

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of WMT, LLC, licensee of Class A digital television station WQAV-CD, Channel 50 in Glassboro, New Jersey, in support of its Application for Construction Permit to specify operation on its post-repack channel, Channel 26. It is proposed herein to construct the repack facility at the site of the outstanding WQAV-CD construction permit (LMS File Number 0000022814, granted 4/11/2017).

It is proposed to mount a Dielectric directional antenna at the 279.1-meter level of the existing 284-meter tower on which the WQAV-CD Channel 50 antenna is authorized to be located. The proposed effective radiated power for the facility is 15.0 kW in the horizontal plane. Exhibit B is a map upon which the predicted 51 dBu service contour is plotted. It is important to note that the service contour of the facility proposed herein does not exceed that of the allotted WQAV-DT facility at any azimuth.

Elevation and azimuth pattern data for the proposed Dielectric 8-bay antenna appear in Exhibit C. An interference study of the proposed facility (run with a cell size of 2 kilometers and an increment spacing of 1 kilometer) reveals no significant interference issue with any co-channel or adjacent-channel post-repack station. A detailed power density calculation is provided in Exhibit D.

Since no change in the overall height or location of the existing tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission issued Antenna Structure Registration Number 1042989 to this tower.

EXHIBIT A

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large "K" and "F".

KEVIN T. FISHER

July 3, 2017

**CONTOUR POPULATION
2015 U.S. CENSUS DATA
784,517 (328,674 HH)**



**FCC 51 DBU
SERVICE CONTOUR**

Proposed Site

**EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED WQAV-CD
CH. 26 - GLASSBORO, NEW JERSEY**

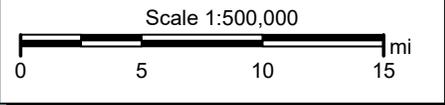
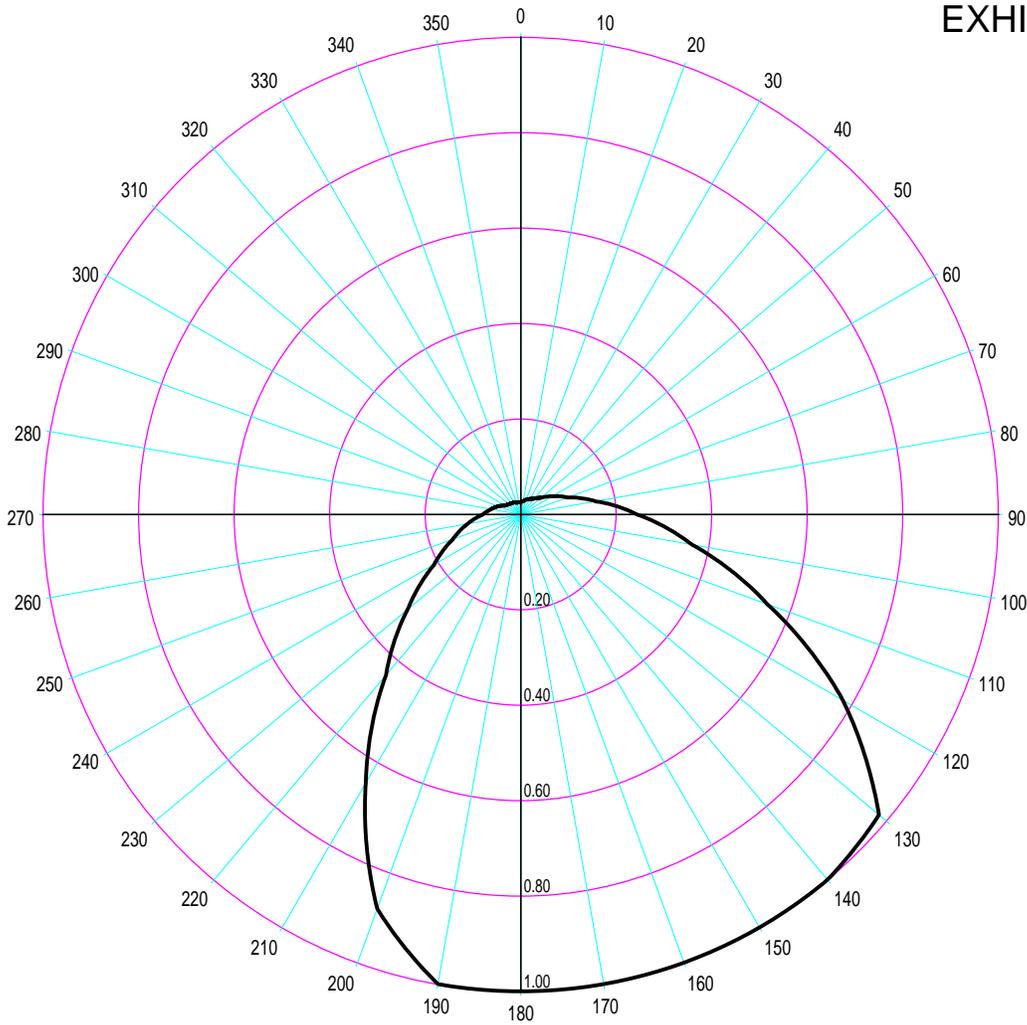


EXHIBIT C



Azim	Rel.FS	ERP [kW]	dBk
0.0	0.026	0.010	-19.940
5.0	0.027	0.011	-19.612
10.0	0.028	0.012	-19.296
15.0	0.031	0.014	-18.412
20.0	0.033	0.016	-17.869
25.0	0.035	0.018	-17.358
30.0	0.037	0.021	-16.875
35.0	0.040	0.024	-16.198
40.0	0.043	0.028	-15.570
45.0	0.049	0.036	-14.435
50.0	0.054	0.044	-13.591
55.0	0.065	0.063	-11.981
60.0	0.076	0.087	-10.623
65.0	0.090	0.122	-9.154
70.0	0.104	0.162	-7.898
75.0	0.132	0.261	-5.828
80.0	0.159	0.379	-4.211
85.0	0.201	0.606	-2.175

Azim	Rel.FS	ERP [kW]	dBk
90.0	0.243	0.886	-0.527
95.0	0.304	1.386	1.418
100.0	0.364	1.987	2.983
105.0	0.457	3.133	4.959
110.0	0.549	4.521	6.552
115.0	0.664	6.613	8.204
120.0	0.779	9.103	9.592
125.0	0.879	11.590	10.641
130.0	0.979	14.377	11.577
135.0	0.989	14.672	11.665
140.0	0.999	14.970	11.752
145.0	0.999	14.970	11.752
150.0	0.999	14.970	11.752
155.0	0.999	14.970	11.752
160.0	0.999	14.970	11.752
165.0	0.999	14.970	11.752
170.0	0.999	14.970	11.752
175.0	0.999	14.970	11.752

Azim	Rel.FS	ERP [kW]	dBk
180.0	0.999	14.970	11.752
185.0	0.999	14.970	11.752
190.0	0.999	14.970	11.752
195.0	0.939	13.226	11.214
200.0	0.879	11.590	10.641
205.0	0.764	8.755	9.423
210.0	0.649	6.318	8.006
215.0	0.544	4.439	6.473
220.0	0.439	2.891	4.610
225.0	0.374	2.098	3.218
230.0	0.309	1.432	1.560
235.0	0.259	1.006	0.027
240.0	0.209	0.655	-1.836
245.0	0.180	0.486	-3.134
250.0	0.151	0.342	-4.660
255.0	0.132	0.261	-5.828
260.0	0.113	0.192	-7.178
265.0	0.096	0.138	-8.594

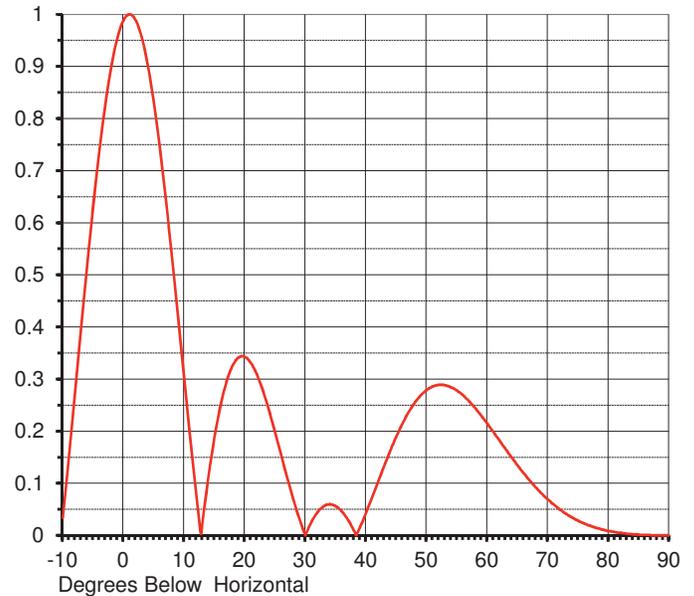
Azim	Rel.FS	ERP [kW]	dBk
270.0	0.079	0.094	-10.287
275.0	0.071	0.076	-11.214
280.0	0.063	0.060	-12.252
285.0	0.057	0.049	-13.122
290.0	0.050	0.038	-14.260
295.0	0.044	0.029	-15.370
300.0	0.037	0.021	-16.875
305.0	0.035	0.018	-17.358
310.0	0.034	0.017	-17.610
315.0	0.032	0.015	-18.136
320.0	0.030	0.014	-18.697
325.0	0.030	0.014	-18.697
330.0	0.029	0.013	-18.991
335.0	0.028	0.012	-19.296
340.0	0.026	0.010	-19.940
345.0	0.026	0.010	-19.940
350.0	0.026	0.010	-19.940
355.0	0.026	0.010	-19.940

ELEVATION PATTERN

Proposal No. **C-70924**
 Date **27-Jun-17**
 Call Letters **WQAV**
 Channel **26**
 Frequency **545 MHz**
 Antenna Type **TLP-8F (SP) OFFSET**

RMS Directivity at Main Lobe **4.0 (6.02 dB)**
 RMS Directivity at Horizontal **3.9 (5.91 dB)**
Calculated

Beam Tilt **1.00 deg**
 Pattern Number **04L040100**



Angle	Field								
-10.0	0.034	10.0	0.303	30.0	0.000	50.0	0.279	70.0	0.069
-9.0	0.151	11.0	0.188	31.0	0.026	51.0	0.286	71.0	0.059
-8.0	0.273	12.0	0.079	32.0	0.044	52.0	0.289	72.0	0.049
-7.0	0.397	13.0	0.022	33.0	0.056	53.0	0.288	73.0	0.041
-6.0	0.517	14.0	0.111	34.0	0.060	54.0	0.284	74.0	0.034
-5.0	0.632	15.0	0.188	35.0	0.056	55.0	0.278	75.0	0.028
-4.0	0.736	16.0	0.249	36.0	0.046	56.0	0.269	76.0	0.023
-3.0	0.826	17.0	0.295	37.0	0.030	57.0	0.257	77.0	0.018
-2.0	0.900	18.0	0.326	38.0	0.009	58.0	0.244	78.0	0.014
-1.0	0.955	19.0	0.341	39.0	0.015	59.0	0.230	79.0	0.011
0.0	0.988	20.0	0.343	40.0	0.043	60.0	0.215	80.0	0.008
1.0	1.000	21.0	0.331	41.0	0.073	61.0	0.199	81.0	0.006
2.0	0.989	22.0	0.309	42.0	0.103	62.0	0.182	82.0	0.005
3.0	0.956	23.0	0.278	43.0	0.133	63.0	0.166	83.0	0.003
4.0	0.903	24.0	0.240	44.0	0.163	64.0	0.150	84.0	0.002
5.0	0.832	25.0	0.198	45.0	0.190	65.0	0.134	85.0	0.001
6.0	0.744	26.0	0.154	46.0	0.214	66.0	0.119	86.0	0.001
7.0	0.644	27.0	0.111	47.0	0.236	67.0	0.105	87.0	0.000
8.0	0.534	28.0	0.069	48.0	0.254	68.0	0.092	88.0	0.000
9.0	0.419	29.0	0.032	49.0	0.268	69.0	0.080	89.0	0.000
								90.0	0.000

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POWER DENSITY CALCULATION

PROPOSED WQAV-CD
CHANNEL 26 – GLASSBORO, NEW JERSEY

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Glassboro facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 15 kW (H,V), an antenna radiation center 279.1 meters above ground, and the specific elevation pattern of the proposed Dielectric antenna, maximum power density two meters above ground of 0.00068 mW/cm^2 is calculated to occur 216 meters south-southeast of the base of the tower. Since this is only 0.2 percent of the 0.36 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 26 (542-548 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.