

**APPLICATION FOR A
MINOR CHANGE
CONSTRUCTION PERMIT
TO A LICENSED FACILITY**

FCC FORM 301

**(REQUESTING CONSIDERATION UNDER §73.215)
(LONGLEY-RICE METHOD)**

Facility Identification Number 74177

WVIV-FM

Highland Park, Illinois

CHANNEL 276A – 103.1 MHz

ERP: 3.4 kW (H&V)

HAAT: 134.5 meters (H&V)

APPLICANT: Big City Radio-CHI, L.L.C.

January, 2003

Prepared by:



Engineering Statement
In Support of a Application
For a Construction Permit
WVIV-FM, Highland Park, Illinois, Channel 276A

CONTENTS
FOR ENGINEERING EXHIBITS F.C.C. FORM 301

1. Statement of Engineers	E3-E8
2. Exhibit E, Figure 1	Channel Spacing Study
3. Exhibit E, Figure 2	Terrain Averaging and Contour Study
4. Exhibit E, Figure 3	Proposed Service Contour Map
5. Exhibit E, Figure 4	Longley-Rice / F(50,50) Service Contour Comparison Map
6. Exhibit E, Figure 5	Longley-Rice / F(50,50) Service Contour Comparison Study
7. Exhibit E, Figure 6	Delta-h Study
8. Exhibit E, Figure 7	WVIV-FM/WYXX Protected and Interfering Contours Map
9. Exhibit E, Figure 8	WYXX-FM Protected to WVIV-FM Interfering Contours Study
10. Exhibit E, Figure 9	Vertical Plane Sketch
11. Exhibit E, Figure 10	Longley-Rice Study Parameters

ENGINEERING STATEMENT

Of

Reynolds Technical Associates

In Support of an

Application for a

Construction Permit

WVIV-FM

Highland Park, Illinois

Channel 276A – 103.1 MHz

ERP: 3.4 kW(H&V)

HAAT: 134.5 m (H&V)

January, 2003

General

As broadcast technical consultants doing business as Reynolds Technical Associates (“RTA”), we have been authorized by Big City Radio-CHI, L.L.C. (herein referred to as “Big City Radio” as well as “The Applicant”), licensee of WVIV-FM, Highland Park, Illinois, to conduct engineering studies and prepare the engineering portion of an application for a construction permit.

This instant application is seeking to change transmitter relocation, effective radiated power and all elevations of the transmitting antenna.

This application is contingent with the application of WYXX of Morris, Illinois and WYXX should be considered first when reviewing and processing.

Because the proposed WVIV-FM facility does not cover the community of license (Highland Park, Illinois) with the F(50,50) 70 dBu contour, a supplemental method

(Longley-Rice) is used. By using this supplemental method, the applicant (Big City Radio) demonstrates that WVIV-FM's proposed facility would continue to cover at least 80% of Highland Park with a 70 dBu contour, in compliance with §73.315 of the Commission's Rules and Regulations.

The Proposed Site
(Exhibits E, Figure 1 through 3)

Exhibit E, Figure 1 is a channel spacing study for the proposed change, showing the facilities considered.

Exhibit E, Figure 2 is the terrain averaging and contour study for the proposed facility.

Exhibit E, Figure 3 is the service contour map displaying the FCC F(50,50) 70 and 60 dBu contours of the proposed facility.

Exhibit E, Figures 4-6 and 10 show how the Longley-Rice 70 dBu contour was derived and its coverage of the city of Highland Park.

Exhibit E, Figure 9 is a vertical sketch of the proposed antenna supporting structure.

The FAA has been notified of the proposed construction. Upon receiving determination of no hazard, an antenna supporting structure number will be applied for.

The distance to the blanketing contour is calculated to be 0.727 kilometers (0.452 mile).

Grandfathered Short-spaced Stations
(No Exhibits)

WVIV is short-spaced to WVAZ, Oak Park, Illinois, licensed to channel 274B and WKCS, Chicago, Illinois is licensed to CH278B. The short-spacings of these two facilities have existed continuously since November 16, 1964, and according to 47 C.F.R. 73.213(a)(4), there is no distance separation requirement.

Protected and Interfering Contours
(Exhibits E, Figure 7 and 8)

Exhibit E, Figure 7 is a map displaying the protected and interfering contours of WVIV-FM and WYXX. Exhibit E, Figure 8 is a FM overlap study for WVIV-FM and WYXX.

Human Exposure
(No Exhibits)

The proposed FM facility was evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with the RF Worksheet #1 [FCC 301 Worksheet 7 (Page 4 and 5)].

The antenna for The Applicant's proposed FM broadcast station is to be placed on a new tower. The proposed center of radiation above ground level of 136.1 meters, with an ERP (both horizontally and vertically) of 3.4 kW. The controlled/occupational limit, as well as the uncontrolled/general public limit is in compliance. Power density two (2) meters above ground is 0.126 mW/cm^2 , well below the maximum allowable limit of 0.2 mW/cm^2 for uncontrolled/general public exposure limits as well as the 1.0 mW/cm^2 for controlled/occupational exposure limits

Should anyone be required to climb the tower, WVIV-FM will either reduce power or cease operation, so as to prevent hazardous exposure to radiofrequency radiation.

Environmental Impact
(No Exhibits)

A grant of the proposed construction would not constitute a major action as defined in the Commission's Rules and Regulations.

During operation, the facility will produce no chemical or significant thermal pollution, and no ionizing radiation will be generated. Areas of high intensity radiofrequency fields

will be confined to the immediate area of the transmitting antenna, far above the ground and away from any human and wildlife population.

The area is not officially designated as a wilderness area or wildlife preserve and is not pending consideration. The area has no significant value in American history, architecture, archaeology, or culture, which is listed in the Register of Historic Places, and it is not eligible for listing. It is not recognized either nationally or locally for special scenic or recreational value.

Conclusion

This statement/application has been prepared for The Applicant by utilizing the latest available information, cross-checked with the Federal Communications Commission and other sources. Therefore, it is submitted that the proposed is in compliance with the Commission's Rules and Regulations and other sources. Therefore, it is submitted that the engineering data compiled and demonstrated herein for the proposed is in compliance with Commission's Rules and Regulations at the time of this application's filing date. We welcome the opportunity to discuss with the staff of the Federal Communications Commission the engineering data contained in this application. Should any questions arise concerning the information, please contact us.

The following pages are exhibits prepared and assembled in support of the proposed.

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Statement of the Consultants

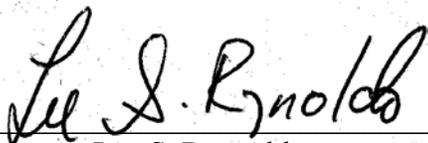
The instant engineering statement was prepared for Big City Radio-CHI, L.L.C. (“The Applicant”) and supports an application for a construction permit of WVIV-FM, Highland Park, Illinois. It was developed by RTA and may not be used for purposes other than submission to the Commission by The Applicant.

It may not be reproduced in its entirety, or in part, by anyone (other than from the Commission) without the written consent of RTA.

It is prepared for The Applicant under contractual agreement, and its certification by RTA is used accordingly. If The Applicant fails in its contractual obligation, RTA reserves the right to withdraw its certification.

The information in this application is compiled from the most recent Commission and outside data. RTA is not responsible for errors resulting from incorrect data or unpublished rule and procedure changes.

For RTA:



Lee S. Reynolds

January 13th, 2003

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**Engineering Statement
In Support of an Application
For a Construction Permit**

WVIV, Highland Park, Illinois

WVIV Channel Spacing Study

REFERENCE		DISPLAY DATES				
42 01 50 N	CLASS = A	DATA 08-20-02				
87 42 32 W	Current Spacings	SEARCH 01-13-03				
----- Channel 276 - 103.1 MHz -----						
Call	Channel	Location	Dist	Azi	FCC	Margin

Community of Highland Park			IL	18.40	335.9	
Reference Coordinates:						
North Latitude: 42-10-54						
West Longitude: 87-48-00						
WVIVFM LIC 276A	Highland Park		IL	25.55	297.8	115.0 -89.45
Of no concern:						
Licensed facility of instant application.						
WVAZ LIC 274B	Oakpark		IL	16.26	154.1	69.0 -52.74
Of no concern:						
No spacing requirements as per Section 73.213(a) (4).						
WKSCFM LIC 278B	Chicago		IL	17.91	160.2	69.0 -51.09
Of no concern:						
No spacing requirements as per Section 73.213(a) (4).						
WYXX LIC 276A	Morris		IL	97.08	212.6	115.0 -17.92
Of concern:						
Protection afforded under Section 73.215.						
WLZR	LIC 275B	Milwaukee	WI	115.10	348.9	113.0 2.10
WLZR.C	CP 275B	Milwaukee	WI	115.10	348.9	113.0 2.10
WGFBS	LIC 276A	Rockton	IL	119.81	288.7	115.0 4.81
WHME	LIC 276A	South Bend	IN	132.96	110.5	115.0 17.96
WPWX	LIC 222B	Hammond	IN	46.91	161.3	15.0 31.91
WXSS	LIC 279B	Wauwatosa	WI	119.52	352.4	69.0 50.52
WMKB.C	CP 275A	Earlville	IL	123.34	248.8	72.0 51.34
WDEK	LIC 223B	Dekalb	IL	88.38	259.1	15.0 73.38
WIVQ	LIC 277A	Spring Valley	IL	150.74	238.0	72.0 78.74
ALLO	VAC 277A	Gilman	IL	152.07	190.3	72.0 80.07
WFURFM	LIC 275B	Grand Rapids	MI	194.49	57.4	113.0 81.49
WKFRFM	LIC 277B	Battle Creek	MI	198.89	78.7	113.0 85.89
WZBL	LIC 279A	Hartford	MI	124.17	75.5	31.0 93.17
WKZS	LIC 276A	Covington	IN	210.37	174.1	115.0 95.37
WKZS.C	CP 276A	Covington	IN	210.94	176.9	115.0 95.94

Engineering Statement

In Support of an Application for a Construction Permit

WVIV-FM, Highland Park, Illinois Channel 276A

WVIV-FM Terrain-Contour Study

Reference Coordinates:

North Latitude: 42-01-50

West Longitude: 87-42-32

Azimuth °T.	ERP = 3.4 kW Ave. Elev. 3 to 16 km Meters AMSL	FM - 2-6 Tables Effective Antenna Height Meters AAT	ERP (dBk)	F(50-50) Distance to 70 dBu Contour km	F(50-50) Distance to 60 dBu Contour km
0	178.9	138.9	5.315	16.6	28.7
5	178.5	139.3	5.315	16.6	28.7
10	178.2	139.6	5.315	16.6	28.8
15	177.9	139.9	5.315	16.6	28.8
20	177.5	140.3	5.315	16.7	28.8
25	177.0	140.8	5.315	16.7	28.9
30	177.1	140.7	5.315	16.7	28.9
35	176.9	140.9	5.315	16.7	28.9
40	176.7	141.1	5.315	16.7	28.9
45	176.5	141.3	5.315	16.7	28.9
50	176.4	141.4	5.315	16.7	28.9
55	176.3	141.5	5.315	16.7	28.9
60	176.2	141.6	5.315	16.7	28.9
65	176.2	141.6	5.315	16.8	29.0
70	176.2	141.6	5.315	16.8	29.0
75	176.2	141.6	5.315	16.8	29.0
80	176.1	141.7	5.315	16.8	29.0
85	176.1	141.7	5.315	16.8	29.0
90	176.1	141.7	5.315	16.8	29.0
95	176.2	141.6	5.315	16.8	29.0
100	176.2	141.6	5.315	16.7	28.9
105	176.3	141.5	5.315	16.7	28.9
110	176.4	141.4	5.315	16.7	28.9
115	176.4	141.4	5.315	16.7	28.9
120	176.6	141.2	5.315	16.7	28.9
125	176.8	141.0	5.315	16.7	28.9
130	177.2	140.6	5.315	16.7	28.9
135	177.8	140.0	5.315	16.6	28.8
140	178.2	139.6	5.315	16.6	28.8
145	178.9	138.9	5.315	16.6	28.7
150	180.7	137.1	5.315	16.4	28.5
155	185.2	132.6	5.315	16.1	28.1

Continued on the next page

Exhibit E, Figure 2

ERP =	3.4 kW	FM - 2-6 Tables		F(50-50)	F(50-50)
Azimuth	Ave. Elev.	Effective	ERP	Distance to	Distance to
°T.	3 to 16 km	Antenna Height	(dBk)	70 dBu Contour	60 dBu Contour
	Meters AMSL	Meters AAT		km	km
160	185.7	132.1	5.315	16.1	28.1
165	183.6	134.2	5.315	16.2	28.3
170	181.3	136.5	5.315	16.4	28.5
175	180.3	137.5	5.315	16.5	28.6
180	181.5	136.3	5.315	16.4	28.5
185	182.4	135.4	5.315	16.3	28.4
190	183.1	134.7	5.315	16.3	28.3
195	184.2	133.6	5.315	16.2	28.2
200	185.6	132.2	5.315	16.1	28.1
205	187.3	130.5	5.315	16.0	27.9
210	189.9	127.9	5.315	15.8	27.7
215	190.3	127.5	5.315	15.8	27.7
220	189.8	128.0	5.315	15.8	27.7
225	189.6	128.2	5.315	15.8	27.7
230	189.7	128.1	5.315	15.8	27.7
235	190.3	127.5	5.315	15.8	27.7
240	191.3	126.5	5.315	15.7	27.6
245	192.0	125.8	5.315	15.6	27.5
250	191.2	126.6	5.315	15.7	27.6
255	191.4	126.4	5.315	15.7	27.6
260	191.5	126.3	5.315	15.7	27.6
265	192.3	125.5	5.315	15.6	27.5
270	192.3	125.5	5.315	15.6	27.5
275	192.6	125.2	5.315	15.6	27.5
280	193.7	124.1	5.315	15.5	27.4
285	194.9	122.9	5.315	15.5	27.3
290	195.3	122.5	5.315	15.4	27.2
295	195.7	122.1	5.315	15.4	27.2
300	195.3	122.5	5.315	15.4	27.2
305	195.0	122.8	5.315	15.4	27.3
310	194.2	123.6	5.315	15.5	27.3
315	193.4	124.4	5.315	15.6	27.4
320	194.4	123.4	5.315	15.5	27.3
325	193.6	124.2	5.315	15.5	27.4
330	191.9	125.9	5.315	15.7	27.5
335	191.3	126.5	5.315	15.7	27.6
340	195.1	122.7	5.315	15.4	27.3
345	188.7	129.1	5.315	15.9	27.8
350	183.3	134.5	5.315	16.3	28.3
355	179.8	138.0	5.315	16.5	28.6

WVIV, Highland Park, IL
Service Contours

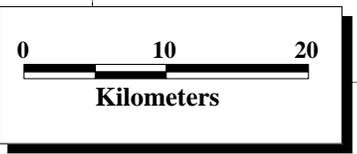
Higland Park
City Limits

60 dBu
F(50,50)

70 dBu
F(50,50)

▲
42-01-50
87-42-32

Exhibit E, Figure 3



**Percentage of Community Covered by
Longley-Rice 70 dBu Contour = 80.56%**

**WVIV, Highland Park, Illinois
FCC/Longley-Rice
70 dBu Contour Comparison Map**

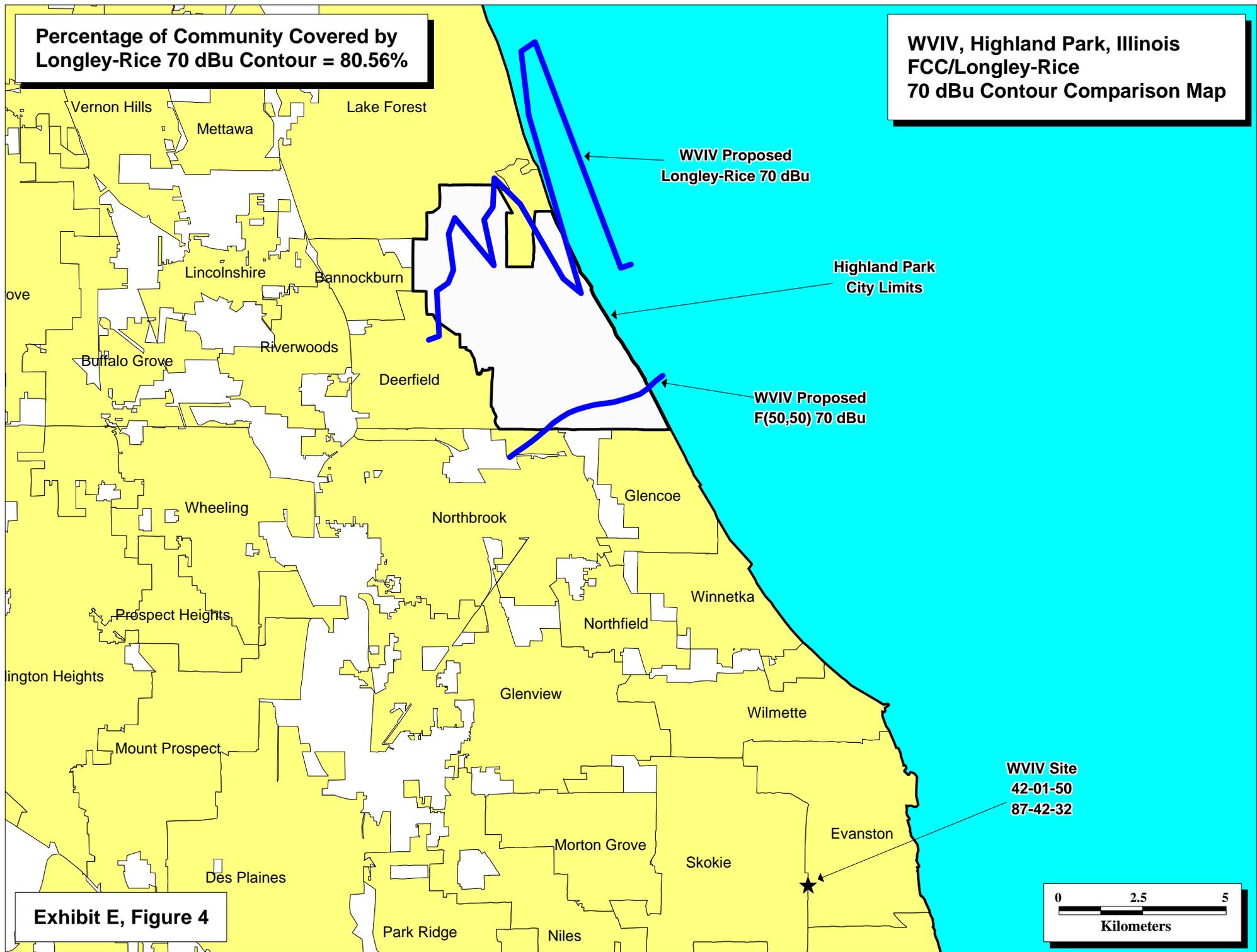


Exhibit E, Figure 4

Engineering Statement
In Support of an
Application for a
Construction Permit
WVIV-FM, Highland Park, Illinois
Channel 276A

WVIV-FM FCC/Longley-Rice Contour Comparison Study

<u>Azimuth</u>	<u>Longley-Rice 70 dBu Contour</u>	<u>(F50,50) 70 dBu Contour</u>	<u>Percentage Change</u>
325.0	19.8	15.5	27.7%
326.0	19.7	15.6	26.3%
327.0	20.3	15.6	30.1%
328.0	20.9	15.6	34.0%
329.0	20.9	15.6	34.0%
330.0	21.1	15.7	34.4%
331.0	22.1	15.7	40.8%
332.0	22.5	15.7	43.3%
333.0	20.6	15.8	30.4%
334.0	22.0	15.7	40.1%
335.0	22.3	15.7	42.0%
336.0	23.0	15.6	47.4%
337.0	22.0	15.6	41.0%
338.0	19.4	15.5	25.2%
339.0	18.8	15.5	21.3%
340.0	24.4	15.4	58.4%
341.0	26.3	15.4	70.8%
342.0	26.4	15.5	70.3%
343.0	19.2	15.7	22.3%

Engineering Statement

**In Support of an
Application for a
Construction Permit**

**WVIV-FM, Highland Park, Illinois
Channel 276A**

WVIV-FM Supplemental Terrain Study

Reference Coordinates:

North Latitude: 42-01-50

West Longitude: 87-42-32

<u>Azimuth</u>	<u>Max. Elevation (m)</u>	<u>Min. Elevation (m)</u>	<u>Delta-h (m)</u>
*325.0	206.0	195.3	10.7
*326.0	204.2	195.0	9.3
*327.0	199.9	194.0	5.9

* **Azimuths where the terrain is excessively flat (Delta-h < 20 meters)**

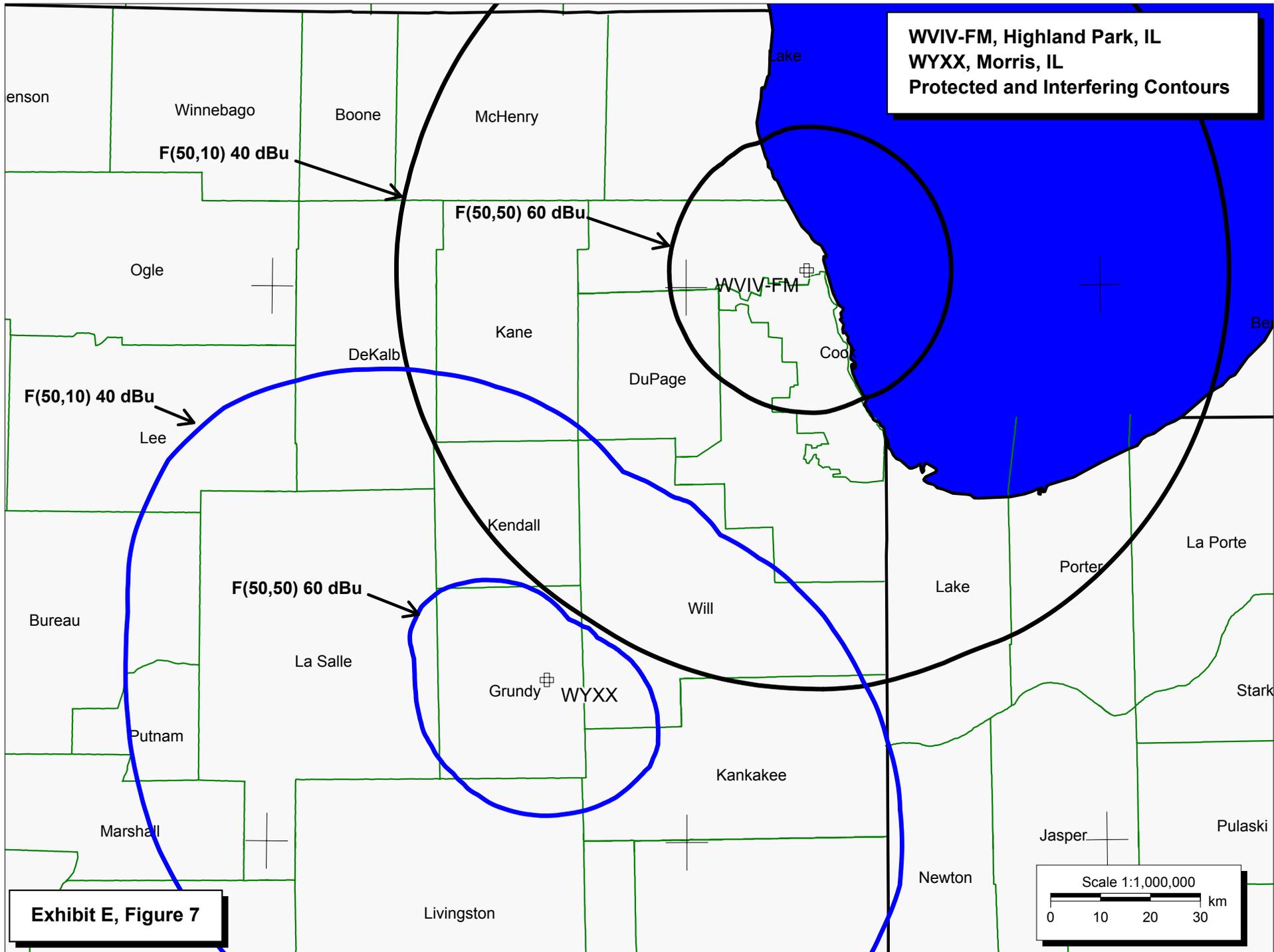


Exhibit E, Figure 7

Engineering Statement
In Support of an
Application for a
Construction Permit
WVIV-FM, Highland Park, Illinois
Channel 276A

WYXX Protected/WVIV-FM Interfering FM Overlap Study

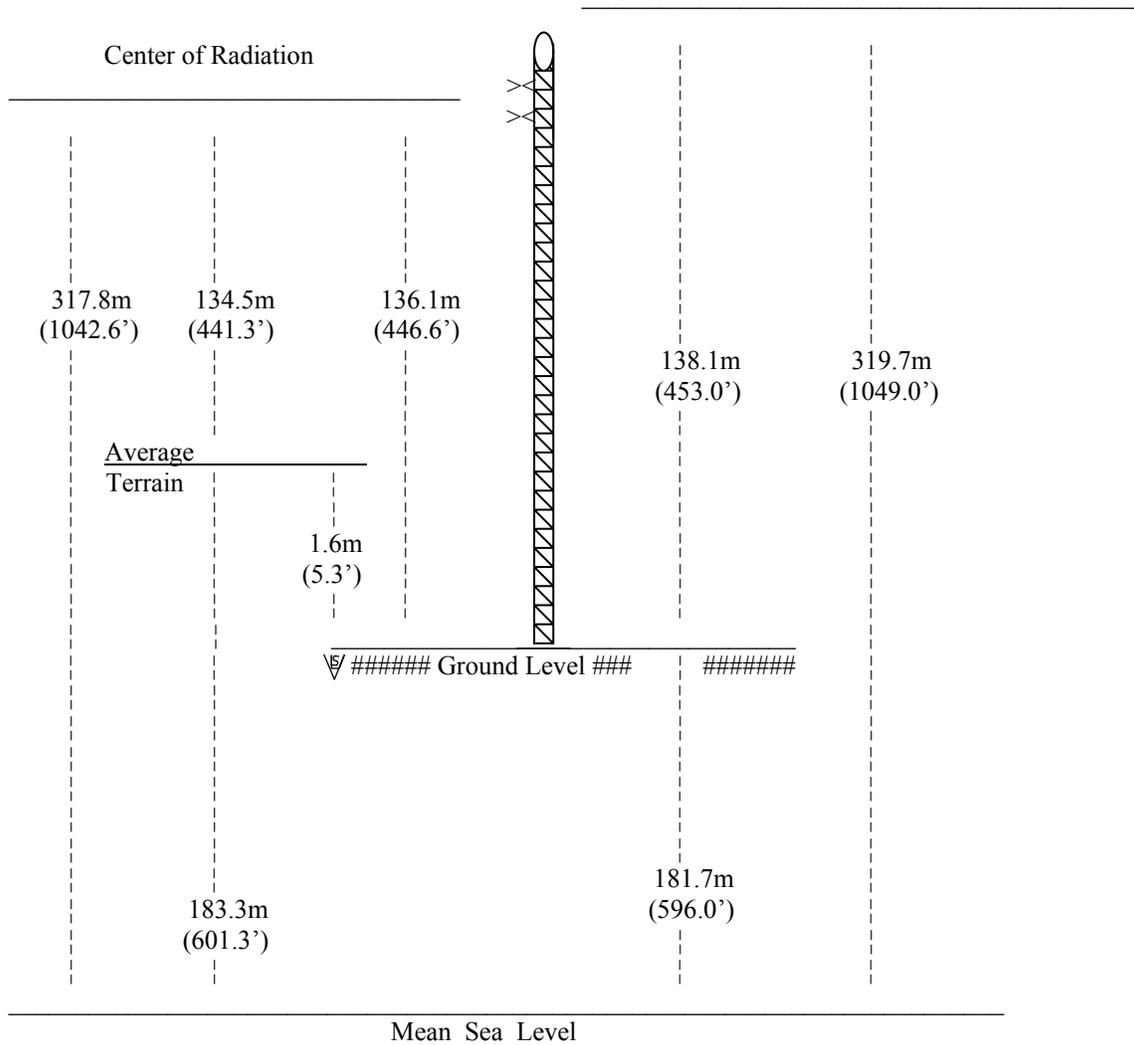
WYXX
Channel = 276A
Max ERP = 6 kW
RCAMSL = 266 M
N. Lat = 411735
W. Lng = 882004

WVIVFM
Channel = 276A
Max ERP = 3.4 kW
RCAMSL = 317.8 M
N. Lat = 420150
W. Lng = 874232

Protected
60 dBu

Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
350.0	000.8528	0107.2	018.5	221.1	003.4000	0128.1	084.3	39.5
351.0	000.8196	0107.2	018.3	220.8	003.4000	0128.1	084.2	39.5
352.0	000.7871	0107.1	018.1	220.6	003.4000	0128.1	084.1	39.5
353.0	000.7553	0107.2	017.9	220.3	003.4000	0128.0	084.0	39.6
354.0	000.7241	0107.4	017.8	220.1	003.4000	0128.0	083.9	39.6
355.0	000.6936	0107.5	017.6	219.9	003.4000	0128.0	083.8	39.6
356.0	000.6637	0107.5	017.4	219.6	003.4000	0128.0	083.7	39.6
357.0	000.6345	0107.5	017.1	219.4	003.4000	0128.0	083.7	39.7
358.0	000.6060	0107.5	016.9	219.1	003.4000	0128.0	083.6	39.7
359.0	000.5781	0107.4	016.7	218.8	003.4000	0128.0	083.6	39.7
000.0	000.5509	0107.4	016.5	218.6	003.4000	0128.0	083.6	39.7
001.0	000.5293	0107.3	016.3	218.4	003.4000	0127.9	083.6	39.7
002.0	000.5081	0107.2	016.1	218.1	003.4000	0127.9	083.6	39.7
003.0	000.4874	0107.1	015.9	217.9	003.4000	0127.9	083.6	39.7
004.0	000.4670	0106.9	015.6	217.6	003.4000	0127.9	083.6	39.7
005.0	000.4472	0106.8	015.4	217.4	003.4000	0127.8	083.6	39.7
006.0	000.4277	0106.7	015.3	217.2	003.4000	0127.8	083.7	39.7
007.0	000.4087	0106.6	015.1	217.0	003.4000	0127.8	083.7	39.6
008.0	000.3902	0106.5	014.9	216.7	003.4000	0127.8	083.7	39.6
009.0	000.3720	0106.5	014.7	216.5	003.4000	0127.8	083.8	39.6
010.0	000.3543	0106.2	014.5	216.3	003.4000	0127.6	083.9	39.6
011.0	000.3430	0105.8	014.3	216.1	003.4000	0127.6	083.9	39.6
012.0	000.3319	0105.1	014.1	215.9	003.4000	0127.6	083.9	39.6
013.0	000.3210	0104.2	014.0	215.7	003.4000	0127.6	084.0	39.5
014.0	000.3103	0103.4	013.8	215.5	003.4000	0127.6	084.1	39.5
015.0	000.2997	0102.6	013.6	215.3	003.4000	0127.5	084.2	39.5
016.0	000.2893	0101.8	013.4	215.1	003.4000	0127.5	084.2	39.5
017.0	000.2792	0101.3	013.3	214.9	003.4000	0127.5	084.3	39.5
018.0	000.2692	0101.0	013.2	214.8	003.4000	0127.5	084.4	39.4
019.0	000.2593	0100.8	013.0	214.6	003.4000	0127.5	084.4	39.4
020.0	000.2497	0100.6	012.9	214.4	003.4000	0127.4	084.5	39.4
021.0	000.2497	0100.6	012.9	214.3	003.4000	0127.4	084.4	39.4
022.0	000.2497	0100.6	012.9	214.1	003.4000	0127.4	084.4	39.4
023.0	000.2497	0100.6	012.9	214.0	003.4000	0127.4	084.4	39.4
024.0	000.2497	0100.6	012.9	213.8	003.4000	0127.4	084.3	39.4
025.0	000.2497	0100.7	012.9	213.7	003.4000	0127.4	084.3	39.5
026.0	000.2497	0100.9	012.9	213.5	003.4000	0127.4	084.2	39.5
027.0	000.2497	0101.0	012.9	213.4	003.4000	0127.3	084.2	39.5
028.0	000.2497	0100.9	012.9	213.2	003.4000	0127.3	084.2	39.5
029.0	000.2497	0100.8	012.9	213.1	003.4000	0127.3	084.2	39.5
030.0	000.2497	0100.8	012.9	212.9	003.4000	0127.3	084.2	39.5



Proposed Location - 42° 01' 50" N. Lat. 87° 42' 32" W. Long. [NAD 27]

NOT DRAWN TO SCALE

Proposed antenna - 2 element, half wave spaced.

Exhibit E, Figure 9 Vertical Sketch of Supporting Structure
WVIV-FM Highland Park, Illinois Channel 276A – 103.1 MHz. January, 2003

Engineering Statement

**In Support of an
Application for a
Construction Permit**

**WVIV-FM, Highland Park, Illinois
Channel 276A**

Longley-Rice Parameters Used

Software Author and Version:	SoftWright, Version 4.1.586
Transmitter Latitude:	42:01:50.0N
Transmitter Longitude:	87:42:32.0W
Transmitter Center of Radiation:	317.8 meters AMSL (136.1 meters AGL)
Frequency:	103.1 MHz
Power (ERP)	3.4 kW
Antenna:	Non-directional
19 radials (325° to 343°, from 0.5 km to 50.0 km in 0.5 km increments)	
Terrain resolution: 3-arc second NGDC database	
Receiver Antenna:	9.14 meters
Mode of Variability:	11 (Individual Mode)
Confidence:	50%
Reliability:	50%
Polarization:	Vertical
Relative Permittivity:	15
Conductivity:	0.005 (S/m)
Climate:	5 (Continental Temperate)
Sea Level Refractivity:	0
Surface Refractivity:	300.90
Effective earth curvature:	1.333