

Non-Interference Compliance

Regarding Facility id 154423

Channel 203

Description of Exhibit 12 Contents

This exhibit demonstrates that the proposed facility complies with contour overlap and interference protection provisions in all of the applicable rule sections and that this application for a construction permit is in full compliance with 47 C.F.R. § 74.1204.

Let it 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 C.F.R. § 74.1203.

Page 2 of this exhibit is an explanation of the method used to demonstrate compliance with contour overlap and interference provisions based on 47 C.F.R. § 74.1204(d), which states:

[A]n application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such other factors as may be applicable.

Page 3 contains a tabulation of the vertical radiation pattern of the proposed antenna and the minimum ground clearance of the interfering contour based on this pattern.

Pages 4 includes a plot and a tabulation of the vertical radiation pattern for the proposed antenna provided by the antenna manufacturer.

Page 5 of this exhibit contains the tabulated data from the interference analysis, which shows all stations whose protected contours come within 50 km of the 34 dBμ F(50,10) contour of the proposed translator. These tabulated values were calculated using data from the FCC's CDBS files and 30 arc second terrain data. The column labeled "Adj" shows the number of channels difference between the entry and the proposed translator. The column labeled "Dist" shows the distance in km. The column labeled "Overlap" shows the area of contour overlap in square kilometers.

Page 6 of this exhibit is a portion of a USGS 1:24,000 scale 7.5 minute quadrangle at full scale with the calculated area of interference overlaid. The sheet includes the quadrangle name and measurement scale at the bottom-left corner (note: "Mt" refers to meters). The area of interference was calculated using the free space equation and 120 radials.

Page 7 of this exhibit is a contour map generated with ComStudy. The 60dBμ F(50,50) contour of the proposed translator, K256AZ, does not intersect the 100 dBμ F(50,10) contour of the Faith Pleases God Application, BNPFT-20000128AAR and is therefore in full compliance with 47 C.F.R. § 74.1233.

Since the proposed translator is within 320 km of the Mexican border, 47 C.F.R. § 74.1235(d) has been taken into account and this applicant certifies that in the direction of the Mexican border, the proposed translator's 60 dBμ F(50,50) contour does not lie within 116.3 km of the Mexican border. This application is therefore in full compliance with 47 C.F.R. § 74.1235(d)(2), which states that for translators between 125 and 320 km from the border, "in no event shall the location of the 60 dBμ contour lie within 116.3 km of the Mexican border," and hence complies with 47 C.F.R. § 74.1204(h).

Compliance with 47 C.F.R. § 74.1204(d)

All authorized second and third adjacent stations with which the proposed translator has contour overlap are tabulated below. Column four show the station's signal level at the proposed translator's tower site, and column five gives the minimum value within the entire standard interfering contour of the proposed translator (100 dBμ for most classes, 94 for class B, 97 for class B1). The minimum second or third adjacent F(50,50) contour within the proposed translator's standard interfering contour was used to calculate the proposed translator's actual "worst-case" interfering contour.

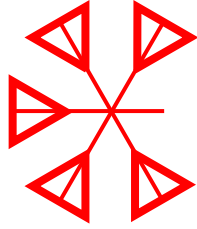
Application_id	File Number	Callsign	Contour at Tower	Min. Contour
1102790	BMPED20051201CB			
	E	KRSR	148.9	115.4
428102	BNPED19991210AA			
	F	KRSR	72.2	71.8
Minimum F(50,50) Contour of Adjacent Station within Proposed Translator's Standard Interfering Contour				71.8

FCC 02-244 at Section II.A.5 states that "when demonstrating that 'no actual interference will occur due to . . . other factors,' pursuant to Section 74.1204(d), an applicant may use the undesired-to-desired signal ratio method." The undesired-to-desired ratio for second and third adjacent stations required by § 74.1204(a) is 40 dB. Since the minimum protected contour strength within the proposed translator's standard interference contour is **71.8 dBμ**, this makes the proposed translator's worst-case interfering contour **111.8 dBμ**. By the free-space equation, this contour is calculated to extend a maximum of **25.5 m** from the transmit antenna.

The maximum horizontal plane of the interfering contour was calculated for 120 radials and plotted on the pertinent portion of a USGS quadrangle (page 8 of this exhibit). However, the field strength of the proposed translator's antenna varies with angle of depression from horizontal. The antenna relative fields are tabulated on the following page at 5 degree increments, starting at 5 degrees below horizontal. Antenna relative field strength data was provided and certified by the manufacturer of the proposed antenna. Using a free-space calculation that neglects any loss due to reflection, the vertical ground clearance of the proposed translator's interference contour has been tabulated. As shown on the following page, the area of interference clears the tower ground level (TGL) by **25.7 m** at the lowest point. The applicant has taken into account USGS quadrangles and relevant aerial photography in stating that no structures, except possibly tower support structures, puncture the area of interference. Hence, in accordance with 47 C.F.R. § 74.1204(d) and the clarification provided by the FCC in the decision *Re: Living Way Ministries* (FCC 02-244), a lack of population has been demonstrated within the area of interference and this application is therefore in full compliance with 47 C.F.R. § 74.1204.

Antenna Manufacturer:	TEL
Antenna Model:	ANT90D
CORAGL:	36 m
Maximum ERP:	0.002 kW
Interfering Contour:	111.8 dBμ
Max Int. Contour Distance:	25.5 m
Min Ground Clearance:	25.7 m

Depression Angle Below Horizontal	Antenna Relative Field	ERP (watts)	Distance to Interfering Contour from Antenna (m)	Horizontal Distance of Interfering Contour from Tower (m)	Vertical Clearance of Interfering Contour above TGL (m)
5	.824	1.4	21.0	20.9	34.2
10	.813	1.3	20.7	20.4	32.4
15	.795	1.3	20.3	19.6	30.8
20	.772	1.2	19.7	18.5	29.3
25	.743	1.1	18.9	17.2	28.0
30	.708	1.0	18.1	15.6	27.0
35	.668	0.9	17.0	14.0	26.2
40	.623	0.8	15.9	12.2	25.8
45	.572	0.7	14.6	10.3	25.7
50	.517	0.5	13.2	8.5	25.9
55	.458	0.4	11.7	6.7	26.4
60	.396	0.3	10.1	5.0	27.3
65	.332	0.2	8.5	3.6	28.3
70	.266	0.1	6.8	2.3	29.6
75	.198	0.1	5.0	1.3	31.1
80	.131	0.0	3.3	0.6	32.7
85	.065	0.0	1.7	0.1	34.3
90	.000	0.0	0.0	0.0	36.0
Minimum Clearance above TGL:					25.7 m



TELEWAVE, INC.



660 GIGUERE COURT, SAN JOSE, CALIFORNIA 95133
408-929-4400 800-331-3396 FAX 408-929-4080

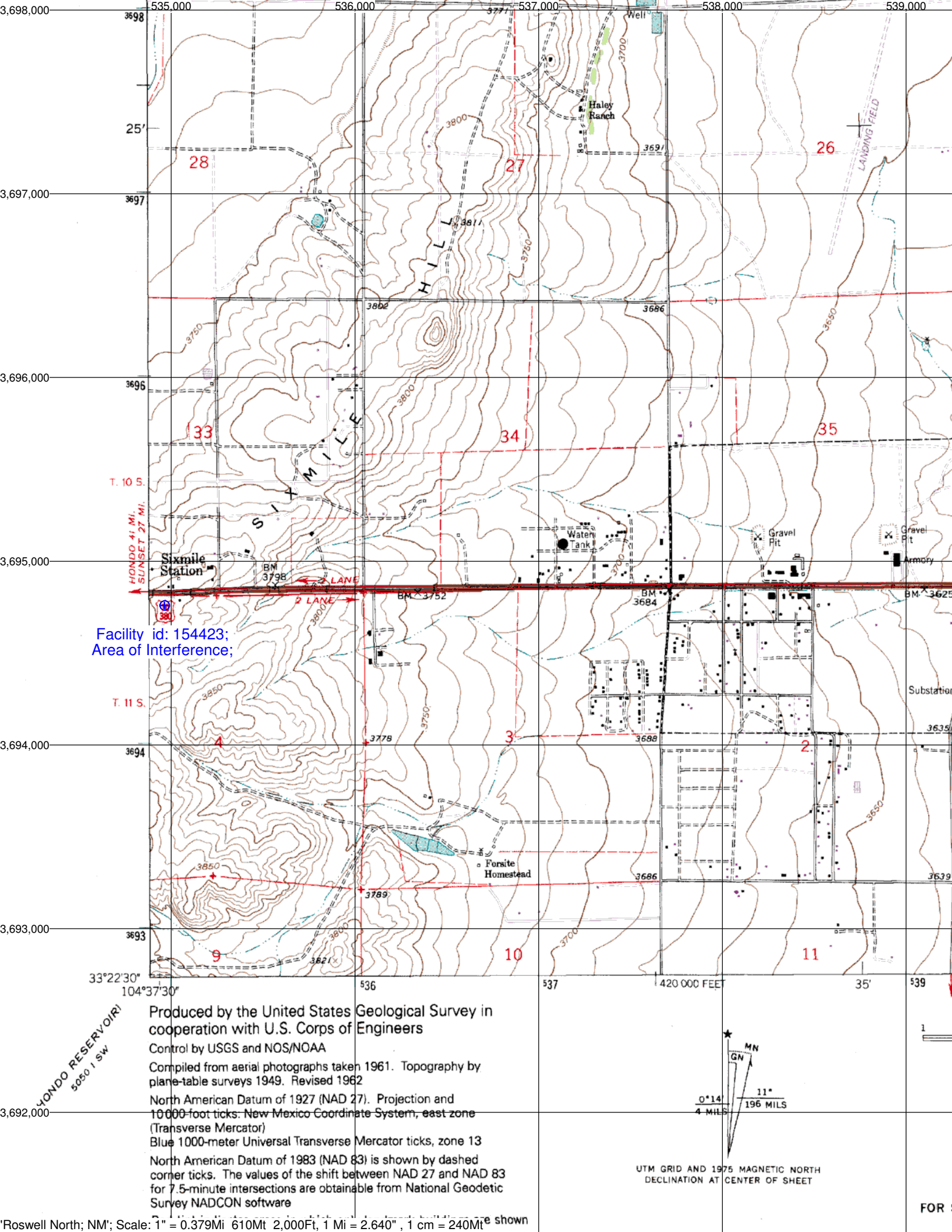
Telewave ANT90D @ 3/8 spacing

Elevation Azimuth	Relative Voltage	Elevation Azimuth	Relative Voltage
0	0.829	185	0.610
5	0.824	190	0.600
10	0.813	195	0.584
15	0.795	200	0.564
20	0.772	205	0.539
25	0.743	210	0.511
30	0.708	215	0.481
35	0.668	220	0.450
40	0.623	225	0.417
45	0.572	230	0.382
50	0.517	235	0.346
55	0.458	240	0.307
60	0.396	245	0.265
65	0.332	250	0.220
70	0.266	255	0.171
75	0.198	260	0.117
80	0.131	265	0.061
85	0.065	270	0.000
90	0.000	275	0.064
95	0.063	280	0.130
100	0.122	285	0.198
105	0.179	290	0.267
110	0.231	295	0.335
115	0.279	300	0.403
120	0.324	305	0.468
125	0.364	310	0.530
130	0.400	315	0.588
135	0.434	320	0.640
140	0.465	325	0.687
145	0.493	330	0.727
150	0.520	335	0.761
155	0.545	340	0.788
160	0.568	345	0.808
165	0.586	350	0.822
170	0.601	355	0.829
175	0.610		
180	0.613		

Adjacent Channel Study
For Station K256AZ, Facility_id: 154423

Co-channel through third adjacent:

Application_id	Facility_id	Prefix	ARN	Call	Licensee	Class	City	State	Status	ERP	RCAMSL	Channel	Adj	Dist	Overlap
1102790	121997	BMPED	20051201CBE	KQAI	EDUCATIONAL MEDIA FOUNDATION	A	ROSWELL	NM	CP MOD	2	1221	206	3	0	0.0119
432408	122348	BNPFT	20000128AAR	NEW	FAITH PLEASES GOD CHURCH CORP.	D	ROSWELL	NM	APP	0.01	1247	201	2	5.9	0



Facility id: 154423;
Area of Interference;

Produced by the United States Geological Survey in
cooperation with U.S. Corps of Engineers

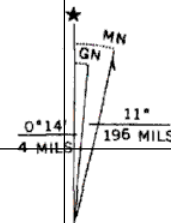
Control by USGS and NOS/NOAA

Compiled from aerial photographs taken 1961. Topography by
plane-table surveys 1949. Revised 1962

North American Datum of 1927 (NAD 27). Projection and
10,000-foot ticks: New Mexico Coordinate System, east zone
(Transverse Mercator)

Blue 1000-meter Universal Transverse Mercator ticks, zone 13

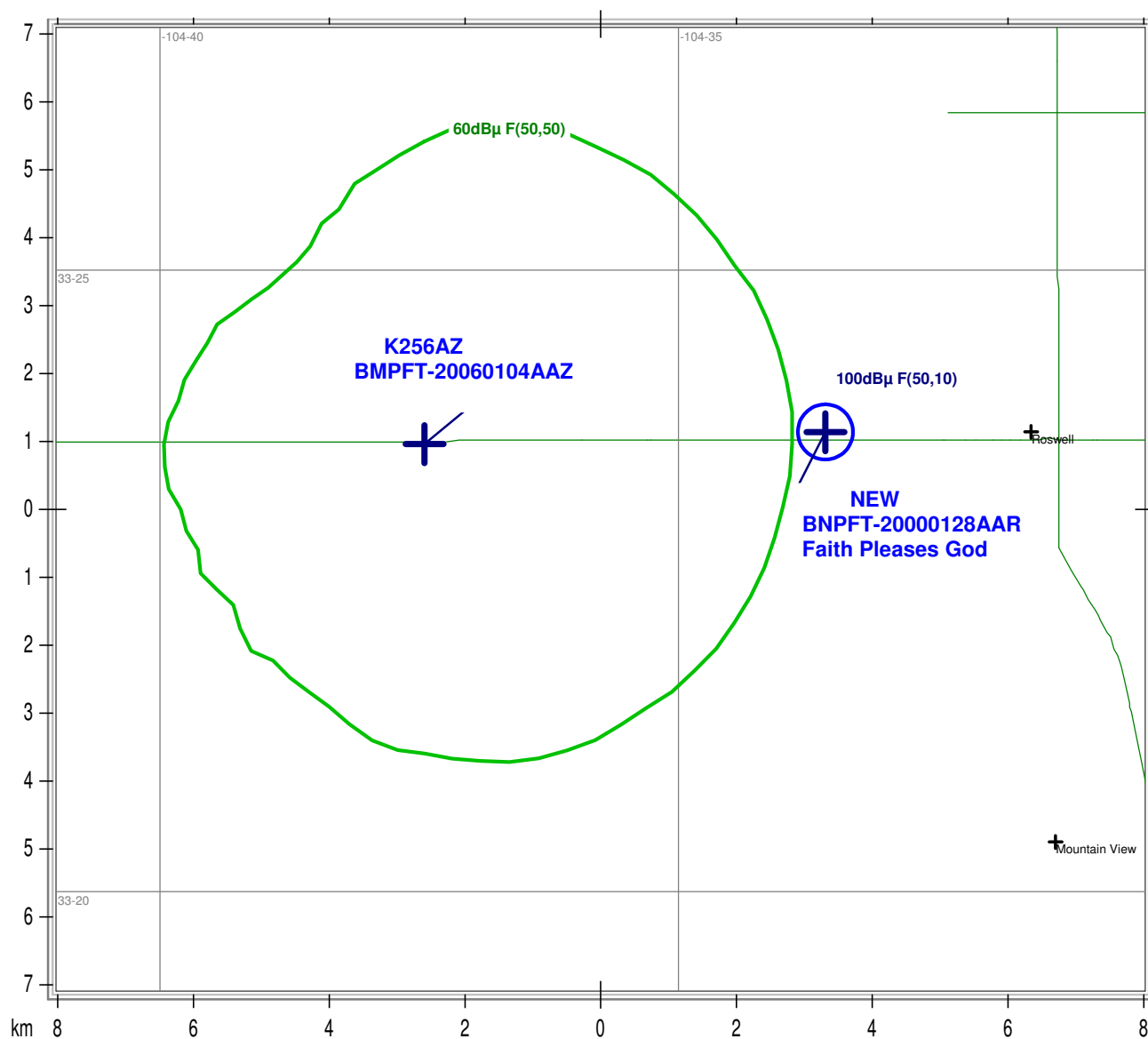
North American Datum of 1983 (NAD 83) is shown by dashed
corner ticks. The values of the shift between NAD 27 and NAD 83
for 7.5-minute intersections are obtainable from National Geodetic
Survey NADCON software



UTM GRID AND 1975 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

"Roswell North; NM"; Scale: 1" = 0.379Mi 610M 2,000Ft, 1 Mi = 2.640", 1 cm = 240M

Exhibit 12A Contour Overlaps 2 Watts



Roswell, NM FAC# 154423 BMPFT-20060104AAZ