APPENDIX 1

ENGINEERING STATEMENT CONCERNING
WSHU(AM) 1260 kHz PROPOSED VERTICAL DIPOLE ANTENNA BP-20140821AFR
SEYMOUR, CONNECTICUT
JANUARY 2015

Sacred Heart University, Inc., licensee of standard broadcast station WSHU(AM), has on file an application to change site, change community of license and implement non-directional operation on an existing communications tower carrying FCC Registration #1209826. This document describes the method of feeding the grounded, self-supporting, tower. The proposed feed system consists of a vertical dipole mounted off the center of each face of the three sided, self-supporting tower.

To the best of the affiant's knowledge this feed configuration was first presented to the Audio Division of the Media Bureau in an application for construction permit for KRMD(AM), Shreveport, Louisiana in FCC File Number BP-20040719ABJ. This initial model was constructed by Professor Al Christman at Grove City College, was reviewed by OET and the construction permit granted on January 26, 2006.

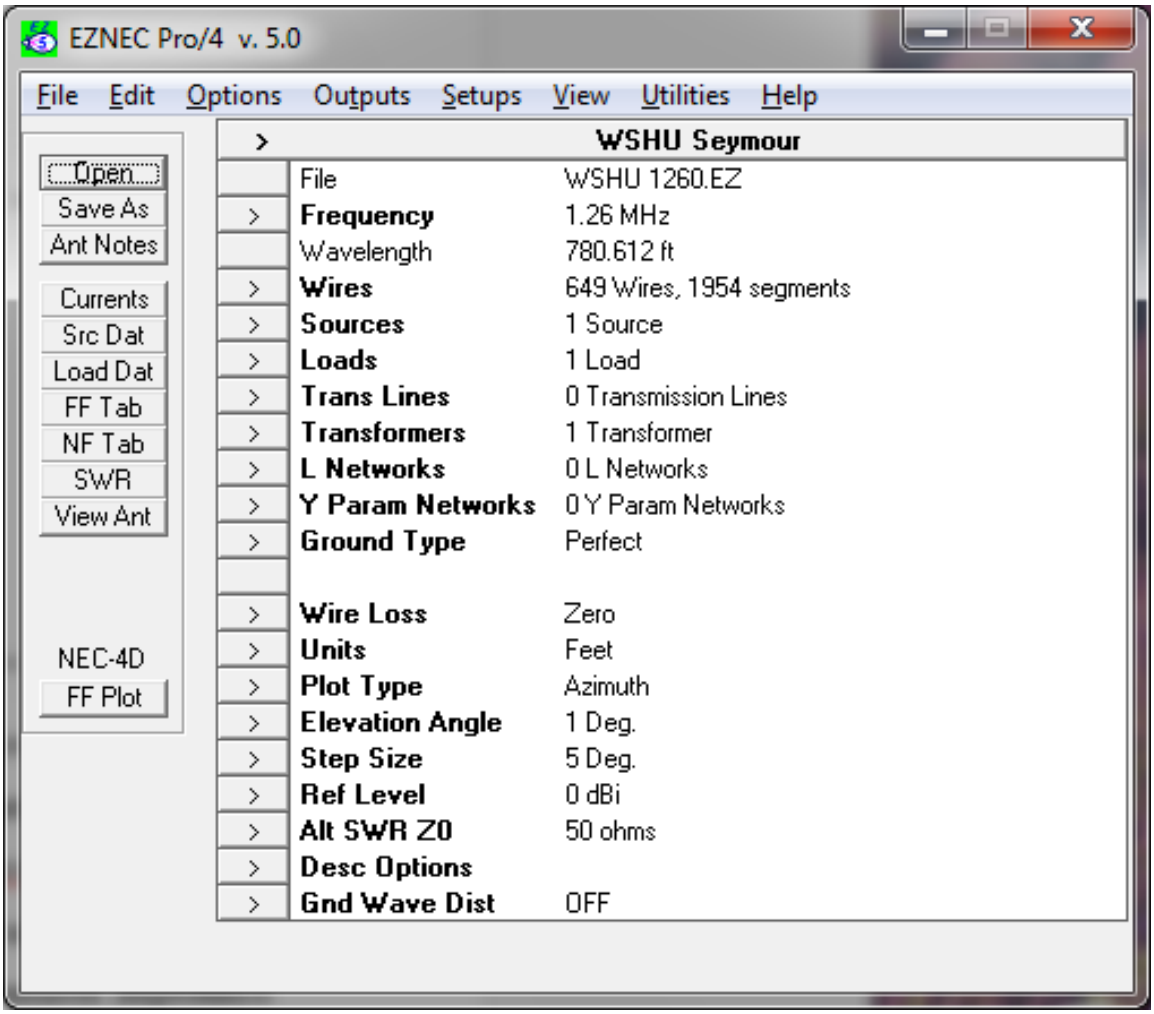
KXEN(AM), St. Louis, Missouri was authorized full-time STA operation with a vertical dipole mounted on a self-supporting tower under File Number BSTA-20121204ACJ and continues to operate on the antenna system during nighttime hours. Field strength measurements on the antenna system were taken on four evenly spaced radials which showed that the predicted radiation efficiency of 305 mV/m @ 1 kM for 1 kW was achieved.

The vertical dipole configuration proposed for WSHU(AM) consists of one dipole centered on each face of the tower with the feed point 42 meters AGL. The length of the dipole above the feed point is 139 feet which is 64.1 degrees at 1260 kHz. The 288.96 mV/m @ 1kM radiation efficiency proposed is based on a vertical monopole of that height over a full 120 equally spaced, quarter wave, radial ground system as computed using the FCC PopUp Tool, Figure 8. The NEC model

value of just over 306 mV/m@1 kM does not include losses and it is anticipated that the actual efficiency will be closer to the FCC value. Sacred Heart plans to conduct radial field strength measurements to determine the radiation efficiency as constructed.

A photo of the existing tower is shown below. NEC-4 has been employed to analyze the proposed feed system and tower as accurately as possible.

The NEC-4 engine used for the wire model analysis is a part of the EZNEC Pro/4 v. 5.0.62 software provide by Roy W. Lewallen. A screen shot with the wires file loaded is found below:



The computed source impedance for the model is:

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        --------------- SOURCE DATA ---------------

  Frequency = 1.26 MHz

  Source 1      Voltage = 153.9 V at -0.02 deg.
          Current = 6.499 A at 0.0 deg.
          Impedance = 23.68 - J 0.008474 ohms
          Power = 1000 watts
          SWR (50 ohm system) = 2.112  (50 ohm system) =  2.112
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The wire model includes a positive reactance to wash out the negative reactance at the feed point and a 16:1 balun transforms the relatively low drive point impedance associated with the three dipoles fed in parallel up to a value that can be fed through an electrical half wave length of heliax cable to an antenna matching unit at the tower base. This is the configuration used in the KXEN antenna system. Close agreement was found between the calculated and measured impedance values in the KXEN antenna system and is expected here as well.

A single dipole configuration was tried but had a horizontal plane circularity of almost 3 dB. A dipole on two skirt faces was tested but the pattern circularity exceeded 1 dB. The horizontal plane pattern tabulation below demonstrates that the radiation pattern should be essentially non-directional:

EZNEC Pro/4 ver. 5.0 - (2)

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---------- FAR FIELD PATTERN DATA ----------

Frequency = 1.26 MHz

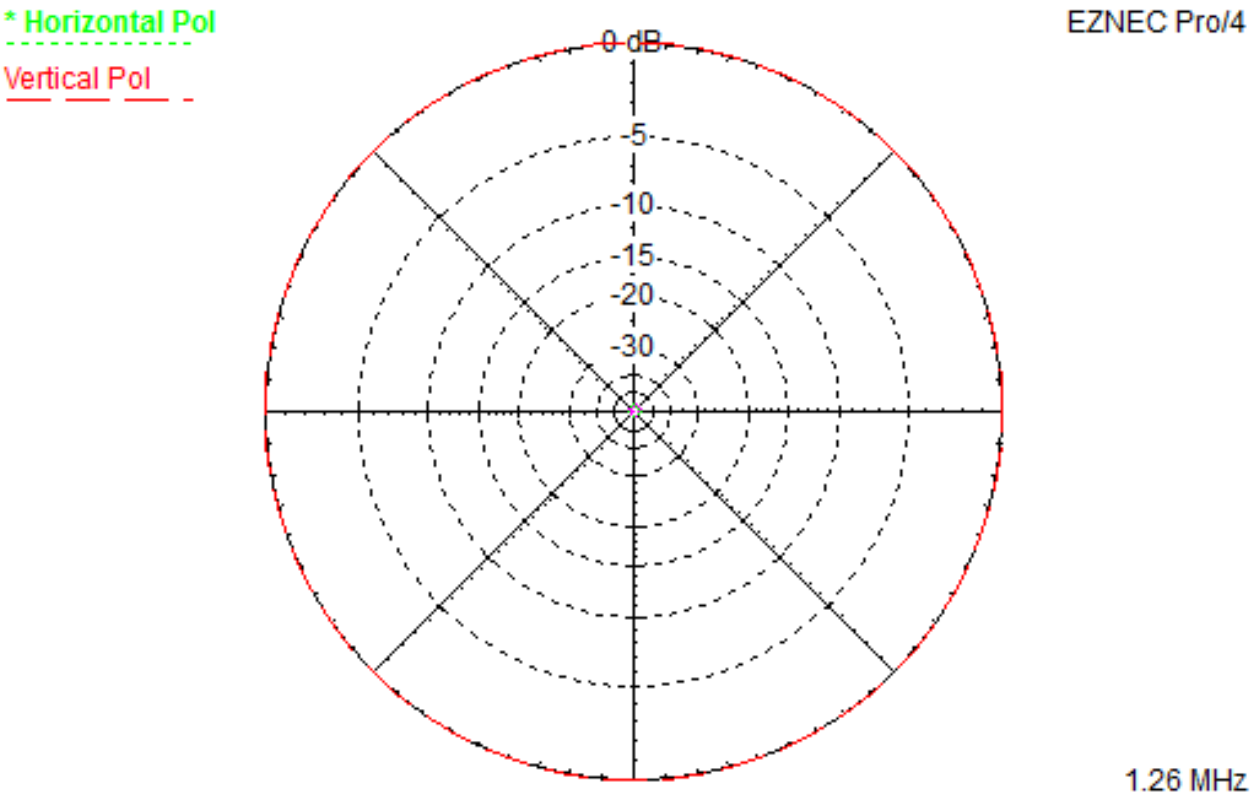
mV/m for 1 kW at 1 km

Azimuth Pattern Elevation angle = 1 deg.

Bear	V Fld	H Fld	Tot Fld	V Pha	H Pha
0	306.4	0.014722	306.4	-62.84	-75.03
5	306.39	0.015049	306.39	-62.84	-71.83
10	306.39	0.01541	306.39	-62.85	-68.90
15	306.38	0.015794	306.38	-62.85	-66.24
20	306.37	0.016192	306.37	-62.85	-63.83
25	306.37	0.016592	306.37	-62.85	-61.67
30	306.37	0.016986	306.37	-62.85	-59.74
35	306.37	0.017365	306.37	-62.86	-58.05
40	306.37	0.017721	306.37	-62.86	-56.57
45	306.37	0.018045	306.37	-62.86	-55.31
50	306.38	0.018329	306.38	-62.85	-54.25
55	306.39	0.018568	306.39	-62.85	-53.39
60	306.4	0.018753	306.4	-62.85	-52.75
65	306.41	0.018881	306.41	-62.84	-52.31
70	306.43	0.018947	306.43	-62.84	-52.08
75	306.45	0.018948	306.45	-62.83	-52.08
80	306.47	0.018883	306.47	-62.83	-52.30
85	306.49	0.018752	306.49	-62.82	-52.76
90	306.51	0.018558	306.51	-62.81	-53.47
95	306.53	0.018306	306.53	-62.80	-54.43
100	306.56	0.018001	306.56	-62.79	-55.67
105	306.58	0.017652	306.58	-62.79	-57.20
110	306.6	0.017271	306.6	-62.78	-59.02
115	306.62	0.016868	306.62	-62.77	-61.14
120	306.64	0.016458	306.64	-62.76	-63.57
125	306.65	0.016053	306.65	-62.76	-66.30
130	306.67	0.015668	306.67	-62.75	-69.33

135	306.68	0.015316	306.68	-62.74	-72.64
140	306.69	0.015009	306.69	-62.74	-76.19
145	306.7	0.014758	306.7	-62.73	-79.94
150	306.71	0.014571	306.71	-62.73	-83.83
155	306.72	0.014452	306.72	-62.73	-87.81
160	306.73	0.014404	306.73	-62.72	-91.81
165	306.73	0.014426	306.73	-62.72	-95.76
170	306.74	0.014514	306.74	-62.72	-99.61
175	306.75	0.014664	306.75	-62.71	-103.30
180	306.76	0.014868	306.76	-62.71	-106.80
185	306.77	0.015118	306.77	-62.71	-110.07
190	306.78	0.015407	306.78	-62.70	-113.11
195	306.79	0.015724	306.79	-62.70	-115.90
200	306.8	0.016062	306.8	-62.70	-118.43
205	306.8	0.01641	306.8	-62.70	-120.72
210	306.81	0.016761	306.81	-62.70	-122.76
215	306.82	0.017104	306.82	-62.70	-124.56
220	306.82	0.017432	306.82	-62.70	-126.12
225	306.82	0.017734	306.82	-62.70	-127.45
230	306.82	0.018003	306.82	-62.70	-128.57
235	306.81	0.01823	306.81	-62.70	-129.46
240	306.8	0.018407	306.8	-62.70	-130.13
245	306.79	0.018528	306.79	-62.71	-130.59
250	306.78	0.018587	306.78	-62.71	-130.83
255	306.76	0.01858	306.76	-62.72	-130.85
260	306.74	0.018505	306.74	-62.73	-130.64
265	306.72	0.018362	306.72	-62.74	-130.19
270	306.69	0.018153	306.69	-62.74	-129.50
275	306.67	0.017883	306.67	-62.75	-128.54
280	306.64	0.017557	306.64	-62.76	-127.32
285	306.62	0.017185	306.62	-62.77	-125.80
290	306.59	0.016779	306.59	-62.77	-123.98
295	306.57	0.016351	306.57	-62.78	-121.84
300	306.55	0.015917	306.55	-62.79	-119.38
305	306.53	0.015493	306.53	-62.80	-116.58
310	306.51	0.015093	306.51	-62.80	-113.46
315	306.49	0.014735	306.49	-62.81	-110.04
320	306.48	0.014433	306.48	-62.81	-106.34
325	306.46	0.014198	306.46	-62.82	-102.44
330	306.45	0.014039	306.45	-62.82	-98.38
335	306.44	0.013962	306.44	-62.82	-94.24
340	306.43	0.013968	306.43	-62.83	-90.12
345	306.42	0.014054	306.42	-62.83	-86.07
350	306.41	0.014214	306.41	-62.83	-82.18
355	306.41	0.01444	306.41	-62.84	-78.49
360	306.4	0.014722	306.4	-62.84	-75.03

The plotted radiation pattern is shown below:



Azimuth Plot		Cursor Bear	75.0 deg.
Elevation Angle	1.0 deg.	Gain	-79.22 dBi
Outer Ring	4.97 dBi		0.0 dBmax

Slice Max Gain	-79.22 dBi @ Bearing = 75.0 deg.
Front/Back	0.17 dB
Beamwidth	?
Sidelobe Gain	-79.38 dBi @ Bearing = 250.0 deg.
Front/Sidelobe	0.16 dB

The wire model data is found below:

EZNEC Pro/4 ver. 5.0 - (2)

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---------- WIRES ----------

No.	End 1 Coord. (ft)			End 2 Coord. (ft)			Dia (in)	Segs	Insulation		
	Conn.	X	Y	Z	Conn.	X	Y	Z			Diel C	Thk(in)	Loss Tan
1	W97E1	-14,	-8.1,	3	W2E1	-13,	-7.5,	23	3	3	1	0	0
2	W61E1	-13,	-7.5,	23	W3E1	-12.1,	-7,	43	3	3	1	0	0
3	W62E1	-12.1,	-7,	43	W4E1	-11.1,	-6.4,	63	3	3	1	0	0
4	W63E1	-11.1,	-6.4,	63	W5E1	-10.2,	-5.9,	83	3	3	1	0	0
5	W64E1	-10.2,	-5.9,	83	W6E1	-9.2,	-5.3,	103	3	3	1	0	0
6	W65E1	-9.2,	-5.3,	103	W7E1	-8.3,	-4.8,	123	3	3	1	0	0
7	W66E1	-8.3,	-4.8,	123	W8E1	-7.3,	-4.2,	143	3	3	1	0	0
8	W67E1	-7.3,	-4.2,	143	W9E1	-7.1317,	-4.1175,	146	3	3	1	0	0
9	W508E1	-7.1317,	-4.1175,	146	W10E1	-6.3,	-3.7,	163	2	3	1	0	0
10	W68E1	-6.3,	-3.7,	163	W11E1	-6.1791,	-3.5675,	166	3	3	1	0	0
11	W517E1	-6.1791,	-3.5675,	166	W12E1	-5.8457,	-3.375,	173	2	3	1	0	0
12	W523E1	-5.8457,	-3.375,	173	W13E1	-5.7028,	-3.2925,	176	2	3	1	0	0
13	W526E1	-5.7028,	-3.2925,	176	W14E1	-5.4,	-3.1,	183	2	3	1	0	0
14	W69E1	-5.4,	-3.1,	183	W15E1	-5.2265,	-3.0175,	186	3	3	1	0	0
15	W535E1	-5.2265,	-3.0175,	186	W16E1	-4.893,	-2.825,	193	2	3	1	0	0
16	W541E1	-4.893,	-2.825,	193	W17E1	-4.7501,	-2.7425,	196	2	3	1	0	0
17	W544E1	-4.7501,	-2.7425,	196	W18E1	-4.4,	-2.6,	203	2	3	1	0	0
18	W70E1	-4.4,	-2.6,	203	W19E1	-4.2738,	-2.4675,	206	3	3	1	0	0
19	W553E1	-4.2738,	-2.4675,	206	W20E1	-3.5,	-2,	223	2	3	1	0	0
20	W71E1	-3.5,	-2,	223	W72E1	-3,	-1.7,	233	3	3	1	0	0
21	W98E1	14,	-8.1,	3	W22E1	13,	-7.5,	23	3	3	1	0	0
22	W61E2	13,	-7.5,	23	W23E1	12.1,	-7,	43	3	3	1	0	0
23	W62E2	12.1,	-7,	43	W24E1	11.1,	-6.4,	63	3	3	1	0	0
24	W63E2	11.1,	-6.4,	63	W25E1	10.2,	-5.9,	83	3	3	1	0	0
25	W64E2	10.2,	-5.9,	83	W26E1	9.2,	-5.3,	103	3	3	1	0	0
26	W65E2	9.2,	-5.3,	103	W27E1	8.3,	-4.8,	123	3	3	1	0	0
27	W66E2	8.3,	-4.8,	123	W28E1	7.3,	-4.2,	143	3	3	1	0	0
28	W67E2	7.3,	-4.2,	143	W29E1	7.13172,	-4.1175,	146	3	3	1	0	0
29	W562E1	7.13172,	-4.1175,	146	W30E1	6.3,	-3.7,	163	2	3	1	0	0
30	W68E2	6.3,	-3.7,	163	W31E1	6.17909,	-3.5675,	166	3	3	1	0	0
31	W571E1	6.17909,	-3.5675,	166	W32E1	5.84567,	-3.375,	173	2	3	1	0	0
32	W577E1	5.84567,	-3.375,	173	W33E1	5.70278,	-3.2925,	176	2	3	1	0	0
33	W580E1	5.70278,	-3.2925,	176	W34E1	5.4,	-3.1,	183	2	3	1	0	0
34	W69E2	5.4,	-3.1,	183	W35E1	5.22646,	-3.0175,	186	3	3	1	0	0
35	W589E1	5.22646,	-3.0175,	186	W36E1	4.89304,	-2.825,	193	2	3	1	0	0
36	W595E1	4.89304,	-2.825,	193	W37E1	4.75015,	-2.7425,	196	2	3	1	0	0
37	W598E1	4.75015,	-2.7425,	196	W38E1	4.4,	-2.6,	203	2	3	1	0	0
38	W70E2	4.4,	-2.6,	203	W39E1	4.27384,	-2.4675,	206	3	3	1	0	0
39	W607E1	4.27384,	-2.4675,	206	W40E1	3.5,	-2,	223	2	3	1	0	0
40	W71E2	3.5,	-2,	223	W72E2	3,	-1.7,	233	3	3	1	0	0
41	W148E1	0,	16.2,	3	W42E1	0,	15.1,	23	3	3	1	0	0
42	W73E2	0,	15.1,	23	W43E1	0,	14,	43	3	3	1	0	0
43	W74E2	0,	14,	43	W44E1	0,	12.9,	63	3	3	1	0	0
44	W75E2	0,	12.9,	63	W45E1	0,	11.7,	83	3	3	1	0	0
45	W76E2	0,	11.7,	83	W46E1	0,	10.6,	103	3	3	1	0	0
46	W77E2	0,	10.6,	103	W47E1	0,	9.5,	123	3	3	1	0	0
47	W78E2	0,	9.5,	123	W48E1	0,	8.4,	143	3	3	1	0	0
48	W79E2	0,	8.4,	143	W49E1	0,	8.235,	146	3	3	1	0	0
49	W454E1	0,	8.235,	146	W50E1	0,	7.3,	163	2	3	1	0	0
50	W80E2	0,	7.3,	163	W51E1	0,	7.135,	166	3	3	1	0	0
51	W463E1	0,	7.135,	166	W52E1	0,	6.75,	173	2	3	1	0	0
52	W469E1	0,	6.75,	173	W53E1	0,	6.585,	176	2	3	1	0	0
53	W472E1	0,	6.585,	176	W54E1	0,	6.2,	183	2	3	1	0	0
54	W81E2	0,	6.2,	183	W55E1	0,	6.035,	186	3	3	1	0	0
55	W481E1	0,	6.035,	186	W56E1	0,	5.65,	193	2	3	1	0	0
56	W487E1	0,	5.65,	193	W57E1	0,	5.485,	196	2	3	1	0	0
57	W490E1	0,	5.485,	196	W58E1	0,	5.1,	203	2	3	1	0	0
58	W82E2	0,	5.1,	203	W59E1	0,	4.935,	206	3	3	1	0	0
59	W499E1	0,	4.935,	206	W60E1	0,	4,	223	2	3	1	0	0
60	W83E2	0,	4,	223	W84E2	0,	3.5,	233	3	3	1	0	0
61	W85E2	-13,	-7.5,	23	W73E1	13,	-7.5,	23	2	3	1	0	0
62	W86E2	-12.1,	-7,	43	W74E1	12.1,	-7,	43	2	3	1	0	0
63	W87E2	-11.1,	-6.4,	63	W75E1	11.1,	-6.4,	63	2	3	1	0	0
64	W88E2	-10.2,	-5.9,	83	W76E1	10.2,	-5.9,	83	2	3	1	0	0
65	W89E2	-9.2,	-5.3,	103	W77E1	9.2,	-5.3,	103	2	3	1	0	0
66	W90E2	-8.3,	-4.8,	123	W78E1	8.3,	-4.8,	123	2	3	1	0	0
67	W91E2	-7.3,	-4.2,	143	W79E1	7.3,	-4.2,	143	2	3	1	0	0
68	W92E2	-6.3,	-3.7,	163	W80E1	6.3,	-3.7,	163	2	3	1	0	0
69	W93E2	-5.4,	-3.1,	183	W81E1	5.4,	-3.1,	183	2	3	1	0	0
70	W94E2	-4.4,	-2.6,	203	W82E1	4.4,	-2.6,	203	2	3	1	0	0
71	W95E2	-3.5,	-2,	223	W83E1	3.5,	-2,	223	2	3	1	0	0
72	W96E2	-3,	-1.7,	233	W84E1	3,	-1.7,	233	2	3	1	0	0
73	W100E1	13,	-7.5,	23	W85E1	0,	15.1,	23	2	3	1	0	0
74	W104E1	12.1,	-7,	43	W86E1	0,	14,	43	2	3	1	0	0
75	W108E1	11.1,	-6.4,	63	W87E1	0,	12.9,	63	2	3	1	0	0
76	W112E1	10.2,	-5.9,	83	W88E1	0,	11.7,	83	2	3	1	0	0
77	W116E1	9.2,	-5.3,	103	W89E1	0,	10.6,	103	2	3	1	0	0
78	W120E1	8.3,	-4.8,	123	W90E1	0,	9.5,	123	2	3	1	0	0
79	W124E1	7.3,	-4.2,	143	W91E1	0,	8.4,	143	2	3	1	0	0
80	W128E1	6.3,	-3.7,	163	W92E1	0,	7.3,	163	2	3	1	0	0
81	W132E1	5.4,	-3.1,	183	W93E1	0,	6.2,	183	2	3	1	0	0

82	W136E1	4.4,	-2.6,	203	W94E1	0,	5.1,	203	2	3	1	0	0
83	W140E1	3.5,	-2,	223	W95E1	0,	4,	223	2	3	1	0	0
84	W144E1	3,	-1.7,	233	W96E1	0,	3.5,	233	2	3	1	0	0
85	W146E1	0,	15.1,	23	W99E1	-13,	-7.5,	23	2	3	1	0	0
86	W152E1	0,	14,	43	W103E1	-12.1,	-7,	43	2	3	1	0	0
87	W156E1	0,	12.9,	63	W107E1	-11.1,	-6.4,	63	2	3	1	0	0
88	W160E1	0,	11.7,	83	W111E1	-10.2,	-5.9,	83	2	3	1	0	0
89	W164E1	0,	10.6,	103	W115E1	-9.2,	-5.3,	103	2	3	1	0	0
90	W168E1	0,	9.5,	123	W119E1	-8.3,	-4.8,	123	2	3	1	0	0
91	W172E1	0,	8.4,	143	W123E1	-7.3,	-4.2,	143	2	3	1	0	0
92	W176E1	0,	7.3,	163	W127E1	-6.3,	-3.7,	163	2	3	1	0	0
93	W180E1	0,	6.2,	183	W131E1	-5.4,	-3.1,	183	2	3	1	0	0
94	W184E1	0,	5.1,	203	W135E1	-4.4,	-2.6,	203	2	3	1	0	0
95	W188E1	0,	4,	223	W139E1	-3.5,	-2,	223	2	3	1	0	0
96	W192E1	0,	3.5,	233	W143E1	-3,	-1.7,	233	2	3	1	0	0
97	W196E1	-14,	-8.1,	3	W98E2	0.5,	-7.8,	13	2	3	1	0	0
98	W147E1	14,	-8.1,	3	W99E2	0.5,	-7.8,	13	2	3	1	0	0
99	W101E1	-13,	-7.5,	23	W100E2	0.5,	-7.8,	13	2	3	1	0	0
100	W102E1	13,	-7.5,	23	W97E2	0.5,	-7.8,	13	2	3	1	0	0
101	W194E1	-13,	-7.5,	23	W102E2	-0.5,	-7.3,	33	2	3	1	0	0
102	W145E1	13,	-7.5,	23	W103E2	-0.5,	-7.3,	33	2	3	1	0	0
103	W105E1	-12.1,	-7,	43	W104E2	-0.5,	-7.3,	33	2	3	1	0	0
104	W106E1	12.1,	-7,	43	W101E2	-0.5,	-7.3,	33	2	3	1	0	0
105	W200E1	-12.1,	-7,	43	W106E2	-0.5,	-6.7,	53	2	3	1	0	0
106	W151E1	12.1,	-7,	43	W107E2	-0.5,	-6.7,	53	2	3	1	0	0
107	W109E1	-11.1,	-6.4,	63	W108E2	-0.5,	-6.7,	53	2	3	1	0	0
108	W110E1	11.1,	-6.4,	63	W105E2	-0.5,	-6.7,	53	2	3	1	0	0
109	W204E1	-11.1,	-6.4,	63	W110E2	-0.5,	-6.2,	73	2	3	1	0	0
110	W155E1	11.1,	-6.4,	63	W111E2	-0.5,	-6.2,	73	2	3	1	0	0
111	W113E1	-10.2,	-5.9,	83	W112E2	-0.5,	-6.2,	73	2	3	1	0	0
112	W114E1	10.2,	-5.9,	83	W109E2	-0.5,	-6.2,	73	2	3	1	0	0
113	W208E1	-10.2,	-5.9,	83	W114E2	-0.5,	-5.6,	93	2	3	1	0	0
114	W159E1	10.2,	-5.9,	83	W115E2	-0.5,	-5.6,	93	2	3	1	0	0
115	W117E1	-9.2,	-5.3,	103	W116E2	-0.5,	-5.6,	93	2	3	1	0	0
116	W118E1	9.2,	-5.3,	103	W113E2	-0.5,	-5.6,	93	2	3	1	0	0
117	W212E1	-9.2,	-5.3,	103	W118E2	-0.5,	-5,	113	2	3	1	0	0
118	W163E1	9.2,	-5.3,	103	W119E2	-0.5,	-5,	113	2	3	1	0	0
119	W121E1	-8.3,	-4.8,	123	W120E2	-0.5,	-5,	113	2	3	1	0	0
120	W122E1	8.3,	-4.8,	123	W117E2	-0.5,	-5,	113	2	3	1	0	0
121	W216E1	-8.3,	-4.8,	123	W122E2	-0.5,	-4.5,	133	2	3	1	0	0
122	W167E1	8.3,	-4.8,	123	W123E2	-0.5,	-4.5,	133	2	3	1	0	0
123	W125E1	-7.3,	-4.2,	143	W124E2	-0.5,	-4.5,	133	2	3	1	0	0
124	W126E1	7.3,	-4.2,	143	W121E2	-0.5,	-4.5,	133	2	3	1	0	0
125	W220E1	-7.3,	-4.2,	143	W126E2	-0.5,	-3.9,	153	2	3	1	0	0
126	W171E1	7.3,	-4.2,	143	W127E2	-0.5,	-3.9,	153	2	3	1	0	0
127	W129E1	-6.3,	-3.7,	163	W128E2	-0.5,	-3.9,	153	2	3	1	0	0
128	W130E1	6.3,	-3.7,	163	W125E2	-0.5,	-3.9,	153	2	3	1	0	0
129	W233E1	-6.3,	-3.7,	163	W130E2	-0.5,	-3.4,	173	2	3	1	0	0
130	W175E1	6.3,	-3.7,	163	W131E2	-0.5,	-3.4,	173	2	3	1	0	0
131	W133E1	-5.4,	-3.1,	183	W132E2	-0.5,	-3.4,	173	2	3	1	0	0
132	W134E1	5.4,	-3.1,	183	W129E2	-0.5,	-3.4,	173	2	3	1	0	0
133	W237E1	-5.4,	-3.1,	183	W134E2	-0.5,	-2.8,	193	2	3	1	0	0
134	W179E1	5.4,	-3.1,	183	W135E2	-0.5,	-2.8,	193	2	3	1	0	0
135	W137E1	-4.4,	-2.6,	203	W136E2	-0.5,	-2.8,	193	2	3	1	0	0
136	W138E1	4.4,	-2.6,	203	W133E2	-0.5,	-2.8,	193	2	3	1	0	0
137	W241E1	-4.4,	-2.6,	203	W138E2	-0.5,	-2.3,	213	2	3	1	0	0
138	W183E1	4.4,	-2.6,	203	W139E2	-0.5,	-2.3,	213	2	3	1	0	0
139	W141E1	-3.5,	-2,	223	W140E2	-0.5,	-2.3,	213	2	3	1	0	0
140	W142E1	3.5,	-2,	223	W137E2	-0.5,	-2.3,	213	2	3	1	0	0
141	W245E1	-3.5,	-2,	223	W142E2	-0.2,	-1.9,	228	2	3	1	0	0
142	W187E1	3.5,	-2,	223	W143E2	-0.2,	-1.9,	228	2	3	1	0	0
143	W249E1	-3,	-1.7,	233	W144E2	-0.2,	-1.9,	228	2	3	1	0	0
144	W191E1	3,	-1.7,	233	W141E2	-0.2,	-1.9,	228	2	3	1	0	0
145	W149E1	13,	-7.5,	23	W146E2	6.5,	4.3,	13	2	3	1	0	0
146	W150E1	0,	15.1,	23	W147E2	6.5,	4.3,	13	2	3	1	0	0
147	W626E1	14,	-8.1,	3	W148E2	6.5,	4.3,	13	2	3	1	0	0
148	W195E1	0,	16.2,	3	W145E2	6.5,	4.3,	13	2	3	1	0	0
149	W21E2	13,	-7.5,	23	W150E2	6.5,	3.2,	33	2	3	1	0	0
150	W193E1	0,	15.1,	23	W151E2	6.5,	3.2,	33	2	3	1	0	0
151	W153E1	12.1,	-7,	43	W152E2	6.5,	3.2,	33	2	3	1	0	0
152	W154E1	0,	14,	43	W149E2	6.5,	3.2,	33	2	3	1	0	0
153	W22E2	12.1,	-7,	43	W154E2	6,	2.9,	53	2	3	1	0	0
154	W199E1	0,	14,	43	W155E2	6,	2.9,	53	2	3	1	0	0
155	W157E1	11.1,	-6.4,	63	W156E2	6,	2.9,	53	2	3	1	0	0
156	W158E1	0,	12.9,	63	W153E2	6,	2.9,	53	2	3	1	0	0
157	W23E2	11.1,	-6.4,	63	W158E2	5.6,	2.7,	73	2	3	1	0	0
158	W203E1	0,	12.9,	63	W159E2	5.6,	2.7,	73	2	3	1	0	0
159	W161E1	10.2,	-5.9,	83	W160E2	5.6,	2.7,	73	2	3	1	0	0
160	W162E1	0,	11.7,	83	W157E2	5.6,	2.7,	73	2	3	1	0	0
161	W24E2	10.2,	-5.9,	83	W162E2	5.1,	2.4,	93	2	3	1	0	0
162	W207E1	0,	11.7,	83	W163E2	5.1,	2.4,	93	2	3	1	0	0
163	W165E1	9.2,	-5.3,	103	W164E2	5.1,	2.4,	93	2	3	1	0	0
164	W166E1	0,	10.6,	103	W161E2	5.1,	2.4,	93	2	3	1	0	0
165	W25E2	9.2,	-5.3,	103	W166E2	4.6,	2.1,	113	2	3	1	0	0
166	W211E1	0,	10.6,	103	W167E2	4.6,	2.1,	113	2	3	1	0	0
167	W169E1	8.3,	-4.8,	123	W168E2	4.6,	2.1,	113	2	3	1	0	0
168	W170E1	0,	9.5,	123	W165E2	4.6,	2.1,	113	2	3	1	0	0
169	W26E2	8.3,	-4.8,	123	W170E2	4.1,	1.8,	133	2	3	1	0	0
170	W215E1	0,	9.5,	123	W171E2	4.1,	1.8,	133	2	3	1	0	0
171	W173E1	7.3,	-4.2,	143	W172E2	4.1,	1.8,	133	2	3	1	0	0
172	W174E1	0,	8.4,	143	W169E2	4.1,	1.8,	133	2	3	1	0	0
173	W559E1	7.3,	-4.2,	143	W174E2	3.7,	1.6,	153	2	3	1	0	0
174	W219E1	0,	8.4,	143	W175E2	3.7,	1.6,	153	2	3	1	0	0
175	W177E1	6.3,	-3.7,	163	W176E2	3.7,	1.6,	153	2	3	1	0	0
176	W178E1	0,	7.3,	163	W173E2	3.7,	1.6,	153	2	3	1	0	0

177	W568E1	6.3,	-3.7,	163	W178E2	3.2,	1.3,	173	2	3	1	0	0
178	W223E1	0,	7.3,	163	W179E2	3.2,	1.3,	173	2	3	1	0	0
179	W181E1	5.4,	-3.1,	183	W180E2	3.2,	1.3,	173	2	3	1	0	0
180	W182E1	0,	6.2,	183	W177E2	3.2,	1.3,	173	2	3	1	0	0
181	W586E1	5.4,	-3.1,	183	W182E2	2.7,	1,	193	2	3	1	0	0
182	W236E1	0,	6.2,	183	W183E2	2.7,	1,	193	2	3	1	0	0
183	W185E1	4.4,	-2.6,	203	W184E2	2.7,	1,	193	2	3	1	0	0
184	W186E1	0,	5.1,	203	W181E2	2.7,	1,	193	2	3	1	0	0
185	W604E1	4.4,	-2.6,	203	W186E2	2.2,	0.7,	213	2	3	1	0	0
186	W240E1	0,	5.1,	203	W187E2	2.2,	0.7,	213	2	3	1	0	0
187	W189E1	3.5,	-2,	223	W188E2	2.2,	0.7,	213	2	3	1	0	0
188	W190E1	0,	4,	223	W185E2	2.2,	0.7,	213	2	3	1	0	0
189	W39E2	3.5,	-2,	223	W190E2	1.7,	0.7,	228	2	3	1	0	0
190	W244E1	0,	4,	223	W191E2	1.7,	0.7,	228	2	3	1	0	0
191	W256E1	3,	-1.7,	233	W192E2	1.7,	0.7,	228	2	3	1	0	0
192	W248E1	0,	3.5,	233	W189E2	1.7,	0.7,	228	2	3	1	0	0
193	W197E1	0,	15.1,	23	W194E2	-7,	3.5,	13	2	3	1	0	0
194	W198E1	-13,	-7.5,	23	W195E2	-7,	3.5,	13	2	3	1	0	0
195	W625E1	0,	16.2,	3	W196E2	-7,	3.5,	13	2	3	1	0	0
196	W624E1	-14,	-8.1,	3	W193E2	-7,	3.5,	13	2	3	1	0	0
197	W41E2	0,	15.1,	23	W198E2	-6,	4,	33	2	3	1	0	0
198	W1E2	-13,	-7.5,	23	W199E2	-6,	4,	33	2	3	1	0	0
199	W201E1	0,	14,	43	W200E2	-6,	4,	33	2	3	1	0	0
200	W202E1	-12.1,	-7,	43	W197E2	-6,	4,	33	2	3	1	0	0
201	W42E2	0,	14,	43	W202E2	-5.6,	3.8,	53	2	3	1	0	0
202	W2E2	-12.1,	-7,	43	W203E2	-5.6,	3.8,	53	2	3	1	0	0
203	W205E1	0,	12.9,	63	W204E2	-5.6,	3.8,	53	2	3	1	0	0
204	W206E1	-11.1,	-6.4,	63	W201E2	-5.6,	3.8,	53	2	3	1	0	0
205	W43E2	0,	12.9,	63	W206E2	-5.1,	3.5,	73	2	3	1	0	0
206	W3E2	-11.1,	-6.4,	63	W207E2	-5.1,	3.5,	73	2	3	1	0	0
207	W209E1	0,	11.7,	83	W208E2	-5.1,	3.5,	73	2	3	1	0	0
208	W210E1	-10.2,	-5.9,	83	W205E2	-5.1,	3.5,	73	2	3	1	0	0
209	W44E2	0,	11.7,	83	W210E2	-4.6,	3.2,	93	2	3	1	0	0
210	W4E2	-10.2,	-5.9,	83	W211E2	-4.6,	3.2,	93	2	3	1	0	0
211	W213E1	0,	10.6,	103	W212E2	-4.6,	3.2,	93	2	3	1	0	0
212	W214E1	-9.2,	-5.3,	103	W209E2	-4.6,	3.2,	93	2	3	1	0	0
213	W45E2	0,	10.6,	103	W214E2	-4.1,	2.9,	113	2	3	1	0	0
214	W5E2	-9.2,	-5.3,	103	W215E2	-4.1,	2.9,	113	2	3	1	0	0
215	W217E1	0,	9.5,	123	W216E2	-4.1,	2.9,	113	2	3	1	0	0
216	W218E1	-8.3,	-4.8,	123	W213E2	-4.1,	2.9,	113	2	3	1	0	0
217	W46E2	0,	9.5,	123	W218E2	-3.7,	2.7,	133	2	3	1	0	0
218	W6E2	-8.3,	-4.8,	123	W219E2	-3.7,	2.7,	133	2	3	1	0	0
219	W221E1	0,	8.4,	143	W220E2	-3.7,	2.7,	133	2	3	1	0	0
220	W222E1	-7.3,	-4.2,	143	W217E2	-3.7,	2.7,	133	2	3	1	0	0
221	W451E1	0,	8.4,	143	W222E2	-3.2,	2.4,	153	2	3	1	0	0
222	W505E1	-7.3,	-4.2,	143	W223E2	-3.2,	2.4,	153	2	3	1	0	0
223	W234E1	0,	7.3,	163	W233E2	-3.2,	2.4,	153	2	3	1	0	0
224	W284E2	-1.5,	.9,	278	W254E2	-3,	-1.7,	278	2	3	1	0	0
225	W278E2	1.5,	.9,	278	W266E2	0,	3.5,	278	2	3	1	0	0
226	W272E2	0,	-1.7,	278	W260E2	3,	-1.7,	278	2	3	1	0	0
227	W285E2	-1.5,	.9,	283	W255E2	-3,	-1.7,	283	2	3	1	0	0
228	W273E2	0,	-1.7,	283	W261E2	3,	-1.7,	283	2	3	1	0	0
229	W279E2	1.5,	.9,	283	W267E2	0,	3.5,	283	2	3	1	0	0
230	W262E2	0,	3.5,	238	W263E1	0,	3.5,	243	2	3	1	0	0
231	W250E2	-3,	-1.7,	238	W251E1	-3,	-1.7,	243	2	3	1	0	0
232	W256E2	3,	-1.7,	238	W257E1	3,	-1.7,	243	2	3	1	0	0
233	W235E1	-6.3,	-3.7,	163	W221E2	-3.2,	2.4,	153	2	3	1	0	0
234	W460E1	0,	7.3,	163	W235E2	-2.6957,2.10865,		173	2	3	1	0	0
235	W514E1	-6.3,	-3.7,	163	W236E2	-2.6957,2.10865,		173	2	3	1	0	0
236	W238E1	0,	6.2,	183	W237E2	-2.6957,2.10865,		173	2	3	1	0	0
237	W239E1	-5.4,	-3.1,	183	W234E2	-2.6957,2.10865,		173	2	3	1	0	0
238	W478E1	0,	6.2,	183	W239E2	-2.2174,1.83251,		193	2	3	1	0	0
239	W532E1	-5.4,	-3.1,	183	W240E2	-2.2174,1.83251,		193	2	3	1	0	0
240	W242E1	0,	5.1,	203	W241E2	-2.2174,1.83251,		193	2	3	1	0	0
241	W243E1	-4.4,	-2.6,	203	W238E2	-2.2174,1.83251,		193	2	3	1	0	0
242	W496E1	0,	5.1,	203	W243E2	-1.7391,1.55638,		213	2	3	1	0	0
243	W550E1	-4.4,	-2.6,	203	W244E2	-1.7391,1.55638,		213	2	3	1	0	0
244	W246E1	0,	4,	223	W245E2	-1.7391,1.55638,		213	2	3	1	0	0
245	W247E1	-3.5,	-2,	223	W242E2	-1.7391,1.55638,		213	2	3	1	0	0
246	W59E2	0,	4,	223	W247E2	-1.5,1.14218,		228	2	3	1	0	0
247	W19E2	-3.5,	-2,	223	W248E2	-1.5,1.14218,		228	2	3	1	0	0
248	W262E1	0,	3.5,	233	W249E2	-1.5,1.14218,		228	2	3	1	0	0
249	W250E1	-3,	-1.7,	233	W246E2	-1.5,1.14218,		228	2	3	1	0	0
250	W286E1	-3,	-1.7,	233	W407E1	-3,	-1.7,	238	3	3	1	0	0
251	W268E1	-3,	-1.7,	243	W252E1	-3,	-1.7,	253	3	3	1	0	0
252	W269E1	-3,	-1.7,	253	W253E1	-3,	-1.7,	263	3	3	1	0	0
253	W270E1	-3,	-1.7,	263	W254E1	-3,	-1.7,	273	3	3	1	0	0
254	W271E1	-3,	-1.7,	273	W255E1	-3,	-1.7,	278	3	3	1	0	0
255	W272E1	-3,	-1.7,	278	W273E1	-3,	-1.7,	283	3	3	1	0	0
256	W287E1	3,	-1.7,	233	W404E1	3,	-1.7,	238	3	3	1	0	0
257	W274E1	3,	-1.7,	243	W258E1	3,	-1.7,	253	3	3	1	0	0
258	W269E2	3,	-1.7,	253	W259E1	3,	-1.7,	263	3	3	1	0	0
259	W270E2	3,	-1.7,	263	W260E1	3,	-1.7,	273	3	3	1	0	0
260	W271E2	3,	-1.7,	273	W261E1	3,	-1.7,	278	3	3	1	0	0
261	W278E1	3,	-1.7,	278	W279E1	3,	-1.7,	283	3	3	1	0	0
262	W313E1	0,	3.5,	233	W413E1	0,	3.5,	238	3	3	1	0	0
263	W280E1	0,	3.5,	243	W264E1	0,	3.5,	253	3	3	1	0	0
264	W275E2	0,	3.5,	253	W265E1	0,	3.5,	263	3	3	1	0	0
265	W276E2	0,	3.5,	263	W266E1	0,	3.5,	273	3	3	1	0	0
266	W277E2	0,	3.5,	273	W267E1	0,	3.5,	278	3	3	1	0	0
267	W284E1	0,	3.5,	278	W285E1	0,	3.5,	283	3	3	1	0	0
268	W288E1	-3,	-1.7,	243	W421E1	0,	-1.7,	243	2	3	1	0	0
269	W281E2	-3,	-1.7,	253	W275E1	3,	-1.7,	253	2	3	1	0	0
270	W282E2	-3,	-1.7,	263	W276E1	3,	-1.7,	263	2	3	1	0	0
271	W283E2	-3,	-1.7,	273	W277E1	3,	-1.7,	273	2	3	1	0	0

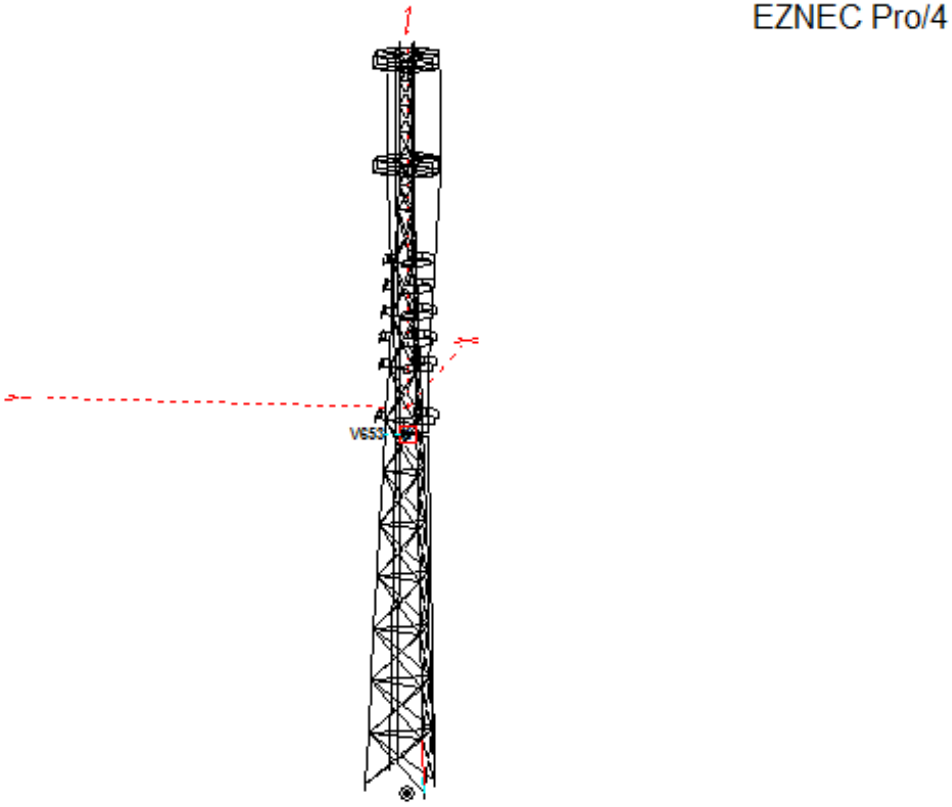
272	W304E1	-3,	-1.7,	278	W377E1	0,	-1.7,	278	2	3	1	0	0
273	W308E1	-3,	-1.7,	283	W376E1	0,	-1.7,	283	2	3	1	0	0
274	W289E1	3,	-1.7,	243	W427E1	1.5,	.9,	243	2	3	1	0	0
275	W293E1	3,	-1.7,	253	W281E1	0,	3.5,	253	2	3	1	0	0
276	W297E1	3,	-1.7,	263	W282E1	0,	3.5,	263	2	3	1	0	0
277	W301E1	3,	-1.7,	273	W283E1	0,	3.5,	273	2	3	1	0	0
278	W305E1	3,	-1.7,	278	W383E1	1.5,	.9,	278	2	3	1	0	0
279	W309E1	3,	-1.7,	283	W382E1	1.5,	.9,	283	2	3	1	0	0
280	W311E1	0,	3.5,	243	W424E1	-1.5,	.9,	243	2	3	1	0	0
281	W317E1	0,	3.5,	253	W292E1	-3,	-1.7,	253	2	3	1	0	0
282	W321E1	0,	3.5,	263	W296E1	-3,	-1.7,	263	2	3	1	0	0
283	W325E1	0,	3.5,	273	W300E1	-3,	-1.7,	273	2	3	1	0	0
284	W329E1	0,	3.5,	278	W380E1	-1.5,	.9,	278	2	3	1	0	0
285	W333E1	0,	3.5,	283	W379E1	-1.5,	.9,	283	2	3	1	0	0
286	W337E1	-3,	-1.7,	233	W287E2	0,	-1.7,	238	2	3	1	0	0
287	W312E1	3,	-1.7,	233	W288E2	0,	-1.7,	238	2	3	1	0	0
288	W290E1	-3,	-1.7,	243	W289E2	0,	-1.7,	238	2	3	1	0	0
289	W291E1	3,	-1.7,	243	W422E1	0,	-1.7,	238	2	3	1	0	0
290	W335E1	-3,	-1.7,	243	W291E2	0,	-1.7,	248	2	3	1	0	0
291	W310E1	3,	-1.7,	243	W292E2	0,	-1.7,	248	2	3	1	0	0
292	W294E1	-3,	-1.7,	253	W293E2	0,	-1.7,	248	2	3	1	0	0
293	W295E1	3,	-1.7,	253	W290E2	0,	-1.7,	248	2	3	1	0	0
294	W341E1	-3,	-1.7,	253	W295E2	0,	-1.7,	258	2	3	1	0	0
295	W316E1	3,	-1.7,	253	W296E2	0,	-1.7,	258	2	3	1	0	0
296	W298E1	-3,	-1.7,	263	W297E2	0,	-1.7,	258	2	3	1	0	0
297	W299E1	3,	-1.7,	263	W294E2	0,	-1.7,	258	2	3	1	0	0
298	W345E1	-3,	-1.7,	263	W299E2	0,	-1.7,	268	2	3	1	0	0
299	W320E1	3,	-1.7,	263	W300E2	0,	-1.7,	268	2	3	1	0	0
300	W302E1	-3,	-1.7,	273	W301E2	0,	-1.7,	268	2	3	1	0	0
301	W303E1	3,	-1.7,	273	W298E2	0,	-1.7,	268	2	3	1	0	0
302	W349E1	-3,	-1.7,	273	W303E2	0,	-1.7,	275.5	2	3	1	0	0
303	W324E1	3,	-1.7,	273	W304E2	0,	-1.7,	275.5	2	3	1	0	0
304	W306E1	-3,	-1.7,	278	W305E2	0,	-1.7,	275.5	2	3	1	0	0
305	W307E1	3,	-1.7,	278	W302E2	0,	-1.7,	275.5	2	3	1	0	0
306	W353E1	-3,	-1.7,	278	W307E2	0,	-1.7,	280.5	2	3	1	0	0
307	W328E1	3,	-1.7,	278	W308E2	0,	-1.7,	280.5	2	3	1	0	0
308	W357E1	-3,	-1.7,	283	W309E2	0,	-1.7,	280.5	2	3	1	0	0
309	W332E1	3,	-1.7,	283	W306E2	0,	-1.7,	280.5	2	3	1	0	0
310	W314E1	3,	-1.7,	243	W311E2	1.5,	.9,	238	2	3	1	0	0
311	W315E1	0,	3.5,	243	W312E2	1.5,	.9,	238	2	3	1	0	0
312	W40E2	3,	-1.7,	233	W313E2	1.5,	.9,	238	2	3	1	0	0
313	W336E1	0,	3.5,	233	W428E1	1.5,	.9,	238	2	3	1	0	0
314	W403E1	3,	-1.7,	243	W315E2	1.5,	.9,	248	2	3	1	0	0
315	W334E1	0,	3.5,	243	W316E2	1.5,	.9,	248	2	3	1	0	0
316	W318E1	3,	-1.7,	253	W317E2	1.5,	.9,	248	2	3	1	0	0
317	W319E1	0,	3.5,	253	W314E2	1.5,	.9,	248	2	3	1	0	0
318	W257E2	3,	-1.7,	253	W319E2	1.5,	.9,	258	2	3	1	0	0
319	W340E1	0,	3.5,	253	W320E2	1.5,	.9,	258	2	3	1	0	0
320	W322E1	3,	-1.7,	263	W321E2	1.5,	.9,	258	2	3	1	0	0
321	W323E1	0,	3.5,	263	W318E2	1.5,	.9,	258	2	3	1	0	0
322	W258E2	3,	-1.7,	263	W323E2	1.5,	.9,	268	2	3	1	0	0
323	W344E1	0,	3.5,	263	W324E2	1.5,	.9,	268	2	3	1	0	0
324	W326E1	3,	-1.7,	273	W325E2	1.5,	.9,	268	2	3	1	0	0
325	W327E1	0,	3.5,	273	W322E2	1.5,	.9,	268	2	3	1	0	0
326	W259E2	3,	-1.7,	273	W327E2	1.5,	.9,	275.5	2	3	1	0	0
327	W348E1	0,	3.5,	273	W328E2	1.5,	.9,	275.5	2	3	1	0	0
328	W330E1	3,	-1.7,	278	W329E2	1.5,	.9,	275.5	2	3	1	0	0
329	W331E1	0,	3.5,	278	W326E2	1.5,	.9,	275.5	2	3	1	0	0
330	W359E1	3,	-1.7,	278	W331E2	1.5,	.9,	280.5	2	3	1	0	0
331	W352E1	0,	3.5,	278	W332E2	1.5,	.9,	280.5	2	3	1	0	0
332	W358E1	3,	-1.7,	283	W333E2	1.5,	.9,	280.5	2	3	1	0	0
333	W356E1	0,	3.5,	283	W330E2	1.5,	.9,	280.5	2	3	1	0	0
334	W338E1	0,	3.5,	243	W335E2	-1.5,	.9,	238	2	3	1	0	0
335	W339E1	-3,	-1.7,	243	W336E2	-1.5,	.9,	238	2	3	1	0	0
336	W60E2	0,	3.5,	233	W337E2	-1.5,	.9,	238	2	3	1	0	0
337	W20E2	-3,	-1.7,	233	W425E1	-1.5,	.9,	238	2	3	1	0	0
338	W412E1	0,	3.5,	243	W339E2	-1.5,	.9,	248	2	3	1	0	0
339	W406E1	-3,	-1.7,	243	W340E2	-1.5,	.9,	248	2	3	1	0	0
340	W342E1	0,	3.5,	253	W341E2	-1.5,	.9,	248	2	3	1	0	0
341	W343E1	-3,	-1.7,	253	W338E2	-1.5,	.9,	248	2	3	1	0	0
342	W263E2	0,	3.5,	253	W343E2	-1.5,	.9,	258	2	3	1	0	0
343	W251E2	-3,	-1.7,	253	W344E2	-1.5,	.9,	258	2	3	1	0	0
344	W346E1	0,	3.5,	263	W345E2	-1.5,	.9,	258	2	3	1	0	0
345	W347E1	-3,	-1.7,	263	W342E2	-1.5,	.9,	258	2	3	1	0	0
346	W264E2	0,	3.5,	263	W347E2	-1.5,	.9,	268	2	3	1	0	0
347	W252E2	-3,	-1.7,	263	W348E2	-1.5,	.9,	268	2	3	1	0	0
348	W350E1	0,	3.5,	273	W349E2	-1.5,	.9,	268	2	3	1	0	0
349	W351E1	-3,	-1.7,	273	W346E2	-1.5,	.9,	268	2	3	1	0	0
350	W265E2	0,	3.5,	273	W351E2	-1.5,	.9,	275.5	2	3	1	0	0
351	W253E2	-3,	-1.7,	273	W352E2	-1.5,	.9,	275.5	2	3	1	0	0
352	W354E1	0,	3.5,	278	W353E2	-1.5,	.9,	275.5	2	3	1	0	0
353	W355E1	-3,	-1.7,	278	W350E2	-1.5,	.9,	275.5	2	3	1	0	0
354	W368E1	0,	3.5,	278	W355E2	-1.5,	.9,	280.5	2	3	1	0	0
355	W362E1	-3,	-1.7,	278	W356E2	-1.5,	.9,	280.5	2	3	1	0	0
356	W367E1	0,	3.5,	283	W357E2	-1.5,	.9,	280.5	2	3	1	0	0
357	W361E1	-3,	-1.7,	283	W354E2	-1.5,	.9,	280.5	2	3	1	0	0
358	W373E1	3,	-1.7,	283	W360E1	13,	-1.7,	283	2	3	1	0	0
359	W374E1	3,	-1.7,	278	W360E2	13,	-1.7,	278	2	3	1	0	0
360	W393E2	13,	-1.7,	283	W394E2	13,	-1.7,	278	2	3	1	0	0
361	W364E1	-3,	-1.7,	283	W363E1	-13,	-1.7,	283	2	3	1	0	0
362	W365E1	-3,	-1.7,	278	W363E2	-13,	-1.7,	278	2	3	1	0	0
363	W385E1	-13,	-1.7,	283	W386E1	-13,	-1.7,	278	2	3	1	0	0
364	W622E1	-3,	-1.7,	283	W366E1	-7.99,	-10.36,	283	2	3	1	0	0
365	W224E2	-3,	-1.7,	278	W366E2	-7.99,	-10.36,	278	2	3	1	0	0
366	W399E2	-7.99,	-10.36,	283	W400E2	-7.99,	-10.36,	278	2	3	1	0	0

367	W370E1	0,	3.5,	283	W369E1	4.99,	12.16,	283	2	3	1	0	0
368	W371E1	0,	3.5,	278	W369E2	4.99,	12.16,	278	2	3	1	0	0
369	W389E2	4.99,	12.16,	283	W390E2	4.99,	12.16,	278	2	3	1	0	0
370	W623E1	0,	3.5,	283	W372E1	-5,	12.16,	283	2	3	1	0	0
371	W225E2	0,	3.5,	278	W372E2	-5,	12.16,	278	2	3	1	0	0
372	W387E2	-5,	12.16,	283	W388E2	-5,	12.16,	278	2	3	1	0	0
373	W621E1	3,	-1.7,	283	W375E1	8,	-10.36,	283	2	3	1	0	0
374	W226E2	3,	-1.7,	278	W375E2	8,	-10.36,	278	2	3	1	0	0
375	W395E2	8,	-10.36,	283	W396E2	8,	-10.36,	278	2	3	1	0	0
376	W228E1	0,	-1.7,	283	W378E1	0,	-11.7,	283	2	3	1	0	0
377	W226E1	0,	-1.7,	278	W378E2	0,	-11.7,	278	2	3	1	0	0
378	W397E2	0,	-11.7,	283	W398E2	0,	-11.7,	278	2	3	1	0	0
379	W227E1	-1.5,	.9,	283	W381E1	-10.16,	5.89,	283	2	3	1	0	0
380	W224E1	-1.5,	.9,	278	W381E2	-10.16,	5.89,	278	2	3	1	0	0
381	W385E2	-10.16,	5.89,	283	W386E2	-10.16,	5.89,	278	2	3	1	0	0
382	W229E1	1.5,	.9,	283	W384E1	10.16,	5.9,	283	2	3	1	0	0
383	W225E1	1.5,	.9,	278	W384E2	10.16,	5.9,	278	2	3	1	0	0
384	W391E2	10.16,	5.9,	283	W392E2	10.16,	5.9,	278	2	3	1	0	0
385	W401E2	-13,	-1.7,	283	W387E1	-10.16,	5.89,	283	2	3	1	0	0
386	W402E2	-13,	-1.7,	278	W388E1	-10.16,	5.89,	278	2	3	1	0	0
387	W379E2	-10.16,	5.89,	283	W389E1	-5,	12.16,	283	2	3	1	0	0
388	W380E2	-10.16,	5.89,	278	W390E1	-5,	12.16,	278	2	3	1	0	0
389	W370E2	-5,	12.16,	283	W391E1	4.99,	12.16,	283	2	3	1	0	0
390	W371E2	-5,	12.16,	278	W392E1	4.99,	12.16,	278	2	3	1	0	0
391	W367E2	4.99,	12.16,	283	W393E1	10.16,	5.9,	283	2	3	1	0	0
392	W368E2	4.99,	12.16,	278	W394E1	10.16,	5.9,	278	2	3	1	0	0
393	W382E2	10.16,	5.9,	283	W395E1	13,	-1.7,	283	2	3	1	0	0
394	W383E2	10.16,	5.9,	278	W396E1	13,	-1.7,	278	2	3	1	0	0
395	W358E2	13,	-1.7,	283	W397E1	8,	-10.36,	283	2	3	1	0	0
396	W359E2	13,	-1.7,	278	W398E1	8,	-10.36,	278	2	3	1	0	0
397	W373E2	8,	-10.36,	283	W399E1	0,	-11.7,	283	2	3	1	0	0
398	W374E2	8,	-10.36,	278	W400E1	0,	-11.7,	278	2	3	1	0	0
399	W376E2	0,	-11.7,	283	W401E1	-7.99,	-10.36,	283	2	3	1	0	0
400	W377E2	0,	-11.7,	278	W402E1	-7.99,	-10.36,	278	2	3	1	0	0
401	W364E2	-7.99,	-10.36,	283	W361E2	-13,	-1.7,	283	2	3	1	0	0
402	W365E2	-7.99,	-10.36,	278	W362E2	-13,	-1.7,	278	2	3	1	0	0
403	W418E1	3,	-1.7,	243	W405E1	13,	-1.7,	243	2	3	1	0	0
404	W419E1	3,	-1.7,	238	W405E2	13,	-1.7,	238	2	3	1	0	0
405	W438E2	13,	-1.7,	243	W439E2	13,	-1.7,	238	2	3	1	0	0
406	W409E1	-3,	-1.7,	243	W408E1	-13,	-1.7,	243	2	3	1	0	0
407	W410E1	-3,	-1.7,	238	W408E2	-13,	-1.7,	238	2	3	1	0	0
408	W430E1	-13,	-1.7,	243	W431E1	-13,	-1.7,	238	2	3	1	0	0
409	W450E2	-3,	-1.7,	243	W411E1	-7.99,	-10.36,	243	2	3	1	0	0
410	W231E1	-3,	-1.7,	238	W411E2	-7.99,	-10.36,	238	2	3	1	0	0
411	W444E2	-7.99,	-10.36,	243	W445E2	-7.99,	-10.36,	238	2	3	1	0	0
412	W415E1	0,	3.5,	243	W414E1	4.99,	12.16,	243	2	3	1	0	0
413	W416E1	0,	3.5,	238	W414E2	4.99,	12.16,	238	2	3	1	0	0
414	W434E2	4.99,	12.16,	243	W435E2	4.99,	12.16,	238	2	3	1	0	0
415	W448E2	0,	3.5,	243	W417E1	-5,	12.16,	243	2	3	1	0	0
416	W230E1	0,	3.5,	238	W417E2	-5,	12.16,	238	2	3	1	0	0
417	W432E2	-5,	12.16,	243	W433E2	-5,	12.16,	238	2	3	1	0	0
418	W449E2	3,	-1.7,	243	W420E1	8,	-10.36,	243	2	3	1	0	0
419	W232E1	3,	-1.7,	238	W420E2	8,	-10.36,	238	2	3	1	0	0
420	W440E2	8,	-10.36,	243	W441E2	8,	-10.36,	238	2	3	1	0	0
421	W449E1	0,	-1.7,	243	W423E1	0,	-11.7,	243	2	3	1	0	0
422	W286E2	0,	-1.7,	238	W423E2	0,	-11.7,	238	2	3	1	0	0
423	W442E2	0,	-11.7,	243	W443E2	0,	-11.7,	238	2	3	1	0	0
424	W450E1	-1.5,	.9,	243	W426E1	-10.16,	5.89,	243	2	3	1	0	0
425	W334E2	-1.5,	.9,	238	W426E2	-10.16,	5.89,	238	2	3	1	0	0
426	W430E2	-10.16,	5.89,	243	W431E2	-10.16,	5.89,	238	2	3	1	0	0
427	W448E1	1.5,	.9,	243	W429E1	10.16,	5.9,	243	2	3	1	0	0
428	W310E2	1.5,	.9,	238	W429E2	10.16,	5.9,	238	2	3	1	0	0
429	W436E2	10.16,	5.9,	243	W437E2	10.16,	5.9,	238	2	3	1	0	0
430	W446E2	-13,	-1.7,	243	W432E1	-10.16,	5.89,	243	2	3	1	0	0
431	W447E2	-13,	-1.7,	238	W433E1	-10.16,	5.89,	238	2	3	1	0	0
432	W424E2	-10.16,	5.89,	243	W434E1	-5,	12.16,	243	2	3	1	0	0
433	W425E2	-10.16,	5.89,	238	W435E1	-5,	12.16,	238	2	3	1	0	0
434	W415E2	-5,	12.16,	243	W436E1	4.99,	12.16,	243	2	3	1	0	0
435	W416E2	-5,	12.16,	238	W437E1	4.99,	12.16,	238	2	3	1	0	0
436	W412E2	4.99,	12.16,	243	W438E1	10.16,	5.9,	243	2	3	1	0	0
437	W413E2	4.99,	12.16,	238	W439E1	10.16,	5.9,	238	2	3	1	0	0
438	W427E2	10.16,	5.9,	243	W440E1	13,	-1.7,	243	2	3	1	0	0
439	W428E2	10.16,	5.9,	238	W441E1	13,	-1.7,	238	2	3	1	0	0
440	W403E2	13,	-1.7,	243	W442E1	8,	-10.36,	243	2	3	1	0	0
441	W404E2	13,	-1.7,	238	W443E1	8,	-10.36,	238	2	3	1	0	0
442	W418E2	8,	-10.36,	243	W444E1	0,	-11.7,	243	2	3	1	0	0
443	W419E2	8,	-10.36,	238	W445E1	0,	-11.7,	238	2	3	1	0	0
444	W421E2	0,	-11.7,	243	W446E1	-7.99,	-10.36,	243	2	3	1	0	0
445	W422E2	0,	-11.7,	238	W447E1	-7.99,	-10.36,	238	2	3	1	0	0
446	W409E2	-7.99,	-10.36,	243	W406E2	-13,	-1.7,	243	2	3	1	0	0
447	W410E2	-7.99,	-10.36,	238	W407E2	-13,	-1.7,	238	2	3	1	0	0
448	W274E2	1.5,	.9,	243	W230E2	0,	3.5,	243	2	3	1	0	0
449	W268E2	0,	-1.7,	243	W232E2	3,	-1.7,	243	2	3	1	0	0
450	W280E2	-1.5,	.9,	243	W231E2	-3,	-1.7,	243	2	3	1	0	0
451	W47E2	0,	8.4,	143	W452E1	0,	11.4,	143	2	3	1	0	0
452	W453E1	0,	11.4,	143	W459E1	-6,	11.4,	143	2	3	1	0	0
453	W457E1	0,	11.4,	143	W458E1	6,	11.4,	143	2	3	1	0	0
454	W48E2	0,	8.235,	146	W455E1	0,	11.4,	146	2	3	1	0	0
455	W456E1	0,	11.4,	146	W459E2	-6,	11.4,	146	2	3	1	0	0
456	W457E2	0,	11.4,	146	W458E2	6,	11.4,	146	2	3	1	0	0
457	W451E2	0,	11.4,	143	W454E2	0,	11.4,	146	2	3	1	0	0
458	W453E2	6,	11.4,	143	W456E2	6,	11.4,	146	2	3	1	0	0
459	W452E2	-6,	11.4,	143	W455E2	-6,	11.4,	146	2	3	1	0	0
460	W49E2	0,	7.3,	163	W461E1	0,	10.3,	163	2	3	1	0	0
461	W462E1	0,	10.3,	163	W468E1	-6,	10.3,	163	2	3	1	0	0

462	W466E1	0, 10.3,	163	W467E1	6, 10.3,	163	2	3	1	0	0
463	W50E2	0, 7.135,	166	W464E1	0, 10.3,	166	2	3	1	0	0
464	W465E1	0, 10.3,	166	W468E2	-6, 10.3,	166	2	3	1	0	0
465	W466E2	0, 10.3,	166	W467E2	6, 10.3,	166	2	3	1	0	0
466	W460E2	0, 10.3,	163	W463E2	0, 10.3,	166	2	3	1	0	0
467	W462E2	6, 10.3,	163	W465E2	6, 10.3,	166	2	3	1	0	0
468	W461E2	-6, 10.3,	163	W464E2	-6, 10.3,	166	2	3	1	0	0
469	W51E2	0, 6.75,	173	W470E1	0, 9.75,	173	2	3	1	0	0
470	W471E1	0, 9.75,	173	W477E1	-6, 9.75,	173	2	3	1	0	0
471	W475E1	0, 9.75,	173	W476E1	6, 9.75,	173	2	3	1	0	0
472	W52E2	0, 6.585,	176	W473E1	0, 9.75,	176	2	3	1	0	0
473	W474E1	0, 9.75,	176	W477E2	-6, 9.75,	176	2	3	1	0	0
474	W475E2	0, 9.75,	176	W476E2	6, 9.75,	176	2	3	1	0	0
475	W469E2	0, 9.75,	173	W472E2	0, 9.75,	176	2	3	1	0	0
476	W471E2	6, 9.75,	173	W474E2	6, 9.75,	176	2	3	1	0	0
477	W470E2	-6, 9.75,	173	W473E2	-6, 9.75,	176	2	3	1	0	0
478	W53E2	0, 6.2,	183	W479E1	0, 9.2,	183	2	3	1	0	0
479	W480E1	0, 9.2,	183	W486E1	-6, 9.2,	183	2	3	1	0	0
480	W484E1	0, 9.2,	183	W485E1	6, 9.2,	183	2	3	1	0	0
481	W54E2	0, 6.035,	186	W482E1	0, 9.2,	186	2	3	1	0	0
482	W483E1	0, 9.2,	186	W486E2	-6, 9.2,	186	2	3	1	0	0
483	W484E2	0, 9.2,	186	W485E2	6, 9.2,	186	2	3	1	0	0
484	W478E2	0, 9.2,	183	W481E2	0, 9.2,	186	2	3	1	0	0
485	W480E2	6, 9.2,	183	W483E2	6, 9.2,	186	2	3	1	0	0
486	W479E2	-6, 9.2,	183	W482E2	-6, 9.2,	186	2	3	1	0	0
487	W55E2	0, 5.65,	193	W488E1	0, 8.65,	193	2	3	1	0	0
488	W489E1	0, 8.65,	193	W495E1	-6, 8.65,	193	2	3	1	0	0
489	W493E1	0, 8.65,	193	W494E1	6, 8.65,	193	2	3	1	0	0
490	W56E2	0, 5.485,	196	W491E1	0, 8.65,	196	2	3	1	0	0
491	W492E1	0, 8.65,	196	W495E2	-6, 8.65,	196	2	3	1	0	0
492	W493E2	0, 8.65,	196	W494E2	6, 8.65,	196	2	3	1	0	0
493	W487E2	0, 8.65,	193	W490E2	0, 8.65,	196	2	3	1	0	0
494	W489E2	6, 8.65,	193	W492E2	6, 8.65,	196	2	3	1	0	0
495	W488E2	-6, 8.65,	193	W491E2	-6, 8.65,	196	2	3	1	0	0
496	W57E2	0, 5.1,	203	W497E1	0, 8.1,	203	2	3	1	0	0
497	W498E1	0, 8.1,	203	W504E1	-6, 8.1,	203	2	3	1	0	0
498	W502E1	0, 8.1,	203	W503E1	6, 8.1,	203	2	3	1	0	0
499	W58E2	0, 4.935,	206	W500E1	0, 8.1,	206	2	3	1	0	0
500	W501E1	0, 8.1,	206	W504E2	-6, 8.1,	206	2	3	1	0	0
501	W502E2	0, 8.1,	206	W503E2	6, 8.1,	206	2	3	1	0	0
502	W496E2	0, 8.1,	203	W499E2	0, 8.1,	206	2	3	1	0	0
503	W498E2	6, 8.1,	203	W501E2	6, 8.1,	206	2	3	1	0	0
504	W497E2	-6, 8.1,	203	W500E2	-6, 8.1,	206	2	3	1	0	0
505	W7E2	-7.3, -4.2,	143	W506E1	-9.8727, -5.7,	143	2	3	1	0	0
506	W507E1	-9.8727, -5.7,	143	W513E1	-6.8727,-10.896,	143	2	3	1	0	0
507	W511E1	-9.8727, -5.7,	143	W512E1	-12.873,-.50385,	143	2	3	1	0	0
508	W8E2	-7.1317,-4.1175,	146	W509E1	-9.8727, -5.7,	146	2	3	1	0	0
509	W510E1	-9.8727, -5.7,	146	W513E2	-6.8727,-10.896,	146	2	3	1	0	0
510	W511E2	-9.8727, -5.7,	146	W512E2	-12.873,-.50385,	146	2	3	1	0	0
511	W505E2	-9.8727, -5.7,	143	W508E2	-9.8727, -5.7,	146	2	3	1	0	0
512	W507E2	-12.873,-.50385,	143	W510E2	-12.873,-.50385,	146	2	3	1	0	0
513	W506E2	-6.8727,-10.896,	143	W509E2	-6.8727,-10.896,	146	2	3	1	0	0
514	W9E2	-6.3, -3.7,	163	W515E1	-8.9201, -5.15,	163	2	3	1	0	0
515	W516E1	-8.9201, -5.15,	163	W522E1	-5.9201,-10.346,	163	2	3	1	0	0
516	W520E1	-8.9201, -5.15,	163	W521E1	-11.92,.046152,	163	2	3	1	0	0
517	W10E2	-6.1791,-3.5675,	166	W518E1	-8.9201, -5.15,	166	2	3	1	0	0
518	W519E1	-8.9201, -5.15,	166	W522E2	-5.9201,-10.346,	166	2	3	1	0	0
519	W520E2	-8.9201, -5.15,	166	W521E2	-11.92,.046152,	166	2	3	1	0	0
520	W514E2	-8.9201, -5.15,	163	W517E2	-8.9201, -5.15,	166	2	3	1	0	0
521	W516E2	-11.92,.046152,	163	W519E2	-11.92,.046152,	166	2	3	1	0	0
522	W515E2	-5.9201,-10.346,	163	W518E2	-5.9201,-10.346,	166	2	3	1	0	0
523	W11E2	-5.8457, -3.375,	173	W524E1	-8.4437, -4.875,	173	2	3	1	0	0
524	W525E1	-8.4437, -4.875,	173	W531E1	-5.4437,-10.071,	173	2	3	1	0	0
525	W529E1	-8.4437, -4.875,	173	W530E1	-11.444,.321152,	173	2	3	1	0	0
526	W12E2	-5.7028,-3.2925,	176	W527E1	-8.4437, -4.875,	176	2	3	1	0	0
527	W528E1	-8.4437, -4.875,	176	W531E2	-5.4437,-10.071,	176	2	3	1	0	0
528	W529E2	-8.4437, -4.875,	176	W530E2	-11.444,.321152,	176	2	3	1	0	0
529	W523E2	-8.4437, -4.875,	173	W526E2	-8.4437, -4.875,	176	2	3	1	0	0
530	W525E2	-11.444,.321152,	173	W528E2	-11.444,.321152,	176	2	3	1	0	0
531	W524E2	-5.4437,-10.071,	173	W527E2	-5.4437,-10.071,	176	2	3	1	0	0
532	W13E2	-5.4, -3.1,	183	W533E1	-7.9674, -4.6,	183	2	3	1	0	0
533	W534E1	-7.9674, -4.6,	183	W540E1	-4.9674,-9.7962,	183	2	3	1	0	0
534	W538E1	-7.9674, -4.6,	183	W539E1	-10.967,.596152,	183	2	3	1	0	0
535	W14E2	-5.2265,-3.0175,	186	W536E1	-7.9674, -4.6,	186	2	3	1	0	0
536	W537E1	-7.9674, -4.6,	186	W540E2	-4.9674,-9.7962,	186	2	3	1	0	0
537	W538E2	-7.9674, -4.6,	186	W539E2	-10.967,.596152,	186	2	3	1	0	0
538	W532E2	-7.9674, -4.6,	183	W535E2	-7.9674, -4.6,	186	2	3	1	0	0
539	W534E2	-10.967,.596152,	183	W537E2	-10.967,.596152,	186	2	3	1	0	0
540	W533E2	-4.9674,-9.7962,	183	W536E2	-4.9674,-9.7962,	186	2	3	1	0	0
541	W15E2	-4.893, -2.825,	193	W542E1	-7.4911, -4.325,	193	2	3	1	0	0
542	W543E1	-7.4911, -4.325,	193	W549E1	-4.4911,-9.5212,	193	2	3	1	0	0
543	W547E1	-7.4911, -4.325,	193	W548E1	-10.491,.871152,	193	2	3	1	0	0
544	W16E2	-4.7501,-2.7425,	196	W545E1	-7.4911, -4.325,	196	2	3	1	0	0
545	W546E1	-7.4911, -4.325,	196	W549E2	-4.4911,-9.5212,	196	2	3	1	0	0
546	W547E2	-7.4911, -4.325,	196	W548E2	-10.491,.871152,	196	2	3	1	0	0
547	W541E2	-7.4911, -4.325,	193	W544E2	-7.4911, -4.325,	196	2	3	1	0	0
548	W543E2	-10.491,.871152,	193	W546E2	-10.491,.871152,	196	2	3	1	0	0
549	W542E2	-4.4911,-9.5212,	193	W545E2	-4.4911,-9.5212,	196	2	3	1	0	0
550	W17E2	-4.4, -2.6,	203	W551E1	-7.0148, -4.05,	203	2	3	1	0	0
551	W552E1	-7.0148, -4.05,	203	W558E1	-4.0148,-9.2462,	203	2	3	1	0	0
552	W556E1	-7.0148, -4.05,	203	W557E1	-10.015,1.14615,	203	2	3	1	0	0
553	W18E2	-4.2738,-2.4675,	206	W554E1	-7.0148, -4.05,	206	2	3	1	0	0
554	W555E1	-7.0148, -4.05,	206	W558E2	-4.0148,-9.2462,	206	2	3	1	0	0
555	W556E2	-7.0148, -4.05,	206	W557E2	-10.015,1.14615,	206	2	3	1	0	0
556	W550E2	-7.0148, -4.05,	203	W553E2	-7.0148, -4.05,	206	2	3	1	0	0

557	W552E2	-10.015,1.14615,	203	W555E2	-10.015,1.14615,	206	2	3	1	0	0
558	W551E2	-4.0148,-9.2462,	203	W554E2	-4.0148,-9.2462,	206	2	3	1	0	0
559	W27E2	7.3, -4.2,	143	W560E1	9.87269, -5.7,	143	2	3	1	0	0
560	W561E1	9.87269, -5.7,	143	W567E1	12.8727,-.50385,	143	2	3	1	0	0
561	W565E1	9.87269, -5.7,	143	W566E1	6.87269,-10.896,	143	2	3	1	0	0
562	W28E2	7.13172,-4.1175,	146	W563E1	9.87269, -5.7,	146	2	3	1	0	0
563	W564E1	9.87269, -5.7,	146	W567E2	12.8727,-.50385,	146	2	3	1	0	0
564	W565E2	9.87269, -5.7,	146	W566E2	6.87269,-10.896,	146	2	3	1	0	0
565	W559E2	9.87269, -5.7,	143	W562E2	9.87269, -5.7,	146	2	3	1	0	0
566	W561E2	6.87269,-10.896,	143	W564E2	6.87269,-10.896,	146	2	3	1	0	0
567	W560E2	12.8727,-.50385,	143	W563E2	12.8727,-.50385,	146	2	3	1	0	0
568	W29E2	6.3, -3.7,	163	W569E1	8.92006, -5.15,	163	2	3	1	0	0
569	W570E1	8.92006, -5.15,	163	W576E1	11.9201,.046152,	163	2	3	1	0	0
570	W574E1	8.92006, -5.15,	163	W575E1	5.92006,-10.346,	163	2	3	1	0	0
571	W30E2	6.17909,-3.5675,	166	W572E1	8.92006, -5.15,	166	2	3	1	0	0
572	W573E1	8.92006, -5.15,	166	W576E2	11.9201,.046152,	166	2	3	1	0	0
573	W574E2	8.92006, -5.15,	166	W575E2	5.92006,-10.346,	166	2	3	1	0	0
574	W568E2	8.92006, -5.15,	163	W571E2	8.92006, -5.15,	166	2	3	1	0	0
575	W570E2	5.92006,-10.346,	163	W573E2	5.92006,-10.346,	166	2	3	1	0	0
576	W569E2	11.9201,.046152,	163	W572E2	11.9201,.046152,	166	2	3	1	0	0
577	W31E2	5.84567, -3.375,	173	W578E1	8.44375, -4.875,	173	2	3	1	0	0
578	W579E1	8.44375, -4.875,	173	W585E1	11.4437,.321152,	173	2	3	1	0	0
579	W583E1	8.44375, -4.875,	173	W584E1	5.44375,-10.071,	173	2	3	1	0	0
580	W32E2	5.70278,-3.2925,	176	W581E1	8.44375, -4.875,	176	2	3	1	0	0
581	W582E1	8.44375, -4.875,	176	W585E2	11.4437,.321152,	176	2	3	1	0	0
582	W583E2	8.44375, -4.875,	176	W584E2	5.44375,-10.071,	176	2	3	1	0	0
583	W577E2	8.44375, -4.875,	173	W580E2	8.44375, -4.875,	176	2	3	1	0	0
584	W579E2	5.44375,-10.071,	173	W582E2	5.44375,-10.071,	176	2	3	1	0	0
585	W578E2	11.4437,.321152,	173	W581E2	11.4437,.321152,	176	2	3	1	0	0
586	W33E2	5.4, -3.1,	183	W587E1	7.96743, -4.6,	183	2	3	1	0	0
587	W588E1	7.96743, -4.6,	183	W594E1	10.9674,.596152,	183	2	3	1	0	0
588	W592E1	7.96743, -4.6,	183	W593E1	4.96743,-9.7962,	183	2	3	1	0	0
589	W34E2	5.22646,-3.0175,	186	W590E1	7.96743, -4.6,	186	2	3	1	0	0
590	W591E1	7.96743, -4.6,	186	W594E2	10.9674,.596152,	186	2	3	1	0	0
591	W592E2	7.96743, -4.6,	186	W593E2	4.96743,-9.7962,	186	2	3	1	0	0
592	W586E2	7.96743, -4.6,	183	W589E2	7.96743, -4.6,	186	2	3	1	0	0
593	W588E2	4.96743,-9.7962,	183	W591E2	4.96743,-9.7962,	186	2	3	1	0	0
594	W587E2	10.9674,.596152,	183	W590E2	10.9674,.596152,	186	2	3	1	0	0
595	W35E2	4.89304, -2.825,	193	W596E1	7.49112, -4.325,	193	2	3	1	0	0
596	W597E1	7.49112, -4.325,	193	W603E1	10.4911,.871152,	193	2	3	1	0	0
597	W601E1	7.49112, -4.325,	193	W602E1	4.49112,-9.5212,	193	2	3	1	0	0
598	W36E2	4.75015,-2.7425,	196	W599E1	7.49112, -4.325,	196	2	3	1	0	0
599	W600E1	7.49112, -4.325,	196	W603E2	10.4911,.871152,	196	2	3	1	0	0
600	W601E2	7.49112, -4.325,	196	W602E2	4.49112,-9.5212,	196	2	3	1	0	0
601	W595E2	7.49112, -4.325,	193	W598E2	7.49112, -4.325,	196	2	3	1	0	0
602	W597E2	4.49112,-9.5212,	193	W600E2	4.49112,-9.5212,	196	2	3	1	0	0
603	W596E2	10.4911,.871152,	193	W599E2	10.4911,.871152,	196	2	3	1	0	0
604	W37E2	4.4, -2.6,	203	W605E1	7.01481, -4.05,	203	2	3	1	0	0
605	W606E1	7.01481, -4.05,	203	W612E1	10.0148,1.14615,	203	2	3	1	0	0
606	W610E1	7.01481, -4.05,	203	W611E1	4.01481,-9.2462,	203	2	3	1	0	0
607	W38E2	4.27384,-2.4675,	206	W608E1	7.01481, -4.05,	206	2	3	1	0	0
608	W609E1	7.01481, -4.05,	206	W612E2	10.0148,1.14615,	206	2	3	1	0	0
609	W610E2	7.01481, -4.05,	206	W611E2	4.01481,-9.2462,	206	2	3	1	0	0
610	W604E2	7.01481, -4.05,	203	W607E2	7.01481, -4.05,	206	2	3	1	0	0
611	W606E2	4.01481,-9.2462,	203	W609E2	4.01481,-9.2462,	206	2	3	1	0	0
612	W605E2	10.0148,1.14615,	203	W608E2	10.0148,1.14615,	206	2	3	1	0	0
613		0, -12.7,	277	W614E1	0, -12.7,	238	0.5	3	1	0	0
614	W613E2	0, -12.7,	238	W615E1	0, -7.5,	163	0.5	5	1	0	0
615	W614E2	0, -7.5,	163	W616E1	0, -7.5,	158	0.5	3	1	0	0
616	W615E2	0, -7.5,	158	W617E1	0, -7.5,	153	0.5	3	1	0	0
617	W616E2	0, -7.5,	153	W618E1	0, -7.5,	148	0.5	3	1	0	0
618	W617E2	0, -7.5,	148	W619E1	0, -7.5,	143	0.5	3	1	0	0
619	W618E2	0, -7.5,	143	W643E1	0, -7.5,	138	0.5	2	1	0	0
620	W646E1	0, -7.5,	137		0, -10.5,	10	0.5	7	1	0	0
621	W228E2	3, -1.7,	283		3, -1.7,	288	2	2	1	0	0
622	W227E2	-3, -1.7,	283		-3, -1.7,	288	2	2	1	0	0
623	W229E2	0, 3.5,	283		0, 3.5,	288	2	2	1	0	0
624	W1E1	-14, -8.1,	3	GND	-14, -8.1,	0	2	2	1	0	0
625	W41E1	0, 16.2,	3	GND	0, 16.2,	0	2	2	1	0	0
626	W21E1	14, -8.1,	3	GND	14, -8.1,	0	2	2	1	0	0
627		10.9985, 6.35,	277	W628E1	10.9985, 6.35,	238	0.5	3	1	0	0
628	W627E2	10.9985, 6.35,	238	W629E1	6.49519, 3.75,	163	0.5	5	1	0	0
629	W628E2	6.49519, 3.75,	163	W630E1	6.49519, 3.75,	158	0.5	3	1	0	0
630	W629E2	6.49519, 3.75,	158	W631E1	6.49519, 3.75,	153	0.5	3	1	0	0
631	W630E2	6.49519, 3.75,	153	W632E1	6.49519, 3.75,	148	0.5	3	1	0	0
632	W631E2	6.49519, 3.75,	148	W633E1	6.49519, 3.75,	143	0.5	3	1	0	0
633	W632E2	6.49519, 3.75,	143	W645E1	6.49519, 3.75,	138	0.5	2	1	0	0
634	W648E1	6.49519, 3.75,	137		9.09327, 5.25,	10	0.5	7	1	0	0
635		-10.999, 6.35,	277	W636E1	-10.999, 6.35,	238	0.5	3	1	0	0
636	W635E2	-10.999, 6.35,	238	W637E1	-6.4952, 3.75,	163	0.5	5	1	0	0
637	W636E2	-6.4952, 3.75,	163	W638E1	-6.4952, 3.75,	158	0.5	3	1	0	0
638	W637E2	-6.4952, 3.75,	158	W639E1	-6.4952, 3.75,	153	0.5	3	1	0	0
639	W638E2	-6.4952, 3.75,	153	W640E1	-6.4952, 3.75,	148	0.5	3	1	0	0
640	W639E2	-6.4952, 3.75,	148	W641E1	-6.4952, 3.75,	143	0.5	3	1	0	0
641	W640E2	-6.4952, 3.75,	143	W644E1	-6.4952, 3.75,	138	0.5	2	1	0	0
642	W647E1	-6.4952, 3.75,	137		-9.0933, 5.25,	10	0.5	7	1	0	0
643	W619E2	0, -7.5,	138	W644E2	0, 0,	138	0.5	3	1	0	0
644	W641E2	-6.4952, 3.75,	138	W645E2	0, 0,	138	0.5	3	1	0	0
645	W633E2	6.49519, 3.75,	138	W649E1	0, 0,	138	0.5	3	1	0	0
646	W620E1	0, -7.5,	137	W647E2	0, 0,	137	0.5	3	1	0	0
647	W642E1	-6.4952, 3.75,	137	W648E2	0, 0,	137	0.5	3	1	0	0
648	W634E1	6.49519, 3.75,	137	W649E2	0, 0,	137	0.5	3	1	0	0
649	W643E2	0, 0,	138	W646E2	0, 0,	137	0.5	1	1	0	0

A screen shot of the wire model is shown below:



The foregoing was prepared on behalf of Sacred Heart University, Inc. by Clarence M. Beverage of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.

Clarence M. Beverage
for Communications Technologies, Inc.
Marlton, New Jersey
January 8, 2015