

**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application**

- 1) **Statement** - Nature Of Proposal
- 2) **Exhibit 1** - Co Channel WZSR 105.5 40 dBu (50,10) Overlap W288EA 60 dBu
- 3) **Exhibit 2** - Co Channel WYKT 105.5 40 dBu (50,10) Overlap W288EA 60 dBu
- 4) **Exhibit 3** - Proposed W288EA License Vs. Proposed 60 dBu Contour Overlap
- 5) **Exhibit 4** – Proposed W288EA 60 dBu and WBIG AM 2.0 mV/m Overlap(Primary Station)
- 6) **Exhibit 5** – Proposed W288EA 40 dBu(50,10) and Co Channel WXLC 60 dBu Contours
- 7) **Exhibit 6** – Proposed W288EA 40 dBu(50,10) and Co Channel WYOT 60 dBu Contours
- 8) **Exhibit 6B** - Proposed W288EA 40 dBu(50,10) and Co Channel WYOT 60 dBu Contours Expanded View
- 9) **Exhibit 7** – Proposed W288EA 40 dBu(50,10) and Co Channel WYCA 60 dBu Contours
- 10) **Exhibit 8** – Proposed W288EA 40 dbu(50,10) and Co Channel W272DQ 60 dBu Contour
- 11) **Exhibit 8B** – Proposed W288EA 40 dbu(50,10) and Co Channel W272DQ 60 dBu Contour Expanded View.
- 12) **Exhibit 9** - First Adjacent Channel Study Proposed W288EA 54 dBu (50,10) Contours First Adjacent WAL5 FM 102.1 60 dBu
- 13) **Exhibit 10** – First Adjacent Study Proposed W288EA 54 dBu (50,10) Contours First Adjacent W273CZ FM 102.5 60 dBu
- 14) **Exhibit 10B** – First Adjacent Study Proposed W288EA 54 dBu (50,10) Contours First Adjacent W273CZ FM 102.5 60 dBu Expanded View
- 15) **Exhibit 11** - Third Adjacent Study Proposed W288EA 100 dBu (50,10) Contours Third Adjacent WMKB FM 102.9 60 dBu
- 16) **Exhibit 12** - Proposed Kathrein 3B Custom Directional Antenna Pattern

**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application**

## **Statement - Nature Of Proposal**

Auril Broadcasting LLC, ("Auril Broadcasting") is the licensee of Translator Station W288EA, 105.5 FM, Aurora (Facility Id 202935) W288EA is a licensed Class D FM station with authority to operate .070 kW with a Non directional facility(0000204873). WBIG AM 1280 - Aurora, Illinois is the Primary station(BL-14439)(Facility ID 5217).

Auril Broadcasting herein proposes a change to W288EA, 105.5 to 102.3 MHz. This instant application proposes to utilize a different antenna as the current License(0000204873). Once this instant application is granted. Auril Broadcasting is requesting a change to a Kathrein 3B Custom directional pattern and move it approximately 2.90 miles(4.7Km) North North West to an elevation of 451 feet(137.46 Meters). Auril Broadcasting requests operation at .238 kW power ERP.

The change is due to displacement. WYKT FM 105.5(BLH-19970602KK)(Facility ID 36120) And WZSR FM 105.5(BLH-19971117KC)(Facility ID: 53505) . The result of incoming interference to W288EA 105.5 Aurora (0000204873) requires a frequency move. Auril Broadcasting requests moving to the Frequency of 102.3 MHz and a elevation of 451 feet(137.46 Meters) and a power of .238 kW utilizing a Kathrein 3B Custom Directional pattern.

Incoming co-channel interference from WYKT-FM (Ch. 288A, Wilmington, IL) is causing significant reception difficulties. In support of demonstrating interference on Channel 288, Exhibit 1 depicts the 60 dBu protected contour of the authorized W288AE facility, and the 40 dBu F(50,10) interfering contour from WYKT-FM. As shown, the WYKT-FM interfering contour completely encompasses the 60 dBu contour of the authorized W288EA License.

Incoming co-channel interference from WZSR-FM (Ch. 288A, Woodstock, IL) is causing significant reception difficulties. In support of demonstrating interference on Channel 288, Exhibit 2 depicts the 60 dBu protected contour of the authorized W288EA facility, and the 40 dBu F(50,10) interfering contour from WZSR-FM. As shown, the WZSR-FM interfering contour completely encompasses the 60 dBu contour of the authorized W288EA License.

In granting this Instant application and minor modification Auril Broadcasting is requesting that the Primary station will remain WBIG AM 1280 Aurora (BL-14439) (Facility ID: 5217). With a grant of this instant application W288EA 102.3 mHz 60 dBu would be inside the 2.0 mV/m contour of WBIG AM 1280 Aurora (BL-14439).

This instant application W288EA (0000204873) The city of License will remain Aurora, Illinois.

**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application**

**Statement - Nature Of Proposal**  
Page 2

**W288AE Proposed Move**

**Coordinates: NAD 83**

41-48-27.0 N

88-16-06.0 W

**Elevation:**

AGL: 451' (137.46 Meters)

G-AMSL: 734.91' (224.00m)

RC-AMSL: 1185.91' (361.46m)

HAAT: 476.39' (145.20m)

Directional Antenna  
Kathrein 3B Custom Directional

**Power:**

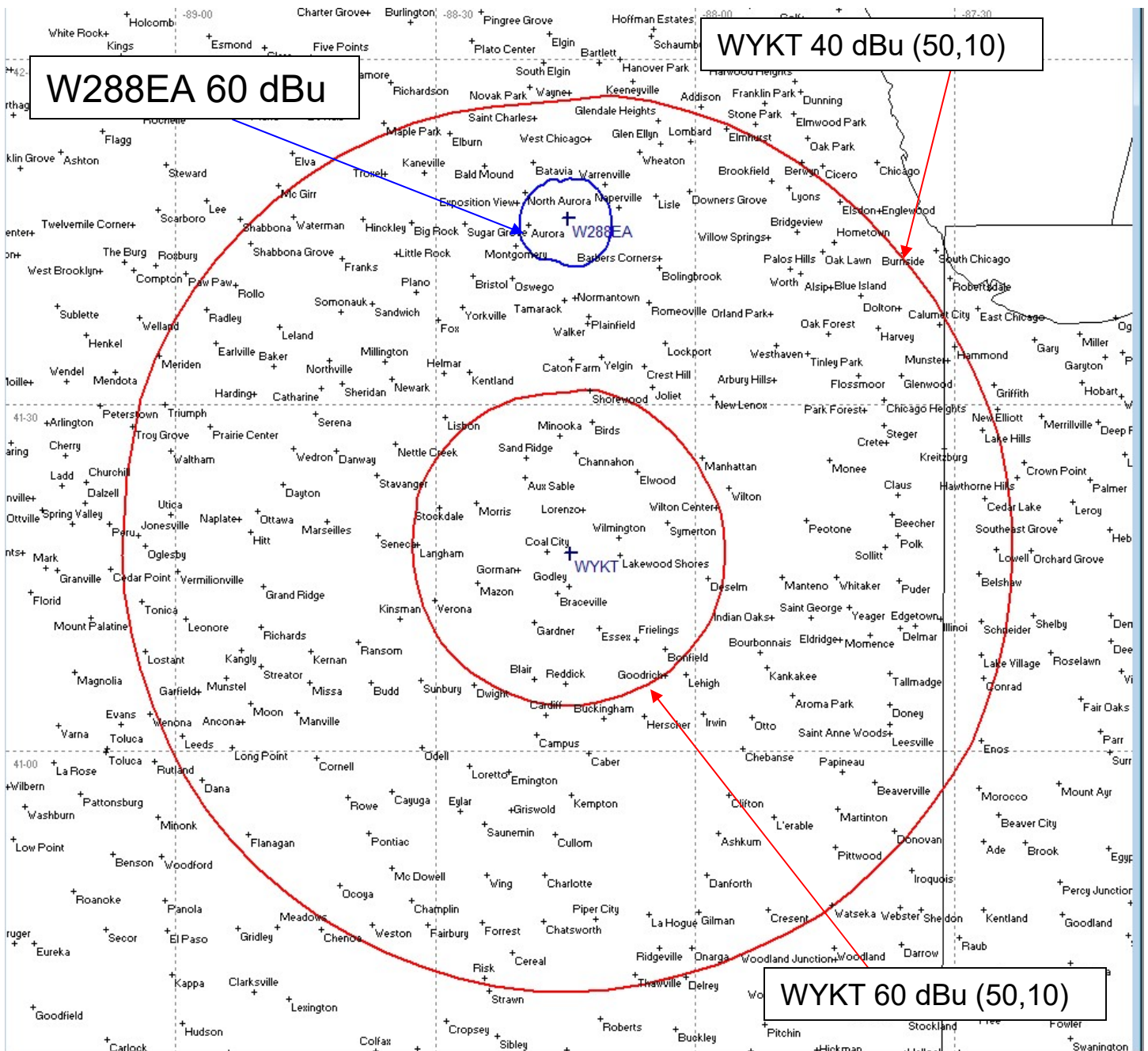
238 Watts ERP

The map displays the Waukegan, IL area with signal coverage for WZSR and W288EA. WZSR 60 dBu (50,10) coverage is indicated by a large red circle, and W288EA 60 dBu coverage is indicated by a smaller blue circle. The map includes numerous town names and a coordinate grid.

**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application**

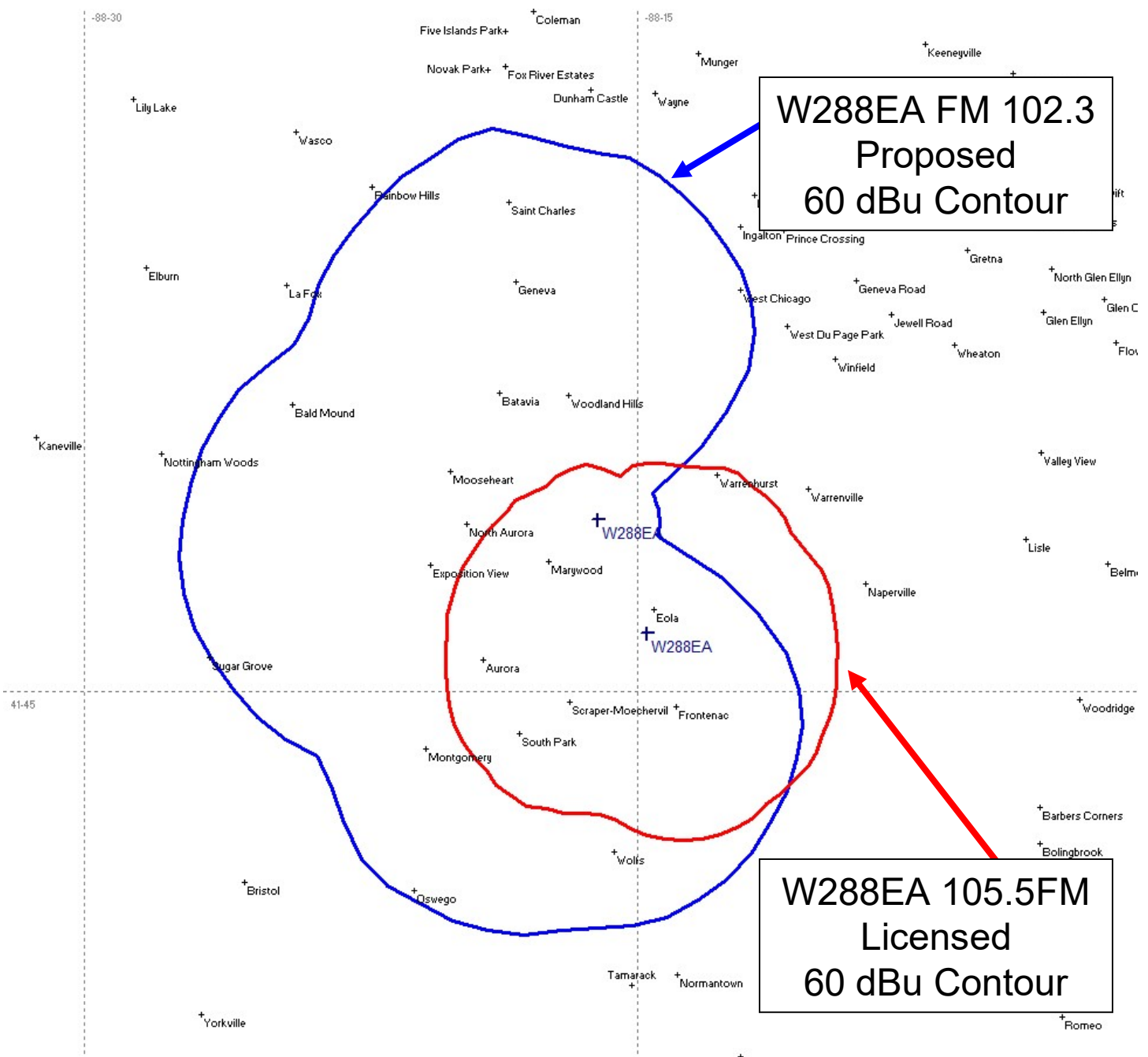
**Exhibit 2**

Co Channel WYKT FM 105.5 40 DBu(50,10) W288EA FM 105.5 60 Dbu Overlap

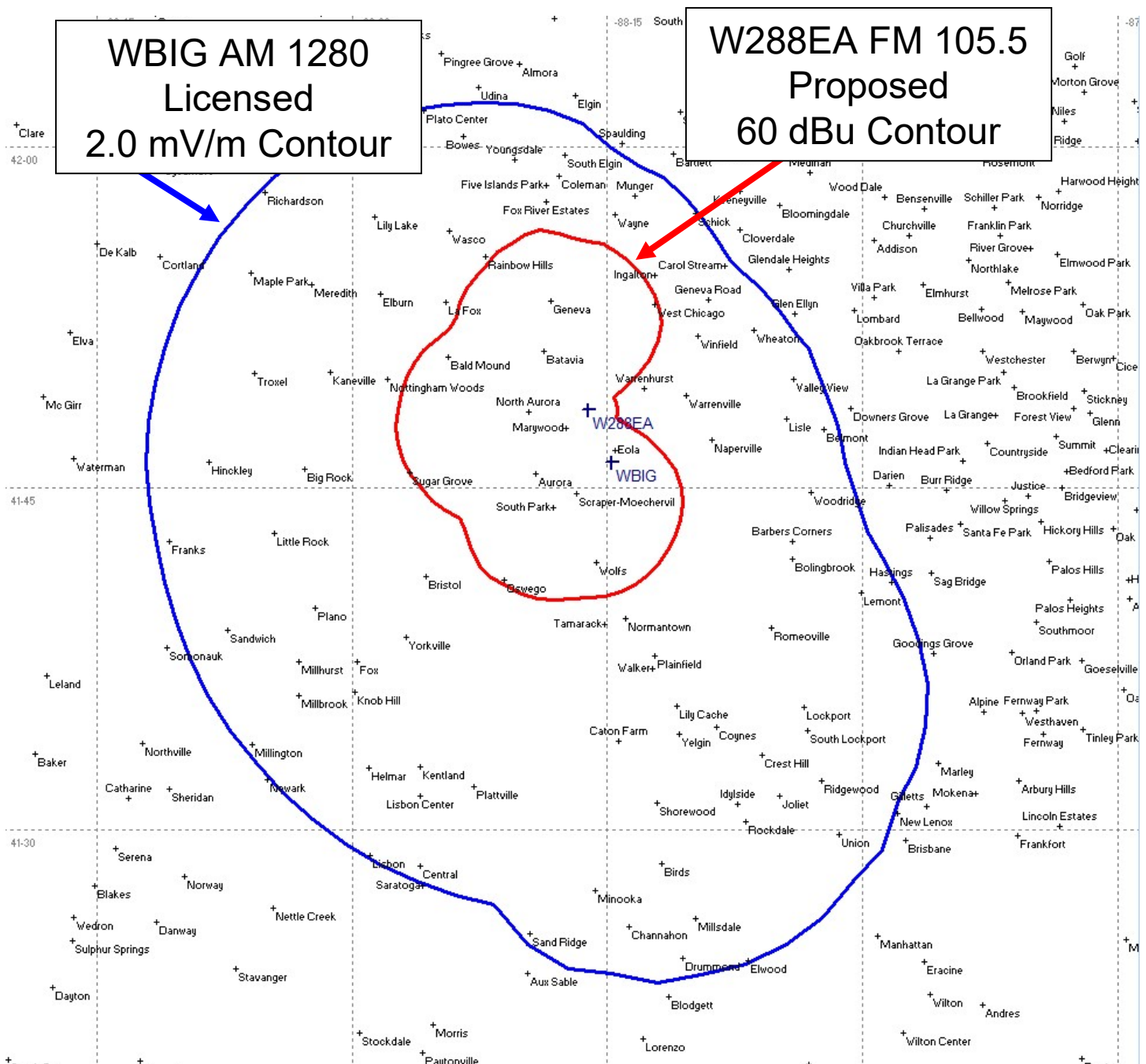


**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application**

**Exhibit 3**  
60 dBu Overlaps  
W288EA FM 105.5 - License Vs. Proposed FM 102.3



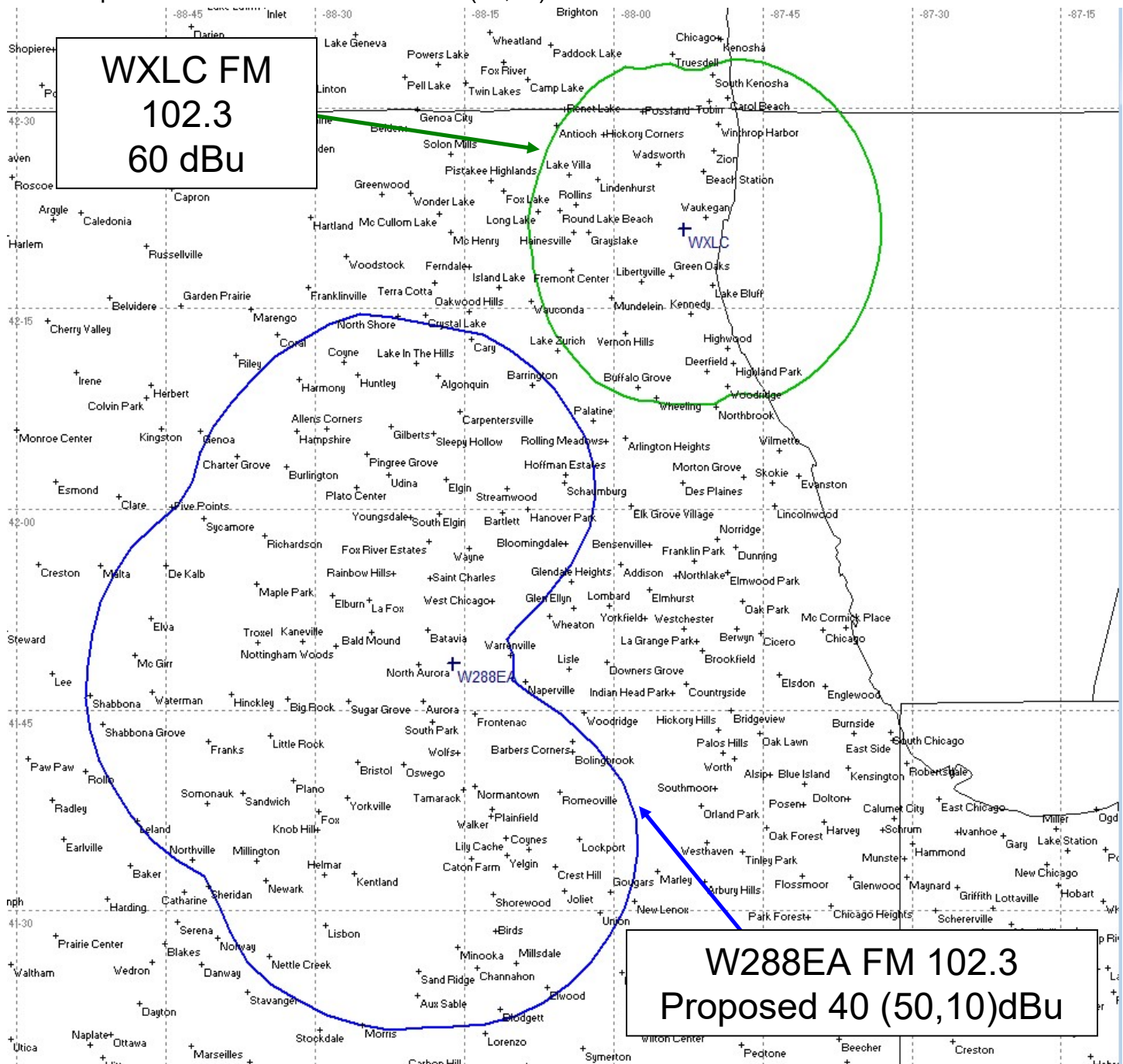




**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application**

**Exhibit 5  
Co Channel Study**

Proposed W288EA FM 102.3 40 dBu(50,10) Contours Co Channel WXLC FM 102.3 60 dBu



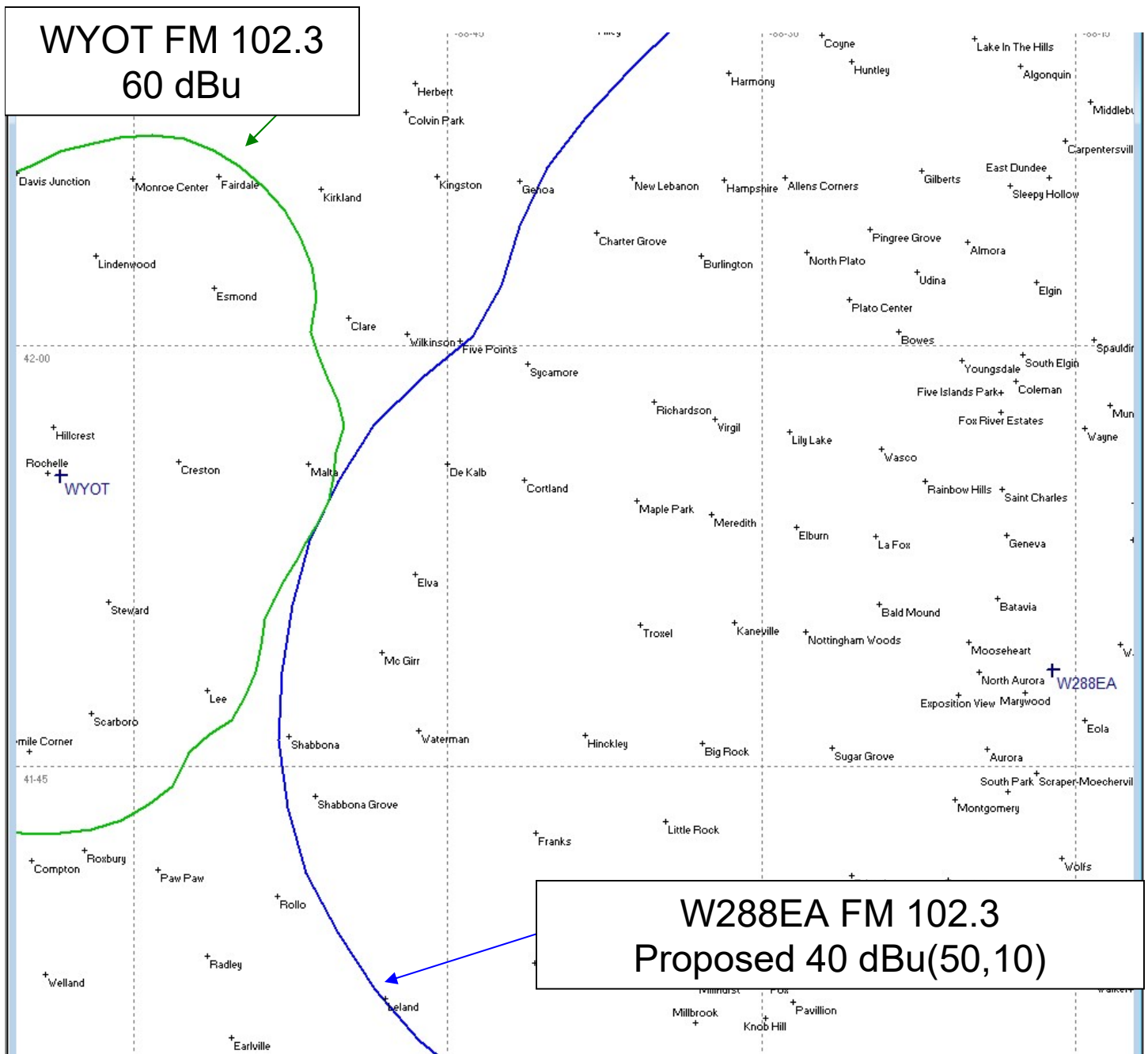


**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application**

**Exhibit 6**

**Proposed Co Channel Study**

Proposed W288EA FM 102.3 40 dBu(50,10) Contours Co Channel WYOT FM 102.3 60 dBu

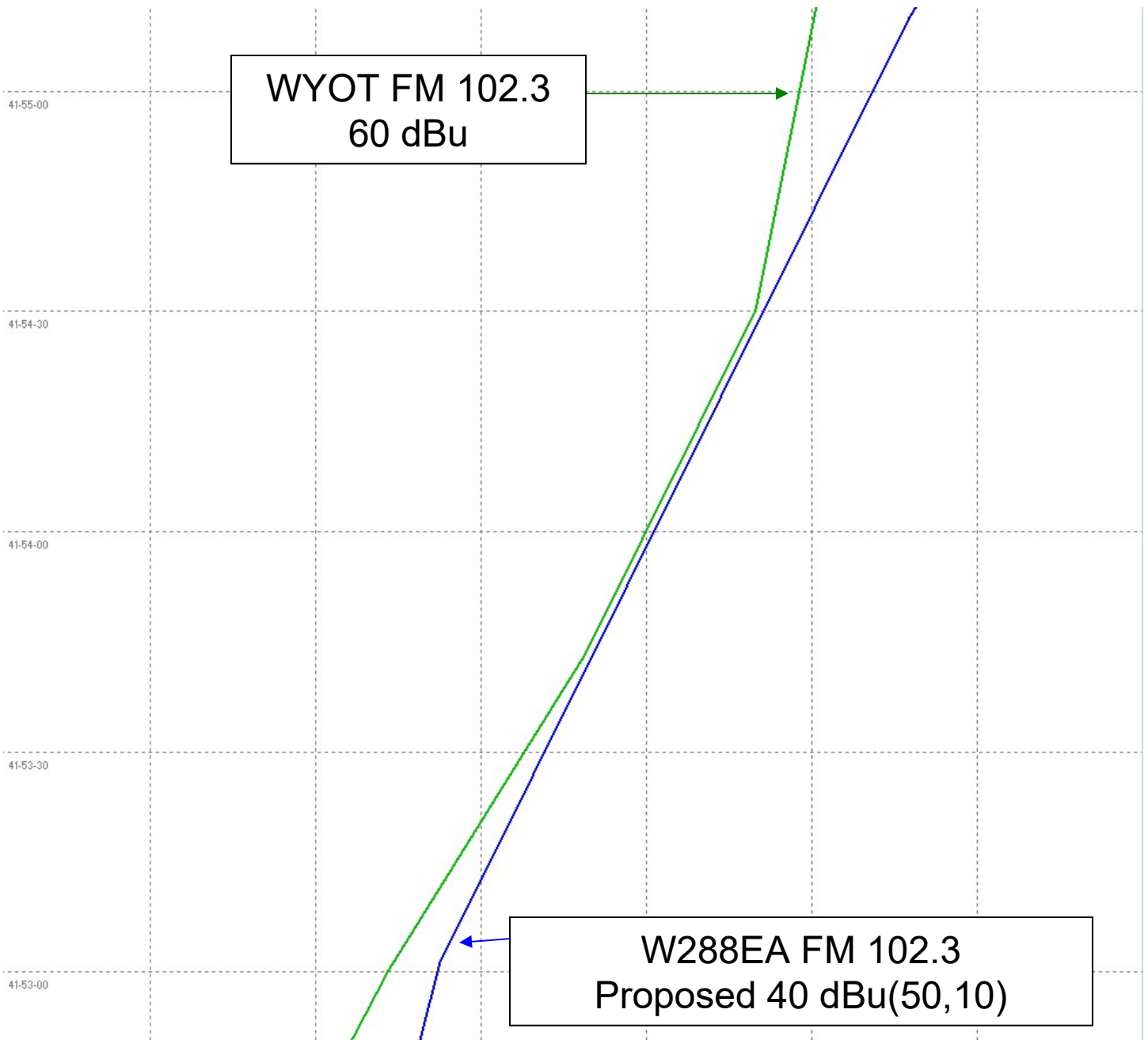


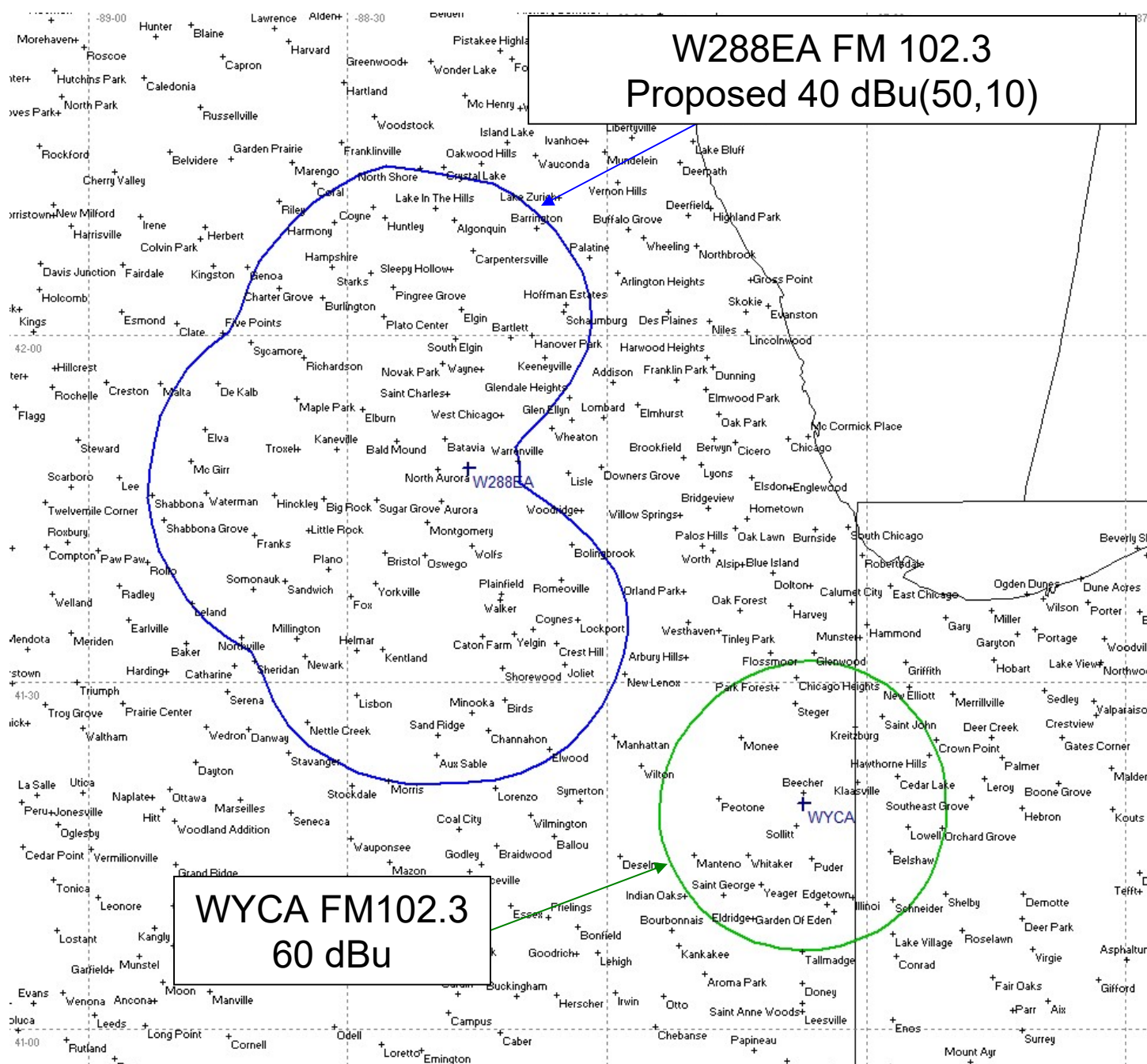
**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application**

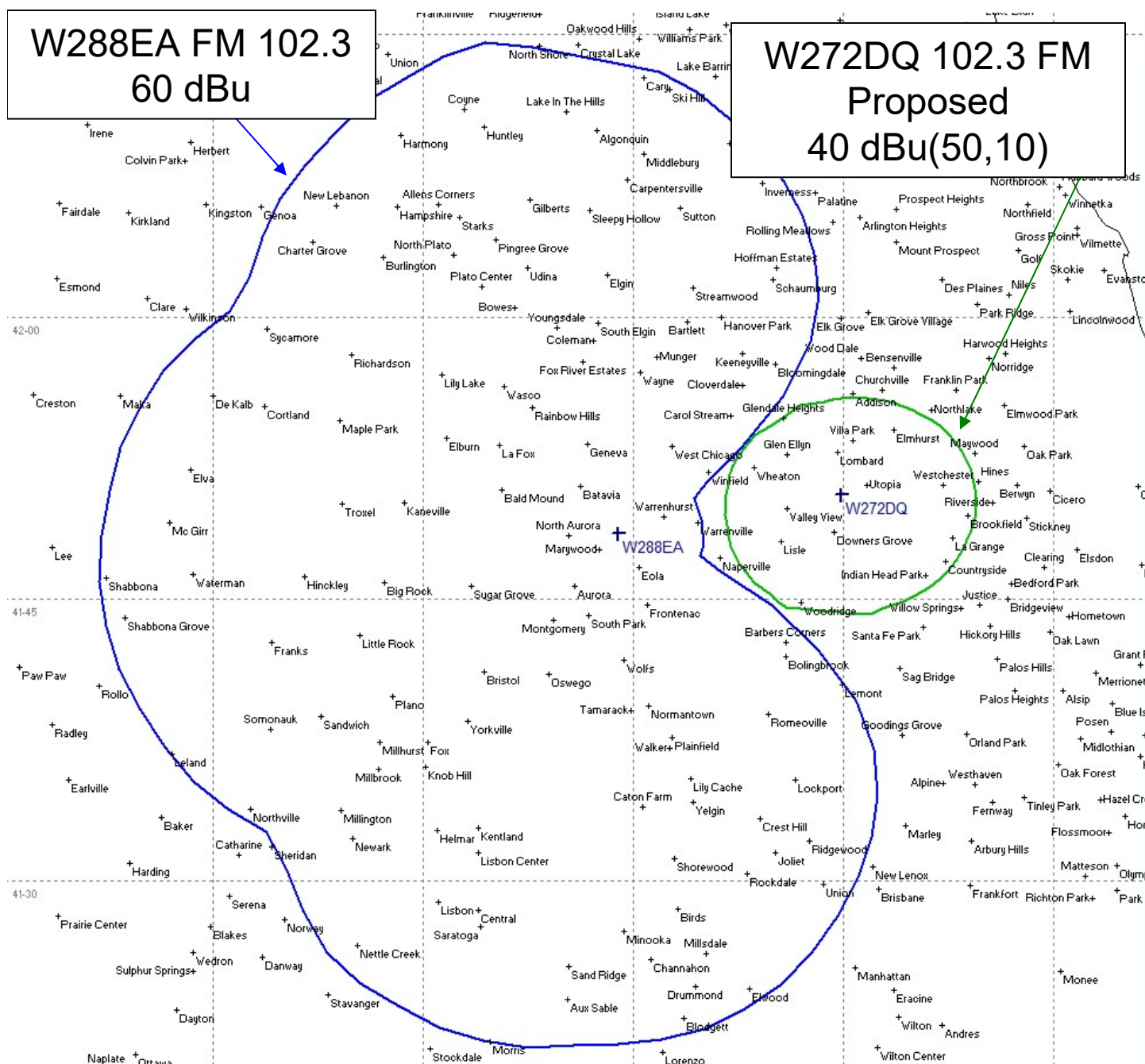
**Exhibit 6B**

**Proposed Co Channel Study**

Proposed W288EA FM 102.3 40 dBu(50,10) Contours Co Channel WYOT FM 102.3 60 dBu  
Expanded View





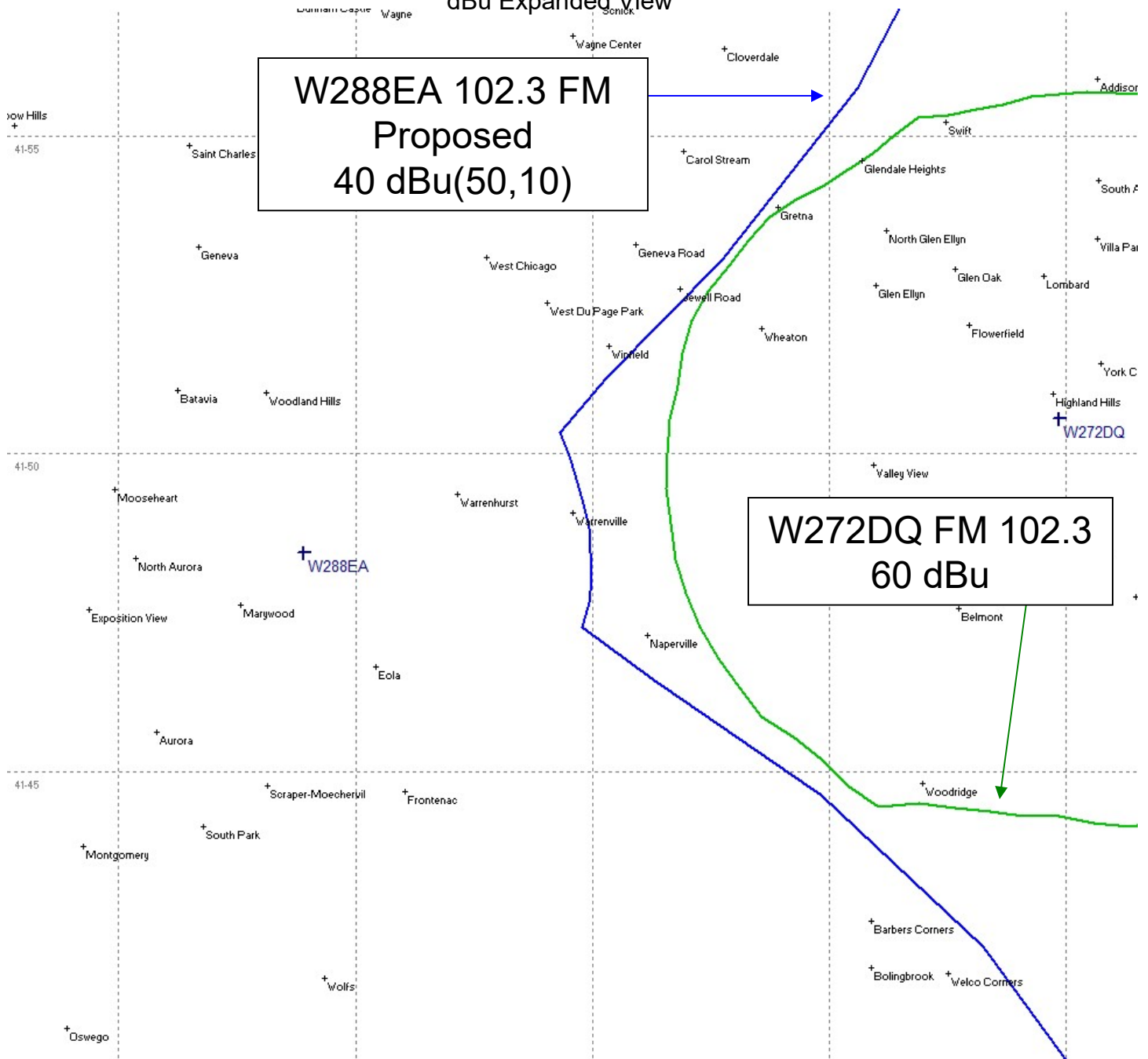


**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application**

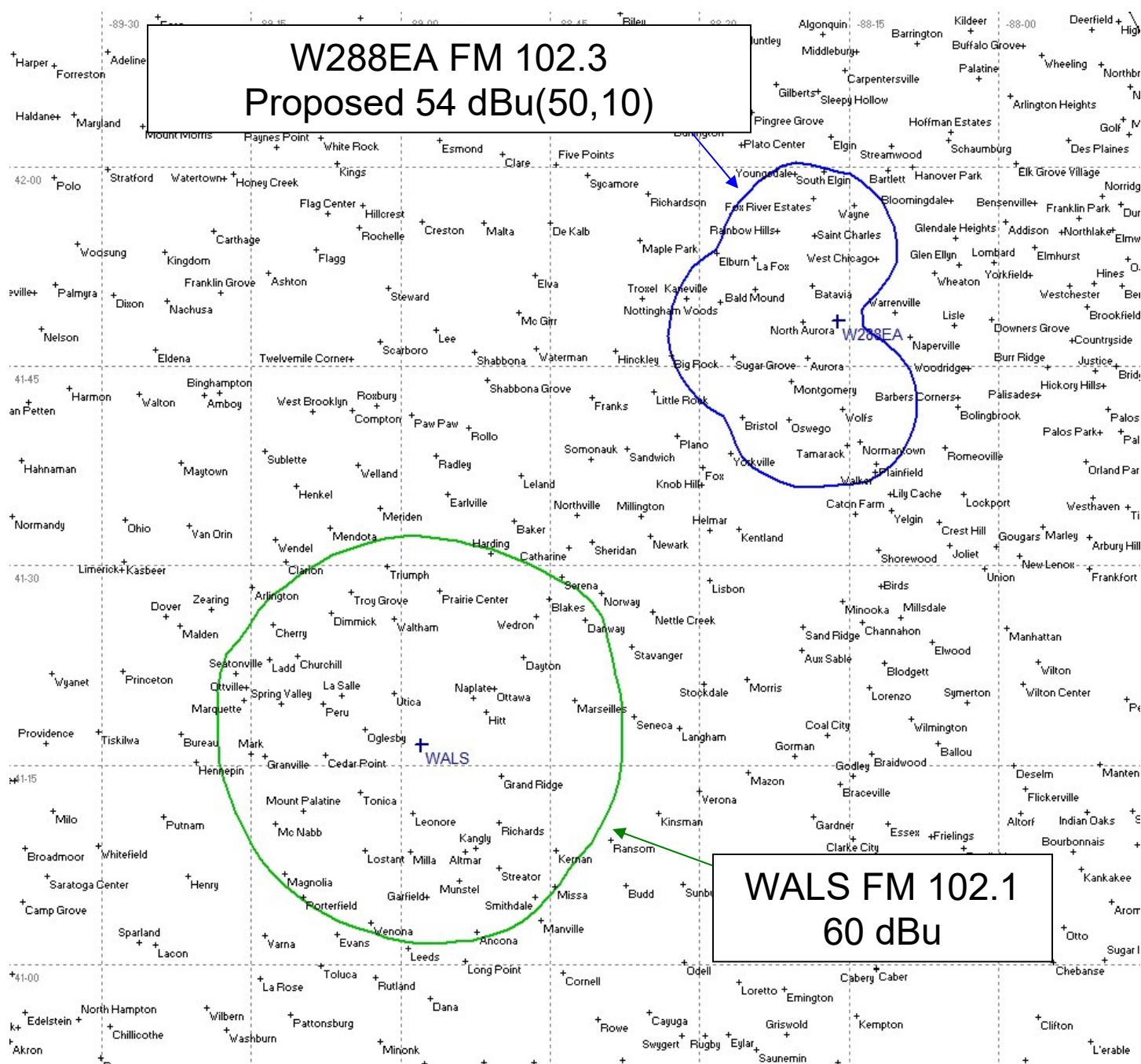
**Exhibit 8B**

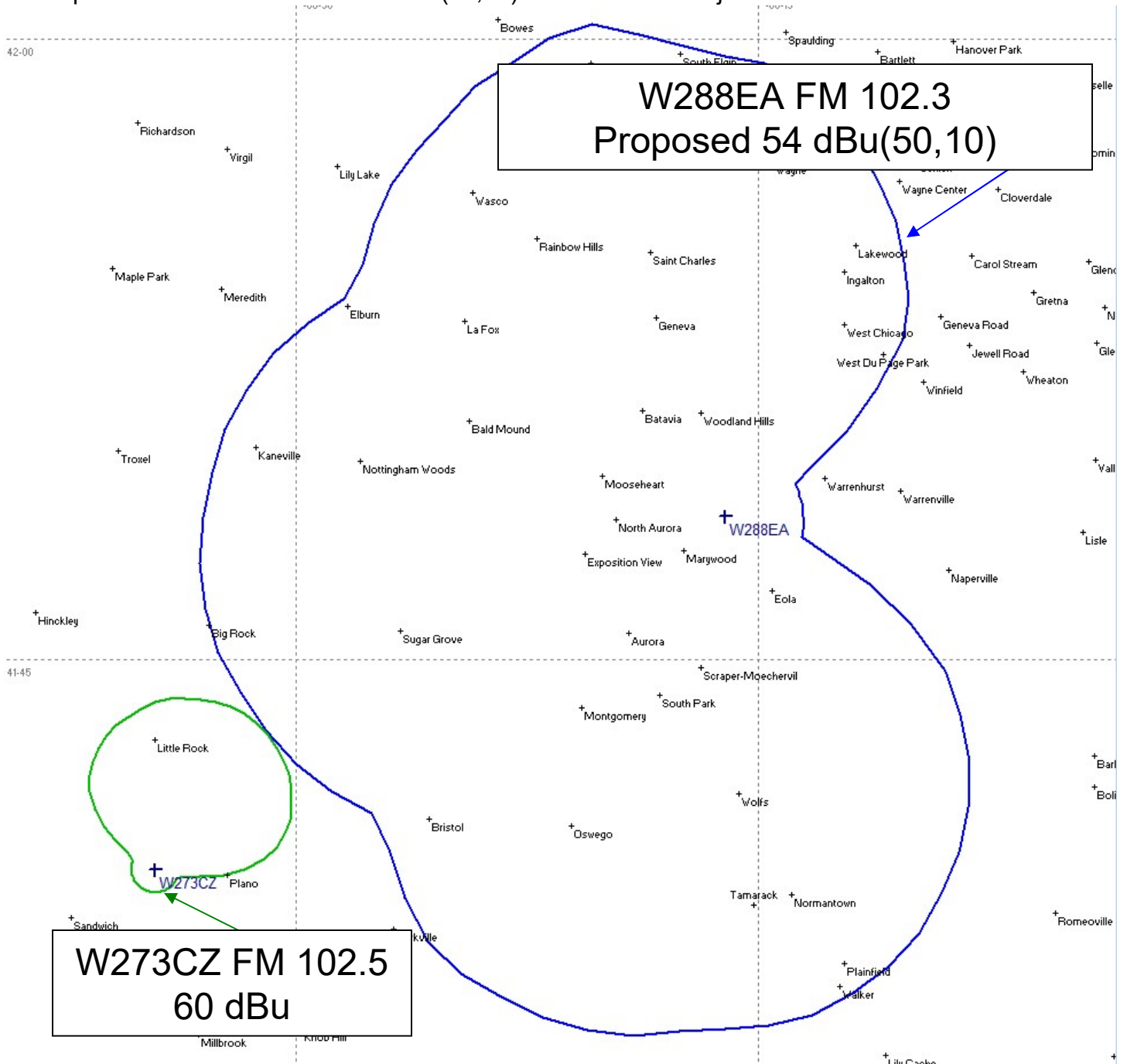
**Proposed Co Channel Study**

Proposed W288EA FM 102.3 40 dBu(50,10) Contours Co Channel W272DQ FM 102.3 60 dBu Expanded View







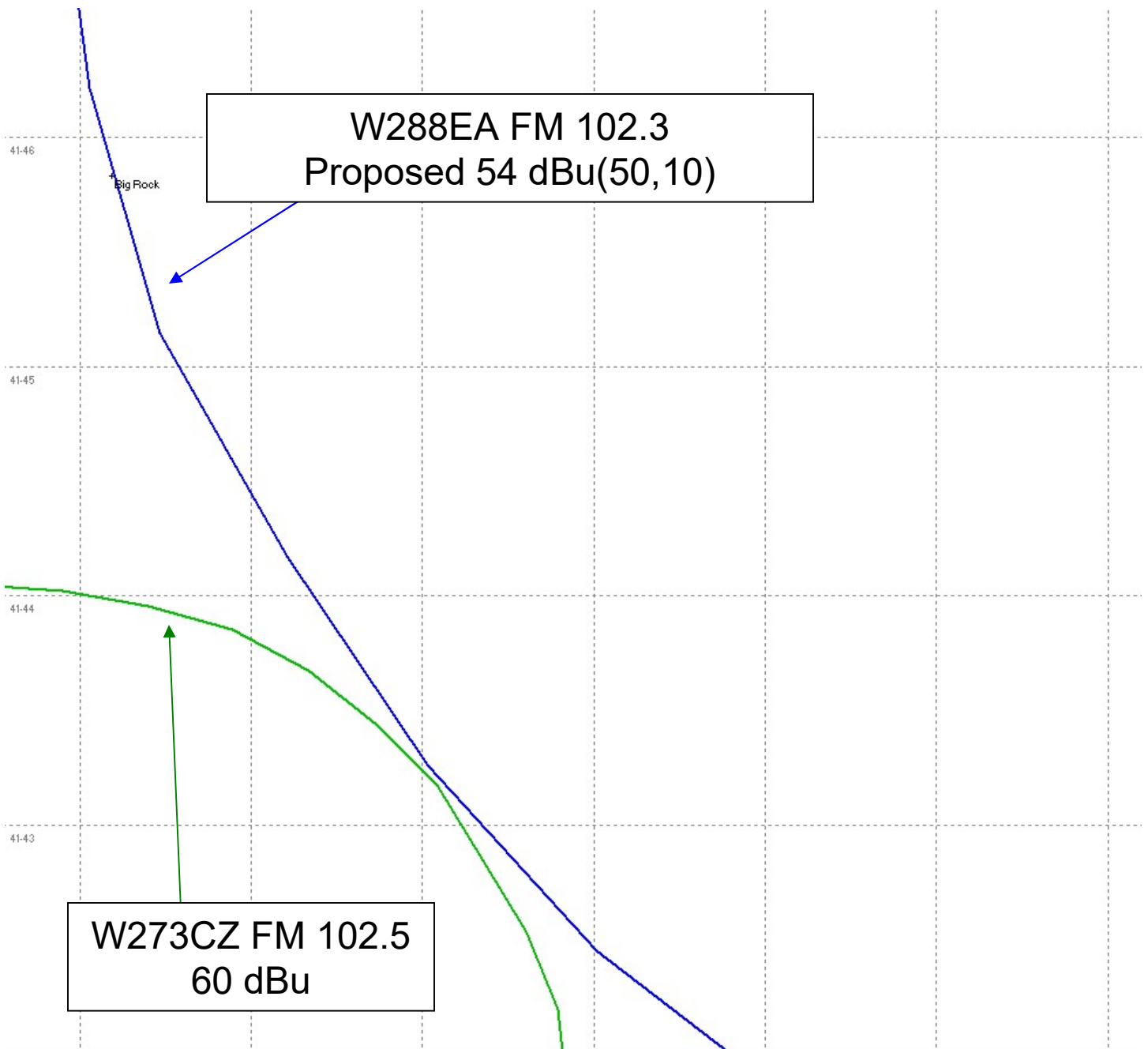


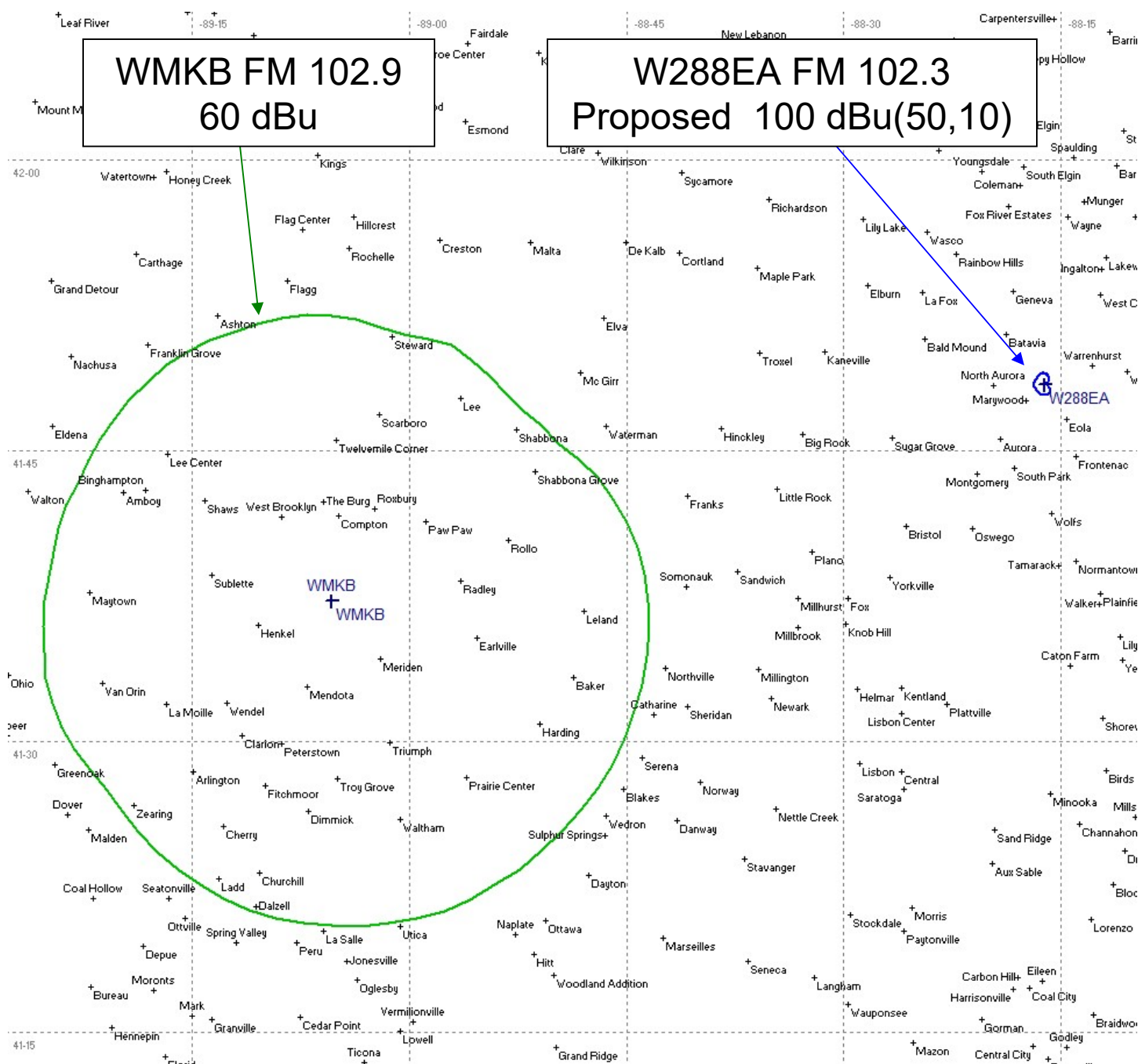
**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application**

**Exhibit 10B**

**Proposed First Adjacent Channel Study**

Proposed W288EA FM 102.3 54 dBu(50,10) Contours First Adjacent W273CZ FM 102.5 60 dBu-  
Expanded View

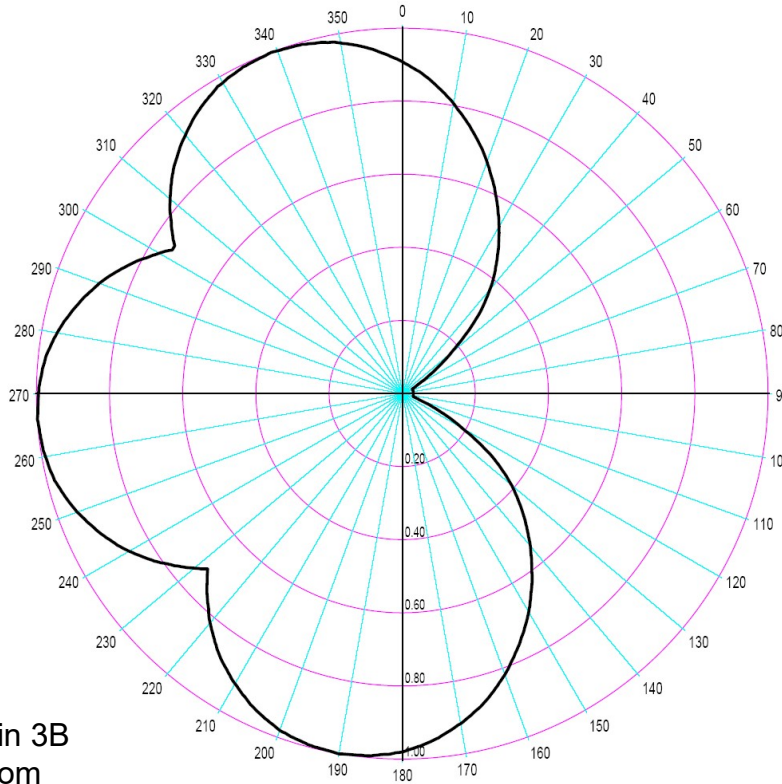






**ENGINEERING STATEMENT  
APPLICATION FCC 349  
Prepared For Auril Broadcasting LLC,  
W288EA FM Aurora, Illinois  
Facility ID 202935 105.5 FM .070 kW  
FCC Form 349-Instant Application  
Exhibit 12**

**Proposed Kathrein 3B Custom Antenna Pattern Circular Polarization**



**Kathrein 3B  
Custom  
Directional**

Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk
0.0	0.908	196.275	-7.071	90.0	0.030	0.214	-36.691	180.0	0.980	228.637	-6.409	270.0	0.995	235.689	-6.277
5.0	0.862	176.892	-7.523	95.0	0.030	0.214	-36.691	185.0	0.994	235.216	-6.285	275.0	0.982	229.571	-6.391
10.0	0.806	154.655	-8.106	100.0	0.030	0.214	-36.691	190.0	1.000	238.064	-6.233	280.0	0.958	218.487	-6.606
15.0	0.742	131.069	-8.825	105.0	0.030	0.214	-36.691	195.0	0.994	235.216	-6.285	285.0	0.923	202.814	-6.929
20.0	0.676	108.790	-9.634	110.0	0.050	0.595	-32.254	200.0	0.980	228.637	-6.409	290.0	0.882	185.196	-7.324
25.0	0.602	86.275	-10.641	115.0	0.110	2.881	-25.405	205.0	0.952	215.758	-6.660	295.0	0.829	163.607	-7.862
30.0	0.528	66.368	-11.780	120.0	0.190	8.594	-20.658	210.0	0.916	199.749	-6.995	300.0	0.768	140.416	-8.526
35.0	0.452	48.637	-13.130	125.0	0.300	21.426	-16.691	215.0	0.872	181.020	-7.423	305.0	0.768	140.416	-8.526
40.0	0.372	32.944	-14.822	130.0	0.390	36.210	-14.412	220.0	0.818	159.294	-7.978	310.0	0.829	163.607	-7.862
45.0	0.278	18.399	-17.352	135.0	0.467	51.919	-12.847	225.0	0.756	136.062	-8.663	315.0	0.882	185.196	-7.324
50.0	0.174	7.208	-21.422	140.0	0.544	70.452	-11.521	230.0	0.742	131.069	-8.825	320.0	0.923	202.814	-6.929
55.0	0.098	2.286	-26.409	145.0	0.618	90.922	-10.413	235.0	0.806	154.655	-8.106	325.0	0.958	218.487	-6.606
60.0	0.046	0.504	-32.978	150.0	0.690	113.342	-9.456	240.0	0.862	176.892	-7.523	330.0	0.982	229.571	-6.391
65.0	0.030	0.214	-36.691	155.0	0.756	136.062	-8.663	245.0	0.908	196.275	-7.071	335.0	0.995	235.689	-6.277
70.0	0.030	0.214	-36.691	160.0	0.818	159.294	-7.978	250.0	0.946	213.047	-6.715	340.0	0.998	237.113	-6.250
75.0	0.030	0.214	-36.691	165.0	0.872	181.020	-7.423	255.0	0.974	225.846	-6.462	345.0	0.991	233.798	-6.312
80.0	0.030	0.214	-36.691	170.0	0.916	199.749	-6.995	260.0	0.991	233.798	-6.312	350.0	0.974	225.846	-6.462
85.0	0.030	0.214	-36.691	175.0	0.952	215.758	-6.660	265.0	0.998	237.113	-6.250	355.0	0.946	213.047	-6.715