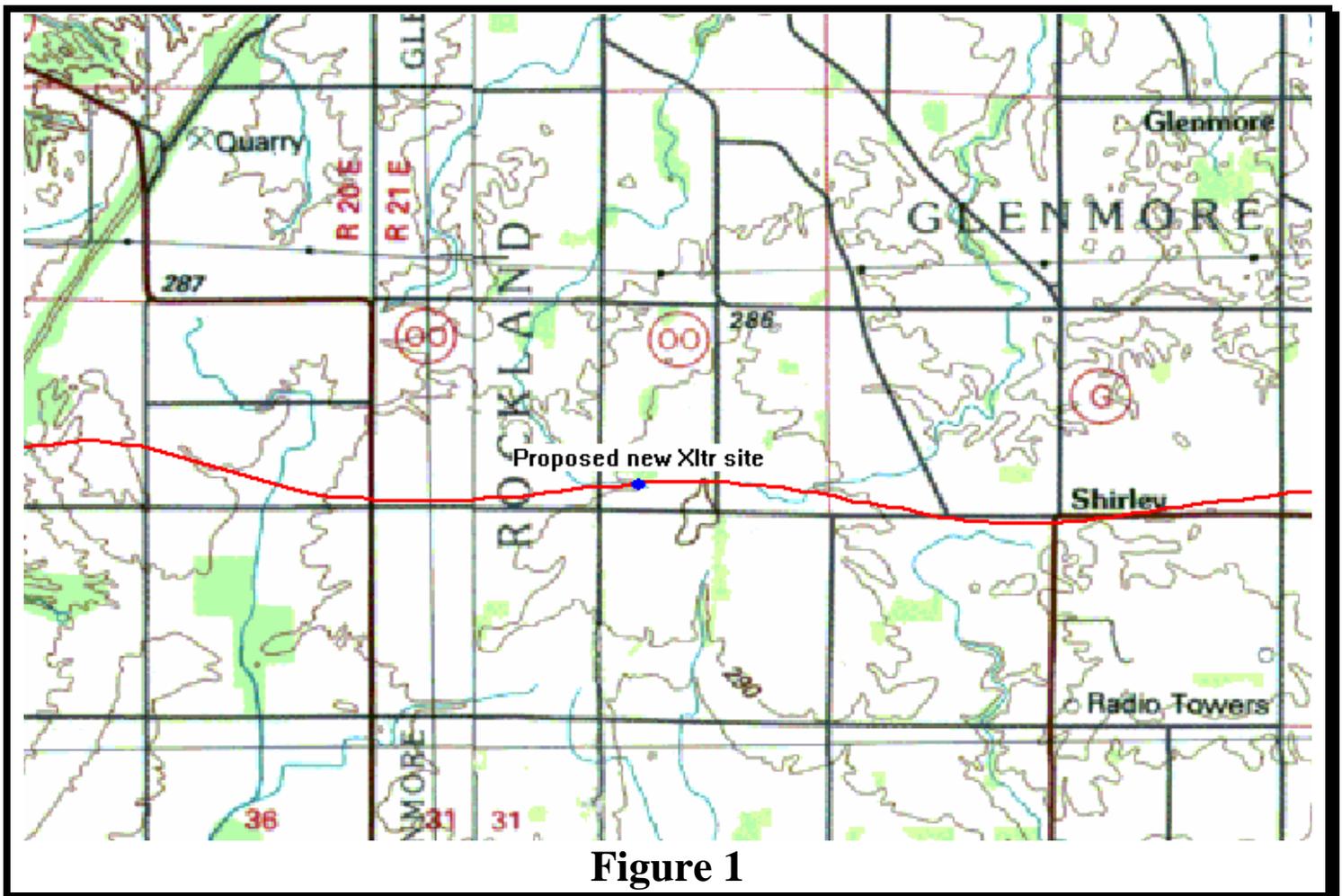
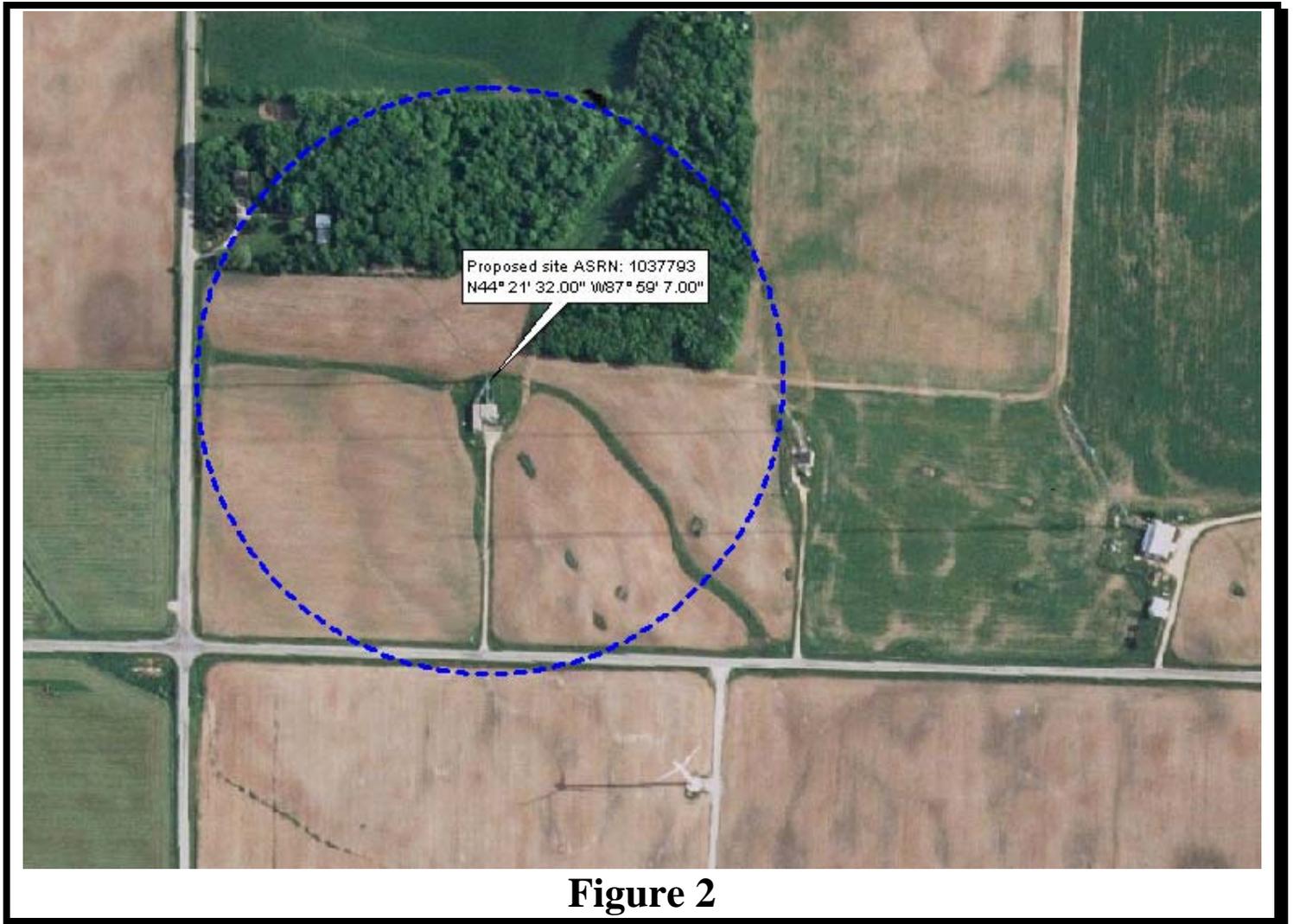


## Protection to WZNN from Interference by W291BG

The site for the proposed facility is located within the protected contour and on a new channel which is second-adjacent to WZNN with the proposed facility having radiation center 85.3 meters AGL. We predict the WZNN contour at the proposed site to be 74.2 dBu F[50,50]m as displayed in **Figure 1**. According to established second-adjacent channel contour Undesired-to-Desired (U/D) protection ratios, the contour from the interfering station should be 40 dB higher than the protected contour. Therefore the respective interfering contour for this proposed amendment is 114.2 dBu F[50,10], which is 216.2 meters from the proposed radiation center. Displayed in **Figure 2** is the site with a blue dashed perimeter marking the radius of the site.



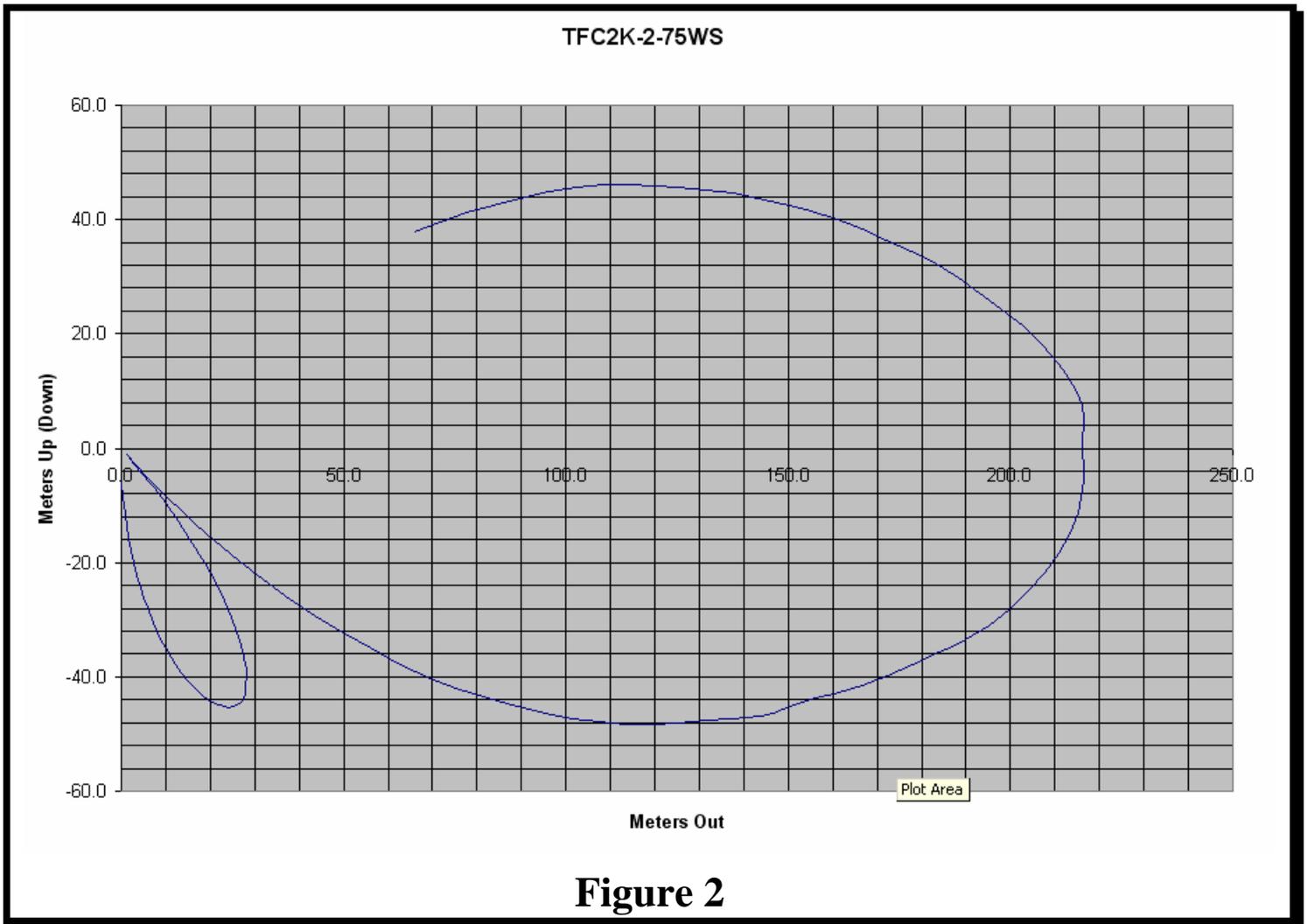


Applicant proposes to use a BEXT antenna model TFC2K-2-75WS, which is a two-bay antenna with  $\frac{3}{4}$  wavelength bay spacing. A graphical representation of radiation in the vertical plane is displayed in **Figure 3**.

Field strength at various elevation angles were provided by the antenna manufacturer and displayed **Table 1** at the end of this exhibit. Columns with calculated field dB and the contour distance in meters which were also calculated both in elevation radial form and for plotting in plane coordinates. It can be seen from this data that the actual interference area does not exceed

48.2 meters below the 85.3 m AGL center of radiation. Therefore, the actual interference area does not extend below 37 meters AGL. The only structure within a 216.2 meter radius of the site is the transmitter building.

There is no residence nor is there any public road within that radius. The only buildings are equipment buildings associated with the tower within this perimeter. Therefore, the interference area is limited to an area where there are no public places.



## **Protection to WAPL from Interference by W291BG**

The site for the proposed facility is located within the protected contour and on a new channel which is third-adjacent to WAPL with the proposed facility having radiation center 85.3 meters AGL on the same tower as WAPL. We predict the WZNN contour at the proposed site to be 137 dBu F[50,50]meters. According to established second-adjacent channel contour Undesired-to-Desired (U/D) protection ratios, the contour from the interfering station should be 40 dB higher than the protected contour. Therefore the respective interfering contour for this proposed amendment is 177 dBu F[50,10], which is 3.1 meters from the proposed radiation center.

There is no residence nor is there any public road within that radius. Therefore, the interference area is limited to an area where there are no public places.

## **Request for Waiver**

Since this proposal complies with 47CFR74.1204(d) based upon the fact that no actual interference will occur due to no population and no public locations within the areas of interference, we hereby request waiver of 47CFR74.1204(a)(3) for separation between this proposed facility and facilities of WZNN and WAPL.

Horizon Christian Fellowship  
 FCC Form 349 - Exhibit No. 12B  
 Waiver Request 47CFR74.1204

**Table I**

TFC2K275.DAT

ELEV ANGLE	FIELD STRENGTH	FIELD DB	ELEV ERP(KW)	ELEV DBK	114.20DBU CNTR(M)	DISTANCE OUT (M)	DISTANCE UP(DOWN)	ELEVATION AMSL (M)
-90	0.028	-31.10	0.0002	-37.12	6.0	0.0	-6.0	371.9
-88	0.036	-28.80	0.0003	-34.82	7.8	0.3	-7.8	370.1
-86	0.054	-25.40	0.0007	-31.42	11.6	0.8	-11.6	366.3
-84	0.073	-22.70	0.0013	-28.72	15.8	1.7	-15.8	362.1
-82	0.093	-20.60	0.0022	-26.62	20.2	2.8	-20.0	357.9
-80	0.114	-18.90	0.0032	-24.92	24.5	4.3	-24.2	353.7
-78	0.132	-17.60	0.0043	-23.62	28.5	5.9	-27.9	350.0
-76	0.151	-16.40	0.0057	-22.42	32.7	7.9	-31.8	346.1
-74	0.168	-15.50	0.0070	-21.52	36.3	10.0	-34.9	343.0
-72	0.184	-14.70	0.0085	-20.72	39.8	12.3	-37.8	340.1
-70	0.200	-14.00	0.0100	-20.02	43.1	14.8	-40.5	337.4
-68	0.211	-13.50	0.0112	-19.52	45.7	17.1	-42.4	335.5
-66	0.224	-13.00	0.0125	-19.02	48.4	19.7	-44.2	333.7
-64	0.232	-12.70	0.0134	-18.72	50.1	22.0	-45.0	332.9
-62	0.237	-12.50	0.0141	-18.52	51.3	24.1	-45.3	332.6
-60	0.240	-12.40	0.0144	-18.42	51.9	25.9	-44.9	333.0
-58	0.240	-12.40	0.0144	-18.42	51.9	27.5	-44.0	333.9
-56	0.232	-12.70	0.0134	-18.72	50.1	28.0	-41.5	336.4
-54	0.221	-13.10	0.0122	-19.12	47.8	28.1	-38.7	339.2
-52	0.202	-13.90	0.0102	-19.92	43.6	26.9	-34.4	343.5
-50	0.178	-15.00	0.0079	-21.02	38.4	24.7	-29.5	348.4
-48	0.146	-16.70	0.0053	-22.72	31.6	21.2	-23.5	354.4
-46	0.107	-19.40	0.0029	-25.42	23.2	16.1	-16.7	361.2
-44	0.060	-24.40	0.0009	-30.42	13.0	9.4	-9.0	368.9
-42	0.008	-42.10	0.0000	-48.12	1.7	1.3	-1.1	376.8
-40	0.050	-26.00	0.0006	-32.02	10.8	8.3	-7.0	370.9
-38	0.112	-19.00	0.0031	-25.02	24.3	19.1	-14.9	363.0
-36	0.176	-15.10	0.0077	-21.12	38.0	30.7	-22.3	355.6
-34	0.243	-12.30	0.0147	-18.32	52.5	43.5	-29.3	348.6
-32	0.305	-10.30	0.0233	-16.32	66.0	56.0	-35.0	342.9
-30	0.372	-8.60	0.0345	-14.62	80.3	69.6	-40.2	337.7
-28	0.432	-7.30	0.0466	-13.32	93.3	82.4	-43.8	334.1
-26	0.490	-6.20	0.0600	-12.22	105.9	95.2	-46.4	331.5
-24	0.543	-5.30	0.0738	-11.32	117.5	107.3	-47.8	330.1
-22	0.596	-4.50	0.0887	-10.52	128.8	119.4	-48.2	329.7
-20	0.646	-3.80	0.1042	-9.82	139.6	131.2	-47.7	330.2
-18	0.700	-3.10	0.1224	-9.12	151.3	143.9	-46.8	331.1
-16	0.741	-2.60	0.1374	-8.62	160.3	154.1	-44.2	333.7
-14	0.794	-2.00	0.1577	-8.02	171.7	166.6	-41.5	336.4
-12	0.841	-1.50	0.1770	-7.52	181.9	177.9	-37.8	340.1
-10	0.891	-1.00	0.1986	-7.02	192.7	189.8	-33.5	344.4
-8	0.933	-0.60	0.2177	-6.62	201.8	199.8	-28.1	349.8
-6	0.966	-0.30	0.2333	-6.32	208.9	207.7	-21.8	356.1
-4	0.989	-0.10	0.2443	-6.12	213.7	213.2	-14.9	363.0

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-2	1.000	0.00	0.2500	-6.02	216.2	216.1	-7.5	370.4
0	1.000	0.00	0.2500	-6.02	216.2	216.2	0.0	377.9
2	1.000	0.00	0.2500	-6.02	216.2	216.1	7.5	385.4
4	0.977	-0.20	0.2387	-6.22	211.3	210.8	14.7	392.6
6	0.944	-0.50	0.2228	-6.52	204.1	203.0	21.3	399.2
8	0.902	-0.90	0.2032	-6.92	194.9	193.0	27.1	405.0
10	0.861	-1.30	0.1853	-7.32	186.1	183.3	32.3	410.2
12	0.813	-1.80	0.1652	-7.82	175.7	171.9	36.5	414.4
14	0.767	-2.30	0.1472	-8.32	165.9	161.0	40.1	418.0
16	0.716	-2.90	0.1282	-8.92	154.8	148.8	42.7	420.6
18	0.668	-3.50	0.1117	-9.52	144.5	137.4	44.7	422.6
20	0.617	-4.20	0.0950	-10.22	133.3	125.3	45.6	423.5
22	0.569	-4.90	0.0809	-10.92	123.0	114.0	46.1	424.0
24	0.519	-5.70	0.0673	-11.72	112.2	102.5	45.6	423.5
26	0.462	-6.70	0.0534	-12.72	100.0	89.8	43.8	421.7
28	0.407	-7.80	0.0415	-13.82	88.1	77.8	41.3	419.2
30	0.351	-9.10	0.0308	-15.12	75.8	65.7	37.9	415.8

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MAX: 216.2m -48.2m 329.7m