Technical Summary
Request for Special Temporary Authority
Engineering Exhibit

WPXD-TV – Ann Arbor, MI

Facility ID: 5800

Licensee “ION MEDIA LICENSE COMPANY, LLC” is currently authorized to operate on Pre-Repack DTV channel 50. The Antenna Structure Registration Number is 1007996 with a Latitude of 042° 29’ 01.0” N+ and a Longitude of 083° 18’ 44.0” W-. WPXD-TV has been assigned Repack Phase 8 with a transition completion date of 3/13/2020.

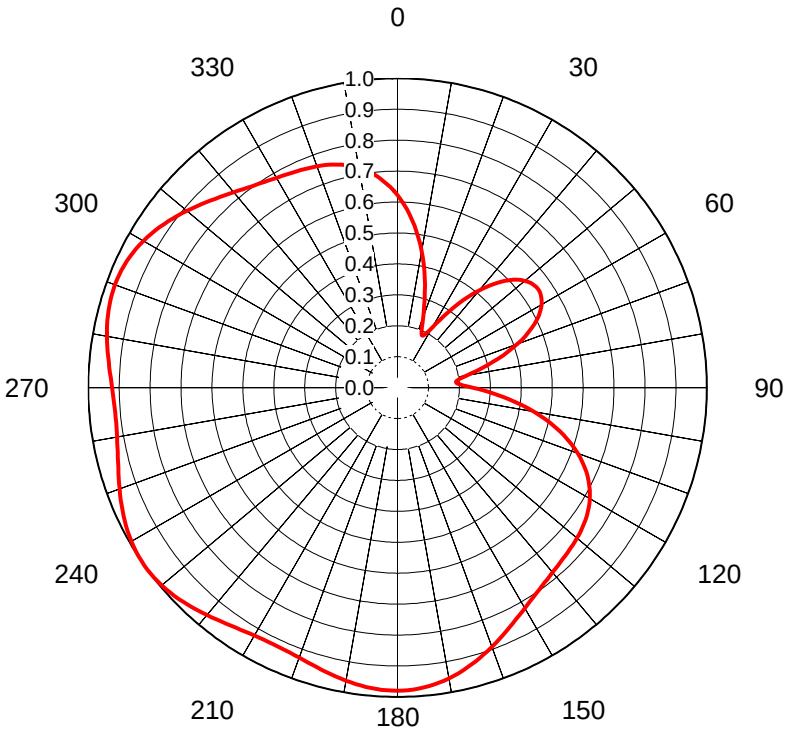
This application is to request authority to operate on Pre-Repack DTV channel 50 from the same location (ASR 1007996). The HAAT is 252.0 m (AGL 271.3 m) with an AMSL of 483.8 m. An ERP of 52 kW will be utilized.

Antenna System

A directional side mounted antenna will be utilized. It will be affixed to an existing guyed tower structure and will not increase the overall height of the structure. Elevation and Azimuth patterns are attached. The proposed STA operation will not expand the station’s noise limited contour.

RF Hazard (Environmental)

Compliance with RF Hazard (Environmental) is provided in the attached RF Hazard Statement.



AZIMUTH PATTERN
Horizontal Polarization

Proposal No.	
Date	
Call Letters	**WPXD**
Channel	**50**
Frequency	**689 MHz**
Antenna Type	**TFU-8WB-R C160**
Gain	**1.68 (2.25dB)** Calculated
Pattern Number	**WB-C160-50 Hpol**

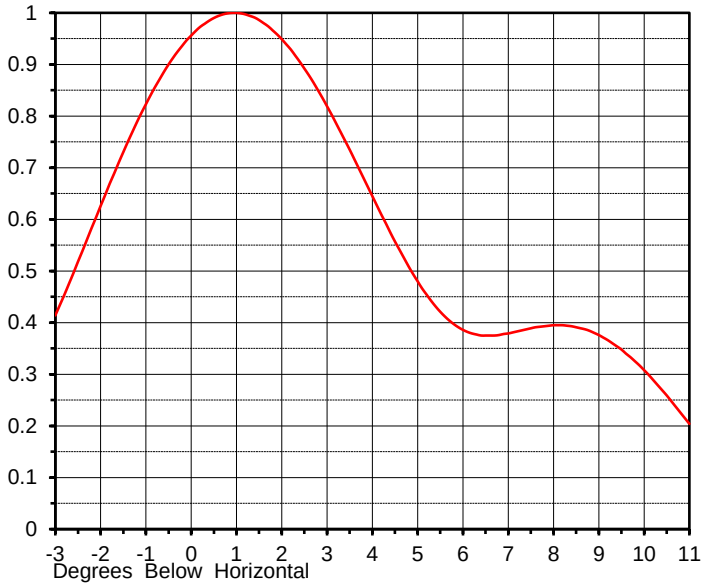
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.622	36	0.335	72	0.376	108	0.591	144	0.794	180	0.980	216	0.943	252	0.948	288	0.971	324	0.804
1	0.608	37	0.355	73	0.357	109	0.606	145	0.798	181	0.980	217	0.947	253	0.943	289	0.972	325	0.800
2	0.593	38	0.374	74	0.338	110	0.620	146	0.802	182	0.979	218	0.951	254	0.939	290	0.972	326	0.796
3	0.578	39	0.392	75	0.319	111	0.633	147	0.807	183	0.979	219	0.955	255	0.936	291	0.972	327	0.793
4	0.561	40	0.410	76	0.299	112	0.645	148	0.812	184	0.977	220	0.960	256	0.932	292	0.971	328	0.789
5	0.544	41	0.428	77	0.280	113	0.657	149	0.818	185	0.975	221	0.964	257	0.929	293	0.970	329	0.786
6	0.526	42	0.444	78	0.262	114	0.668	150	0.823	186	0.973	222	0.968	258	0.926	294	0.968	330	0.783
7	0.508	43	0.460	79	0.244	115	0.678	151	0.830	187	0.971	223	0.972	259	0.923	295	0.966	331	0.781
8	0.489	44	0.474	80	0.228	116	0.687	152	0.836	188	0.968	224	0.976	260	0.921	296	0.964	332	0.778
9	0.469	45	0.488	81	0.215	117	0.696	153	0.842	189	0.965	225	0.980	261	0.919	297	0.960	333	0.776
10	0.449	46	0.500	82	0.203	118	0.704	154	0.849	190	0.962	226	0.984	262	0.918	298	0.957	334	0.774
11	0.428	47	0.511	83	0.195	119	0.711	155	0.856	191	0.959	227	0.987	263	0.917	299	0.953	335	0.772
12	0.407	48	0.521	84	0.190	120	0.718	156	0.863	192	0.955	228	0.990	264	0.916	300	0.949	336	0.770
13	0.385	49	0.530	85	0.190	121	0.724	157	0.870	193	0.952	229	0.993	265	0.917	301	0.944	337	0.768
14	0.364	50	0.537	86	0.194	122	0.729	158	0.877	194	0.948	230	0.995	266	0.917	302	0.939	338	0.766
15	0.342	51	0.544	87	0.201	123	0.734	159	0.885	195	0.945	231	0.997	267	0.918	303	0.934	339	0.764
16	0.321	52	0.548	88	0.213	124	0.739	160	0.892	196	0.941	232	0.998	268	0.919	304	0.928	340	0.761
17	0.300	53	0.552	89	0.227	125	0.743	161	0.899	197	0.938	233	0.999	269	0.921	305	0.922	341	0.759
18	0.279	54	0.554	90	0.243	126	0.746	162	0.906	198	0.935	234	1.000	270	0.923	306	0.916	342	0.756
19	0.259	55	0.555	91	0.261	127	0.749	163	0.913	199	0.932	235	1.000	271	0.925	307	0.909	343	0.753
20	0.241	56	0.554	92	0.280	128	0.752	164	0.920	200	0.930	236	1.000	272	0.928	308	0.903	344	0.750
21	0.224	57	0.552	93	0.300	129	0.755	165	0.926	201	0.927	237	0.999	273	0.931	309	0.896	345	0.747
22	0.210	58	0.549	94	0.321	130	0.757	166	0.933	202	0.925	238	0.998	274	0.934	310	0.889	346	0.743
23	0.199	59	0.544	95	0.343	131	0.760	167	0.939	203	0.924	239	0.996	275	0.937	311	0.882	347	0.738
24	0.191	60	0.538	96	0.364	132	0.762	168	0.944	204	0.923	240	0.994	276	0.941	312	0.875	348	0.733
25	0.187	61	0.531	97	0.385	133	0.764	169	0.950	205	0.922	241	0.991	277	0.944	313	0.869	349	0.727
26	0.187	62	0.522	98	0.406	134	0.766	170	0.955	206	0.922	242	0.988	278	0.947	314	0.862	350	0.721
27	0.191	63	0.512	99	0.427	135	0.768	171	0.959	207	0.922	243	0.985	279	0.951	315	0.855	351	0.715
28	0.199	64	0.501	100	0.448	136	0.770	172	0.964	208	0.923	244	0.982	280	0.954	316	0.849	352	0.707
29	0.211	65	0.489	101	0.468	137	0.772	173	0.967	209	0.924	245	0.978	281	0.957	317	0.842	353	0.699
30	0.225	66	0.476	102	0.487	138	0.774	174	0.971	210	0.926	246	0.974	282	0.960	318	0.836	354	0.690
31	0.241	67	0.461	103	0.506	139	0.777	175	0.973	211	0.928	247	0.970	283	0.963	319	0.830	355	0.681
32	0.259	68	0.446	104	0.525	140	0.780	176	0.976	212	0.930	248	0.965	284	0.965	320	0.824	356	0.671
33	0.277	69	0.430	105	0.542	141	0.783	177	0.977	213	0.933	249	0.961	285	0.967	321	0.819	357	0.660
34	0.296	70	0.412	106	0.559	142	0.786	178	0.979	214	0.936	250	0.957	286	0.969	322	0.814	358	0.648
35	0.316	71	0.395	107	0.576	143	0.790	179	0.980	215	0.939	251	0.952	287	0.970	323	0.809	359	0.636

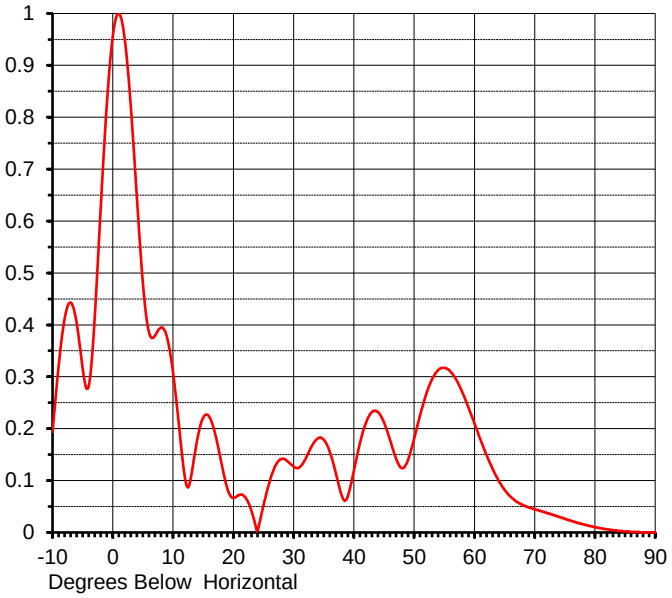
ELEVATION PATTERN

Proposal No.
Date
Call Letters **WPXD**
Channel **50**
Frequency **689 MHz**
Antenna Type **TFU-8WB-R C160**

RMS Directivity at Main Lobe **7.3 (8.62 dB)**
RMS Directivity at Horizontal **6.7 (8.26 dB)**
Calculated

Beam Tilt **1.05 deg**
Pattern Number **08W073105-50**





Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.194	10.0	0.308	30.0	0.127	50.0	0.181	70.0	0.045
-9.0	0.319	11.0	0.204	31.0	0.126	51.0	0.226	71.0	0.041
-8.0	0.411	12.0	0.103	32.0	0.142	52.0	0.266	72.0	0.038
-7.0	0.443	13.0	0.108	33.0	0.166	53.0	0.296	73.0	0.034
-6.0	0.404	14.0	0.178	34.0	0.181	54.0	0.313	74.0	0.030
-5.0	0.316	15.0	0.221	35.0	0.179	55.0	0.317	75.0	0.026
-4.0	0.282	16.0	0.223	36.0	0.155	56.0	0.310	76.0	0.023
-3.0	0.414	17.0	0.189	37.0	0.115	57.0	0.294	77.0	0.019
-2.0	0.626	18.0	0.135	38.0	0.071	58.0	0.270	78.0	0.016
-1.0	0.823	19.0	0.085	39.0	0.070	59.0	0.241	79.0	0.013
0.0	0.956	20.0	0.066	40.0	0.119	60.0	0.210	80.0	0.010
1.0	1.000	21.0	0.072	41.0	0.172	61.0	0.179	81.0	0.008
2.0	0.949	22.0	0.068	42.0	0.211	62.0	0.150	82.0	0.006
3.0	0.819	23.0	0.042	43.0	0.232	63.0	0.123	83.0	0.004
4.0	0.645	24.0	0.002	44.0	0.232	64.0	0.100	84.0	0.003
5.0	0.480	25.0	0.052	45.0	0.212	65.0	0.082	85.0	0.002
6.0	0.386	26.0	0.097	46.0	0.178	66.0	0.069	86.0	0.001
7.0	0.379	27.0	0.129	47.0	0.142	67.0	0.059	87.0	0.001
8.0	0.395	28.0	0.142	48.0	0.124	68.0	0.053	88.0	0.000
9.0	0.376	29.0	0.137	49.0	0.140	69.0	0.048	89.0	0.000
								90.0	0.000

WPXD-STA
Latitude: 42-29-01 N
Longitude: 083-18-44 W
ERP: 52.00 kW
Channel: 50
Frequency: 689.0 MHz
AGL: 271.3 m
HAAT: 252.0 m
AMSL: 483.8 m
Horiz. Pattern: Directional
Vert. Pattern: Yes
Elec Tilt: 1.05
Prop Model: None

Saginaw
Saginaw
Lapeer
Owosso
Shiawassee
Flint
Clinton
St. Clair
Sarnia
Lansing
Holt
Eaton
Ingham
Livingston
Waterford
Oakland
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Macomb
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