

**Technical Exhibit
Minor Change Application**

**WVIV-FM (Facility ID 74177)
Highland Park, Illinois**

**Proposed
Channel 276A
5.4 KW 82 M
42-03-28 N
087-45-36 W**

September 18, 2007

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

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Channel 276A**

Overview

This technical exhibit supports a minor change application to the licensed facility of WVIV-FM, Highland Park, Illinois (Facility ID 74177). WVIV-FM is currently licensed to operate on channel 276A utilizing a directional antenna with an effective radiated power (ERP) of 6 kW and an antenna height above average terrain (HAAT) of 100 meters (BLH-19990730KB). This application proposes a new antenna site utilizing a non-directional antenna.

Proposed Facilities

This minor change application proposes to relocate the transmitter site to the following coordinates: 42-03-28 W; 087-45-36 W. It is proposed to operate non-directional with an ERP of 5.4 kW and an antenna HAAT of 82 meters. The antenna will be mounted on a pole on top of an existing building and while the proposed structure will require registration, at the present time the FAA is studying the proposed location (FAA ASN 2007-AGL-6936-OE).

Proposed Coverage

Figure 3 is a map showing the predicted coverage contours for the proposed operation of WVIV-FM. Since the proposal does not cover 80% of the Community of License of Highland Park using the normal FCC prediction method, use of alternate prediction methods as described in the following section results in compliance with the principle community coverage requirement contained in Section 73.315(a).

Alternate Prediction Methods

Section 73.313 allows the use of an alternate prediction method when the terrain in one or more directions from the antenna site departs widely from the average terrain. The commission staff has established that "Where ΔH is used as the sole determinate that

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the terrain along a radial widely departs from the 50 meter standard, a ΔH of 20 meters or less, or 100 meters or more” is required. Several of the extended radials through Highland Park meet this criterion. As examples, on the radial of 340° true, the ΔH was determined to be 3 meters and on the radial of 345° true the ΔH was determined to be 13 meters, which demonstrates compliance with the ΔH requirement of 20 meters or less.

As shown on Figure 4, the 70 dBu contour determined by the use of the Longley-Rice propagation model utilizing 5 dB of clutter factor provides service to 94% of Highland Park.

Also shown on Figure 4, is the proposed WVIV-FM 70 dBu contour based on the Point-to-Point (PTP) model. Utilizing this method, the principle community of license of Highland Park is predicted to receive coverage over 99% of its area.

Based on the use of these two alternate prediction methods, 70 dBu coverage of at least 94% of Highland Park is obtained.

The following table shows the distance to the 70 dBu contours along each radial of interest through the principle community of license. The contours were calculated using the FCC’s F50/50 method, the Longley-Rice model (with 5 dB clutter factor applied) and the Point-to-Point model.

Radial	70 dBu Field Strength (KM)		Difference		PTP Distance to 70 dBu (km)	Difference	
	FCC F50/50	Longley-Rice	km	Percent		km	Percent
335°	13.4	17.1	3.7	28%	18.4	5.0	37%
340°	13.6	18.0	4.4	32%	20.3	6.7	49%
345°	13.7	20.2	6.5	47%	20.2	6.5	47%

The difference between the distances to the 70 dBu contours for the Longley-Rice model and the Point-to-Point model exceeds the distance to the FCC predicted F50/50 contour for each radial by more than the 10% minimum as required by FCC policy on supplemental showings. If a waiver of the provisions of Section 73.315(a) is still required, it is respectfully requested.

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Allocation Study

An allocation study was performed as specified in Section 73.207 of the Commissions Rules. The CDBS was used as the basis for the separation study. Figure 5 shows the distances specified in 73.207 along with the distances to all stations of concern.

The study shows that from the proposed transmitter site WVIV-FM will continue to be short-spaced to the following stations: WVAZ, Oak Park, Illinois; WKSC-FM, Chicago, Illinois; WCSJ-FM, Morris, Illinois and WHQG, Milwaukee, Wisconsin. Each of these short-spaced situations is addressed below. While the above short-spacings continue to exist, it should be noted that the move of the WVIV-FM antenna site eliminates one short-spaced situation. At present WVIV-FM is short-spaced to WGFB, Rockton, Illinois by 20.3 km. Upon grant of the construction permit and the filing of the 302-FM license application to cover the construction, WVIV-FM will be short by only 0.17 km to WGFB. This rounds to zero and therefore at that point WVIV-FM will no longer be short to WGFB.

In regards to the short-spacing to WVAZ and WKSC, WVIV-FM was short-spaced to these stations on November 16, 1964 and has continuously remained short-spaced to these stations. Therefore under Section 73.213(a) the spacing to these 2nd adjacent stations can be ignored.

Concerning WCSJ-FM, it is requested that contour protection under Section 73.215 be granted for this station. The distance between the WVIV-FM antenna site and the WCSJ-FM antenna is 97.47 km. Section 73.215 requires a minimum spacing of 92 km between co-channel class A stations. The spacing between these stations exceeds the minimum by 5.48 km. Figures Exhibits 6 and 6A depict the protected and interfering contours of WVIV-FM and WCSJ-FM. The WVIV-FM contours were predicted using the parameters specified for the station indicated at the beginning of this technical exhibit. Since WCSJ-FM is already licensed under Section 73.215 of the Commission's Rules, the actual facilities of WCSJ-FM were used to determine the contours.

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Regarding the short-spacing to WHQG, the proposed antenna site for WVIV-FM decreases the short-spacing that currently exists from the licensed site of WVIV-FM. At present, WVIV-FM is located 101.06 km from WHQG and is therefore short-spaced by 11.94 km (the spacing required under Section 73.207 for 1st adjacent class B to class A stations is 113 km). From the proposed antenna site for WVIV-FM the spacing will be 111.36 km, short by 1.64 km. Therefore, the short-spacing is being improved by 10.3 km. In addition to reduction in the short-spaced distance, the area within the overlap between the protected contour of WHQG and the proposed WVIV-FM is decreased. Figure 7 depicts the current overlap and Figure 8 depicts the proposed overlap. As a result in the decrease in land area, there is a corresponding decrease in the population (8,852 persons) predicted to receive interference. Currently WHQG operates at a HAAT of 133 meters. Since this is below the maximum HAAT of 150 meters allowed for Class B stations, the antenna height above ground level for this study was adjusted to the maximum allowed HAAT of 150 meters. Figures 7A & 8A contain the tabulated data. Based on the above reductions in distance, land area and population within the predicted overlap, it is respectively submitted that the short-spacing to WHQG be ignored.

Radiofrequency Electromagnetic Field Exposure

The proposed facility was evaluated in terms of potential radio frequency exposure at ground level, roof level and on top of the elevator penthouse. The FCC's FM Model program was used for the determination. WVIV-FM is proposing to use an ERI 2-bay, .5 wavelength spaced rototiller type antenna. The following table lists the results of the program.

Location	Calculated Intensity from FM Model	Percent of Maximum	
		Uncontrolled	Controlled
Ground Level	5.59 $\mu\text{w}/\text{cm}^2$	2.79%	0.56%
Roof Level	86.12 $\mu\text{w}/\text{cm}^2$	43.06%	8.61%
Elevator Penthouse Roof	120.69 $\mu\text{w}/\text{cm}^2$	60.34%	12.07%

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There are no other emitters located at the proposed site at this time. The "worst case" exposure limit for Uncontrolled (general population) is predicted to be 60.34% of the maximum, therefore this proposal appears to satisfy the requirements for radiofrequency electromagnetic exposure.

Access to the transmitting site will be restricted by a locked door and appropriately marked with warning signs. The permittee/licensee agrees that it will reduce power or cease operation as need be to protect persons having access to the pole or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

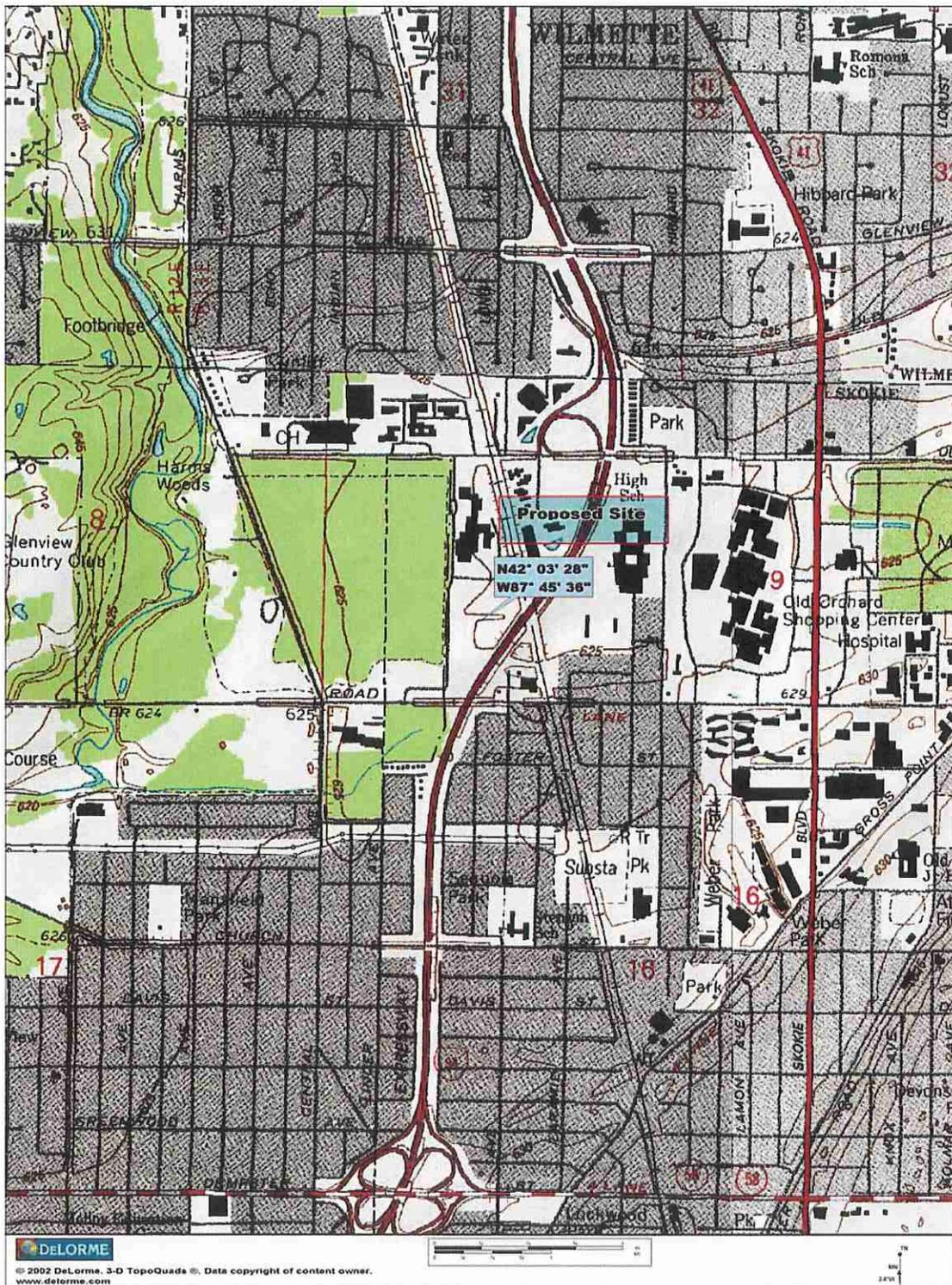
Section 106 NHPA Considerations

The proposed antenna system and supporting structure will increase the height of the condominium building by more than 10%. Accordingly, the applicant recognizes the need to analyze the proposed facility with respect to the requirements of Section 106 of the National Historic Preservation Act and the National Programmatic Agreement. Although the study has not yet been started, the applicant intends on retaining a firm that specializes in this type of study so that it can be completed as soon as possible. Since the process is not yet complete, the applicant is answering Item 17 of Section III-B, Engineering, of FCC Form 301, "No." The applicant will advise the Commission when the process is complete.



Alan D. Kirschner
Technical Consultant
September 18, 2007

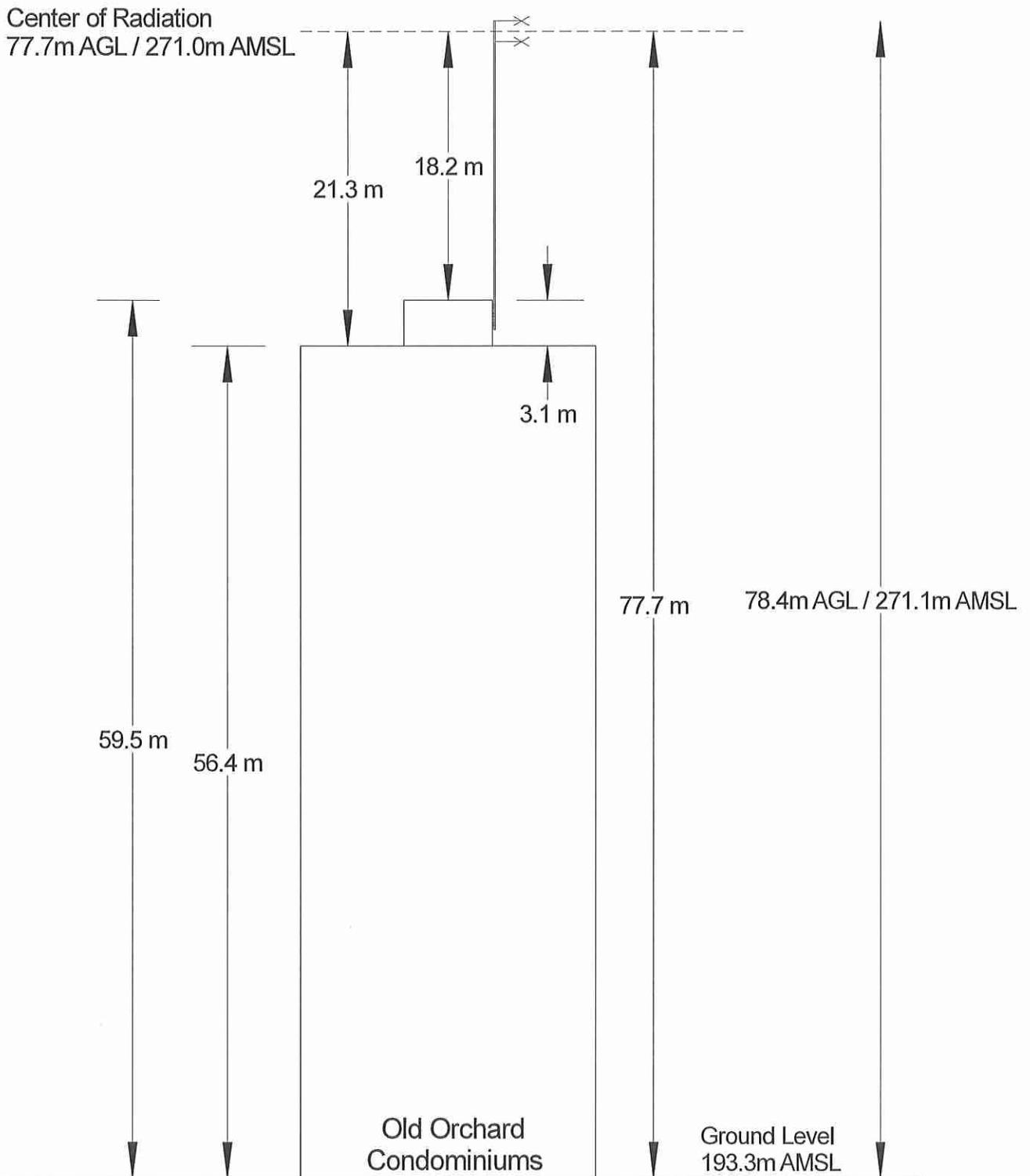
Figure 1



Park Ridge (IL)
1993

Proposed Transmitter Site
WVIV-FM
Highland Park, Illinois
Channel 276A 5.4 kW

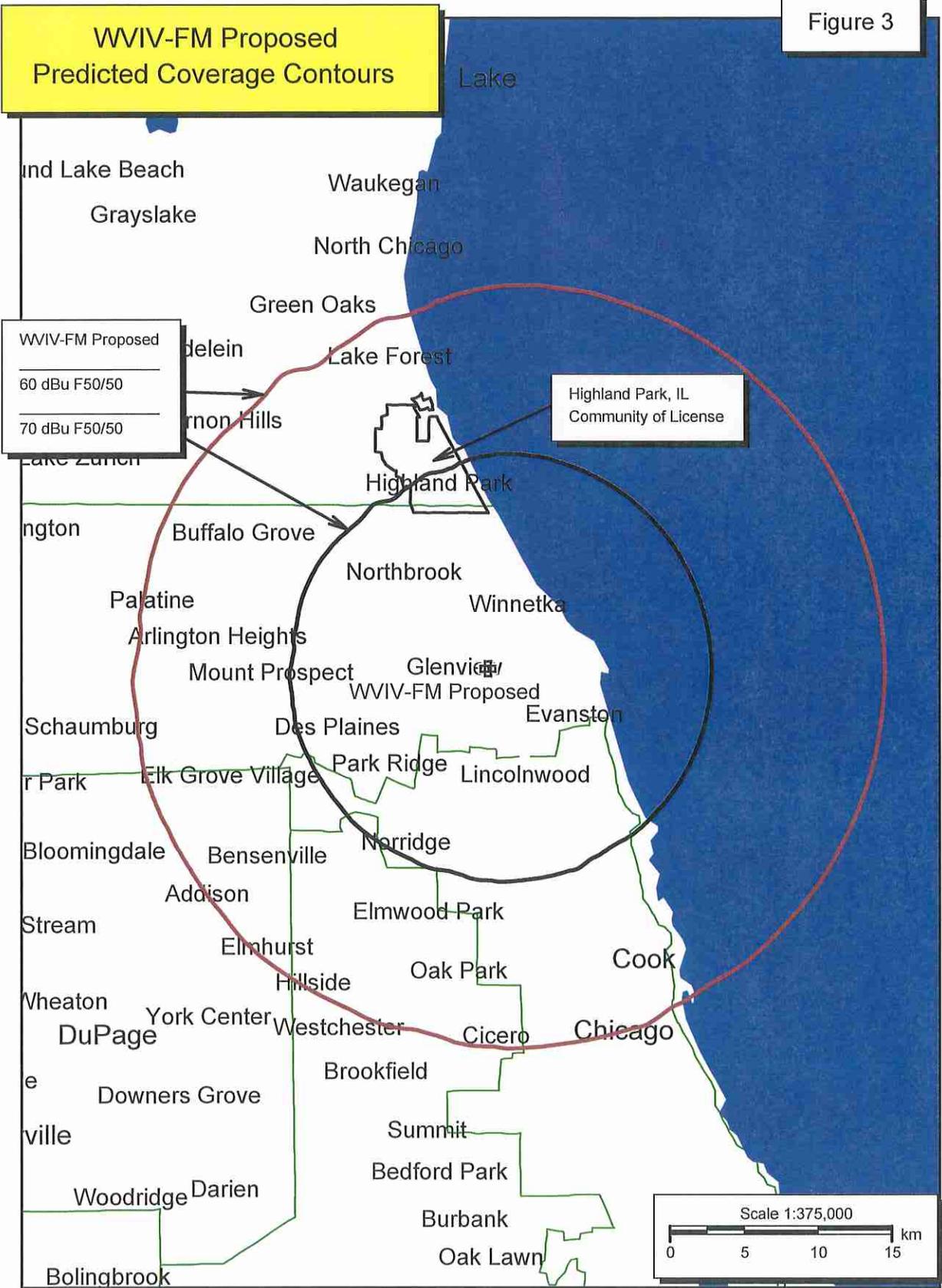
Figure 2



Note: Elevations are drawn to scale

Proposed W V I V - F M antenna
and supporting structure

Figure 3



WWIV-FM Proposed
Community of License Coverage

Figure 4

WWIV-FM Proposed
70 dBu Longley Rice Predicted Contour

WWIV-FM Proposed
70 dBu FM PTP

70 dBu F50/50 Contour

Highland Park, II
Community of License

WWIV-FM Proposed 

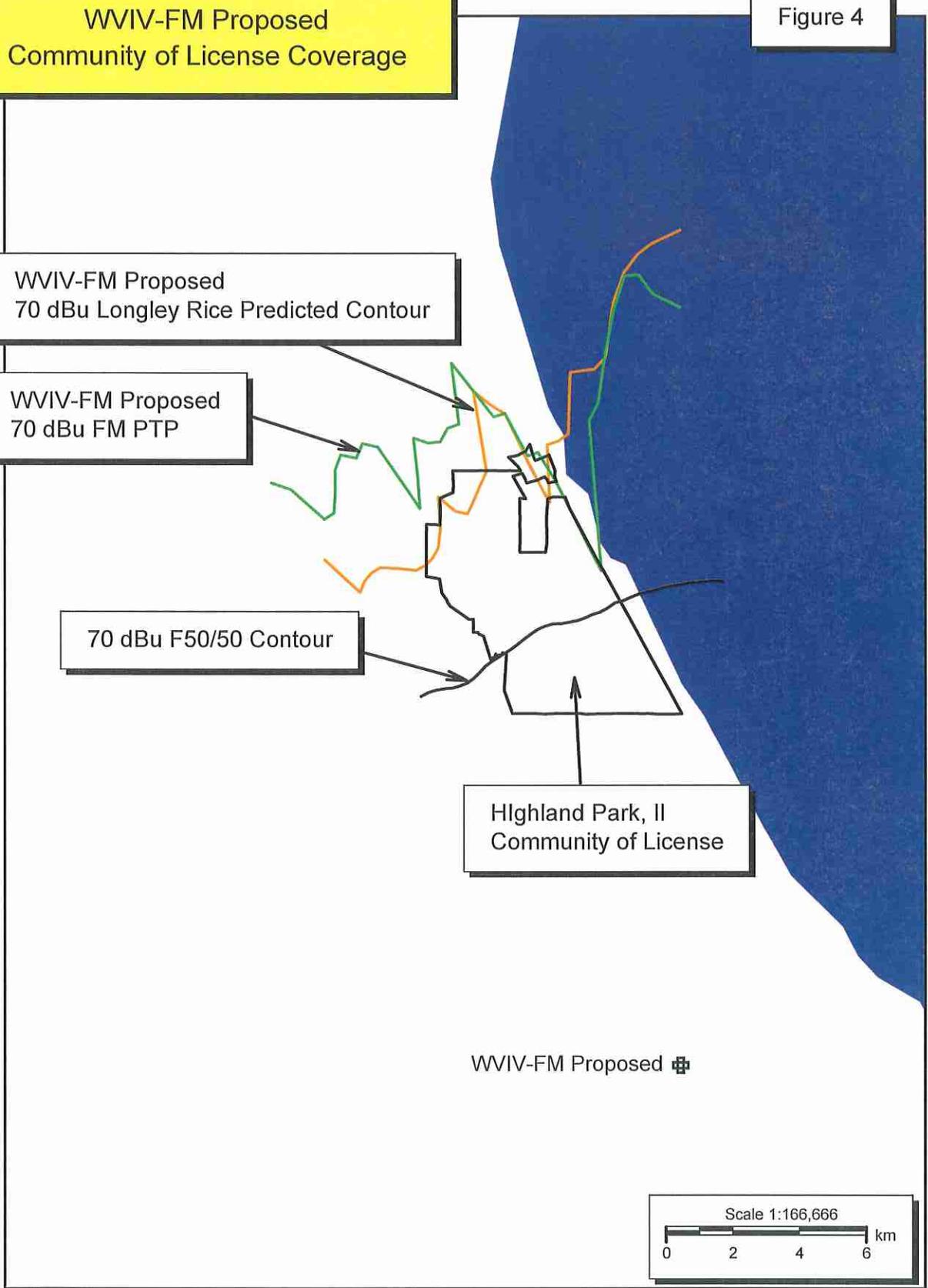
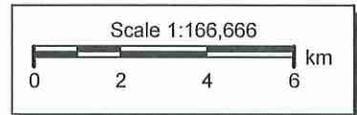
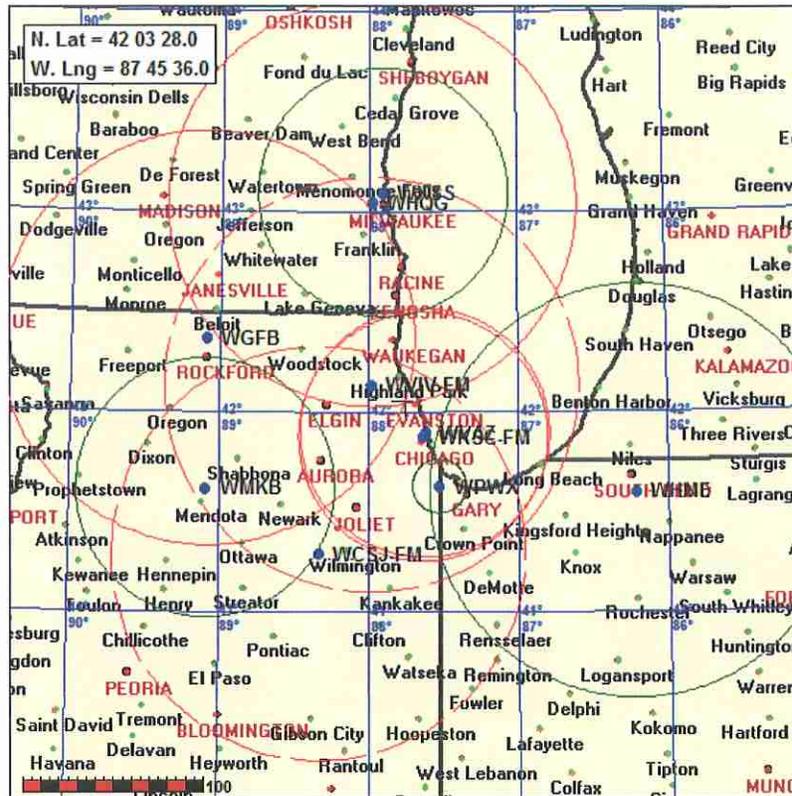


Figure 5

WVIV-FM, Highland Park, Illinois Proposed Antenna Site Spacing Study

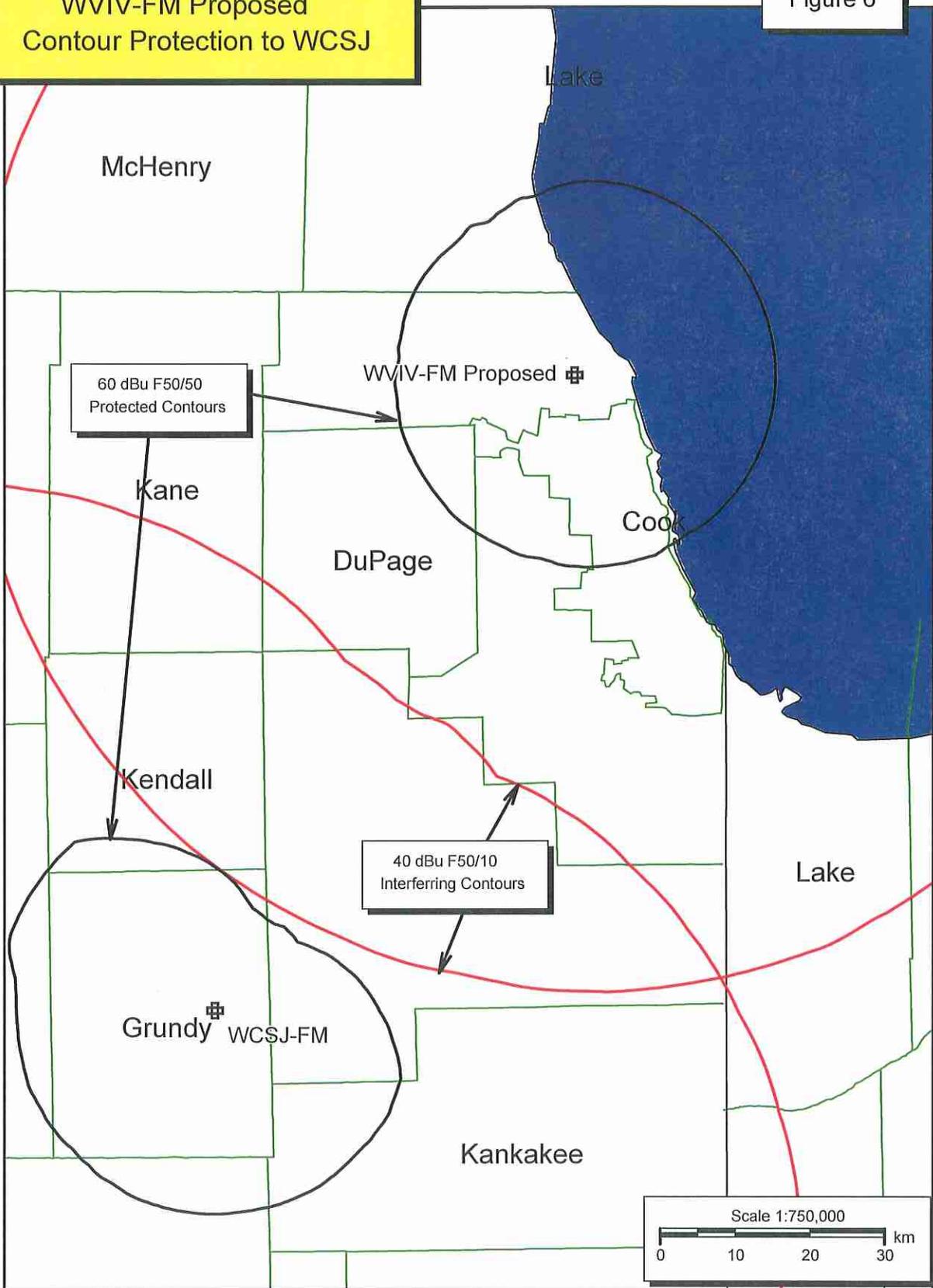


Proposed WVIV-FM, Highland Park, IL

Call	Channel	Location	Azi	Dist	FCC	Margin
WVIV-FM	LIC-Z 276A	Highland Park	IL 295.8	20.41	115.0	-94.59
No Concern: Current Licensed Site						
WVAZ	LIC 274B	Oak Park	IL 147.3	20.98	69.0	-48.02
No Concern: 73.213(a)(4) Station						
WKSC-FM	LIC 278B	Chicago	IL 152.6	22.38	69.0	-46.62
No Concern: 73.213(a)(4) Station						
WCSJ-FM	LIC-Z 276A	Morris	IL 209.5	97.47	115.0	-17.53
Of Concern: Requesting 73.215 Processing						
WHQG	LIC 275B	Milwaukee	WI 350.7	111.36	113.0	-1.64
Of Concern: Reducing overlap in this instant application. See narrative						
WGFB	LIC 276A	Rockton	IL 287.9	114.83	115.0	-0.17
WHME	LIC 276A	South Bend	IN 111.0	137.99	115.0	22.99
WPWX	LIC-D 222B	Hammond	IN 157.9	51.22	15.0	36.22
WXSS	LIC 279B	Wauwatosa	WI 354.2	116.01	69.0	47.01
WMKB	LIC 275A	Earlville	IL 246.6	120.56	72.0	48.56

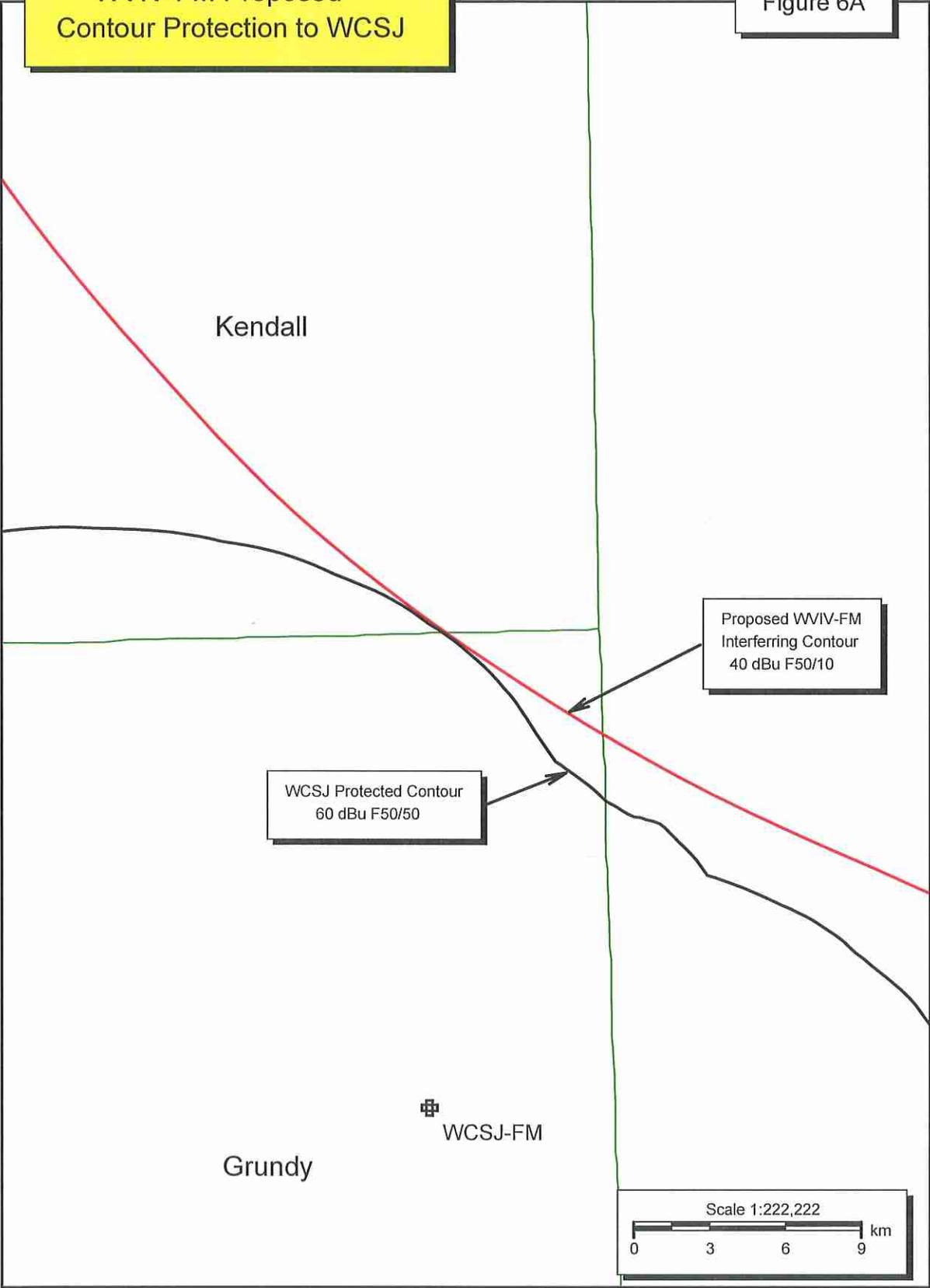
WWIV-FM Proposed
Contour Protection to WCSJ

Figure 6



WVIV-FM Proposed
Contour Protection to WCSJ

Figure 6A



Kendall

WCSJ Protected Contour
60 dBu F50/50

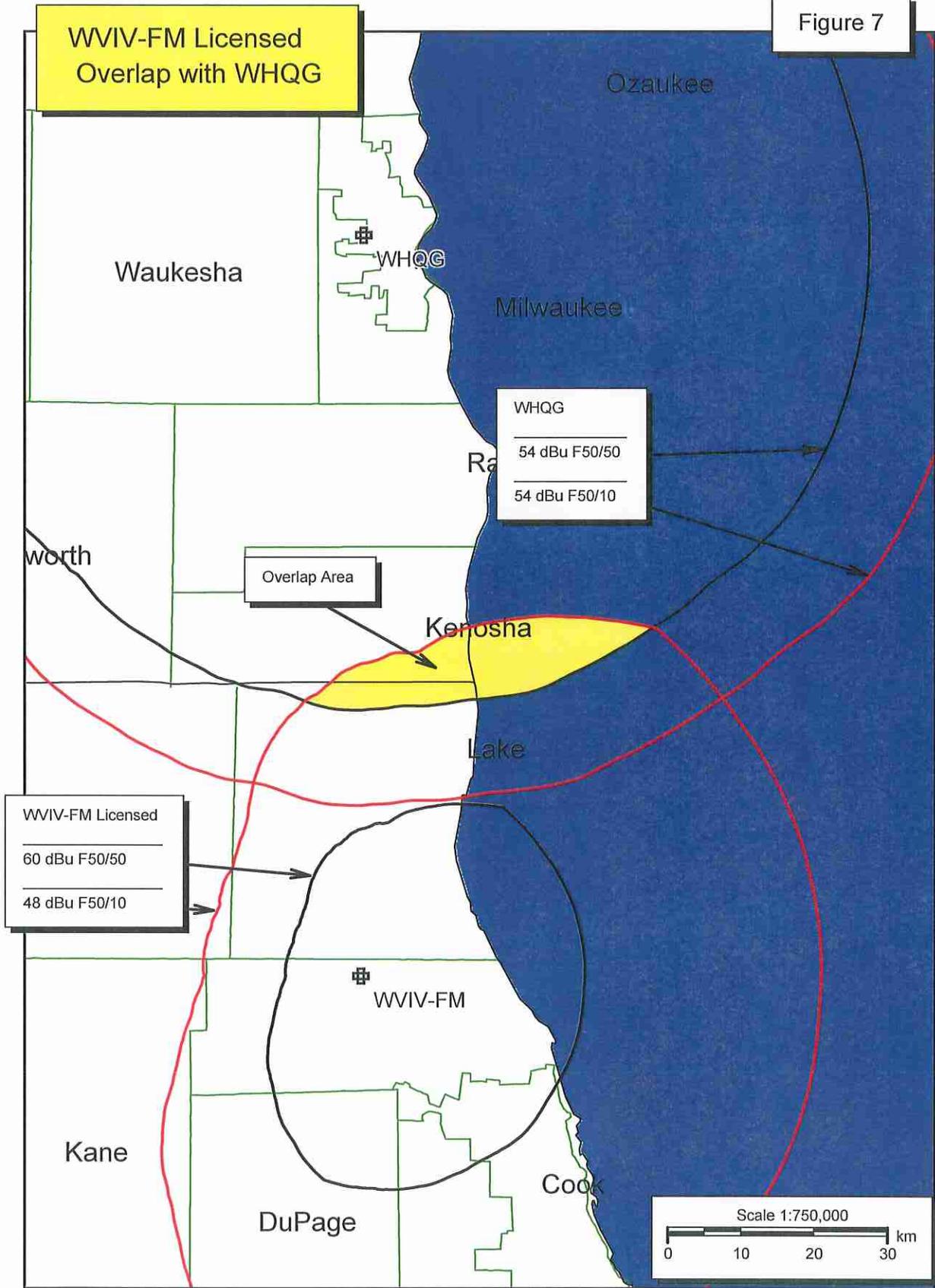
Proposed WWIV-FM
Interfering Contour
40 dBu F50/10

⊕
WCSJ-FM

Grundy

Scale 1:222,222
0 3 6 9 km

Figure 7



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

WVIV-FM Licensed / WHQG Overlap Study

This overlap region consists of the intersection of the following contours:

WVIV-FM: FCC F(50-10) 48.00 dBu

WHQG: FCC F(50-50) 54.00 dBu

Population Database: 2000 US Census (SF1)

Total Population Within Overlap Region: 29,656

Total Housing Units Within Overlap Region: 11,059

Total Area Within Overlap Region: 329.96 sq. km

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WVIV-FM Licensed / WHQG Overlap Study

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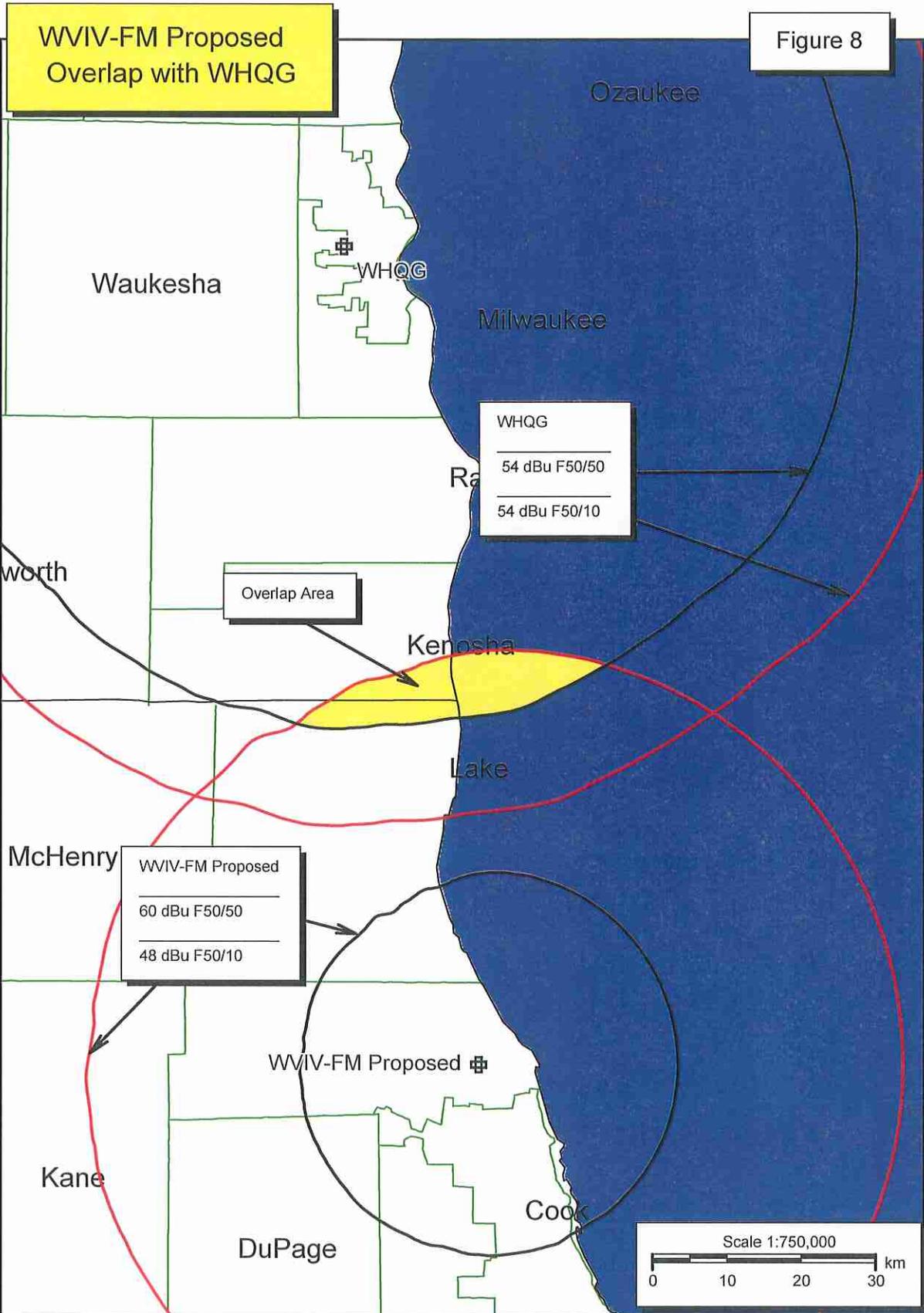
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WVIV-FM Proposed / WHQG

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WVIV-FM Proposed: FCC F(50-10) 48.00 dBu

WHQG: FCC F(50-50) 54.00 dBu

Population Database: 2000 US Census (SF1)

Total Population Within Overlap Region: 20,804

Total Housing Units Within Overlap Region: 7,459

Total Area Within Overlap Region: 247.06 sq. km