



ENGINEERING STATEMENT
OF
JOHN F.X. BROWNE, P.E.
IN SUPPORT OF AN APPLICATION FOR
REPLACEMENT DIGITAL LOW POWER TELEVISION TRANSLATOR
WESH
DAYTONA BEACH, FL

Background

Hearst-Argyle Television, Inc., is the licensee of WESH which has been authorized to operate its post-transition DTV facility on Channel 11 (BMLCDT-20040930AXX) at Daytona Beach, FL, with an ERP of 54.9 kW at an HAAT of 511m. The tower is located at the following coordinates:

(NAD27)
28° 36' 35" N
81° 03' 35" W

Since the transition, WESH has received numerous calls from viewers who previously enjoyed analog indoor reception complaining that they are unable to receive the WESH digital signal on Channel 11 using indoor receiving equipment. WESH technical staff has worked with many of these callers to resolve the problems but it has become apparent that the VHF



Channel 11 signal is not providing these viewers with the same quality indoor service that the analog Channel 2 facility provided. WESH now wishes to operate a "Replacement Digital Low Power Television Translator" on Channel 18 in order to provide better service to these viewers.

Proposed Facility Parameters

WESH-DT proposes to use an ERI ALP8L1-HSER-18 directional antenna on Channel 18 which will be installed on the same tower as the former WESH analog Channel 2 facility (ASR#1041193) at a radiation center height of 492.7m AMSL (HAAT 479.7m). The entire antenna will be side-mounted below the top of the tower and, therefore, no modification to the ASR or notice to the FAA will be required. The proposed ERP of the "replacement translator" is 10 kW with the antenna being oriented at 135° relative to true north (N135°E).

Proposed Replacement Translator Parameters

Coordinates:	28° 56' 16" N
	81° 18' 57" W
ERP:	10.0 kW DA (maximum at 135°)
RCAMSL:	492.7m

Coverage

Figure 1, attached hereto, is a map depicting the Grade B contour of the WESH analog Channel 2 facility, the noise-limited contour of its post-transition Channel 11 facility and the 51 dBu protected contour of its proposed replacement translator on Channel 18. As can be seen on the map, the protected contour of the proposed replacement translator (in green), is entirely inside the analog and digital service contours (red and black respectively). While the replacement translator would not be located in an "analog loss area" between the analog and digital service contours, based on the calls from viewers, this area has lost service from that



provided by the analog Channel 2 facility and the replacement translator is needed to provide an alternative method for these viewers to receive the WESH programming.

Interference

Studies were conducted with the proposed parameters using software that emulates the software used by the FCC (OET-69 analysis). The results of these studies indicate that no authorized low power facilities that would receive more than 2% interference; however, the results do show that full-power station WMOR (Ch. 19 at Lakeland, FL) would receive 2.5% interference from the proposed facility. WMOR is co-owned by Hearst and, considering all of the predicted interference to WMOR will occur outside its DMA, WMOR has agreed to accept the interference as indicated in the attached letter. No other full-power or Class A stations are predicted to receive more than the allowable 0.5% new interference.

Environmental/RFR

The proposed construction does not require preparation of an Environmental Assessment as it does not involve any of the factors listed in Section 1.1306.

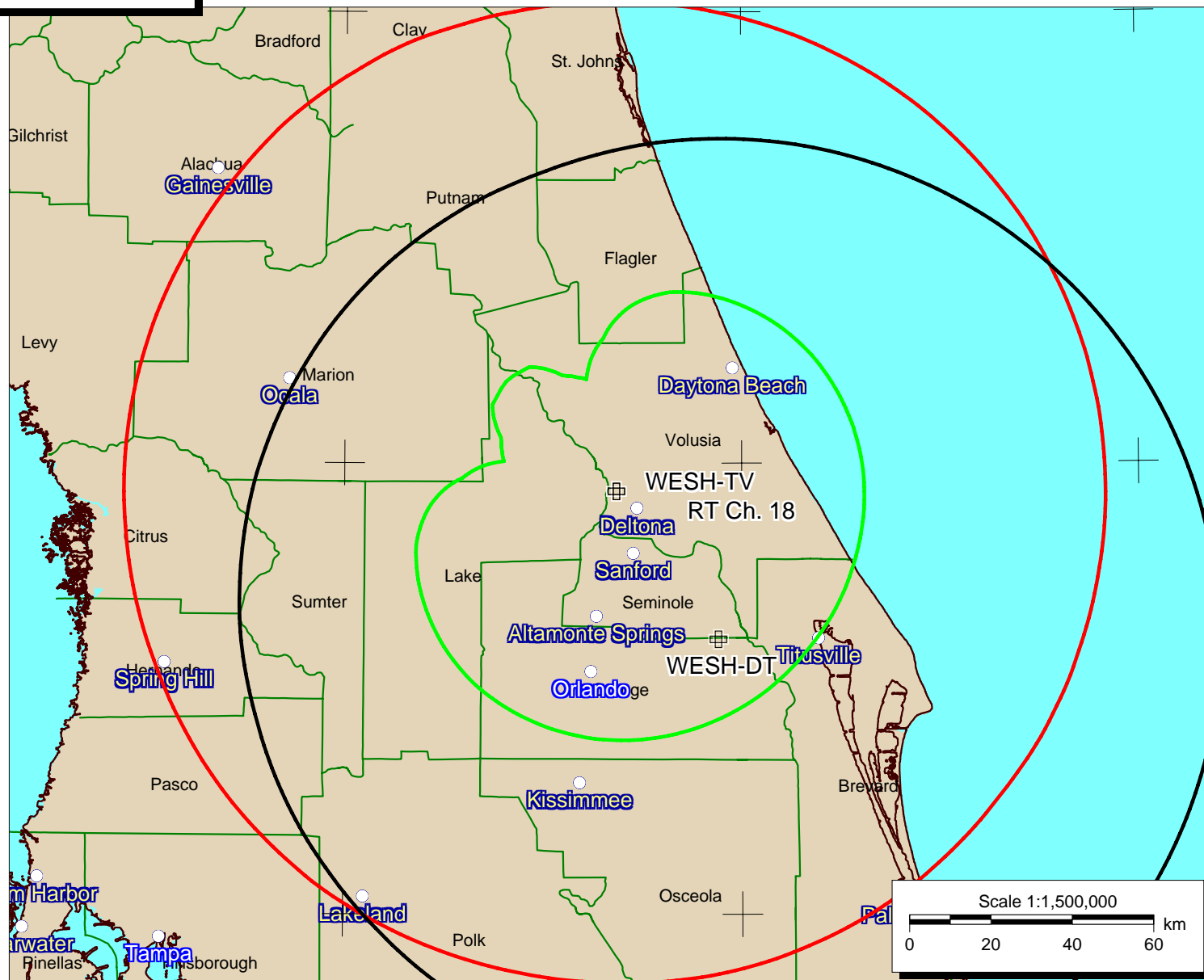
The additional ground level RFR contributed to the site by this proposal in public areas is calculated to be 0.000015 mW/cm^2 which is less than 5% of the MPE for public exposure (0.331 mW/cm^2) at the proposed frequency and, therefore, the proposal is excluded from further consideration.

WESH agrees to comply with the Commission's requirements regarding power adjustments or cessation of operation as may be necessary to ensure a compliant environment for worker access. Workers will be trained on RFR issues and encouraged to wear personal RFR monitors when on the structure. The site is enclosed by a locked security fence and appropriate signage warning of RFR hazards is posted.

**Certification**

I hereby certify that the foregoing report or statement was prepared by me but may include work performed by others under my supervision or direction. The statements of fact contained therein are believed to be true and correct based on personal knowledge, information and belief unless otherwise stated; with respect to facts not known of my own personal knowledge, I believe them to be true and correct based on their origin from sources known to me to be generally reliable and accurate. I have prepared this document with due care and in accordance with applicable standards of professional practice.

John F. X. Browne, P.E.
July 31, 2009



Black - WESH Digital Facility Noise Limited Contour

Red - WESH Analog Facility Grade B Contour

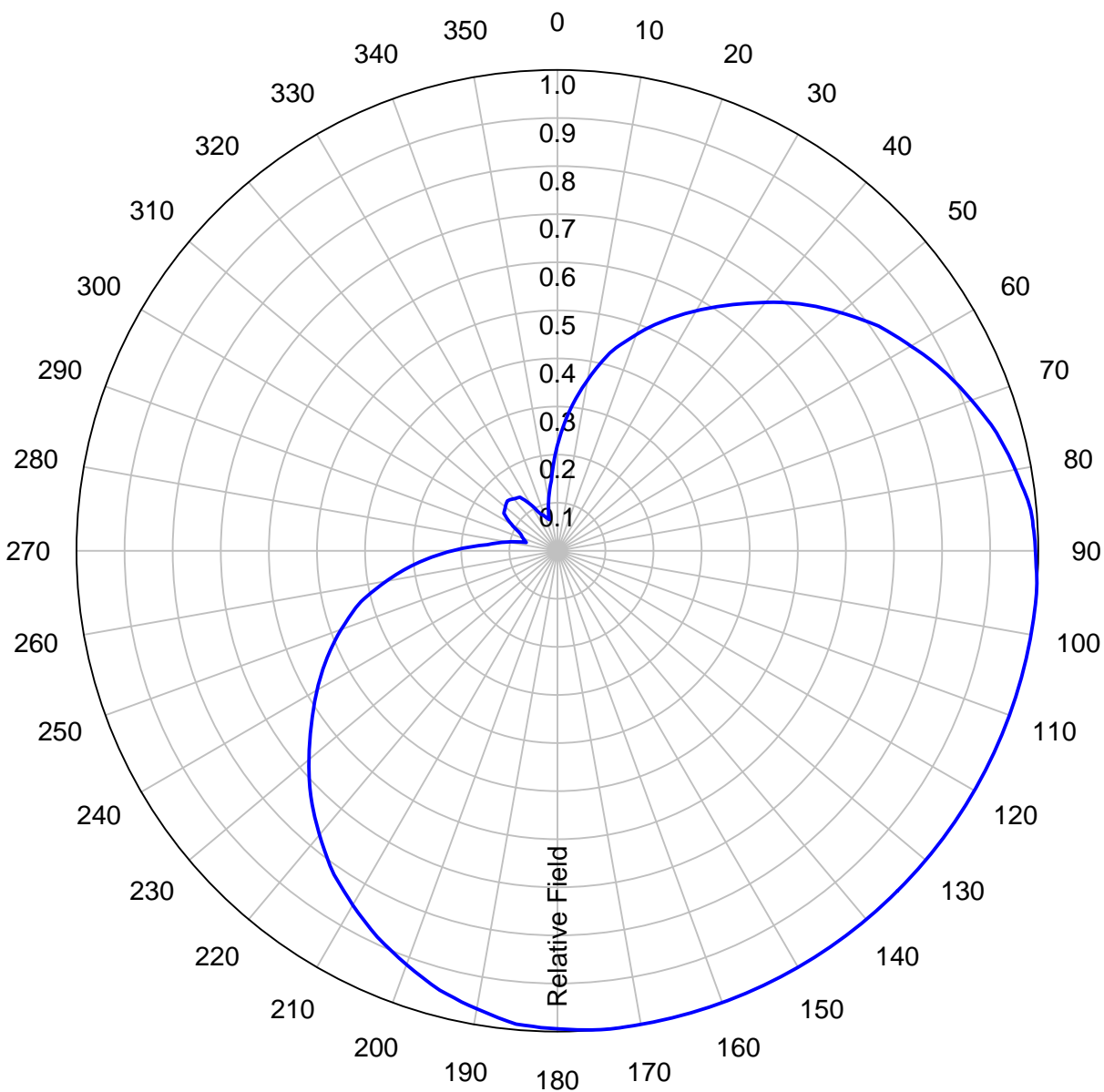
Green - Protected 51 dBu Contour Replacement Translator on Ch. 18 with ERP of 10.0 kW

07-29-09

Figure 1

AZIMUTH PATTERN**Type:****ALP-ER****Channel:****18****Directivity:****Numeric****dBd****1.93****2.86****Peak(s) at:****Location:****Polarization:****Horizontal**

Note: Pattern shape and directivity may vary with channel and mouting configuration.

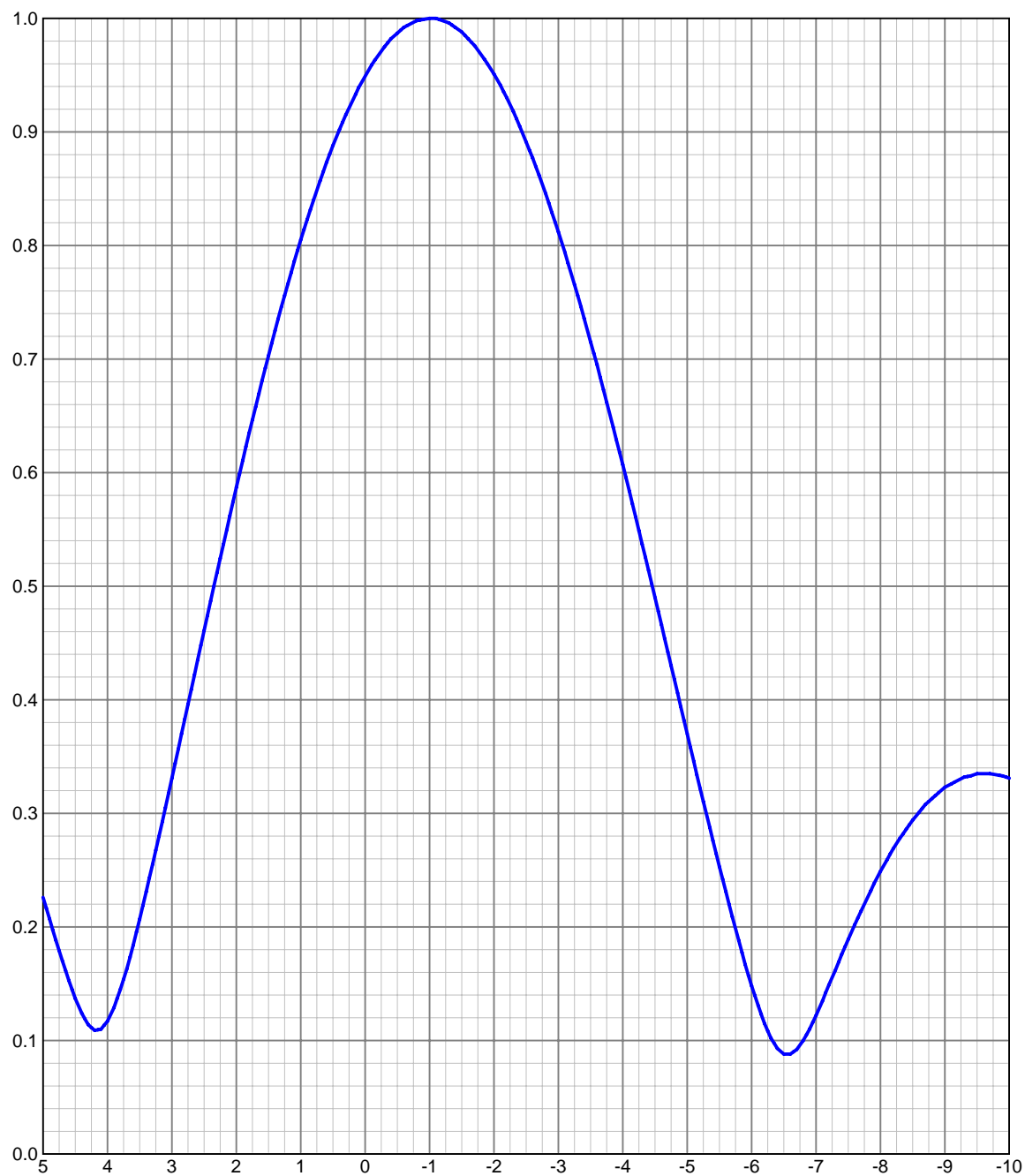


TABULATED DATA FOR AZIMUTH PATTERN

Type: ALP-ER

PolarizationHorizontal

ANGLE	FIELD	ERP (kW)	ERP (dBk)
0	0.220	0.484	-3.152
10	0.361	1.303	1.150
20	0.478	2.285	3.589
30	0.576	3.318	5.208
40	0.674	4.543	6.573
50	0.770	5.929	7.730
60	0.850	7.225	8.588
70	0.916	8.391	9.238
80	0.967	9.351	9.709
90	0.994	9.880	9.948
100	1.000	10.000	10.000
110	1.000	10.000	10.000
120	1.000	10.000	10.000
130	1.000	10.000	10.000
140	1.000	10.000	10.000
150	1.000	10.000	10.000
160	1.000	10.000	10.000
170	1.000	10.000	10.000
180	0.994	9.880	9.948
190	0.967	9.351	9.709
200	0.916	8.391	9.238
210	0.851	7.242	8.599
220	0.770	5.929	7.730
230	0.675	4.556	6.586
240	0.577	3.329	5.224
250	0.479	2.294	3.607
260	0.361	1.303	1.150
270	0.219	0.480	-3.191
280	0.106	0.112	-9.494
290	0.076	0.058	-12.384
300	0.110	0.121	-9.172
310	0.142	0.202	-6.954
320	0.141	0.199	-7.016
330	0.111	0.123	-9.094
340	0.076	0.058	-12.384
350	0.106	0.112	-9.494

ELEVATION PATTERN**Type:****ALP8L4****Channel:****18****Directivity:****Numeric****dBd****Location:****Main Lobe:****9.05****9.57****Beam Tilt:****-1.00****Horizontal:****8.15****9.11****Polarization:****Horizontal****Relative Field**

TABULATED DATA FOR ELEVATION PATTERN

Type: ALP8L4

PolarizationHorizontal

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB
5.00	0.226	-12.92	-6.75	0.096	-20.35	-27.00	0.062	-24.15	-50.50
4.75	0.179	-14.94	-7.00	0.122	-18.27	-27.50	0.041	-27.74	-51.00
4.50	0.137	-17.27	-7.25	0.155	-16.17	-28.00	0.024	-32.40	-51.50
4.25	0.112	-19.05	-7.50	0.189	-14.47	-28.50	0.012	-38.42	-52.00
4.00	0.117	-18.64	-7.75	0.220	-13.15	-29.00	0.005	-46.02	-52.50
3.75	0.154	-16.25	-8.00	0.249	-12.08	-29.50	0.003	-50.46	-53.00
3.50	0.207	-13.68	-8.25	0.274	-11.26	-30.00	0.000	-40.00	-53.50
3.25	0.268	-11.45	-8.50	0.294	-10.63	-30.50	0.007	-43.10	-54.00
3.00	0.331	-9.60	-8.75	0.310	-10.16	-31.00	0.018	-34.89	-54.50
2.75	0.396	-8.05	-9.00	0.323	-9.82	-31.50	0.033	-29.63	-55.00
2.50	0.461	-6.73	-9.25	0.331	-9.62	-32.00	0.050	-26.02	-55.50
2.25	0.524	-5.61	-9.50	0.335	-9.50	-32.50	0.069	-23.22	-56.00
2.00	0.587	-4.63	-9.75	0.335	-9.51	-33.00	0.089	-21.01	-56.50
1.75	0.647	-3.79	-10.00	0.331	-9.60	-33.50	0.108	-19.33	-57.00
1.50	0.703	-3.06	-10.50	0.313	-10.09	-34.00	0.126	-17.99	-57.50
1.25	0.756	-2.43	-11.00	0.284	-10.93	-34.50	0.143	-16.89	-58.00
1.00	0.805	-1.88	-11.50	0.246	-12.18	-35.00	0.156	-16.14	-58.50
0.75	0.849	-1.43	-12.00	0.203	-13.85	-35.50	0.166	-15.60	-59.00
0.50	0.888	-1.03	-12.50	0.157	-16.08	-36.00	0.173	-15.24	-59.50
0.25	0.921	-0.71	-13.00	0.111	-19.09	-36.50	0.175	-15.14	-60.00
0.00	0.949	-0.45	-13.50	0.067	-23.48	-37.00	0.173	-15.24	-60.50
-0.25	0.971	-0.26	-14.00	0.030	-30.46	-37.50	0.168	-15.49	-61.00
-0.50	0.987	-0.11	-14.50	0.001	-60.00	-38.00	0.158	-16.03	-61.50
-0.75	0.996	-0.03	-15.00	0.024	-32.40	-38.50	0.146	-16.71	-62.00
-1.00	1.000	0.00	-15.50	0.037	-28.64	-39.00	0.130	-17.72	-62.50
-1.25	0.997	-0.03	-16.00	0.041	-27.74	-39.50	0.112	-19.02	-63.00
-1.50	0.988	-0.10	-16.50	0.037	-28.64	-40.00	0.093	-20.63	-63.50
-1.75	0.972	-0.25	-17.00	0.027	-31.37	-40.50	0.073	-22.73	-64.00
-2.00	0.951	-0.44	-17.50	0.021	-33.56	-41.00	0.053	-25.51	-64.50
-2.25	0.924	-0.69	-18.00	0.037	-28.64	-41.50	0.035	-29.12	-65.00
-2.50	0.891	-1.00	-18.50	0.065	-23.74	-42.00	0.022	-33.15	-65.50
-2.75	0.854	-1.37	-19.00	0.096	-20.35	-42.50	0.021	-33.56	-66.00
-3.00	0.812	-1.81	-19.50	0.128	-17.86	-43.00	0.030	-30.46	-66.50
-3.25	0.766	-2.32	-20.00	0.158	-16.03	-43.50	0.040	-27.96	-67.00
-3.50	0.715	-2.91	-20.50	0.185	-14.66	-44.00	0.049	-26.20	-67.50
-3.75	0.662	-3.58	-21.00	0.207	-13.68	-44.50	0.055	-25.19	-68.00
-4.00	0.607	-4.34	-21.50	0.224	-13.00	-45.00	0.058	-24.73	-68.50
-4.25	0.549	-5.21	-22.00	0.234	-12.62	-45.50	0.057	-24.88	-69.00
-4.50	0.490	-6.20	-22.50	0.237	-12.51	-46.00	0.054	-25.35	-69.50
-4.75	0.430	-7.33	-23.00	0.233	-12.65	-46.50	0.048	-26.38	-70.00
-5.00	0.370	-8.64	-23.50	0.223	-13.03	-47.00	0.040	-27.96	-70.50
-5.25	0.310	-10.16	-24.00	0.208	-13.64	-47.50	0.029	-30.75	-71.00
-5.50	0.253	-11.94	-24.50	0.188	-14.52	-48.00	0.016	-35.92	-71.50
-5.75	0.199	-14.04	-25.00	0.164	-15.70	-48.50	0.003	-50.46	-72.00
-6.00	0.148	-16.59	-25.50	0.139	-17.14	-49.00	0.012	-38.42	-72.50
-6.25	0.108	-19.29	-26.00	0.112	-19.02	-49.50	0.027	-31.37	-73.00
-6.50	0.088	-21.11	-26.50	0.086	-21.31	-50.00	0.042	-27.54	-73.50

DIRECTIONAL ANTENNA DATA
Orange City Ch. 18 Replacement Translator
dBk Table

Actual Bearing	Pattern Azimuth	Relative Field	ERP (dBk)	Distance to Contour (km) 51 dBu
N000E	0.00	0.220	-3.15	42.6
	10.00	0.361	1.15	
	20.00	0.478	3.59	
	30.00	0.576	5.21	
	40.00	0.674	6.57	
N045E	45.00	0.722	7.17	57.1
	50.00	0.770	7.73	
	60.00	0.850	8.59	
	70.00	0.916	9.24	
	80.00	0.967	9.71	
N090E	90.00	0.994	9.95	61.0
	100.00	1.000	10.00	
	110.00	1.000	10.00	
	120.00	1.000	10.00	
	130.00	1.000	10.00	
N135E	135.00	1.000	10.00	61.3
	140.00	1.000	10.00	
	150.00	1.000	10.00	
	160.00	1.000	10.00	
	170.00	1.000	10.00	
N180E	180.00	0.994	9.95	61.2
	190.00	0.967	9.71	
	200.00	0.916	9.24	
	210.00	0.851	8.60	
	220.00	0.770	7.73	
N225E	225.00	0.722	7.17	57.6
	230.00	0.675	6.59	
	240.00	0.577	5.22	
	250.00	0.479	3.61	
	260.00	0.361	1.15	
N270E	270.00	0.219	-3.19	42.9
	280.00	0.106	-9.49	
	290.00	0.076	-12.38	
	300.00	0.110	-9.17	
	310.00	0.142	-6.95	
N315E	315.00	0.141	-7.02	37.8
	320.00	0.141	-7.02	
	330.00	0.111	-9.09	
	340.00	0.076	-12.38	
	350.00	0.106	-9.49	

Maximum: N135E 10.0 dBk

Minima: N290E -12.38 dBk
N340E -12.38 dBk