

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of LOCUSPOINT WDWO LICENSEE, LLC, licensee of Class A digital television station WDWO-CD, Channel 18 in Detroit, Michigan, in support of its Application for Construction Permit to specify operation on its post-repack channel, Channel 22. No change in site location or antenna height is proposed herein.

It is proposed to mount a Dielectric directional antenna at the 259-meter level of the existing 321-meter tower on which the present WDWO-CD antenna is located. The proposed effective radiated power for the facility is 15.0 kW in horizontal plane, which is the allotted repack power level for WDWO-CD. Exhibit B is a map upon which the predicted 51 dBu service contour is plotted. It is important to note that the coverage “footprint” of the proposed facility does not materially exceed that of the licensed WDWO-CD facility and it covers at least 95 percent of the present service population.

Azimuth and elevation pattern data for the proposed Dielectric antenna are included in Exhibit C. Since the facility proposed herein essentially specifies the repack allotment facility assigned to WDWO-CD, no interference study is included herein. A detailed power density calculation is provided in Exhibit D.

Since no change in the overall height or location of the existing WDWO-CD 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 1007996 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 a long horizontal stroke at the end.

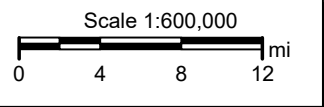
KEVIN T. FISHER

June 27, 2017

**CONTOUR POPULATION
2015 U.S. CENSUS DATA
4,230,686 (1,865,078 HH)**



**FCC 51 DBU
SERVICE CONTOUR**



**EXHIBIT B
PREDICTED SERVICE CONTOUR
PROPOSED WDWO-CD
CHANNEL 22 - DETROIT, MICHIGAN**

EXHIBIT C

Horizontal Polarization AZIMUTH PATTERN

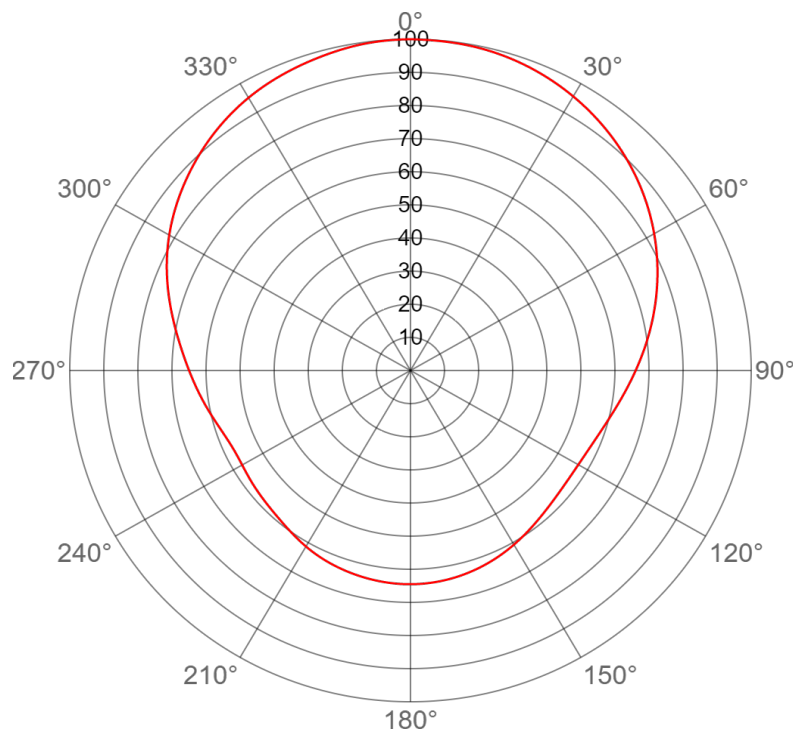


Exhibit No.
Date **27 Jun 2017**
Call Letters
Channel **22**
Antenna Type **TLP-16TLP**
Location
Customer

Gain **1.7 (2.30 dB)**
Calculated
Drawing # **TLP-B**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.935	72	0.759	108	0.589	144	0.594	180	0.645	216	0.600	252	0.584	288	0.747	324	0.930
1	1.000	37	0.932	73	0.754	109	0.586	145	0.596	181	0.645	217	0.598	253	0.587	289	0.753	325	0.934
2	0.999	38	0.928	74	0.748	110	0.583	146	0.598	182	0.645	218	0.596	254	0.590	290	0.759	326	0.938
3	0.999	39	0.924	75	0.742	111	0.581	147	0.600	183	0.645	219	0.594	255	0.593	291	0.765	327	0.941
4	0.999	40	0.920	76	0.737	112	0.579	148	0.603	184	0.645	220	0.592	256	0.596	292	0.771	328	0.944
5	0.998	41	0.916	77	0.731	113	0.577	149	0.605	185	0.644	221	0.590	257	0.600	293	0.777	329	0.948
6	0.998	42	0.912	78	0.726	114	0.575	150	0.607	186	0.644	222	0.589	258	0.603	294	0.783	330	0.951
7	0.998	43	0.908	79	0.720	115	0.574	151	0.609	187	0.643	223	0.587	259	0.607	295	0.789	331	0.954
8	0.997	44	0.904	80	0.714	116	0.573	152	0.611	188	0.643	224	0.586	260	0.610	296	0.795	332	0.956
9	0.996	45	0.899	81	0.709	117	0.571	153	0.614	189	0.642	225	0.584	261	0.614	297	0.801	333	0.959
10	0.996	46	0.895	82	0.703	118	0.570	154	0.616	190	0.641	226	0.583	262	0.618	298	0.806	334	0.962
11	0.995	47	0.890	83	0.698	119	0.569	155	0.618	191	0.640	227	0.582	263	0.622	299	0.812	335	0.964
12	0.994	48	0.886	84	0.692	120	0.569	156	0.619	192	0.640	228	0.581	264	0.625	300	0.817	336	0.966
13	0.993	49	0.881	85	0.687	121	0.568	157	0.621	193	0.639	229	0.580	265	0.629	301	0.823	337	0.968
14	0.992	50	0.876	86	0.682	122	0.568	158	0.623	194	0.638	230	0.579	266	0.633	302	0.828	338	0.971
15	0.990	51	0.872	87	0.676	123	0.568	159	0.625	195	0.637	231	0.578	267	0.637	303	0.834	339	0.973
16	0.989	52	0.867	88	0.671	124	0.568	160	0.627	196	0.636	232	0.577	268	0.641	304	0.839	340	0.975
17	0.987	53	0.862	89	0.666	125	0.568	161	0.628	197	0.634	233	0.576	269	0.646	305	0.844	341	0.977
18	0.985	54	0.857	90	0.661	126	0.568	162	0.630	198	0.633	234	0.575	270	0.650	306	0.849	342	0.979
19	0.983	55	0.852	91	0.656	127	0.569	163	0.632	199	0.632	235	0.574	271	0.654	307	0.854	343	0.980
20	0.981	56	0.847	92	0.651	128	0.569	164	0.633	200	0.631	236	0.573	272	0.659	308	0.859	344	0.982
21	0.979	57	0.842	93	0.646	129	0.570	165	0.634	201	0.629	237	0.572	273	0.663	309	0.864	345	0.984
22	0.977	58	0.836	94	0.641	130	0.571	166	0.636	202	0.628	238	0.572	274	0.668	310	0.869	346	0.986
23	0.975	59	0.831	95	0.637	131	0.572	167	0.637	203	0.626	239	0.571	275	0.673	311	0.874	347	0.988
24	0.972	60	0.826	96	0.632	132	0.573	168	0.638	204	0.625	240	0.570	276	0.678	312	0.879	348	0.990
25	0.970	61	0.820	97	0.628	133	0.574	169	0.639	205	0.623	241	0.570	277	0.683	313	0.883	349	0.991
26	0.967	62	0.815	98	0.624	134	0.575	170	0.640	206	0.621	242	0.570	278	0.688	314	0.888	350	0.993
27	0.964	63	0.810	99	0.619	135	0.577	171	0.641	207	0.619	243	0.570	279	0.694	315	0.893	351	0.994
28	0.961	64	0.804	100	0.615	136	0.578	172	0.642	208	0.618	244	0.570	280	0.699	316	0.897	352	0.995
29	0.958	65	0.799	101	0.612	137	0.580	173	0.643	209	0.616	245	0.571	281	0.705	317	0.902	353	0.996
30	0.955	66	0.793	102	0.608	138	0.582	174	0.643	210	0.613	246	0.572	282	0.711	318	0.906	354	0.997
31	0.952	67	0.787	103	0.604	139	0.584	175	0.644	211	0.611	247	0.573	283	0.716	319	0.910	355	0.998
32	0.949	68	0.782	104	0.601	140	0.586	176	0.644	212	0.609	248	0.575	284	0.722	320	0.914	356	0.999
33	0.946	69	0.776	105	0.597	141	0.588	177	0.645	213	0.607	249	0.577	285	0.728	321	0.919	357	0.999
34	0.942	70	0.771	106	0.594	142	0.590	178	0.645	214	0.605	250	0.579	286	0.734	322	0.923	358	0.999
35	0.939	71	0.765	107	0.591	143	0.592	179	0.645	215	0.602	251	0.581	287	0.740	323	0.927	359	1.000

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ELEVATION PATTERN

EXHIBIT C

Exhibit No.

Date

27 Jun 2017

Call Letters

Channel

22

Antenna Type

TLP-16TLP

Location

Customer

RMS Gain at Main Lobe

15.0 (11.76 dB)

Beam Tilt

2 Degrees

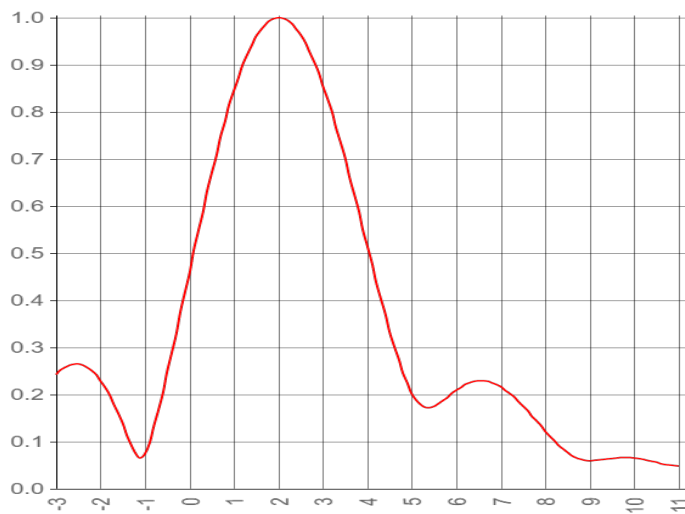
RMS Gain at Horizontal

3.2 (5.03 dB)

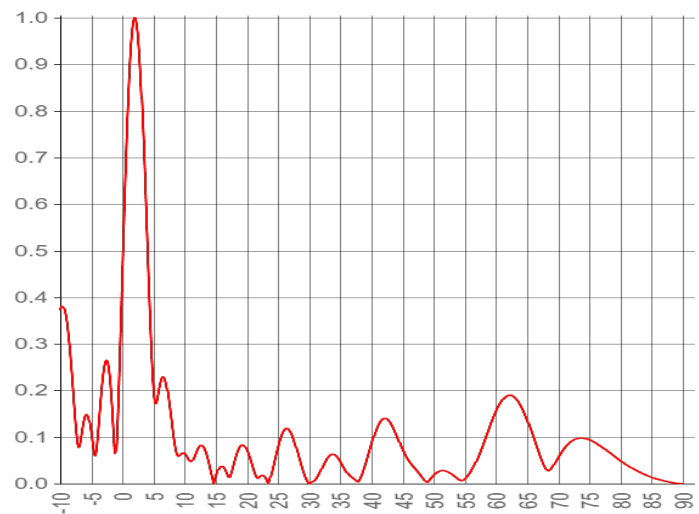
Drawing #

16L150200

Calculated



Degrees below horizontal



Degrees below horizontal

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10	0.372	10	0.065	30	0.000	50	0.018	70	0.057
-9	0.353	11	0.048	31	0.008	51	0.027	71	0.076
-8	0.213	12	0.072	32	0.032	52	0.027	72	0.090
-7	0.078	13	0.079	33	0.056	53	0.019	73	0.097
-6	0.143	14	0.039	34	0.063	54	0.009	74	0.098
-5	0.109	15	0.015	35	0.048	55	0.010	75	0.094
-4	0.097	16	0.037	36	0.025	56	0.027	76	0.088
-3	0.242	17	0.015	37	0.012	57	0.053	77	0.079
-2	0.230	18	0.047	38	0.006	58	0.087	78	0.069
-1	0.074	19	0.081	39	0.040	59	0.123	79	0.059
0	0.461	20	0.072	40	0.085	60	0.155	80	0.049
1	0.844	21	0.033	41	0.123	61	0.179	81	0.040
2	1.000	22	0.014	42	0.140	62	0.189	82	0.032
3	0.857	23	0.013	43	0.132	63	0.185	83	0.025
4	0.514	24	0.025	44	0.105	64	0.167	84	0.019
5	0.203	25	0.079	45	0.073	65	0.137	85	0.014
6	0.209	26	0.115	46	0.049	66	0.101	86	0.010
7	0.216	27	0.111	47	0.033	67	0.062	87	0.006
8	0.122	28	0.073	48	0.017	68	0.032	88	0.003
9	0.059	29	0.027	49	0.004	69	0.035	89	0.001

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POWER DENSITY CALCULATION

PROPOSED WDWO-CD
CHANNEL 22 – DETROIT, MICHIGAN

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Detroit facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 15.0 kW, an antenna radiation center 259 meters above ground, and the specific elevation pattern of the proposed Dielectric antenna, maximum power density two meters above ground of 0.00021 mW/cm^2 is calculated to occur 137 meters northeast of the base of the tower. Since this is significantly less than 0.1 percent of the 0.35 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 22 (518-524 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.