Horizontal Polarization
AZIMUTH PATTERN
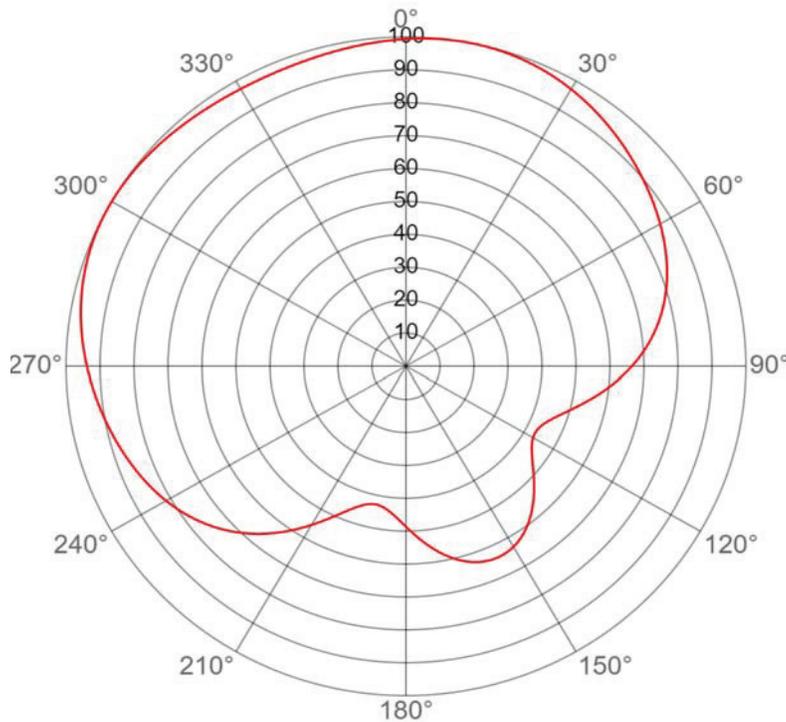
Exhibit No.	
Date	**4 Jun 2019**
Call Letters	**WFMJ**
Channel	**33**
Antenna Type	**TFU-NaNWB**
Location	
Customer	
Gain	**1.6 (1.90 dB)**
	Calculated
Drawing #	**WB-C160H**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.994	36	0.953	72	0.806	108	0.476	144	0.604	180	0.487	216	0.622	252	0.870	288	0.990	324	0.977
1	0.995	37	0.950	73	0.801	109	0.468	145	0.610	181	0.478	217	0.632	253	0.874	289	0.991	325	0.976
2	0.996	38	0.946	74	0.795	110	0.461	146	0.616	182	0.470	218	0.643	254	0.878	290	0.993	326	0.975
3	0.997	39	0.943	75	0.788	111	0.454	147	0.621	183	0.463	219	0.653	255	0.882	291	0.994	327	0.974
4	0.998	40	0.939	76	0.782	112	0.448	148	0.625	184	0.456	220	0.663	256	0.886	292	0.996	328	0.974
5	0.998	41	0.936	77	0.775	113	0.442	149	0.629	185	0.450	221	0.673	257	0.889	293	0.997	329	0.973
6	0.999	42	0.932	78	0.768	114	0.438	150	0.632	186	0.444	222	0.683	258	0.893	294	0.997	330	0.972
7	0.999	43	0.928	79	0.761	115	0.435	151	0.635	187	0.440	223	0.693	259	0.897	295	0.998	331	0.972
8	1.000	44	0.925	80	0.754	116	0.432	152	0.637	188	0.435	224	0.702	260	0.901	296	0.999	332	0.972
9	1.000	45	0.921	81	0.746	117	0.431	153	0.639	189	0.432	225	0.711	261	0.905	297	0.999	333	0.971
10	1.000	46	0.917	82	0.738	118	0.430	154	0.640	190	0.430	226	0.720	262	0.909	298	0.999	334	0.971
11	1.000	47	0.914	83	0.730	119	0.430	155	0.640	191	0.428	227	0.728	263	0.913	299	1.000	335	0.971
12	1.000	48	0.910	84	0.721	120	0.432	156	0.640	192	0.428	228	0.736	264	0.916	300	1.000	336	0.971
13	1.000	49	0.906	85	0.713	121	0.434	157	0.639	193	0.429	229	0.744	265	0.920	301	0.999	337	0.972
14	0.999	50	0.902	86	0.703	122	0.438	158	0.637	194	0.430	230	0.752	266	0.924	302	0.999	338	0.972
15	0.998	51	0.899	87	0.694	123	0.442	159	0.635	195	0.433	231	0.759	267	0.928	303	0.999	339	0.972
16	0.998	52	0.895	88	0.685	124	0.447	160	0.632	196	0.436	232	0.766	268	0.931	304	0.998	340	0.973
17	0.997	53	0.891	89	0.675	125	0.452	161	0.628	197	0.441	233	0.773	269	0.935	305	0.998	341	0.973
18	0.996	54	0.887	90	0.665	126	0.459	162	0.624	198	0.446	234	0.780	270	0.939	306	0.997	342	0.974
19	0.995	55	0.883	91	0.655	127	0.465	163	0.620	199	0.452	235	0.786	271	0.942	307	0.996	343	0.975
20	0.993	56	0.880	92	0.644	128	0.473	164	0.615	200	0.459	236	0.792	272	0.946	308	0.995	344	0.975
21	0.992	57	0.876	93	0.634	129	0.481	165	0.609	201	0.467	237	0.798	273	0.949	309	0.994	345	0.976
22	0.990	58	0.872	94	0.623	130	0.489	166	0.603	202	0.475	238	0.804	274	0.953	310	0.993	346	0.977
23	0.988	59	0.868	95	0.612	131	0.497	167	0.596	203	0.484	239	0.810	275	0.956	311	0.992	347	0.978
24	0.986	60	0.864	96	0.601	132	0.506	168	0.589	204	0.493	240	0.815	276	0.959	312	0.991	348	0.979
25	0.984	61	0.859	97	0.590	133	0.515	169	0.582	205	0.503	241	0.820	277	0.962	313	0.990	349	0.981
26	0.982	62	0.855	98	0.579	134	0.524	170	0.574	206	0.513	242	0.825	278	0.965	314	0.989	350	0.982
27	0.979	63	0.851	99	0.568	135	0.533	171	0.566	207	0.523	243	0.830	279	0.968	315	0.987	351	0.983
28	0.977	64	0.847	100	0.557	136	0.542	172	0.557	208	0.534	244	0.835	280	0.971	316	0.986	352	0.984
29	0.974	65	0.842	101	0.546	137	0.550	173	0.548	209	0.545	245	0.840	281	0.974	317	0.985	353	0.986
30	0.972	66	0.837	102	0.535	138	0.559	174	0.540	210	0.556	246	0.844	282	0.977	318	0.984	354	0.987
31	0.969	67	0.833	103	0.524	139	0.567	175	0.531	211	0.567	247	0.849	283	0.979	319	0.983	355	0.988
32	0.966	68	0.828	104	0.514	140	0.575	176	0.522	212	0.578	248	0.853	284	0.982	320	0.981	356	0.989
33	0.963	69	0.823	105	0.504	141	0.583	177	0.513	213	0.589	249	0.857	285	0.984	321	0.980	357	0.990
34	0.960	70	0.817	106	0.494	142	0.590	178	0.504	214	0.600	250	0.862	286	0.986	322	0.979	358	0.992
35	0.956	71	0.812	107	0.485	143	0.597	179	0.495	215	0.611	251	0.866	287	0.988	323	0.978	359	0.993

Trusted for Decades. Ready for Tomorrow.

ELEVATION PATTERN

Exhibit No.	
Date	**4 Jun 2019**
Call Letters	**WFMJ**
Channel	**33**
Antenna Type	**TFU-NaNWB**
Location	
Customer	

|			
RMS Gain at Main Lobe	**14.5 (11.61 dB)**	Beam Tilt	**0.55 Degrees**
RMS Gain at Horizontal	**13.1 (11.18 dB)**	Drawing #	**TFU-WB-16**
	Calculated		
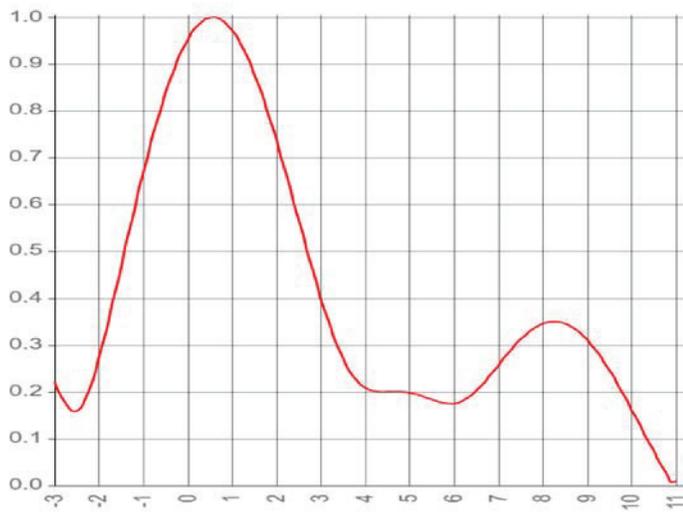
Degrees below horizontal
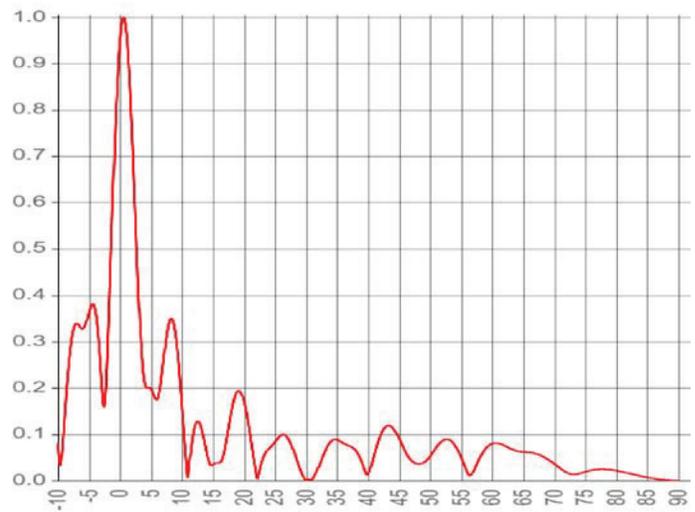
Degrees below horizontal

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10	0.082	10	0.163	30	0.000	50	0.053	70	0.036
-9	0.126	11	0.010	31	0.003	51	0.072	71	0.026
-8	0.286	12	0.115	32	0.029	52	0.086	72	0.018
-7	0.340	13	0.118	33	0.062	53	0.088	73	0.014
-6	0.328	14	0.060	34	0.085	54	0.075	74	0.015
-5	0.363	15	0.034	35	0.088	55	0.050	75	0.019
-4	0.370	16	0.038	36	0.081	56	0.018	76	0.022
-3	0.222	17	0.076	37	0.075	57	0.022	77	0.024
-2	0.269	18	0.151	38	0.065	58	0.050	78	0.025
-1	0.666	19	0.193	39	0.040	59	0.070	79	0.024
0	0.952	20	0.171	40	0.014	60	0.080	80	0.022
1	0.973	21	0.097	41	0.058	61	0.081	81	0.019
2	0.738	22	0.013	42	0.098	62	0.075	82	0.016
3	0.401	23	0.045	43	0.118	63	0.069	83	0.013
4	0.209	24	0.069	44	0.113	64	0.064	84	0.010
5	0.198	25	0.084	45	0.090	65	0.062	85	0.007
6	0.175	26	0.098	46	0.062	66	0.061	86	0.005
7	0.257	27	0.093	47	0.043	67	0.058	87	0.003
8	0.346	28	0.064	48	0.036	68	0.053	88	0.001
9	0.312	29	0.025	49	0.040	69	0.046	89	0.000