

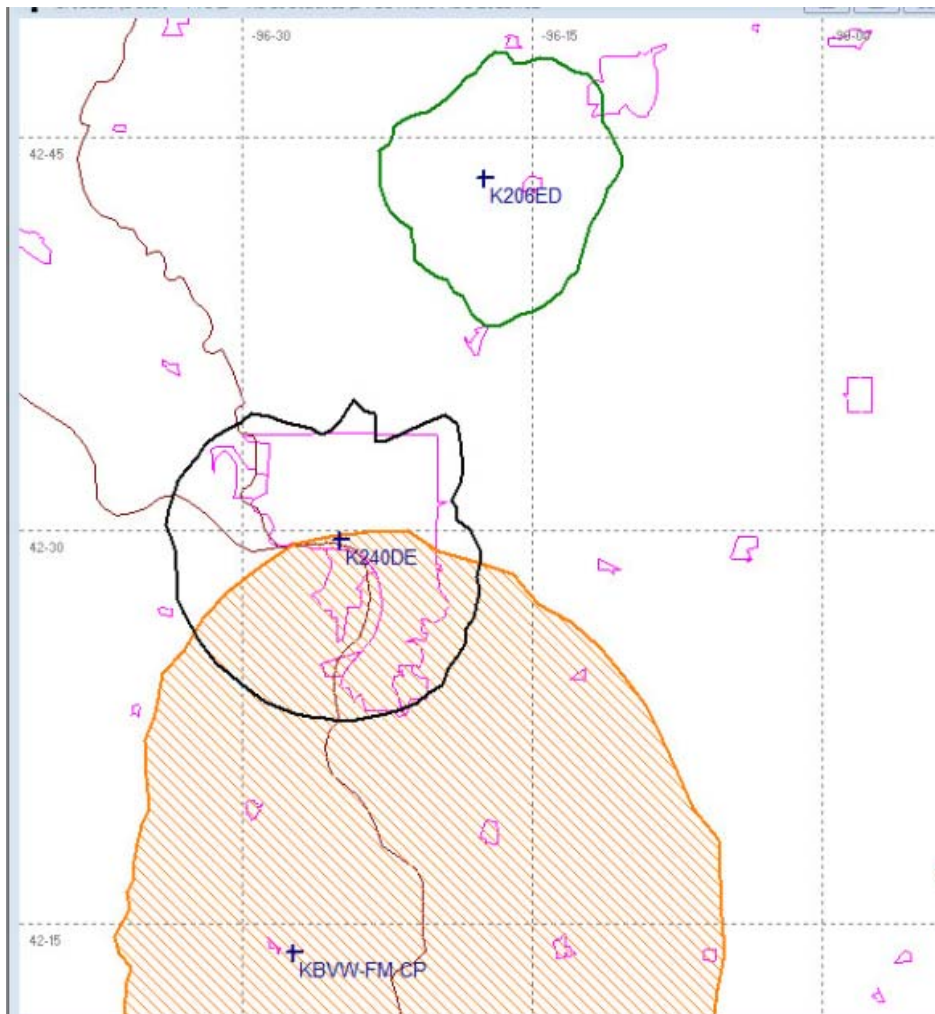
**Translator K206ED LeMars IA
FACID 152205**

Purpose of Application & Technical Statement

This minor change to the licensed facility requests a channel change from Channel 206 to non-adjacent channel 214 as a displacement; because commonly-owned translator K240DE is fed directly from K206ED, This request utilizes the licensed tower location, elevation, antenna and effective radiated power. The translator will continue to be used as a non-fill-in translator for noncommercial Primary Station WZXX.

DISPLACEMENT SHOWING

This map of contours shows the pending construction permit for first-adjacent full power noncommercial facility KBVW which will fully preclude K240DE the ability to receive K206ED and continue the peaceful operation this facility has enjoyed since first licensed in 2004.



Proposed Facility:

Blue - 100dBu(50,10)
Green - 60dBu(50,50)
Orange - 54dBu(50,10)
Red - 40dBu(50,10)

Other Facilities 60dBu(50,50):

Co-Channel - Red
First Adjacent - Orange
Second/Third Adjacent - Blue

This non-adjacent channel change is necessary as the minor change +/-3 channels is not available:

CH203 – K206ED Fully within Co-Channel KLDX

CH204 – K206ED Fully within First-Adjacent KLDX

CH205 - K206ED Prohibited overlap to Co-Channel KBVW, K240DE Reception Interference

CH206 – Current Licensed Channel

CH207 - K240DE Reception interference from co-channel KXNE-FM

CH208 – K206ED Prohibited overlap to first-adjacent KUSD

CH209 - K206ED Prohibited overlap to co-channel KUSD

Utilizing the requested Channel 214 for K206ED will permit no co-channel or first-adjacent reception interference to K240DE and allow the continued operation of the K240DE signal.

OVERLAP REQUIREMENTS

The attached map of contours depicts the proposed allocation situation with respect to all pertinent co and adjacent facilities. All facilities have been depicted utilizing either the maximum ERP or directional pattern data as on file with the commission and 1 degree radial intervals on close in contours in the interest of accuracy. AAT data for the proposed facility was derived from the FCC's 30 second database, *Comstudy*.

As seen on the attached map of contours, channel 212-D is operable at the proposed location with the following facility notes:

- In compliance with 47 CFR 74.1204(g) the proposed facility operates at an effective radiated power which is over 100 watts, therefore protection to intermediate frequency facilities has been calculated and meets all mileage separation requirements.

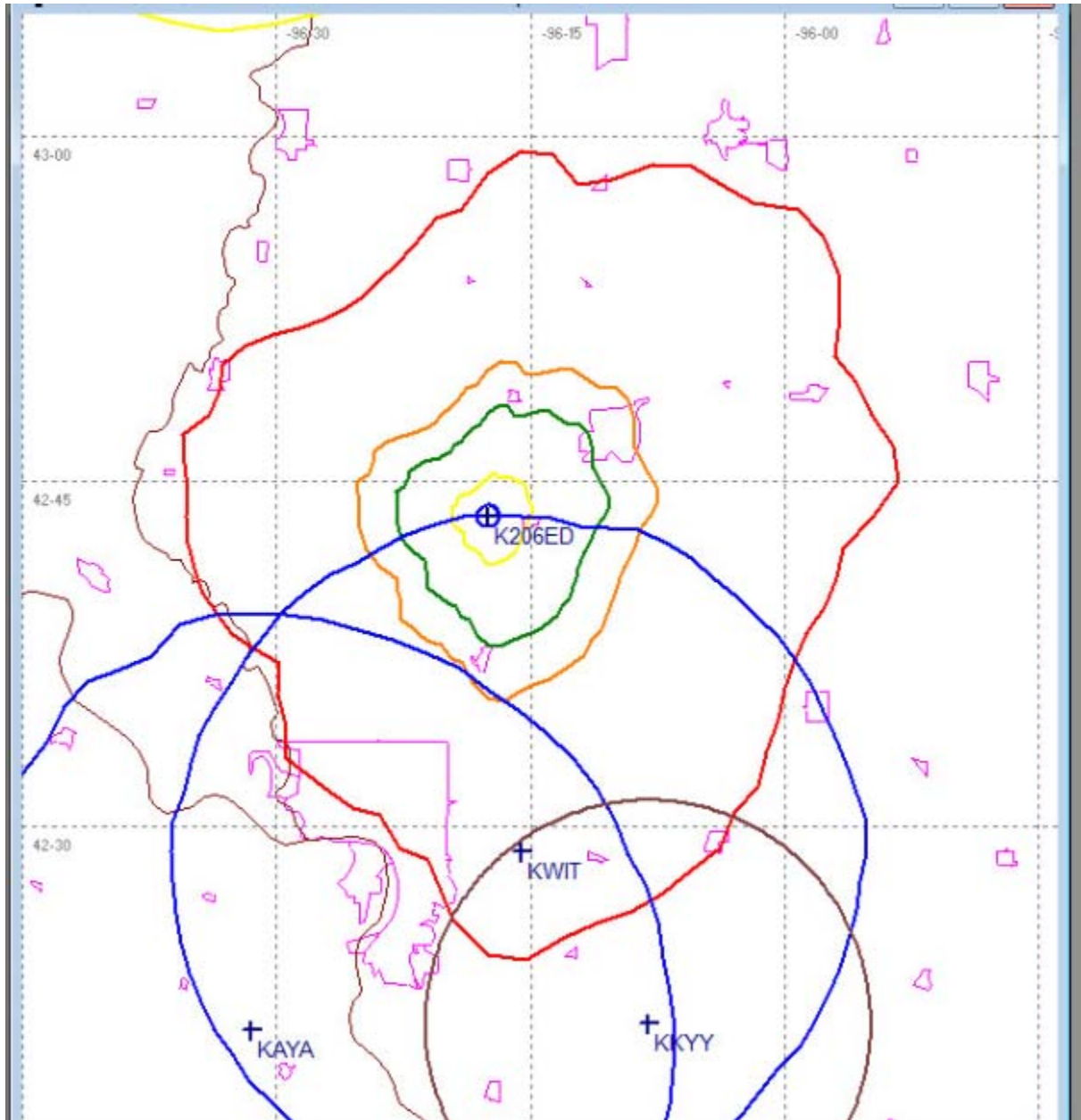
- The proposed location is within the protected 60dbu (50,50) contour of second-adjacent station KWIT (FM) channel 212-C1 located 27.1 km away. Therefore, an interference analysis has been conducted based on the u/d ratio of +40 dB at the proposed site. The signal of KWIT (FM) at the proposed location is 81.5 dBu (50,50) making the relevant interfering contour of the proposed facility 121.5 dBu (50,10). The free space distance to this contour, in a worse-case scenario utilizing a single dipole antenna is 61 meters.

- The applicant is authorized to use the Nicom BKG77 one-bay antenna with the characteristics in the attached chart. The vertical field values were provided by the manufacturer and the calculations demonstrate that the interfering contour will not reach a point 2 meters above the ground at any depression angle. The tower is located in a rural agricultural area meaning the interfering contour will not reach any location where the general public would be present.

Based on this showing, a waiver of section 74.1204 is requested in accordance with *Living Way Ministries, Inc. (FCC 08-242)* on the basis of zero population in the area of interference.

It should be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 CFR. 74.1203.

MAP OF INTERFERING CONTOURS



Proposed Facility:

Blue - 100dBu(50,10)
Green - 60dBu(50,50)
Orange - 54dBu(50,10)
Red - 40dBu (50,10)

Other Facilities 60dBu(50,50):

I.F. Separation - Brown
Co-Channel - Red
First Adjacent - Orange
Second/Third Adjacent - Blue

NICOM BKG77
1-Bay Circularly Polarized FM Antenna



Frequency =

89.1

 Mhz
Interfering Contour

121.5

 dBu (50,10)

ERP=

110

 watts
Height =

47

 m AGL

Depression Angle	Relative Field (o)	Effective Power (w)	Distance to Contour (m)	Distance from Antenna to Ground (m)	Clearance (m)
1	1.000	110.0	61.90	3,590.63	3529
2	0.996	109.1	61.65	1,795.59	1734
3	0.992	108.2	61.41	1,197.36	1136
4	0.989	107.6	61.22	898.34	837
5	0.983	106.3	60.85	719.00	658
6	0.981	105.9	60.72	599.50	539
7	0.979	105.4	60.60	514.20	454
8	0.975	104.6	60.35	450.27	390
9	0.973	104.1	60.23	400.58	340
10	0.971	103.7	60.11	360.87	301
11	0.970	103.5	60.04	328.42	268
12	0.969	103.3	59.98	301.40	241
13	0.968	103.1	59.92	278.57	219
14	0.966	102.6	59.80	259.03	199
15	0.965	102.4	59.73	242.12	182
16	0.961	101.6	59.49	227.35	168
17	0.957	100.7	59.24	214.33	155
18	0.953	99.9	58.99	202.79	144
19	0.949	99.1	58.74	192.48	134
20	0.945	98.2	58.50	183.22	125
21	0.941	97.4	58.25	174.86	117
22	0.938	96.8	58.06	167.28	109
23	0.934	96.0	57.82	160.38	103
24	0.930	95.1	57.57	154.07	97
25	0.926	94.3	57.32	148.28	91
26	0.915	92.1	56.64	142.95	86
27	0.904	89.9	55.96	138.03	82
28	0.894	87.9	55.34	133.48	78
29	0.883	85.8	54.66	129.26	75
30	0.872	83.6	53.98	125.33	71
31	0.868	82.9	53.73	121.67	68
32	0.863	81.9	53.42	118.25	65
33	0.858	81.0	53.11	115.06	62
34	0.850	79.5	52.62	112.06	59
35	0.843	78.2	52.18	109.25	57
36	0.834	76.5	51.63	106.61	55
37	0.824	74.7	51.01	104.13	53
38	0.816	73.2	50.51	101.78	51
39	0.807	71.6	49.95	99.58	50
40	0.798	70.0	49.40	97.49	48
41	0.788	68.3	48.78	95.52	47
42	0.778	66.6	48.16	93.65	45
43	0.767	64.7	47.48	91.88	44
44	0.755	62.7	46.74	90.21	43
45	0.744	60.9	46.05	88.62	43

Depression Angle	Relative Field	Effective Power (w)	Distance to Contour (m)	Distance from Antenna to Ground (m)	Clearance (m)
46	0.729	58.5	45.13	65.34	42
47	0.716	56.4	44.32	64.26	41
48	0.704	54.5	43.58	63.24	41
49	0.693	52.8	42.90	62.28	40
50	0.682	51.2	42.22	61.35	40
51	0.670	49.4	41.47	60.48	39
52	0.659	47.8	40.79	59.64	39
53	0.648	46.2	40.11	58.85	38
54	0.637	44.6	39.43	58.10	38
55	0.626	43.1	38.75	57.38	38
56	0.611	41.1	37.82	56.69	38
57	0.602	39.9	37.26	56.04	37
58	0.588	38.0	36.40	55.42	37
59	0.579	36.9	35.84	54.83	37
60	0.563	34.9	34.85	54.27	37
61	0.551	33.4	34.11	53.74	38
62	0.538	31.8	33.30	53.23	38
63	0.523	30.1	32.37	52.75	38
64	0.511	28.7	31.63	52.29	38
65	0.499	27.4	30.89	51.86	38
66	0.484	25.8	29.96	51.45	39
67	0.469	24.2	29.03	51.06	39
68	0.454	22.7	28.10	50.69	39
69	0.439	21.2	27.17	50.34	40
70	0.424	19.8	26.25	50.02	40
71	0.409	18.4	25.32	49.71	41
72	0.398	17.4	24.64	49.42	41
73	0.381	16.0	23.58	49.15	42
74	0.366	14.7	22.66	48.89	43
75	0.351	13.6	21.73	48.66	43
76	0.338	12.6	20.92	48.44	44
77	0.319	11.2	19.75	48.24	45
78	0.302	10.0	18.69	48.05	45
79	0.290	9.3	17.95	47.88	46
80	0.277	8.4	17.15	47.73	46
81	0.261	7.5	16.16	47.59	47
82	0.248	6.8	15.35	47.46	48
83	0.231	5.9	14.30	47.35	49
84	0.215	5.1	13.31	47.26	50
85	0.200	4.4	12.38	47.18	51
86	0.189	3.9	11.70	47.11	51
87	0.174	3.3	10.77	47.06	52
88	0.161	2.9	9.97	47.03	53
89	0.147	2.4	9.10	47.01	54
90	0.134	2.0	0.00	47.00	63

NOTES:

- HEIGHT HAS BEEN REDUCED BY 2 METERS TO ALLOW FOR HUMAN EXPOSURE
- DISTANCE FROM ANTENNA TO GROUND IS ACTUALLY TO A POINT 2 METERS ABOVE GROUND