APPLICATION FOR CONSTRUCTION PERMIT

FM TRANSLATOR STATION W217BM
CHICAGO, ILLINOIS
FACILITY ID: 91647
91.1 MHZ / 0.099 KW ERP / DA

CHICAGO PUBLIC MEDIA, INC.

APRIL, 2013

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APPLICATION FOR CONSTRUCTION PERMIT

The following engineering statement and attached exhibits have been prepared for **Chicago Public Media, Inc.** ("Chicago"), licensee of FM translator station W217BM at Chicago, Illinois, and are in support of their application for construction permit to modify that facility.[1]

W217BM is currently authorized to operate with an effective radiated power of 99 Watts at a center of radiation of 558 meters AMSL. Under this application, it is proposed that the effective radiated power be maintained at 99 Watts, and the center of radiation decreased to 545.8 meters AMSL. In addition, a directional antenna would be utilized to employ contour protection, and the channel of operation would be changed from 217 to 216.

The proposed facility would continue to be located at the John Hancock Center in Chicago. Due to the proposed modification in the channel of operation, the facility will change from using a non-directional antenna to a directional antenna. The use of this antenna will provide the requisite contour protection to other facilities in the region.

W217BM functions as a fill-in translator for co-located FM NCE station WBEZ at Chicago, Illinois. The function of the translator is to make available to listeners without an "HD Radio" the programming on HD2 stream. The proposed 60 dBu service contour of the modified translator would wholly reside within the predicted 60 dBu service contour. Exhibit E-1 illustrates both 60 dBu service contours.

[1] The Facility ID for W217BM at Chicago, Illinois is 91647.

The proposed change to the facility would constitute a minor change. Exhibit E-2 illustrates the authorized 60 dBu service contour for W217BM along with the proposed service contour. As this exhibit demonstrates, the proposed 60 dBu service contour would be wholly contained within the licensed 60 dBu service contour. Thus, there would be overlap between the two contours.

The proposed facility would comply with the interference provisions of Section 74.1204 of the Commission's Rules. The table below lists the facilities within the FM portion of the spectrum that were considered for purposes of contour overlap.

Callsign	City of License	Channel	Facility ID
WBEZ	Chicago, IL	218	66649
WDCB	Glen Ellyn, IL	215	12281
WRTE	Chicago, IL	214	10794
WGTD	Kenosha, WI	216	23347
980512MP	Valparaiso, IN	216	90651
WKCC	Kankakee, IL	216	33327
980512MV	South Haven, IN	216	90705
971112MA	Valparaiso, IN	216	89070
WMTH	Park Ridge, IL	213	6050
W216AC	Valparaiso, IN	216	70477
WGSL	Loves Park, IL	216	11064
WRTW	Crown Point, IN	216	28188

Exhibit E-3 illustrates the overview of the contour overlap situation for the proposed facility relative to these facilities.[2] This map demonstrates that contour overlap would exist between the proposed translator and other facilities in three situations. Each of these specific situations will be addressed, and compliance with Section 74.1204 will be demonstrated.

[2] Contours illustrated are based on the use of the NED 3-second linearly interpolated terrain database.

The first situation is the small amount of contour overlap that is predicted to occur between the proposed facility and WGTD at Kenosha, Wisconsin. Exhibit E-4 illustrates the area where this predicted contour overlap would occur. As indicated, the area of contour overlap would lie over Lake Michigan. This area of overlap would affect zero population.

The second situation is between the proposed facility and WBEZ at Chicago, Illinois. As was previously mentioned in this technical exhibit, WBEZ and the translator are co-located at the John Hancock Center in Chicago. The effective radiated power of WBEZ is 5.7 kW, while the translator effective radiated power is 99 Watts. Due to the co-location of the two facilities, there is no situation where the field strength from the translator would exceed the U/D ratio permissible under the Commission's Rules. As a result, no interference from W217BM would be caused to WBEZ.

The final situation is to the construction permit for class D facility WRTE at Chicago, Illinois. Exhibit E-5 illustrates that the 66.2 dBu service contour of WRTE approximately intersects the location of the John Hancock Center. Thus, interference is predicted to occur in cases where the field strength from the proposed translator is at least 106.2 dBu.

Due to this relatively high field strength and the low maximum effective radiated power at which the translator would operate, it is more accurate to determine the interference area through the use of calculations than the application of the Commission's propagation curves.

The power density for the proposed facility at a field strength of 106.2 dBu is given by the following equation:

$$\boldsymbol{S = \frac{E^2}{Z_0} = \frac{(0.2042)^2}{377} = 0.0001106}$$

In this equation, S represents the calculated power density in Watts per square meter, E is the electric field intensity, which for 106.2 dBu is 0.2042 Volts per meter, and Z_0 is the characteristic impedance of free space of 377 ohms.

The power density is also given by:

$$\boldsymbol{S = \frac{P}{4\pi R^2}}$$

Where S is the same units, P is the power in Watts (99 Watts in this case), and R is the distance from the antenna. Rearranging the terms in the equation, it can be solved for the distance to the desired power density as follows:

$$\boldsymbol{R^2 = \frac{P}{4\pi S}}$$

The results of these calculations for depression angles of 0 degrees to 90 degrees are tabulated in Exhibit E-6. As the tabulation in Exhibit E-6 demonstrates, the closest point of approach to ground level would be at a depression angle of 50 degrees, where the interference area would reside at or above 223.9 meters AGL. Clearly this interference area would not be expected to affect any resident or transient population were the supporting structure a solitary

tower in a rural area. Since the proposed translator is located, however, in downtown Chicago, additional study of the situation is required.

The tabulation in Exhibit E-6 is predicated on a non-directional antenna at an effective radiated power of 99 Watts. As a result, the potential interference area indicated by this tabulation is greater than what would exist in practice. When the horizontal plane radiation pattern is applied to the tabulation in Exhibit E-6, the potential interference area will be compressed substantially along certain azimuths.

Two additional buildings in the vicinity of the John Hancock Center must be considered as part of this interference study. These buildings are 900 North Michigan, and Water Tower Place. The building known as 900 North Michigan lies along the arc of 293 degrees true to 314 degrees true from the West Tower at JHC, which would be used to support the antenna. The distance along this arc ranges from 453 to 571 feet or 138 to 174 meters. Water Tower Place lies in the arc of 130 to 155 degrees true at a distance of 465 to 344 feet (141.7 to 104.8 meters). The heights of the two buildings are 869 and 860 feet AGL respectively.

For 900 North Michigan, the structure would reside in an arc where the relative field from the antenna is 0.6232 or less in the horizontal plane. This corresponds to an effective radiated power of no greater than 38 Watts. Exhibit E-7 tabulates the vertical plane analysis based on this effective radiated power and the proposed center of radiation AGL. As the tabulation in this exhibit demonstrates, the lowest elevation at which interference to WRTE would be predicted to occur would be at 277.64 meters AGL at a depression angle of 49 degrees true. This corresponds to an

elevation of 910.9 feet AGL, which is above the highest point of 900 North Michigan, thus any interference would overshoot the top of this building.

In the arc in which Water Tower Place lies, the relative field of the antenna varies from a low of 0.501 at 130 degrees true to a high value of 0.881 at 155 degrees true. Thus, the ERP in the horizontal plane across this arc will range from 24.8 Watts at 130 degrees to 76.8 Watts at 155 degrees true. The point of Water Tower Place at 155 degrees true represents the closest point to the W217BM antenna, and as the worst case scenario will be used as the basis for the analysis.

Although the overall height of Water Tower Place is 860 feet AGL, not all of the structure is occupied by residences. The main roof level is at 848 feet AGL due to the window washer garage on top of the structure. Below the main roof line is an architectural parapet of 18 feet in height, and below, including the floor slab thickness, is a mechanical area of 40 feet in height. Thus, the highest occupied elevation in the building would be at 790 feet AGL and below, which corresponds to an elevation of 240.8 meters AGL and below. This elevation, however, would be at the *ceiling* of the top occupied floor, or 10 feet above actual floor space. Exhibit E-8 tabulates the distance from the antenna to the interference area, and illustrates that the closest approach to ground level would be at a depression angle of 50 degrees, where the potential interference elevation is at 240.73 meters AGL and is 104.3 meters distant from the antenna. The closest point of Water Tower Place to the antenna is 104.8 meters, thus, the predicted area of interference would above a zone less than 6 inches from the elevation of the ceiling of the highest occupied floor a foot-and-

a-half outside of the building windows. This is clearly an uninhabited area, and as such the proposed translator would affect zero persons receiving WRTE.[3]

The proposed facility would comply with the provisions of Section 74.1205 as pertains to television broadcast facilities operating on channel six. Under that section of the Commission's Rules, translators operating on channel 216 must consider television broadcast stations on channel six within 80 kilometers of the proposed site. Exhibit E-9 is a spacing study for the proposed translator, and demonstrates that there are no television broadcast channel six facilities within 80 kilometers of the proposed translator facility.

The proposed facility would not constitute a significant environmental impact, and is exempt from environmental processing. The proposed facility would continue to be located at John Hancock Center, which is a developed transmission site for Chicago. The change in the antenna and antenna height would not increase the existing impact already present from the structure.

Under a worst case scenario, the power density from the proposed antenna at ground level would be 0.005 $\mu W/cm^2$. This value is considerably less than the 200 $\mu W/cm^2$ permissible under the uncontrolled environment condition of the applicable safety standard. Thus, exposure hazard to persons at ground level would exist.

The rooftop of the John Hancock center is a controlled environment, and utilizes an RF safety plan. At the rooftop level, the worst case predicted power density would be 16.5 $\mu W/cm^2$, which is considerably less than the 1 mW/cm^2 permissible under controlled environment

[3] It should be noted that Chicago Public Media is the licensee of both W217BM and WRTE.

conditions. Chicago certifies that it will comply with the JHC RF safety program, and will coordinate with all other users of the site to ensure that workers are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards.

The proposed change in the channel of operation would not preclude LPFM operations in the Chicago market. The Chicago market is a spectrum limited market, and as such operates with a 30x30 minute grid. Since a spectrum limited market is under consideration, channels 215 through 217 must be considered for the purposes of this demonstrating no LPFM preclusion would occur.

On channel 215 only one facility needs to be illustrated to demonstrate that W217BM would not preclude LPFM licensing opportunities. WDCB at Glen Ellyn, Illinois is licensed on channel 215 as a class A facility.[4] The LPFM spacing requirement to that facility is 66.5 kilometers. Exhibit E-10 demonstrates that this radius takes in the entire Chicago LPFM grid. Thus, operation on channel 215 is already precluded throughout the Chicago grid regardless of the presence, or lack thereof, of W217BM.

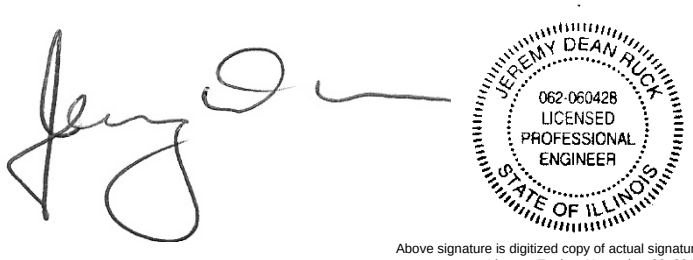
For channel 216, five facilities are considered, although only three are indicated on Exhibit E-11. The three facilities that limit the Chicago grid on channel 216 are WDCB at Glen Ellyn, Illinois, WKCC at Kankakee, Illinois, and the three pending FM applications in the Valparaiso, Indiana area.[5] Although all three applications were considered, the spacing for 971112MA is the only one indicated on the map to reduce clutter. As Exhibit E-11 demonstrates, all of the grid

[4] The Facility ID for WDCB at Glen Ellyn, Illinois is 12281.
[5] The three pending applications on channel 216 in the Valparaiso area are 980512MP, 980512MV, and 971112MA.

would be precluded for LPFM use by virtue of the presence of these five facilities, the proposed translator notwithstanding.

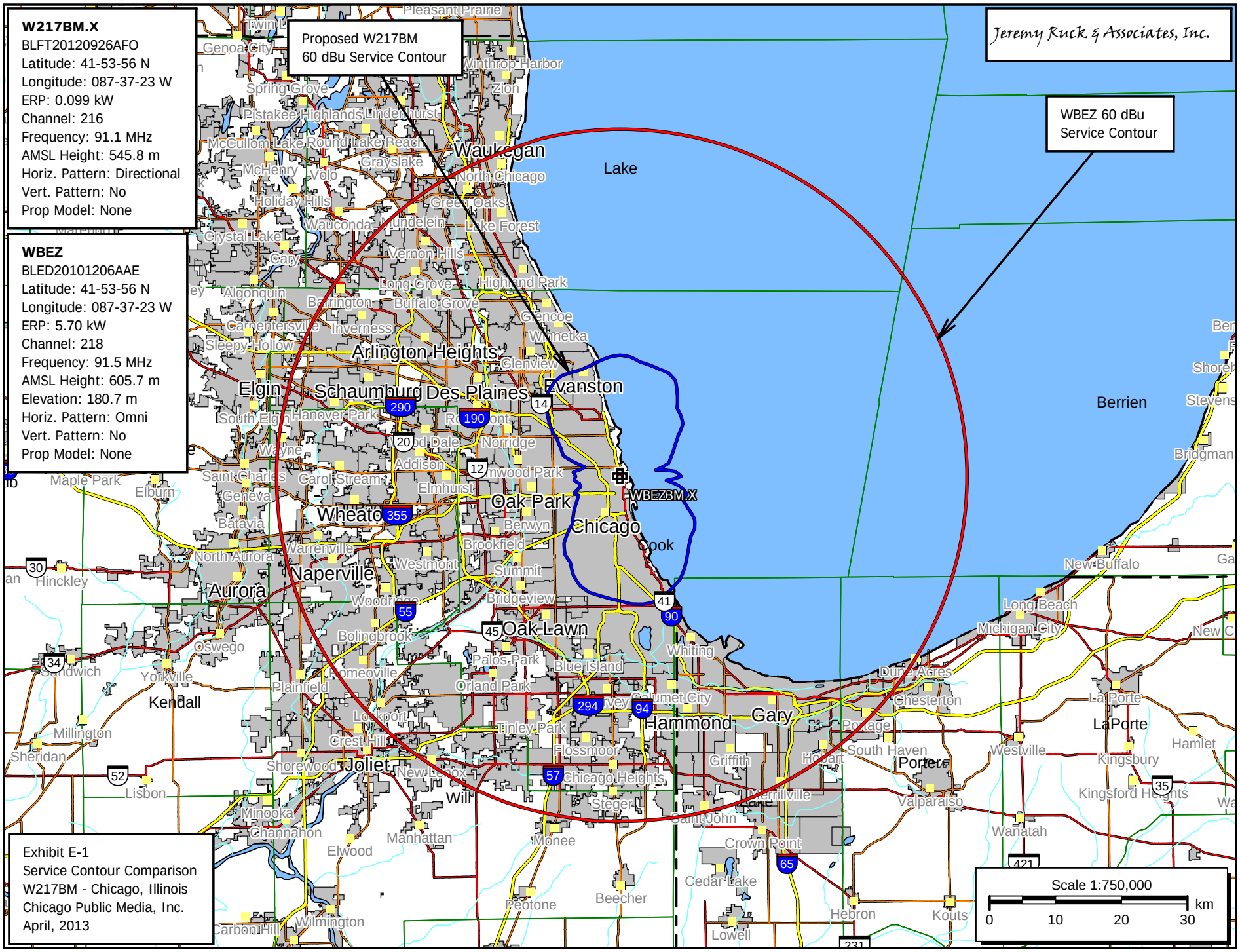
The final channel under consideration is channel 217. This channel is first adjacent to co-located WBEZ. The spacing radius for channel 217 due to WBEZ is 96.5 kilometers. Exhibit E-12 demonstrates that this radius takes in the entire Chicago grid. As a result, no LPFM licensing opportunities would exist on channel 217 regardless of W217BM.

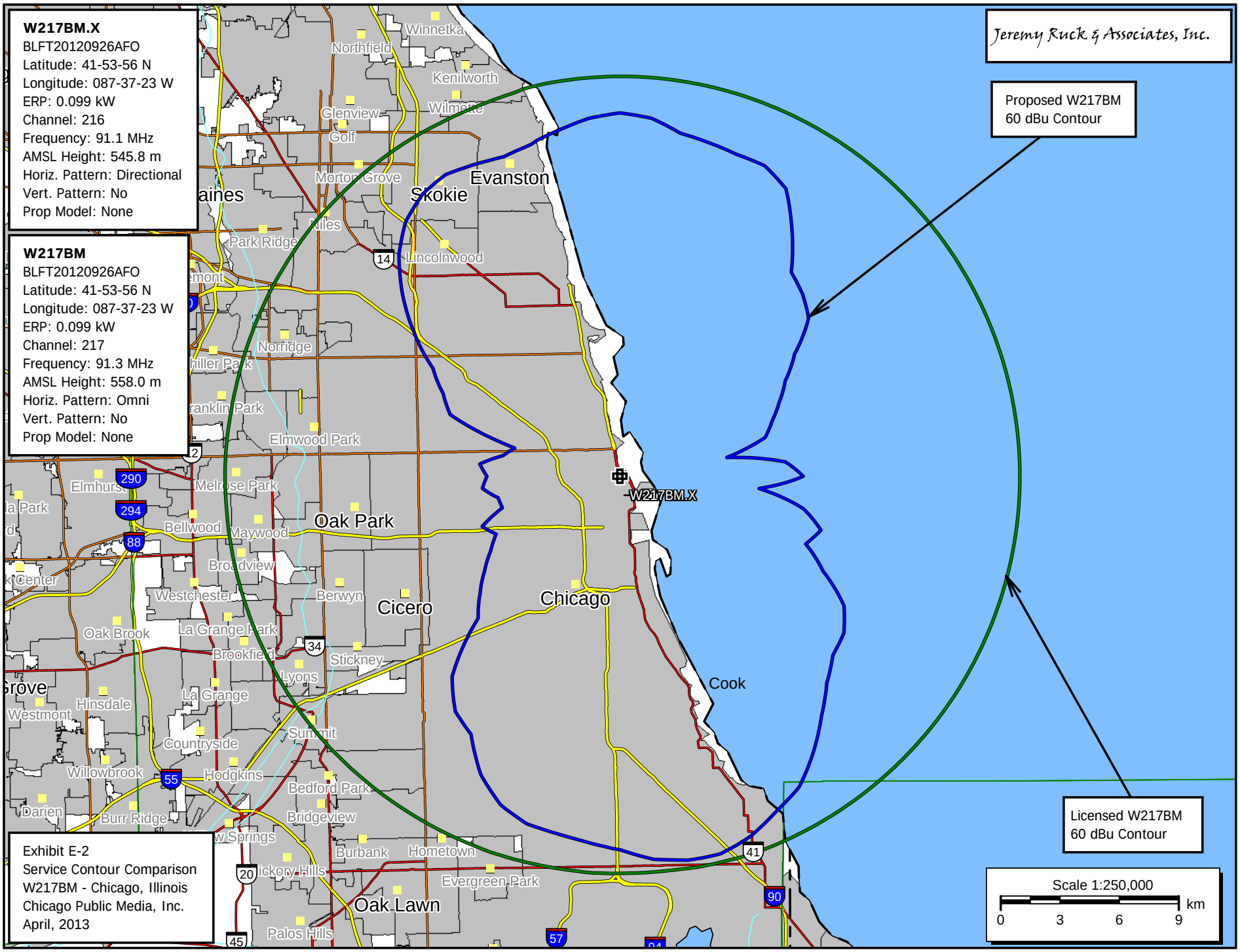
The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.

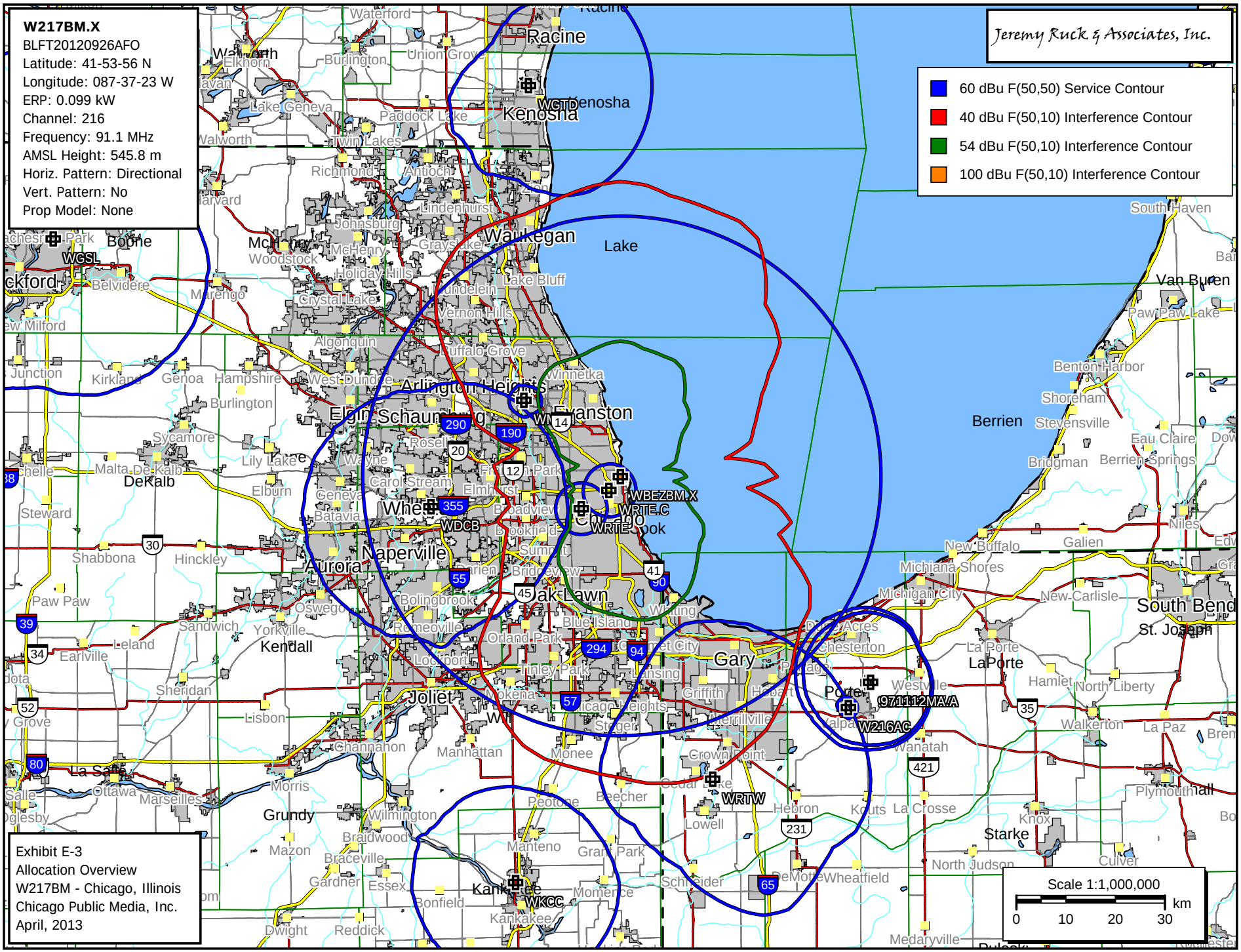


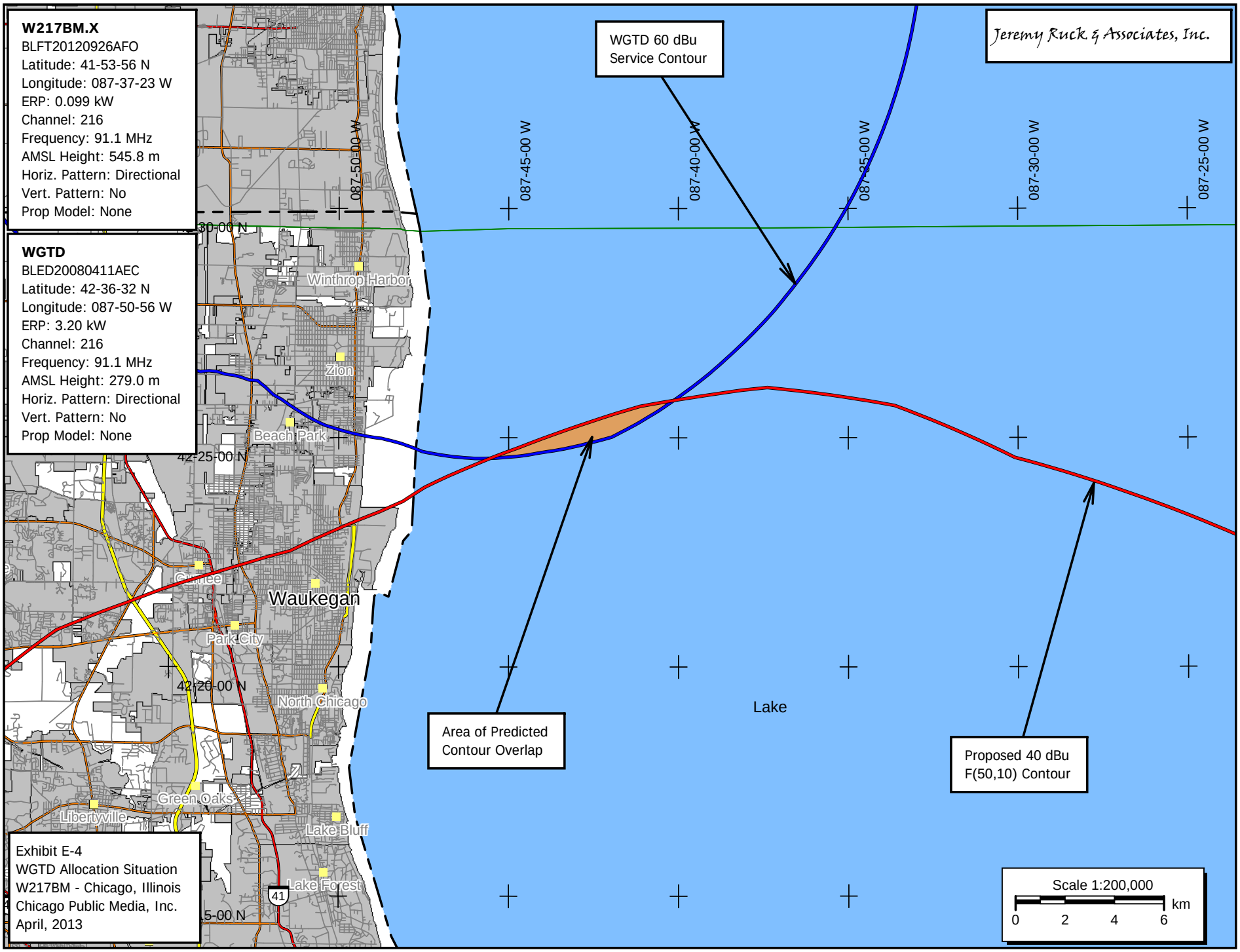
Above signature is digitized copy of actual signature
License Expires November 30, 2013

Jeremy D. Ruck, PE
April 26, 2013


W217BM.X
BLFT20120926AFO
Latitude: 41-53-56 N
Longitude: 087-37-23 W
ERP: 0.099 kW
Channel: 216
Frequency: 91.1 MHz
AMSL Height: 545.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None
WBEZ
BLED20101206AAE
Latitude: 41-53-56 N
Longitude: 087-37-23 W
ERP: 5.70 kW
Channel: 218
Frequency: 91.5 MHz
AMSL Height: 605.7 m
Elevation: 180.7 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None
Proposed W217BM
60 dBu Service Contour
Jeremy Ruck & Associates, Inc.
WBEZ 60 dBu
Service Contour
Lake
Berrien
WBEZBM.X
Waukegan
Arlington Heights
Elgin
Schaumburg
Des Plaines
Evanston
Oak Park
Chicago
Cook
Wheaton
Naperville
Aurora
Oak Lawn
Hammond
Gary
Joliet
Kendall
LaPorte
Exhibit E-1
Service Contour Comparison
W217BM - Chicago, Illinois
Chicago Public Media, Inc.
April, 2013
Scale 1:750,000
km
0
10
20
30


W217BM.X
BLFT20120926AFO
Latitude: 41-53-56 N
Longitude: 087-37-23 W
ERP: 0.099 kW
Channel: 216
Frequency: 91.1 MHz
AMSL Height: 545.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None
W217BM
BLFT20120926AFO
Latitude: 41-53-56 N
Longitude: 087-37-23 W
ERP: 0.099 kW
Channel: 217
Frequency: 91.3 MHz
AMSL Height: 558.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None
Exhibit E-2
Service Contour Comparison
W217BM - Chicago, Illinois
Chicago Public Media, Inc.
April, 2013
Jeremy Ruck & Associates, Inc.
Proposed W217BM
60 dBu Contour
Licensed W217BM
60 dBu Contour
Scale 1:250,000
0 3 6 9 km
W217BM.X
Winnetka
Northfield
Kenilworth
Wilmette
Glenview
Golf
Morton Grove
Evanston
Skokie
Niles
Park Ridge
Lincolnwood
Norridge
Elmwood Park
Melrose Park
Elmhurst
Oak Park
Bellwood
Maywood
Broadview
Westchester
Berwyn
Cicero
Chicago
Cook
Oak Brook
La Grange Park
Brookfield
Stickney
Lyons
La Grange
Hinsdale
Westmont
Countryside
Summit
Willowbrook
Hodgkins
Bedford Park
Darien
Burr Ridge
Bridgeview
Burbank
Hometown
Evergreen Park
Oak Lawn
Palos Hills
14
290
294
88
34
55
20
45
57
41
90


W217BM.X
BLFT20120926AFO
Latitude: 41-53-56 N
Longitude: 087-37-23 W
ERP: 0.099 kW
Channel: 216
Frequency: 91.1 MHz
AMSL Height: 545.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None
Jeremy Ruck & Associates, Inc.
60 dBu F(50,50) Service Contour
40 dBu F(50,10) Interference Contour
54 dBu F(50,10) Interference Contour
100 dBu F(50,10) Interference Contour
Racine
Kenosha
WCTD
Waukegan
Lake
Berrien
Van Buren
South Haven
Benton Harbor
Shoreham
Stevensville
Bridgman
Berrien Springs
Eau Claire
Niles
Galien
New Buffalo
Michiana Shores
Michigan City
New Carlisle
South Bend
St. Joseph
La Porte
Hamlet
North Liberty
Walkerton
La Paz
Plymouth
Knox
Starke
North Judson
Culver
Hebron
Kouts
La Crosse
Lowell
Cedar Lake
Crown Point
Merrillville
Griffith
Hobart
Gary
Chesterton
Porter
Westville
Valparaiso
Wanatah
Monee
Peotone
Beecher
Manteno
Grant Park
Momence
Schneider
Wheatfield
Medaryville
Kankakee
Bonfield
Dwight
Reddick
Gardner
Essex
Braceville
Mazon
Braidwood
Wilmington
Grundy
Morris
Channahon
Manhattan
Lisbon
Sheridan
Joliet
Lockport
Romeoville
Bolingbrook
Naperville
Aurora
Oswego
Yorkville
Sandwich
Kendall
Leland
Earlville
Paw Paw
Shabbona
Hinckley
Steward
DeKalb
Malta
Sycamore
Kirkland
Genoa
Hampshire
Burlington
Belvidere
Boone
Woodstock
McHenry
Crystal Lake
Algonquin
Elgin
Schaumburg
Arlington Heights
Wheeling
Buffalo Grove
Vernon Hills
Lake Bluff
Lindenhurst
Antioch
Grayslake
Johnsburg
Richmond
Twin Lakes
Lake Geneva
Paddock Lake
Burlington
Union Grove
Waterford
Elkhorn
Walworth
Harvard
Marengo
Milford
Junction
Rochelle
Park
WGSL
WBEZBM.X
WRTE.C
WDCB
WRTE
WRTW
WKCC
W216AC
971112MAVA
Exhibit E-3
Allocation Overview
W217BM - Chicago, Illinois
Chicago Public Media, Inc.
April, 2013
Scale 1:1,000,000
0 10 20 30 km


W217BM.X
BLFT20120926AFO
Latitude: 41-53-56 N
Longitude: 087-37-23 W
ERP: 0.099 kW
Channel: 216
Frequency: 91.1 MHz
AMSL Height: 545.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None
WGTD
BLED20080411AEC
Latitude: 42-36-32 N
Longitude: 087-50-56 W
ERP: 3.20 kW
Channel: 216
Frequency: 91.1 MHz
AMSL Height: 279.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None
Exhibit E-4
WGTD Allocation Situation
W217BM - Chicago, Illinois
Chicago Public Media, Inc.
April, 2013
WGTD 60 dBu
Service Contour
Jeremy Ruck & Associates, Inc.
087-45-00 W
087-40-00 W
087-35-00 W
087-30-00 W
087-25-00 W
087-50-00 W
42-30-00 N
42-25-00 N
42-20-00 N
Winthrop Harbor
Zion
Beach Park
Gurnee
Waukegan
Park City
North Chicago
Green Oaks
Libertyville
Lake Bluff
Lake Forest
41
Lake
Area of Predicted
Contour Overlap
Proposed 40 dBu
F(50,10) Contour
Scale 1:200,000
0 2 4 6 km

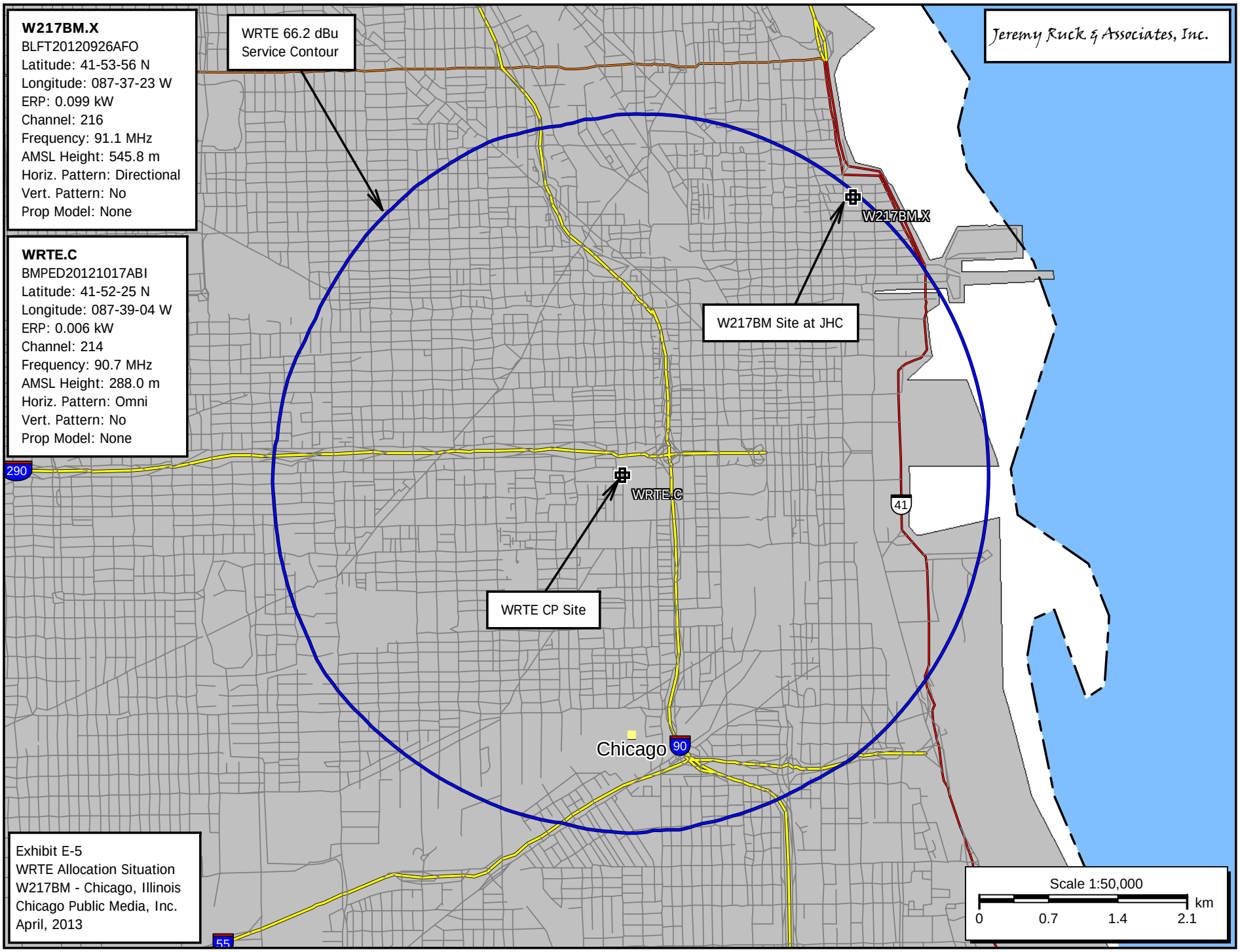
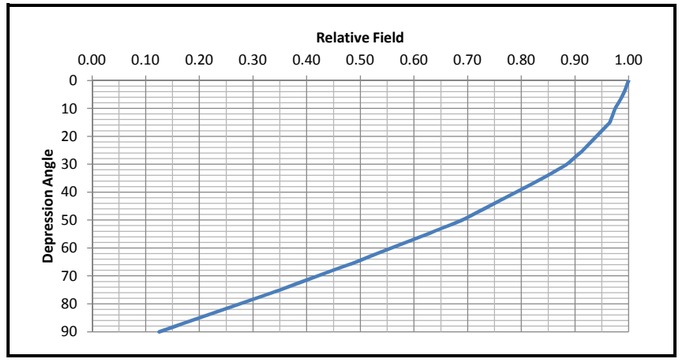
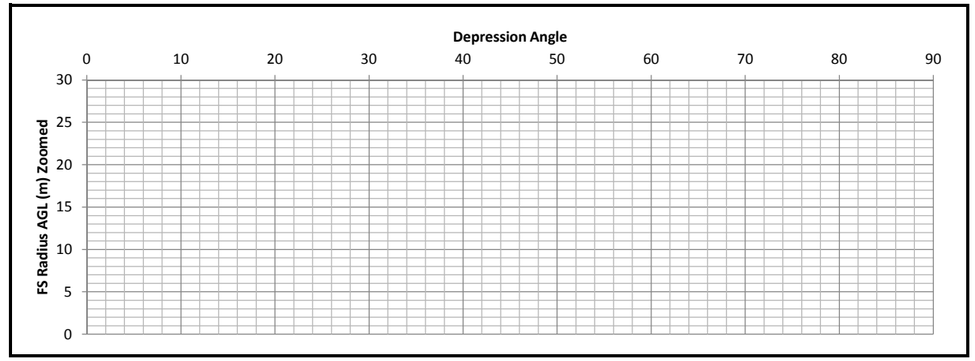

W217BM.X
BLFT20120926AFO
Latitude: 41-53-56 N
Longitude: 087-37-23 W
ERP: 0.099 kW
Channel: 216
Frequency: 91.1 MHz
AMSL Height: 545.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None
WRTE.C
BMPED20121017ABI
Latitude: 41-52-25 N
Longitude: 087-39-04 W
ERP: 0.006 kW
Channel: 214
Frequency: 90.7 MHz
AMSL Height: 288.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None
WRTE 66.2 dBu
Service Contour
Jeremy Ruck & Associates, Inc.
W217BM.X
W217BM Site at JHC
WRTE.C
WRTE CP Site
290
41
90
55
Chicago
Exhibit E-5
WRTE Allocation Situation
W217BM - Chicago, Illinois
Chicago Public Media, Inc.
April, 2013
Scale 1:50,000
0
0.7
1.4
2.1
km

Exhibit E-6
Translator Proximity Interference Analysis
W217BM - Chicago, Illinois

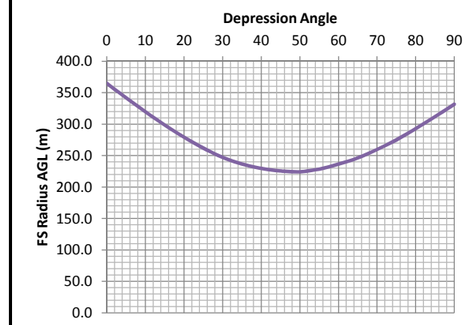
Antenna No:	68	Center of Radiation:	365 m AGL
Manufacturer:	ERI	Effective Radiated Power:	99 Watts
Model:	1192-1CP-DA	FS Contour:	106.2 dBu
Number of Bays:	1	E Field Strength:	0.20417 V/m
Bay Spacing:	Lambda	Z0 (Ohms):	377 Ohms
		Power Density:	0.000110575 W/m^2

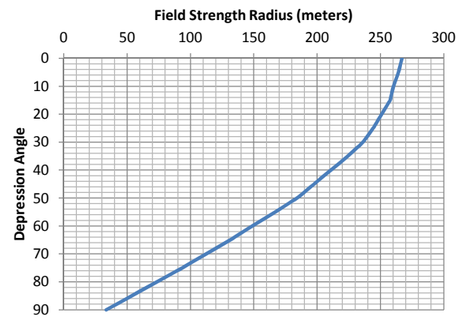


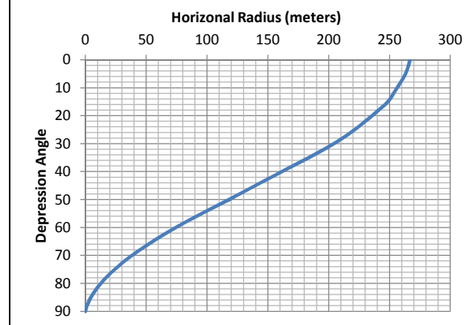


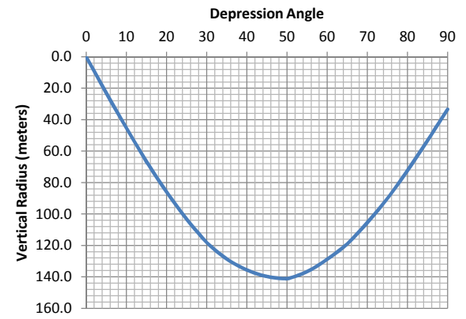
Depression Angle	Relative Field	Relative Power	ERP Watts	Radii in meters			
				Field Strength	Horizontal	Vertical	AGL
0	1.0000	1.0000	99.00	266.92	266.92	0.00	365.00
1	0.9980	0.9960	98.60	266.39	266.35	4.65	360.35
2	0.9960	0.9920	98.21	265.85	265.69	9.28	355.72
3	0.9940	0.9880	97.82	265.32	264.96	13.89	351.11
4	0.9920	0.9841	97.42	264.79	264.14	18.47	346.53
5	0.9900	0.9801	97.03	264.25	263.25	23.03	341.97
6	0.9870	0.9742	96.44	263.45	262.01	27.54	337.46
7	0.9840	0.9683	95.86	262.65	260.69	32.01	332.99
8	0.9810	0.9624	95.27	261.85	259.30	36.44	328.56
9	0.9780	0.9565	94.69	261.05	257.84	40.84	324.16
10	0.9750	0.9506	94.11	260.25	256.29	45.19	319.81
11	0.9730	0.9467	93.73	259.71	254.94	49.56	315.44
12	0.9710	0.9428	93.34	259.18	253.52	53.89	311.11
13	0.9690	0.9390	92.96	258.65	252.02	58.18	306.82
14	0.9670	0.9351	92.57	258.11	250.45	62.44	302.56
15	0.9650	0.9312	92.19	257.58	248.80	66.67	298.33
16	0.9600	0.9216	91.24	256.24	246.32	70.63	294.37
17	0.9550	0.9120	90.29	254.91	243.77	74.53	290.47
18	0.9500	0.9025	89.35	253.58	241.16	78.36	286.64
19	0.9450	0.8930	88.41	252.24	238.50	82.12	282.88
20	0.9400	0.8836	87.48	250.91	235.77	85.81	279.19
21	0.9350	0.8742	86.55	249.57	233.00	89.44	275.56
22	0.9300	0.8649	85.63	248.24	230.16	92.99	272.01
23	0.9250	0.8556	84.71	246.90	227.27	96.47	268.53
24	0.9200	0.8464	83.79	245.57	224.34	99.88	265.12
25	0.9150	0.8372	82.89	244.23	221.35	103.22	261.78
26	0.9090	0.8263	81.80	242.63	218.08	106.36	258.64
27	0.9030	0.8154	80.73	241.03	214.76	109.43	255.57
28	0.8970	0.8046	79.66	239.43	211.40	112.40	252.60
29	0.8910	0.7939	78.59	237.83	208.01	115.30	249.70
30	0.8850	0.7832	77.54	236.23	204.58	118.11	246.89
31	0.8760	0.7674	75.97	233.82	200.43	120.43	244.57
32	0.8670	0.7517	74.42	231.42	196.26	122.63	242.37
33	0.8580	0.7362	72.88	229.02	192.07	124.73	240.27
34	0.8490	0.7208	71.36	226.62	187.87	126.72	238.28
35	0.8400	0.7056	69.85	224.21	183.67	128.60	236.40
36	0.8300	0.6889	68.20	221.54	179.23	130.22	234.78
37	0.8200	0.6724	66.57	218.88	174.80	131.72	233.28
38	0.8100	0.6561	64.95	216.21	170.37	133.11	231.89
39	0.8000	0.6400	63.36	213.54	165.95	134.38	230.62
40	0.7900	0.6241	61.79	210.87	161.53	135.54	229.46
41	0.7800	0.6084	60.23	208.20	157.13	136.59	228.41
42	0.7700	0.5929	58.70	205.53	152.74	137.53	227.47
43	0.7600	0.5776	57.18	202.86	148.36	138.35	226.65
44	0.7500	0.5625	55.69	200.19	144.01	139.06	225.94
45	0.7400	0.5476	54.21	197.52	139.67	139.67	225.33

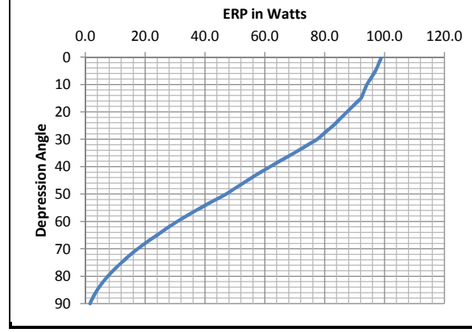
Depression Angle	Relative Field	Relative Power	ERP Watts	Radii in meters			
				Field Strength	Horizontal	Vertical	AGL
45	0.7400	0.5476	54.21	197.52	139.67	139.67	225.33
46	0.7300	0.5329	52.76	194.85	135.36	140.17	224.83
47	0.7200	0.5184	51.32	192.18	131.07	140.55	224.45
48	0.7100	0.5041	49.91	189.51	126.81	140.84	224.16
49	0.7000	0.4900	48.51	186.84	122.58	141.01	223.99
50	0.6900	0.4761	47.13	184.18	118.39	141.09	223.91
51	0.6770	0.4583	45.37	180.71	113.72	140.43	224.57
52	0.6640	0.4409	43.65	177.24	109.12	139.66	225.34
53	0.6510	0.4238	41.96	173.77	104.57	138.78	226.22
54	0.6380	0.4070	40.30	170.30	100.10	137.77	227.23
55	0.6250	0.3906	38.67	166.83	95.69	136.66	228.34
56	0.6114	0.3738	37.01	163.20	91.26	135.30	229.70
57	0.5978	0.3574	35.38	159.57	86.91	133.82	231.18
58	0.5842	0.3413	33.79	155.94	82.63	132.24	232.76
59	0.5706	0.3256	32.23	152.31	78.44	130.55	234.45
60	0.5570	0.3102	30.71	148.68	74.34	128.76	236.24
61	0.5440	0.2959	29.30	145.21	70.40	127.00	238.00
62	0.5310	0.2820	27.91	141.74	66.54	125.14	239.86
63	0.5180	0.2683	26.56	138.27	62.77	123.20	241.80
64	0.5050	0.2550	25.25	134.80	59.09	121.15	243.85
65	0.4920	0.2421	23.96	131.33	55.50	119.02	245.98
66	0.4776	0.2281	22.58	127.48	51.85	116.46	248.54
67	0.4632	0.2146	21.24	123.64	48.31	113.81	251.19
68	0.4488	0.2014	19.94	119.79	44.88	111.07	253.93
69	0.4344	0.1887	18.68	115.95	41.55	108.25	256.75
70	0.4200	0.1764	17.46	112.11	38.34	105.35	259.65
71	0.4060	0.1648	16.32	108.37	35.28	102.47	262.53
72	0.3920	0.1537	15.21	104.63	32.33	99.51	265.49
73	0.3780	0.1429	14.15	100.90	29.50	96.49	268.51
74	0.3640	0.1325	13.12	97.16	26.78	93.40	271.60
75	0.3500	0.1225	12.13	93.42	24.18	90.24	274.76
76	0.3350	0.1122	11.11	89.42	21.63	86.76	278.24
77	0.3200	0.1024	10.14	85.41	19.21	83.23	281.77
78	0.3050	0.0930	9.21	81.41	16.93	79.63	285.37
79	0.2900	0.0841	8.33	77.41	14.77	75.99	289.01
80	0.2750	0.0756	7.49	73.40	12.75	72.29	292.71
81	0.2600	0.0676	6.69	69.40	10.86	68.55	296.45
82	0.2450	0.0600	5.94	65.40	9.10	64.76	300.24
83	0.2300	0.0529	5.24	61.39	7.48	60.93	304.07
84	0.2150	0.0462	4.58	57.39	6.00	57.07	307.93
85	0.2000	0.0400	3.96	53.38	4.65	53.18	311.82
86	0.1850	0.0342	3.39	49.38	3.44	49.26	315.74
87	0.1700	0.0289	2.86	45.38	2.37	45.31	319.69
88	0.1550	0.0240	2.38	41.37	1.44	41.35	323.65
89	0.1400	0.0196	1.94	37.37	0.65	37.36	327.64
90	0.1250	0.0156	1.55	33.37	0.00	33.37	331.63











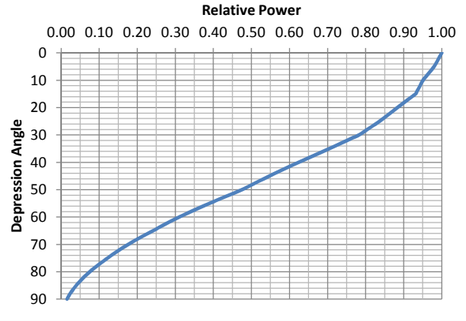
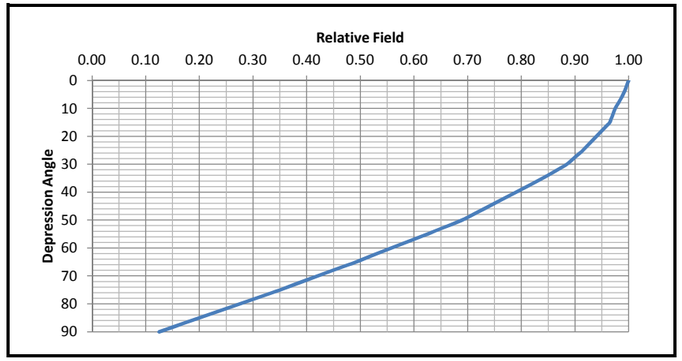
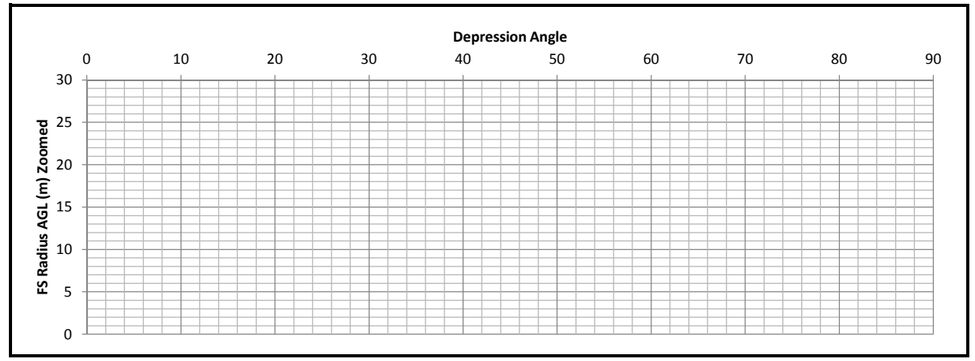


Exhibit E-7
Translator Proximity Interference Analysis
W217BM - Chicago, Illinois

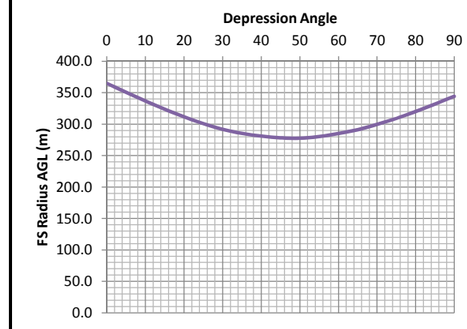
Antenna No:	68	Center of Radiation:	365 m AGL
Manufacturer:	ERI	Effective Radiated Power:	38 Watts
Model:	1192-1CP-DA	FS Contour:	106.2 dBu
Number of Bays:	1	E Field Strength:	0.20417 V/m
Bay Spacing:	Lambda	Z0 (Ohms):	377 Ohms
		Power Density:	0.000110575 W/m^2

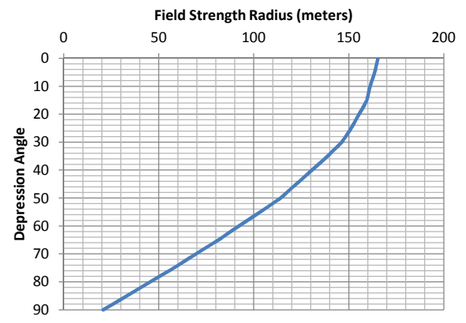


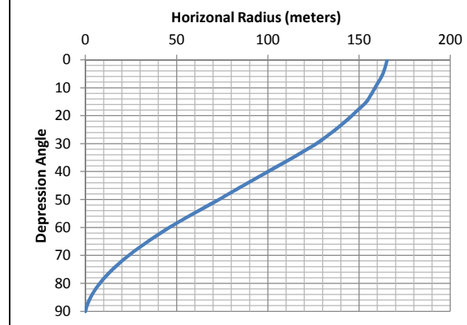


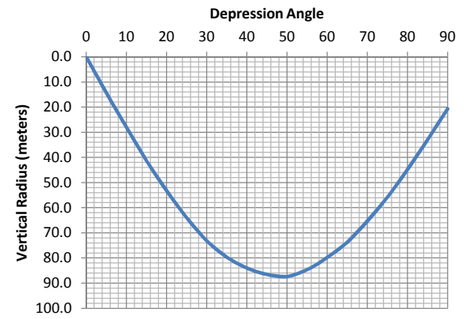
Depression Angle	Relative Field	Relative Power	ERP Watts	Radii in meters			
				Field Strength	Horizontal	Vertical	AGL
0	1.0000	1.0000	38.00	165.37	165.37	0.00	365.00
1	0.9980	0.9960	37.85	165.04	165.01	2.88	362.12
2	0.9960	0.9920	37.70	164.71	164.61	5.75	359.25
3	0.9940	0.9880	37.55	164.38	164.15	8.60	356.40
4	0.9920	0.9841	37.39	164.05	163.65	11.44	353.56
5	0.9900	0.9801	37.24	163.72	163.09	14.27	350.73
6	0.9870	0.9742	37.02	163.22	162.33	17.06	347.94
7	0.9840	0.9683	36.79	162.72	161.51	19.83	345.17
8	0.9810	0.9624	36.57	162.23	160.65	22.58	342.42
9	0.9780	0.9565	36.35	161.73	159.74	25.30	339.70
10	0.9750	0.9506	36.12	161.24	158.79	28.00	337.00
11	0.9730	0.9467	35.98	160.91	157.95	30.70	334.30
12	0.9710	0.9428	35.83	160.57	157.07	33.39	331.61
13	0.9690	0.9390	35.68	160.24	156.14	36.05	328.95
14	0.9670	0.9351	35.53	159.91	155.16	38.69	326.31
15	0.9650	0.9312	35.39	159.58	154.14	41.30	323.70
16	0.9600	0.9216	35.02	158.76	152.61	43.76	321.24
17	0.9550	0.9120	34.66	157.93	151.03	46.17	318.83
18	0.9500	0.9025	34.30	157.10	149.41	48.55	316.45
19	0.9450	0.8930	33.93	156.27	147.76	50.88	314.12
20	0.9400	0.8836	33.58	155.45	146.07	53.17	311.83
21	0.9350	0.8742	33.22	154.62	144.35	55.41	309.59
22	0.9300	0.8649	32.87	153.79	142.60	57.61	307.39
23	0.9250	0.8556	32.51	152.97	140.81	59.77	305.23
24	0.9200	0.8464	32.16	152.14	138.99	61.88	303.12
25	0.9150	0.8372	31.81	151.31	137.14	63.95	301.05
26	0.9090	0.8263	31.40	150.32	135.11	65.90	299.10
27	0.9030	0.8154	30.99	149.33	133.05	67.79	297.21
28	0.8970	0.8046	30.58	148.34	130.97	69.64	295.36
29	0.8910	0.7939	30.17	147.34	128.87	71.43	293.57
30	0.8850	0.7832	29.76	146.35	126.75	73.18	291.82
31	0.8760	0.7674	29.16	144.86	124.17	74.61	290.39
32	0.8670	0.7517	28.56	143.38	121.59	75.98	289.02
33	0.8580	0.7362	27.97	141.89	119.00	77.28	287.72
34	0.8490	0.7208	27.39	140.40	116.40	78.51	286.49
35	0.8400	0.7056	26.81	138.91	113.79	79.68	285.32
36	0.8300	0.6889	26.18	137.26	111.04	80.68	284.32
37	0.8200	0.6724	25.55	135.60	108.30	81.61	283.39
38	0.8100	0.6561	24.93	133.95	105.55	82.47	282.53
39	0.8000	0.6400	24.32	132.30	102.81	83.26	281.74
40	0.7900	0.6241	23.72	130.64	100.08	83.98	281.02
41	0.7800	0.6084	23.12	128.99	97.35	84.62	280.38
42	0.7700	0.5929	22.53	127.34	94.63	85.20	279.80
43	0.7600	0.5776	21.95	125.68	91.92	85.71	279.29
44	0.7500	0.5625	21.38	124.03	89.22	86.16	278.84
45	0.7400	0.5476	20.81	122.37	86.53	86.53	278.47

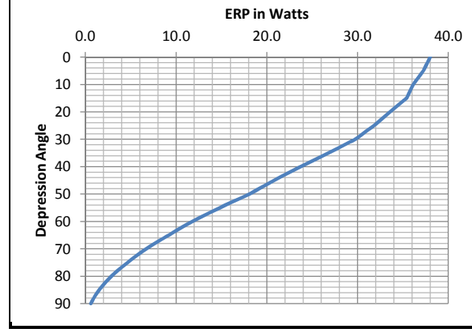
Depression Angle	Relative Field	Relative Power	ERP Watts	Radii in meters			
				Field Strength	Horizontal	Vertical	AGL
45	0.7400	0.5476	20.81	122.37	86.53	86.53	278.47
46	0.7300	0.5329	20.25	120.72	83.86	86.84	278.16
47	0.7200	0.5184	19.70	119.07	81.20	87.08	277.92
48	0.7100	0.5041	19.16	117.41	78.56	87.25	277.75
49	0.7000	0.4900	18.62	115.76	75.94	87.36	277.64
50	0.6900	0.4761	18.09	114.11	73.35	87.41	277.59
51	0.6770	0.4583	17.42	111.96	70.46	87.01	277.99
52	0.6640	0.4409	16.75	109.81	67.60	86.53	278.47
53	0.6510	0.4238	16.10	107.66	64.79	85.98	279.02
54	0.6380	0.4070	15.47	105.51	62.02	85.36	279.64
55	0.6250	0.3906	14.84	103.36	59.28	84.66	280.34
56	0.6114	0.3738	14.20	101.11	56.54	83.82	281.18
57	0.5978	0.3574	13.58	98.86	53.84	82.91	282.09
58	0.5842	0.3413	12.97	96.61	51.20	81.93	283.07
59	0.5706	0.3256	12.37	94.36	48.60	80.88	284.12
60	0.5570	0.3102	11.79	92.11	46.06	79.77	285.23
61	0.5440	0.2959	11.25	89.96	43.61	78.68	286.32
62	0.5310	0.2820	10.71	87.81	41.23	77.53	287.47
63	0.5180	0.2683	10.20	85.66	38.89	76.33	288.67
64	0.5050	0.2550	9.69	83.51	36.61	75.06	289.94
65	0.4920	0.2421	9.20	81.36	34.39	73.74	291.26
66	0.4776	0.2281	8.67	78.98	32.12	72.15	292.85
67	0.4632	0.2146	8.15	76.60	29.93	70.51	294.49
68	0.4488	0.2014	7.65	74.22	27.80	68.81	296.19
69	0.4344	0.1887	7.17	71.84	25.74	67.07	297.93
70	0.4200	0.1764	6.70	69.46	23.76	65.27	299.73
71	0.4060	0.1648	6.26	67.14	21.86	63.48	301.52
72	0.3920	0.1537	5.84	64.83	20.03	61.65	303.35
73	0.3780	0.1429	5.43	62.51	18.28	59.78	305.22
74	0.3640	0.1325	5.03	60.19	16.59	57.86	307.14
75	0.3500	0.1225	4.66	57.88	14.98	55.91	309.09
76	0.3350	0.1122	4.26	55.40	13.40	53.75	311.25
77	0.3200	0.1024	3.89	52.92	11.90	51.56	313.44
78	0.3050	0.0930	3.53	50.44	10.49	49.34	315.66
79	0.2900	0.0841	3.20	47.96	9.15	47.08	317.92
80	0.2750	0.0756	2.87	45.48	7.90	44.79	320.21
81	0.2600	0.0676	2.57	43.00	6.73	42.47	322.53
82	0.2450	0.0600	2.28	40.52	5.64	40.12	324.88
83	0.2300	0.0529	2.01	38.04	4.64	37.75	327.25
84	0.2150	0.0462	1.76	35.55	3.72	35.36	329.64
85	0.2000	0.0400	1.52	33.07	2.88	32.95	332.05
86	0.1850	0.0342	1.30	30.59	2.13	30.52	334.48
87	0.1700	0.0289	1.10	28.11	1.47	28.07	336.93
88	0.1550	0.0240	0.91	25.63	0.89	25.62	339.38
89	0.1400	0.0196	0.74	23.15	0.40	23.15	341.85
90	0.1250	0.0156	0.59	20.67	0.00	20.67	344.33











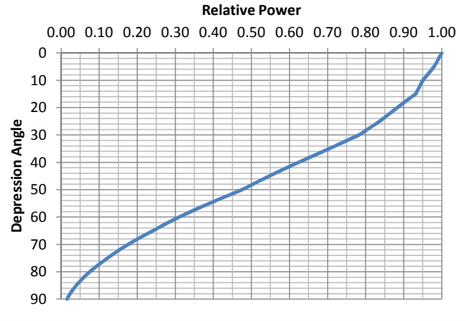
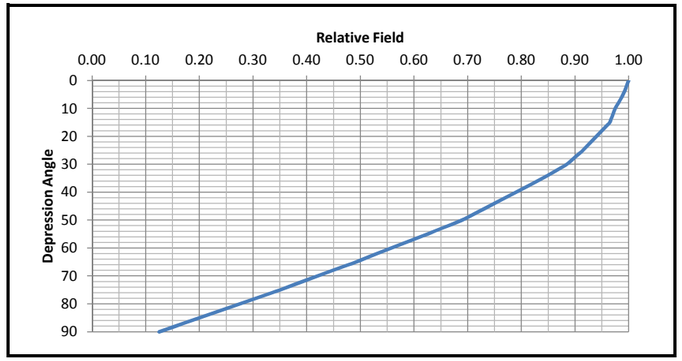
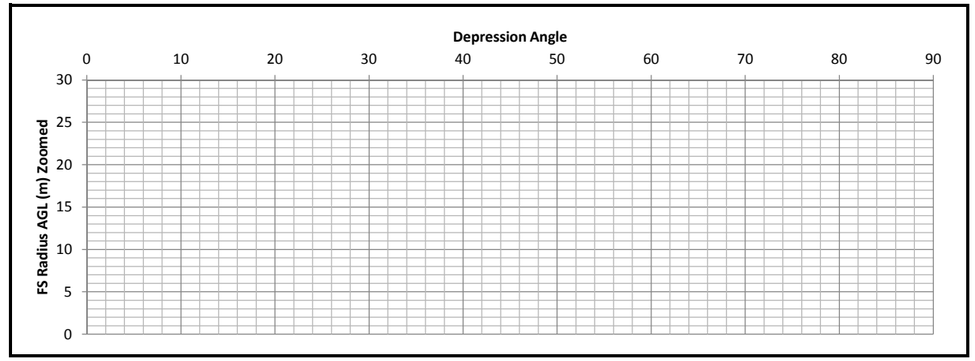


Exhibit E-8
Translator Proximity Interference Analysis
W217BM - Chicago, Illinois

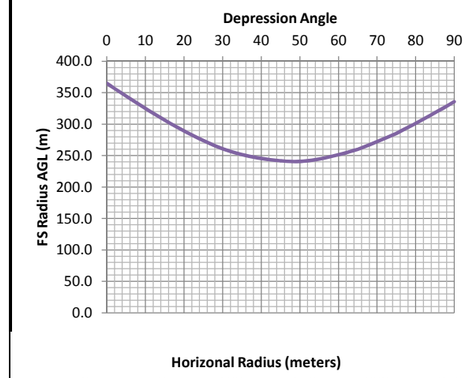
Antenna No:	68	Center of Radiation:	365 m AGL
Manufacturer:	ERI	Effective Radiated Power:	76.8 Watts
Model:	1192-1CP-DA	FS Contour:	106.2 dBu
Number of Bays:	1	E Field Strength:	0.20417 V/m
Bay Spacing:	Lambda	Z0 (Ohms):	377 Ohms
		Power Density:	0.000110575 W/m^2

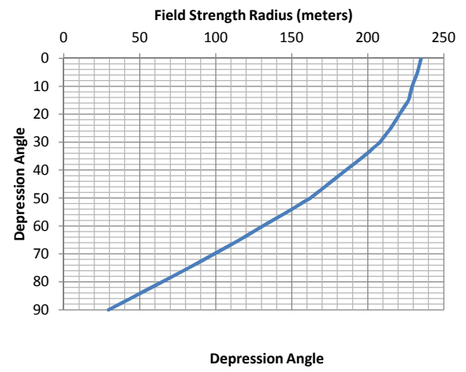


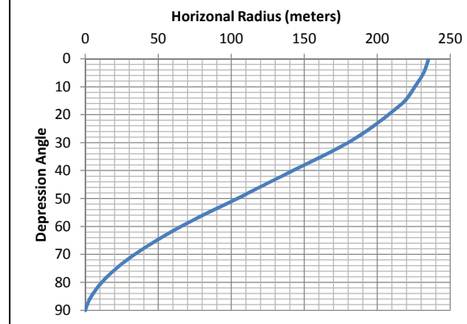


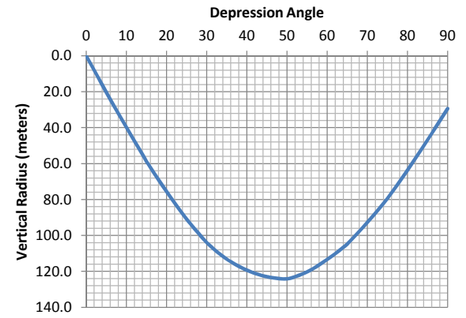
Depression Angle	Relative Field	Relative Power	ERP Watts	Radii in meters			
				Field Strength	Horizontal	Vertical	AGL
0	1.0000	1.0000	76.80	235.10	235.10	0.00	365.00
1	0.9980	0.9960	76.49	234.63	234.59	4.09	360.91
2	0.9960	0.9920	76.19	234.16	234.01	8.17	356.83
3	0.9940	0.9880	75.88	233.69	233.37	12.23	352.77
4	0.9920	0.9841	75.58	233.22	232.65	16.27	348.73
5	0.9900	0.9801	75.27	232.75	231.86	20.29	344.71
6	0.9870	0.9742	74.82	232.04	230.77	24.25	340.75
7	0.9840	0.9683	74.36	231.34	229.61	28.19	336.81
8	0.9810	0.9624	73.91	230.63	228.39	32.10	332.90
9	0.9780	0.9565	73.46	229.92	227.09	35.97	329.03
10	0.9750	0.9506	73.01	229.22	225.74	39.80	325.20
11	0.9730	0.9467	72.71	228.75	224.55	43.65	321.35
12	0.9710	0.9428	72.41	228.28	223.29	47.46	317.54
13	0.9690	0.9390	72.11	227.81	221.97	51.25	313.75
14	0.9670	0.9351	71.81	227.34	220.59	55.00	310.00
15	0.9650	0.9312	71.52	226.87	219.14	58.72	306.28
16	0.9600	0.9216	70.78	225.69	216.95	62.21	302.79
17	0.9550	0.9120	70.04	224.52	214.71	65.64	299.36
18	0.9500	0.9025	69.31	223.34	212.41	69.02	295.98
19	0.9450	0.8930	68.58	222.17	210.06	72.33	292.67
20	0.9400	0.8836	67.86	220.99	207.66	75.58	289.42
21	0.9350	0.8742	67.14	219.82	205.22	78.77	286.23
22	0.9300	0.8649	66.42	218.64	202.72	81.90	283.10
23	0.9250	0.8556	65.71	217.46	200.18	84.97	280.03
24	0.9200	0.8464	65.00	216.29	197.59	87.97	277.03
25	0.9150	0.8372	64.30	215.11	194.96	90.91	274.09
26	0.9090	0.8263	63.46	213.70	192.07	93.68	271.32
27	0.9030	0.8154	62.62	212.29	189.15	96.38	268.62
28	0.8970	0.8046	61.79	210.88	186.20	99.00	266.00
29	0.8910	0.7939	60.97	209.47	183.21	101.55	263.45
30	0.8850	0.7832	60.15	208.06	180.19	104.03	260.97
31	0.8760	0.7674	58.93	205.94	176.53	106.07	258.93
32	0.8670	0.7517	57.73	203.83	172.86	108.01	256.99
33	0.8580	0.7362	56.54	201.71	169.17	109.86	255.14
34	0.8490	0.7208	55.36	199.60	165.47	111.61	253.39
35	0.8400	0.7056	54.19	197.48	161.77	113.27	251.73
36	0.8300	0.6889	52.91	195.13	157.86	114.69	250.31
37	0.8200	0.6724	51.64	192.78	153.96	116.02	248.98
38	0.8100	0.6561	50.39	190.43	150.06	117.24	247.76
39	0.8000	0.6400	49.15	188.08	146.16	118.36	246.64
40	0.7900	0.6241	47.93	185.73	142.27	119.38	245.62
41	0.7800	0.6084	46.73	183.38	138.40	120.31	244.69
42	0.7700	0.5929	45.53	181.02	134.53	121.13	243.87
43	0.7600	0.5776	44.36	178.67	130.67	121.85	243.15
44	0.7500	0.5625	43.20	176.32	126.84	122.48	242.52
45	0.7400	0.5476	42.06	173.97	123.02	123.02	241.98

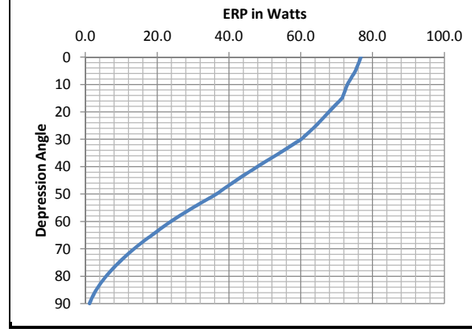
Depression Angle	Relative Field	Relative Power	ERP Watts	Radii in meters			
				Field Strength	Horizontal	Vertical	AGL
45	0.7400	0.5476	42.06	173.97	123.02	123.02	241.98
46	0.7300	0.5329	40.93	171.62	119.22	123.45	241.55
47	0.7200	0.5184	39.81	169.27	115.44	123.80	241.20
48	0.7100	0.5041	38.71	166.92	111.69	124.04	240.96
49	0.7000	0.4900	37.63	164.57	107.97	124.20	240.80
50	0.6900	0.4761	36.56	162.22	104.27	124.27	240.73
51	0.6770	0.4583	35.20	159.16	100.16	123.69	241.31
52	0.6640	0.4409	33.86	156.10	96.11	123.01	241.99
53	0.6510	0.4238	32.55	153.05	92.11	122.23	242.77
54	0.6380	0.4070	31.26	149.99	88.16	121.35	243.65
55	0.6250	0.3906	30.00	146.94	84.28	120.36	244.64
56	0.6114	0.3738	28.71	143.74	80.38	119.16	245.84
57	0.5978	0.3574	27.45	140.54	76.54	117.87	247.13
58	0.5842	0.3413	26.21	137.34	72.78	116.47	248.53
59	0.5706	0.3256	25.00	134.15	69.09	114.99	250.01
60	0.5570	0.3102	23.83	130.95	65.47	113.40	251.60
61	0.5440	0.2959	22.73	127.89	62.00	111.86	253.14
62	0.5310	0.2820	21.65	124.84	58.61	110.22	254.78
63	0.5180	0.2683	20.61	121.78	55.29	108.51	256.49
64	0.5050	0.2550	19.59	118.72	52.05	106.71	258.29
65	0.4920	0.2421	18.59	115.67	48.88	104.83	260.17
66	0.4776	0.2281	17.52	112.28	45.67	102.57	262.43
67	0.4632	0.2146	16.48	108.90	42.55	100.24	264.76
68	0.4488	0.2014	15.47	105.51	39.53	97.83	267.17
69	0.4344	0.1887	14.49	102.13	36.60	95.34	269.66
70	0.4200	0.1764	13.55	98.74	33.77	92.79	272.21
71	0.4060	0.1648	12.66	95.45	31.08	90.25	274.75
72	0.3920	0.1537	11.80	92.16	28.48	87.65	277.35
73	0.3780	0.1429	10.97	88.87	25.98	84.98	280.02
74	0.3640	0.1325	10.18	85.58	23.59	82.26	282.74
75	0.3500	0.1225	9.41	82.28	21.30	79.48	285.52
76	0.3350	0.1122	8.62	78.76	19.05	76.42	288.58
77	0.3200	0.1024	7.86	75.23	16.92	73.30	291.70
78	0.3050	0.0930	7.14	71.70	14.91	70.14	294.86
79	0.2900	0.0841	6.46	68.18	13.01	66.93	298.07
80	0.2750	0.0756	5.81	64.65	11.23	63.67	301.33
81	0.2600	0.0676	5.19	61.13	9.56	60.37	304.63
82	0.2450	0.0600	4.61	57.60	8.02	57.04	307.96
83	0.2300	0.0529	4.06	54.07	6.59	53.67	311.33
84	0.2150	0.0462	3.55	50.55	5.28	50.27	314.73
85	0.2000	0.0400	3.07	47.02	4.10	46.84	318.16
86	0.1850	0.0342	2.63	43.49	3.03	43.39	321.61
87	0.1700	0.0289	2.22	39.97	2.09	39.91	325.09
88	0.1550	0.0240	1.85	36.44	1.27	36.42	328.58
89	0.1400	0.0196	1.51	32.91	0.57	32.91	332.09
90	0.1250	0.0156	1.20	29.39	0.00	29.39	335.61

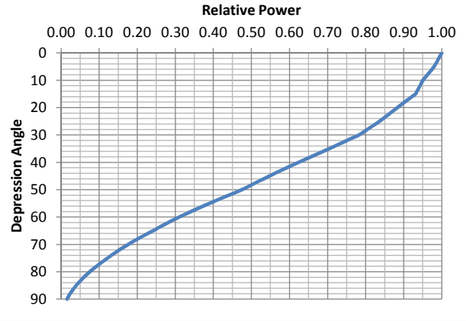












Jeremy Ruck & Associates, Inc.
Consulting Engineers - Canton, Illinois
Exhibit E-9 - Television Channel Six Spacing Study
W217BM - Chicago, Illinois

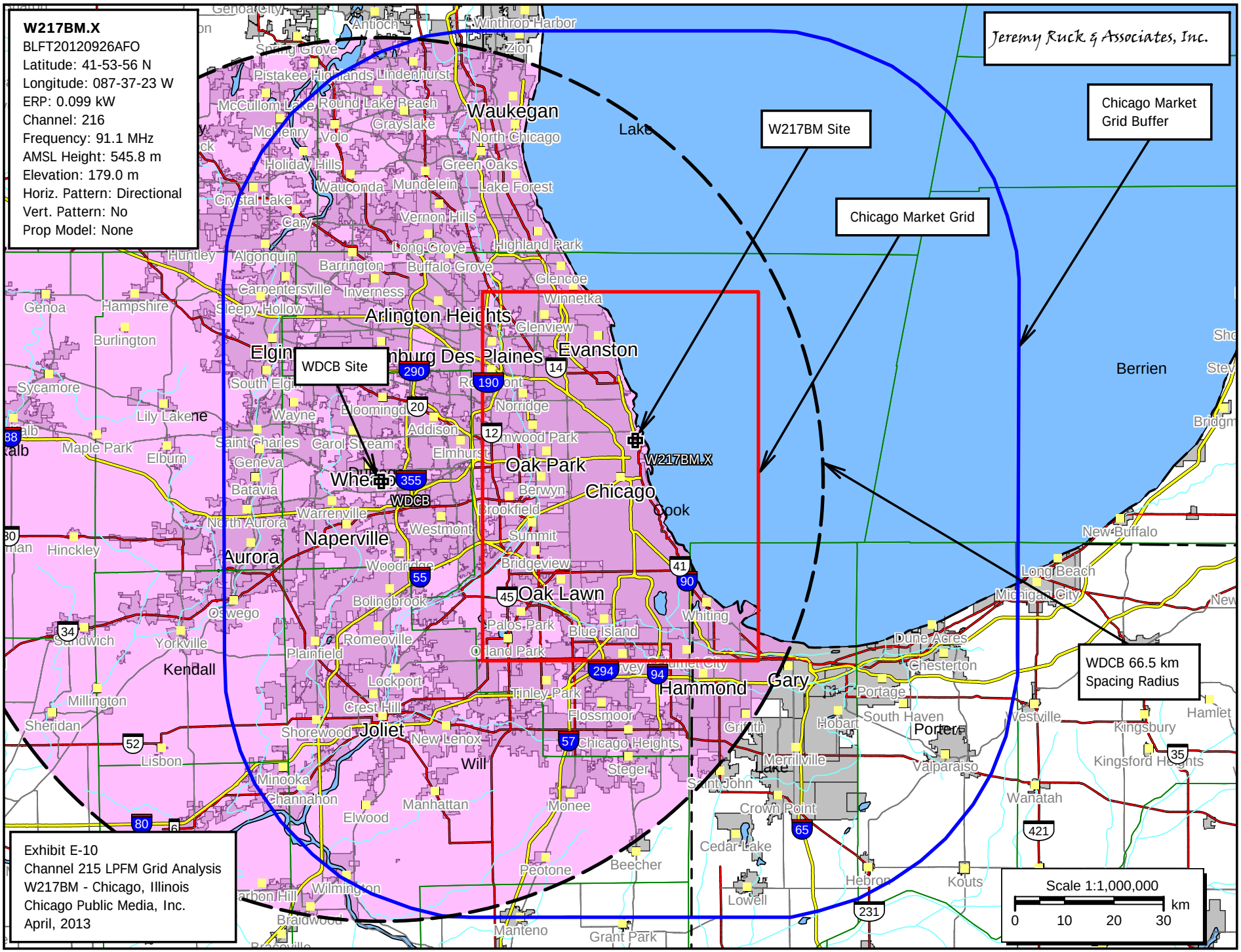
REFERENCE
41 53 56.0 N.
87 37 23.0 W.

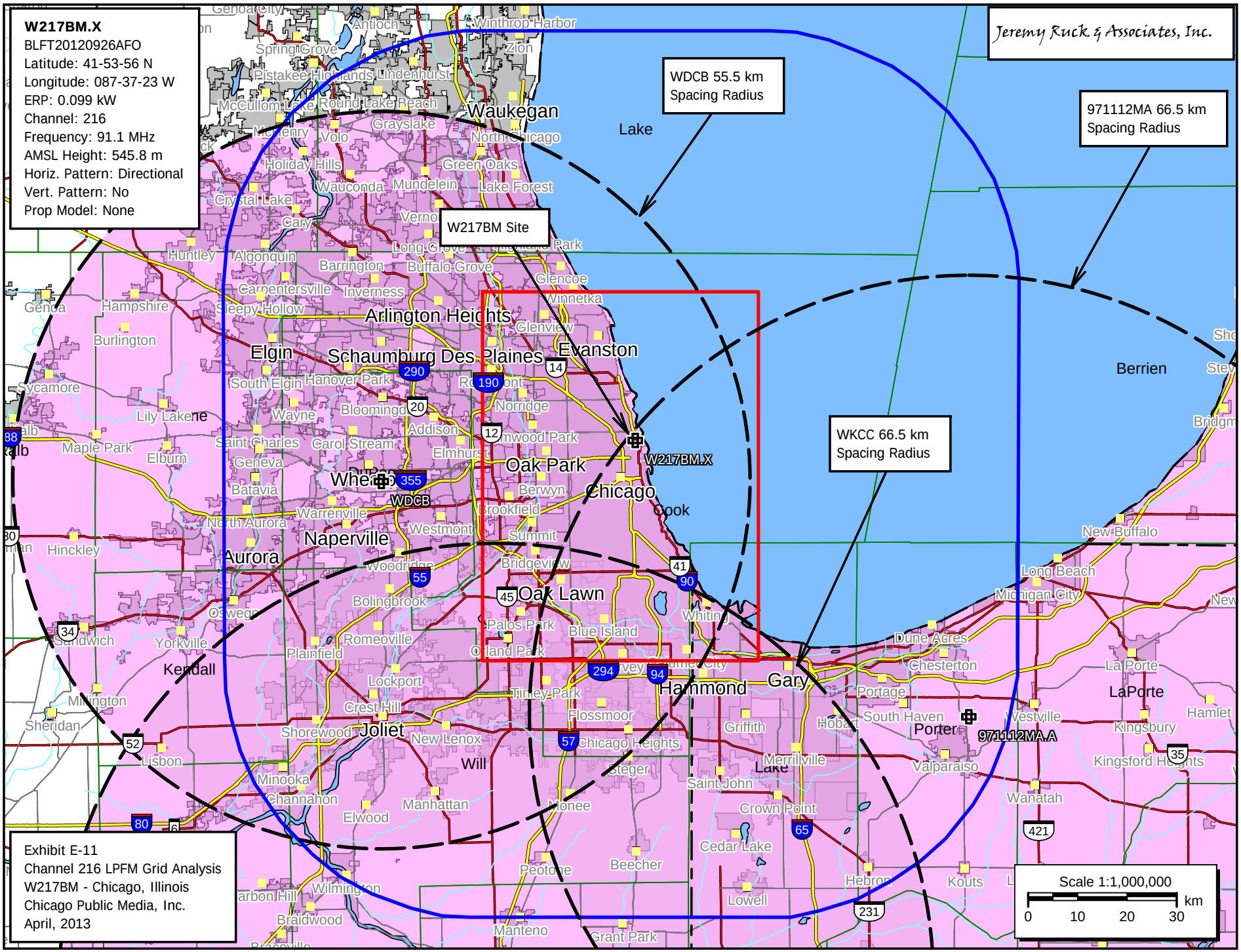
CLASS = D Int = D
Current Spacings to 3rd Adj.
Channel 216 - 91.1 MHz

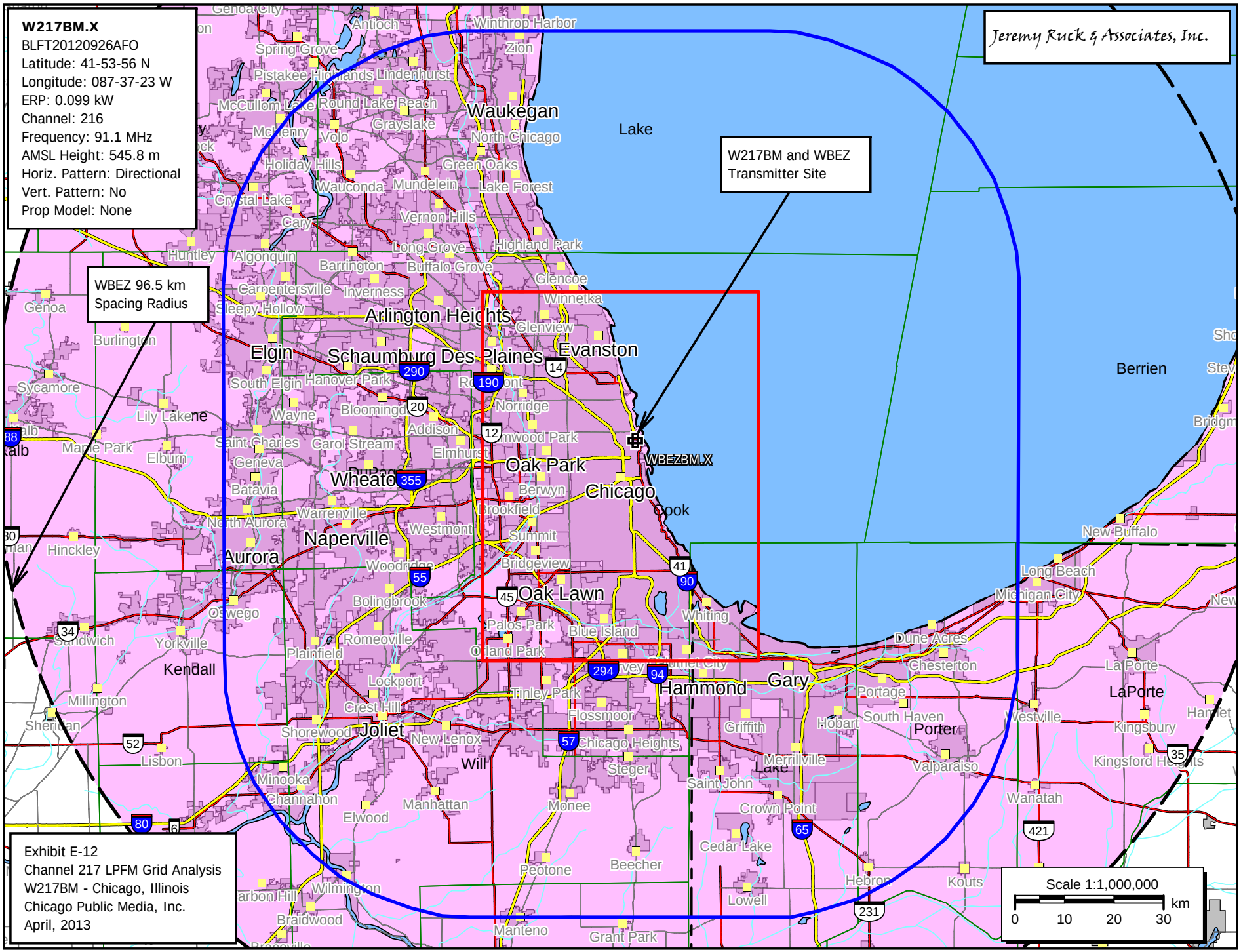
DISPLAY DATES
DATA 04-26-13
SEARCH 04-26-13

Call	Channel	Location		Azi	Dist	FCC	Margin
WKQX-LP	LI -D 06-T	Chicago	IL	0.0	0.00	132.5	-132.5
WKQX-LP	CP 06 T	Chicago	IL	0.0	0.00	132.5	-132.5
WBEZ	LIC 218B	Chicago	IL	0.0	0.00	53.5	-53.5
980512MP	APP 216A	Valparaiso	IN	129.9	65.01	84.5	-19.5
971112MA	APP 216A	Valparaiso	IN	129.5	65.34	84.5	-19.2
980512MV	APP 216A	South Haven	IN	129.5	65.34	84.5	-19.2
W217BM	LIC 217D	Chicago	IL	0.0	0.00	13.5	-13.5
WGTD	LIC-D 216A	Kenosha	WI	346.8	81.03	84.5	-3.5
WRTE	CP 214D	Chicago	IL	219.6	3.64	6.5	-2.9
1330618	AP 06 D	Dixon	IL	275.3	131.45	132.5	-1.0
WKCC	LIC 216A	Kankakee	IL	194.4	84.62	84.5	0.12
W216AC	LIC 216D	Valparaiso	IN	135.5	65.50	64.5	1.0
WRTE	LIC 213D	Chicago	IL	230.5	10.20	6.5	3.7
WDCB	LIC 215A	Glen Ellyn	IL	260.9	38.70	33.5	5.2
WMTH	LIC 213D	Park Ridge	IL	308.4	24.82	6.5	18.3
WRTW	LIC-D 213B1	Crown Point	IN	163.1	63.83	40.5	23.3
WGSL	LIC-D 216B1	Loves Park	IL	292.8	124.08	92.5	31.6
W216BX	LIC 216D	Benton Harbor	MI	77.6	99.83	64.5	35.3
DW27CT	AP -D 06 T	Columbia	IN	136.8	370.16	133.0	237.7

All separation margins include rounding


W217BM.X
BLFT20120926AFO
Latitude: 41-53-56 N
Longitude: 087-37-23 W
ERP: 0.099 kW
Channel: 216
Frequency: 91.1 MHz
AMSL Height: 545.8 m
Elevation: 179.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None
Jeremy Ruck & Associates, Inc.
W217BM Site
Chicago Market Grid Buffer
Chicago Market Grid
WDCB Site
WDCB 66.5 km Spacing Radius
Exhibit E-10
Channel 215 LPFM Grid Analysis
W217BM - Chicago, Illinois
Chicago Public Media, Inc.
April, 2013
Scale 1:1,000,000
0 10 20 30 km
Waukegan
Lake
Berrien
Arlington Heights
Evanston
Des Plaines
Oak Park
Chicago
Cook
Naperville
Aurora
Oak Lawn
Hammond
Gary
Joliet
Will
Kendall
Lake
Porter
Lake
Elgin
Wheaton
W217BM.X
WDCB


W217BM.X
BLFT20120926AFO
Latitude: 41-53-56 N
Longitude: 087-37-23 W
ERP: 0.099 kW
Channel: 216
Frequency: 91.1 MHz
AMSL Height: 545.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None
Jeremy Ruck & Associates, Inc.
WDCB 55.5 km Spacing Radius
971112MA 66.5 km Spacing Radius
WKCC 66.5 km Spacing Radius
W217BM Site
W217BM.X
WDCB
971112MA.A
Waukegan
Lake
Berrien
Cook
Elgin
Schaumburg
Des Plaines
Evanston
Arlington Heights
Oak Park
Chicago
Naperville
Aurora
Oak Lawn
Hammond
Gary
Joliet
Wheaton
Exhibit E-11
Channel 216 LPFM Grid Analysis
W217BM - Chicago, Illinois
Chicago Public Media, Inc.
April, 2013
Scale 1:1,000,000
km
0
10
20
30


W217BM.X
BLFT20120926AFO
Latitude: 41-53-56 N
Longitude: 087-37-23 W
ERP: 0.099 kW
Channel: 216
Frequency: 91.1 MHz
AMSL Height: 545.8 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None
Jeremy Ruck & Associates, Inc.
W217BM and WBEZ Transmitter Site
WBEZ 96.5 km Spacing Radius
WBEZBM.X
Lake
Berrien
Cook
Waukegan
North Chicago
Zion
Winthrop Harbor
Antioch
Lake Forest
Highland Park
Glencoe
Winnetka
Evanston
Arlington Heights
Glenview
Schaumburg
Des Plaines
Elgin
Oak Park
Chicago
Wheaton
Naperville
Aurora
Oak Lawn
Hammond
Gary
Joliet
Kendall
Will
Lake
Porter
LaPorte
Valparaiso
Crown Point
Merrillville
Griffith
Hobart
Portage
Chesterton
Dune Acres
Michigan City
New Buffalo
Long Beach
Whiting
Blue Island
Palos Park
Orland Park
Tinley Park
Chicago Heights
Flossmoor
Steger
Lansing
South Haven
Westville
Kingsbury
Hanna
Wanatah
Kouts
Hebron
Cedar Lake
Lowell
Beecher
Peotone
Monee
Manhattan
Elwood
Channahon
Minooka
Shorewood
New Lenox
Crest Hill
Lockport
Romeoville
Bolingbrook
Woodridge
Bridgeview
Berwyn
Brookfield
Summit
Westmont
Warrenville
North Aurora
Batavia
Geneva
Saint Charles
Carol Stream
Elmhurst
Addison
Bloomingdale
Wayne
Lily Lake
Sycamore
Hanover Park
South Elgin
Norridge
Oak Park
Roosevelt
Inverness
Carpentersville
Barrington
Buffalo Grove
Long Grove
Vernon Hills
Cary
Crystal Lake
Wauconda
Mundelein
Green Oaks
Holiday Hills
Volo
Grayslake
McHenry
McCullom Lake
Round Lake Beach
Lindenhurst
Highlands
Pistakee
Spring Grove
Genoa City
Huntley
Algonquin
Sleepy Hollow
Genoa
Burlington
Hinckley
Sandwich
Yorkville
Oswego
Millington
Sheridan
Lisbon
Braidwood
Wilmington
Manteno
Grant Park
Braceville
Carbon Hill
Scale 1:1,000,000
0 10 20 30 km
Exhibit E-12
Channel 217 LPFM Grid Analysis
W217BM - Chicago, Illinois
Chicago Public Media, Inc.
April, 2013