COMMSCOPE JAHH-65B-R3B	2100	15.71	162.00	4.00	40.00	5958.27	0.00004	5000.00	0.00000
Verizon B 34	SAMSUNG MT6407	3700	23.35	162.00	4.00	50.00	43254.37	0.00080	5000.00	0.00002
Verizon C 35	ANDREW DB846F65ZAXY	850	14.50	162.00	2.00	40.00	2254.71	0.00000	2833.33	0.00000
Verizon C 36	ANDREW DB846F65ZAXY	850	14.50	162.00	2.00	40.00	2254.71	0.00000	2833.33	0.00000
Verizon C 37	COMMSCOPE JAHH-65B-R3B	700	12.11	162.00	2.00	40.00	1300.44	0.00000	2333.33	0.00000
Verizon C 37	COMMSCOPE JAHH-65B-R3B	1900	15.72	162.00	4.00	40.00	5972.00	0.00000	5000.00	0.00000



Antenna ID	Make / Model	Frequency Band (MHz)	Antenna Gain (dBd)	Antenna Centerline (ft)	Channel Count	TX Power/ Channel (watts)	ERP (watts)	Calculated Power Density ($\mu\text{W}/\text{cm}^2$)	General Population MPE Limit ($\mu\text{W}/\text{cm}^2$)	General Population % MPE
Verizon C 38	COMMSCOPE JAHH-65B-R3B	700	12.11	162.00	2.00	40.00	1300.44	0.00000	2333.33	0.00000
Verizon C 38	COMMSCOPE JAHH-65B-R3B	2100	15.71	162.00	4.00	40.00	5958.27	0.00000	5000.00	0.00000
Verizon C 39	SAMSUNG MT6407	3700	23.35	162.00	4.00	50.00	43254.37	0.00001	5000.00	0.00000
Unknown A 40	COMMSCOPE DB222A	150	3.00	164.00	1.00	25.00	49.88	0.00001	1000.00	0.00000
Unknown A 41	COMMSCOPE DB222B	150	3.00	165.00	1.00	25.00	49.88	0.00001	1000.00	0.00000
Unknown A 42	COMMSCOPE DB222C	150	3.00	166.00	1.00	25.00	49.88	0.00000	1000.00	0.00000
Unknown A 43	COMMSCOPE DB222A	150	3.00	114.00	1.00	25.00	49.88	0.00001	1000.00	0.00000
Unknown A 44	COMMSCOPE DB222B	150	3.00	115.00	1.00	25.00	49.88	0.00001	1000.00	0.00000
Unknown A 45	COMMSCOPE DB222C	150	3.00	116.00	1.00	25.00	49.88	0.00001	1000.00	0.00000
							Cumulative Power Density:	18.00920 $\mu\text{W}/\text{cm}^2$	Cumulative % MPE:	1.80103%



Summary

The theoretical calculations performed for this analysis yielded cumulative power density totals in all areas at ground level that are within the allowable federal limits for public exposure to RF energy. Therefore, the site is **compliant** with FCC rules and regulations.

Matt Schulzinger
RF EME Technical Writer
Centerline Communications, LLC

EXHIBIT 6



TOWN OF BEACON FALLS
Connecticut
Building Dept.

Dec. 13 2000

Mr. Erik Pearson
S, B. A.
Construction Project Manager
80 Eastern Blvd.
Glastonbury Ct. 06033

Mr. Pearson
This Certificate of Occupancy is for the
Tower Structure and Electrical installations.

Other issues you questioned must be addressed
to the Zoning Commission and the Town Engineer.

Respectfully
John Petersen
Building Official
Beacon Falls Ct.

CERTIFICATE OF OCCUPANCY

Application Date July 3 2000



TOWN OF BEACON FALLS
Connecticut



BUILDING INSPECTOR

This is to certify that I have inspected building at:

No. RICE LAKE

and find the same to conform with Zoning Ordinance and Building Codes of the State of Connecticut.

Permit Number #P-3-3-2000 Issued from this office MARCH 3 2000

To S.B.A. Inc. Glastonbury Ct. Inspection Date July 3-2000

To be used as cellphone TOWER 150' monopole

Building Inspector John Peter

FORM K-BI 74-202

- e) Demolition
- f) Other _____

13. Project Type:

- a) New Construction
- b) Addition
- c) Alteration
- d) Repair/Replacement
- e) Demolition*
- f) Relocation
- g) Change of Use
- h) Article 32
- i) Designated Historic Structure

Is Structure within the 100 year flood plain Yes No

14. Construction Type:

- 1A 1B 2A 2B 2C 3A 3B 4 5A 5B

15. Use Group(s):

- A-1 B H-1 I-1 M S-1
- A-2 H-2 I-2 S-2
- A-3 F-1 H-3 I-3 R-1
- A-4 F-2 H-4 R-2 U
- A-5 R-3

Mixed Use: Yes No Separated Nonseparated

Note: * See instructions

Town of Beacon Falls Record of Building Permit

Owner SBA / Sprint PCS

Owner's Address 80 Eastern Blvd. Glastonbury Ct.

Site Location Rice Lane

Construction: New Alteration Addition Repair
Garage Shed Other 153'-0" Tower
One family residence

Permit Number #D-3-3-2000 Date Issued March 3 2000

Value of Permit 250,000.00
Fee Paid \$ 1,157.00

Application Approved John Totem Building Inspector
Bl check # 69902

- d) Plumbing Permit
- e) Demolition Permit*
- f) Other _____

Estimated Cost
TOTAL 275,000

13. Project Type:
- a) New Construction
 - b) Addition
 - c) Alteration
 - d) Repair/Replacement
 - e) Demolition*
 - f) Relocation
 - g) Change of Use
 - h) Article 32
 - i) Designated Historic Structure

Is Structure within the 100 year flood plain Yes No

14. Construction Type: 1A 1B 2A 2B 2C 3A 3B 4 5A 5B

15. Use Group(s):

- A-1 B H-1 I-1 M S-1
- A-2 H-2 I-2 S-2
- A-3 F-1 H-3 I-3 R-1
- A-4 F-2 H-4 R-2 U
- A-5 R-3

Mixed Use: Yes No Separated Nonseparated

Note: * See instructions



APPLICATION FOR BUILDING PERMIT
CONNECTICUT STATE BUILDING CODE (SBC 111.0)
CITY/TOWN OF BEACON FALLS

1. 1/7/00 (Please Print or Type All Entries)
 Date

2. RICE LANE 3. _____
 Property Location Street Address Lot #

4. _____
 Owner's Name (As it appears in the Land Records)

5. _____
 Street Address Town State Zip Code

6. _____
 Home Phone # Work Phone # Fax # Mobile Phone #

7. SBA Inc.

8. 80 Eastern Blvd. Glastonbury CT 06033
 Street Address Applicant's Name Town State Zip Code

9. (860) 659-9101 (860) 659-9140 (617) 899-5045
 Home Phone # Work Phone # Fax # Mobile Phone #

10. TBD 11. _____
 Contractor/General Contractor Registration #

12. Permit Type:

a) <input checked="" type="checkbox"/> Building Permit	Estimated Cost <u>250,000</u>
<input type="checkbox"/> Foundation	
<input type="checkbox"/> Tenant Fitout	
<input type="checkbox"/> Superstructure	
<input type="checkbox"/> Other	
b) <input type="checkbox"/> Electrical Permit	Estimated Cost <u>25,000</u>
c) <input type="checkbox"/> Mechanical Permit	Estimated Cost _____
d) <input type="checkbox"/> Plumbing Permit	Estimated Cost _____
e) <input type="checkbox"/> Demolition Permit*	Estimated Cost _____
f) <input type="checkbox"/> Other _____	Estimated Cost _____
	TOTAL <u>275,000</u>

13. Project Type:

a) <input checked="" type="checkbox"/> New Construction	f) <input type="checkbox"/> Relocation
b) <input type="checkbox"/> Addition	g) <input type="checkbox"/> Change of Use
c) <input type="checkbox"/> Alteration	h) <input type="checkbox"/> Article 32
d) <input type="checkbox"/> Repair/Replacement	i) <input type="checkbox"/> Designated Historic Structure
e) <input type="checkbox"/> Demolition*	

Is Structure within the 100 year flood plain Yes No

14. Construction Type: 1A 1B 2A 2B 2C 3A 3B 4 5A 5B

15. Use Group(s):

<input type="checkbox"/> A-1	<input type="checkbox"/> B	<input type="checkbox"/> H-1	<input type="checkbox"/> I-1	<input type="checkbox"/> M	<input type="checkbox"/> S-1
<input type="checkbox"/> A-2		<input type="checkbox"/> H-2	<input type="checkbox"/> I-2		<input type="checkbox"/> S-2
<input type="checkbox"/> A-3	<input type="checkbox"/> F-1	<input type="checkbox"/> H-3	<input type="checkbox"/> I-3	<input type="checkbox"/> R-1	
<input type="checkbox"/> A-4	<input type="checkbox"/> F-2	<input type="checkbox"/> H-4		<input type="checkbox"/> R-2	<input type="checkbox"/> U
<input type="checkbox"/> A-5				<input type="checkbox"/> R-3	

Mixed Use: Yes No Separated Nonseparated

Note: * See instructions

16. Rice Lane Property Location Street Address 17. _____ Lot #

18. Height of building: Stories: _____ Feet: 153' communication tower

19. Total Sq. Ft. of Building: N/A

20. List below the gross square footage of each story, above and below grade:

Story	Area in Sq. Ft.	Story	Area in Sq. Ft.	Story	Area in Sq. Ft.
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

21. Architect's Information: (Attach as applicable) License # _____

22. Engineers Information: (Attach as applicable) License # 16857

23. Interior Design: (Attach as Applicable) Registration # _____

24. Documents Submitted /Attached:

- Zoning Building Plans Site Plans Building Sections Building Elevations Health
- Reports Calculations Details Photographs Threshold Review*
- Correspondence Authorization of Applicant Other Than Owner Manufacturer's Literature
- Statement of Special Inspections* Other (describe) _____

25. Estimated Cost of Construction \$250,000
(Value of Labor & Materials)

CERTIFICATION: I hereby certify that: I am the owner of record of the named property or that the proposed work is authorized by the owner of record and/or I have been authorized to make this application as an authorized agent, and we agree to conform to all applicable laws, regulations and ordinances. All information contained within is true and accurate to the best of my knowledge and belief.

Eric Pearson
Signature of Owner/Authorized Agent

Note: * See instructions

ITEMS 26 - 29 ARE FOR BUILDING OFFICIAL'S USE ONLY

26. Building Permit Fee: 1157.00

27. Plan Review Fee: _____

28. Certificate of Occupancy Fee: _____

29. Other Fees: _____

TOTAL FEE: Cash Check _____

#0-3-3-2000
3/7/2000

Completed Application Received Date: _____

John H. [Signature]
(Signature Building Official)

EXHIBIT 7

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number

1Z9Y45030326240554

Weight

1.00 LBS

Service

UPS Ground

Shipped / Billed On

08/02/2022

Delivered On

08/08/2022 12:51 P.M.

Delivered To

BEACON FALLS, CT, US

Received By

JUNE

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 08/08/2022 1:17 P.M. EST

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number

1Z9Y45030317803105

Weight

1.00 LBS

Service

UPS Ground

Shipped / Billed On

08/02/2022

Delivered On

08/08/2022 12:51 P.M.

Delivered To

BEACON FALLS, CT, US

Received By

JUNE

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 08/08/2022 1:21 P.M. EST

Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

Tracking Number

1Z9Y45030301382091

Weight

1.00 LBS

Service

UPS Ground

Shipped / Billed On

08/02/2022

Delivered On

08/08/2022 12:51 P.M.

Delivered To

BEACON FALLS, CT, US

Received By

JUNE

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 08/08/2022 1:23 P.M. EST



Shipping

Tracking

Business Solutions

Support

Your shipment

1Z9Y45030303651126

Estimated delivery

Wednesday, August 10 by 7:00 P.M.



Label Created



On the Way



Out for Delivery



Delivery

Ship To

BOCA RATON, FL US

Get Updates >

Change My Delivery

[View Details](#)

UPS Freight Less-than-Truckload ("LTL") transportation services are offered by TFI International Inc., its affiliates or divisions (including without limitation TFI) or any of its affiliates, subsidiaries or related entities ("UPS"). UPS assumes no liability in connection with UPS Freight LTL transportation services or any other services provided by UPS, its affiliates, subsidiaries or related entities.