Antenna Model: **TFU-8WB-R C160**

Reference Number:	**20200430WTG**
Date:	**30-Apr-20**
Customer:	**TEGNA**
Location:	**Greensboro, NORTH CAROLINA**

Electrical Specifications

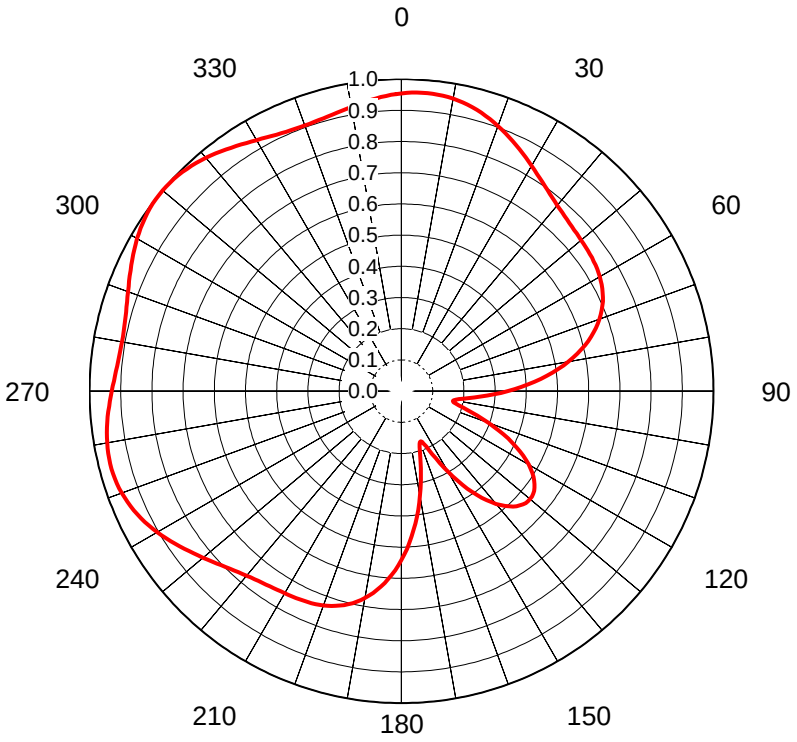
Polarization:	**Horizontal**		
Azimuth Pattern:	**C160**		
Antenna Input:	**4-1/16 in 50 Ohm EIA/DCA**		
VSWR:	Channel	**1.15:1**	Band **1.15:1**
Bandwidth:	**470-698 MHz**		
Rated Input Power:	**20 kW**	**(13.01 dBk)**	**Maximum Average Power**

Mechanical Specifications

Mounting:	**Side Mounted**
Environmental Protection:	**Full Radome**
Height:	**14.4 ft (4.4m)**
Weight:	**570 lb (259 kg)** mounts excluded
Effective Projected Area:	**23.9 ft² (2.2m²)**

Channel Specifications

Call	Ch	Freq	Hpol ERP	TPO	Peak Gain Main Lobe Hpol	Peak Gain at Horizontal Hpol
WFMY	51	695	250 kW (23.98 dBk)	34.5 kW (15.38 dBk)	12.53 (10.98dB)	11.45 (10.59dB)



AZIMUTH PATTERN
Horizontal Polarization

Proposal No.	**20200430WTG**
Date	**30-Apr-20**
Call Letters	**WFMY**
Channel	**51**
Frequency	**695 MHz**
Antenna Type	**TFU-8WB-R C160**
Gain	**1.73 (2.39dB)**
	Calculated
Pattern Number	**WB-C160-51 Hpol**

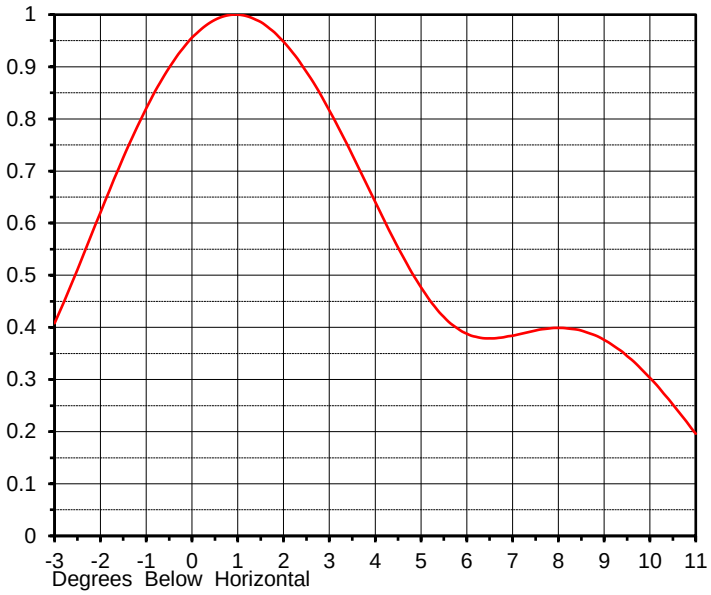
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.954	36	0.796	72	0.655	108	0.257	144	0.412	180	0.541	216	0.759	252	0.959	288	0.925	324	0.957
1	0.956	37	0.791	73	0.644	109	0.276	145	0.395	181	0.558	217	0.762	253	0.960	289	0.929	325	0.952
2	0.957	38	0.786	74	0.632	110	0.296	146	0.377	182	0.574	218	0.765	254	0.961	290	0.933	326	0.947
3	0.958	39	0.781	75	0.619	111	0.316	147	0.358	183	0.589	219	0.769	255	0.962	291	0.937	327	0.943
4	0.959	40	0.777	76	0.606	112	0.336	148	0.339	184	0.604	220	0.772	256	0.962	292	0.941	328	0.938
5	0.959	41	0.773	77	0.591	113	0.355	149	0.319	185	0.617	221	0.777	257	0.962	293	0.946	329	0.933
6	0.958	42	0.770	78	0.576	114	0.374	150	0.300	186	0.630	222	0.781	258	0.961	294	0.951	330	0.929
7	0.957	43	0.767	79	0.560	115	0.392	151	0.280	187	0.642	223	0.786	259	0.960	295	0.956	331	0.925
8	0.956	44	0.764	80	0.543	116	0.410	152	0.261	188	0.653	224	0.792	260	0.958	296	0.960	332	0.921
9	0.954	45	0.761	81	0.526	117	0.426	153	0.242	189	0.664	225	0.797	261	0.956	297	0.965	333	0.918
10	0.952	46	0.759	82	0.507	118	0.442	154	0.224	190	0.673	226	0.803	262	0.954	298	0.970	334	0.915
11	0.949	47	0.757	83	0.488	119	0.457	155	0.208	191	0.682	227	0.810	263	0.951	299	0.974	335	0.912
12	0.946	48	0.755	84	0.469	120	0.470	156	0.194	192	0.690	228	0.816	264	0.948	300	0.978	336	0.910
13	0.942	49	0.754	85	0.448	121	0.483	157	0.183	193	0.697	229	0.823	265	0.945	301	0.982	337	0.908
14	0.938	50	0.752	86	0.428	122	0.494	158	0.176	194	0.704	230	0.830	266	0.942	302	0.986	338	0.907
15	0.933	51	0.751	87	0.406	123	0.504	159	0.173	195	0.710	231	0.838	267	0.939	303	0.989	339	0.906
16	0.928	52	0.749	88	0.385	124	0.513	160	0.174	196	0.715	232	0.845	268	0.935	304	0.992	340	0.906
17	0.923	53	0.748	89	0.363	125	0.521	161	0.179	197	0.720	233	0.853	269	0.932	305	0.995	341	0.906
18	0.917	54	0.747	90	0.341	126	0.527	162	0.189	198	0.724	234	0.860	270	0.929	306	0.997	342	0.907
19	0.911	55	0.745	91	0.319	127	0.532	163	0.202	199	0.728	235	0.868	271	0.926	307	0.998	343	0.908
20	0.904	56	0.743	92	0.297	128	0.535	164	0.218	200	0.731	236	0.875	272	0.923	308	0.999	344	0.910
21	0.898	57	0.742	93	0.275	129	0.538	165	0.236	201	0.734	237	0.883	273	0.920	309	1.000	345	0.912
22	0.891	58	0.739	94	0.254	130	0.538	166	0.255	202	0.736	238	0.890	274	0.917	310	1.000	346	0.914
23	0.884	59	0.737	95	0.234	131	0.538	167	0.276	203	0.738	239	0.897	275	0.915	311	1.000	347	0.916
24	0.877	60	0.734	96	0.216	132	0.536	168	0.297	204	0.740	240	0.904	276	0.913	312	0.999	348	0.919
25	0.870	61	0.731	97	0.199	133	0.532	169	0.318	205	0.742	241	0.911	277	0.912	313	0.997	349	0.922
26	0.862	62	0.727	98	0.186	134	0.528	170	0.340	206	0.743	242	0.917	278	0.910	314	0.996	350	0.925
27	0.855	63	0.723	99	0.176	135	0.521	171	0.362	207	0.744	243	0.923	279	0.910	315	0.993	351	0.929
28	0.848	64	0.718	100	0.169	136	0.514	172	0.384	208	0.746	244	0.929	280	0.910	316	0.990	352	0.932
29	0.841	65	0.712	101	0.168	137	0.505	173	0.405	209	0.747	245	0.934	281	0.910	317	0.987	353	0.935
30	0.834	66	0.706	102	0.171	138	0.495	174	0.426	210	0.748	246	0.939	282	0.911	318	0.984	354	0.939
31	0.827	67	0.700	103	0.178	139	0.484	175	0.447	211	0.750	247	0.944	283	0.912	319	0.980	355	0.942
32	0.820	68	0.692	104	0.189	140	0.472	176	0.467	212	0.751	248	0.948	284	0.914	320	0.976	356	0.945
33	0.814	69	0.684	105	0.203	141	0.458	177	0.487	213	0.753	249	0.951	285	0.916	321	0.971	357	0.948
34	0.808	70	0.675	106	0.220	142	0.444	178	0.506	214	0.755	250	0.954	286	0.918	322	0.967	358	0.950
35	0.802	71	0.666	107	0.238	143	0.428	179	0.524	215	0.757	251	0.957	287	0.921	323	0.962	359	0.952

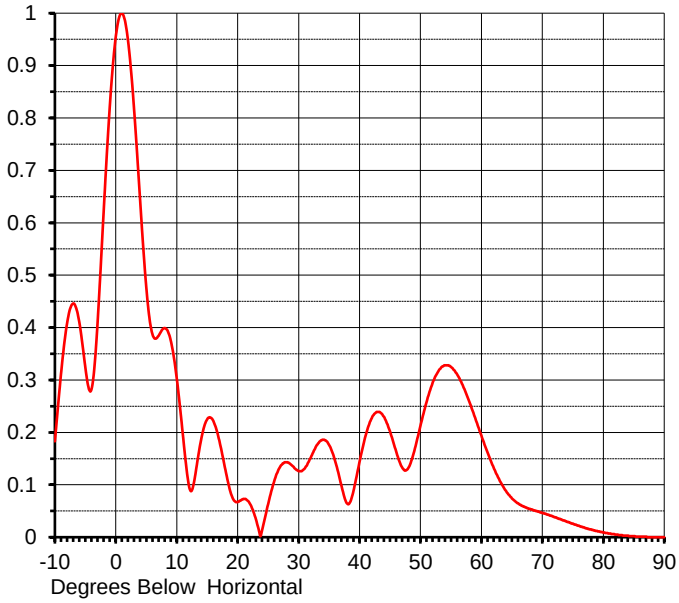
ELEVATION PATTERN

Proposal No.	**20200430WTG**
Date	**30-Apr-20**
Call Letters	**WFMY**
Channel	**51**
Frequency	**695 MHz**
Antenna Type	**TFU-8WB-R C160**

RMS Directivity at Main Lobe	**7.2 (8.59 dB)**	Beam Tilt	**1.05 deg**
RMS Directivity at Horizontal	**6.6 (8.20 dB)**	Pattern Number	**08W072105-51**

Calculated





Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.183	10.0	0.303	30.0	0.126	50.0	0.213	70.0	0.046
-9.0	0.311	11.0	0.196	31.0	0.131	51.0	0.258	71.0	0.043
-8.0	0.408	12.0	0.098	32.0	0.152	52.0	0.295	72.0	0.038
-7.0	0.446	13.0	0.116	33.0	0.176	53.0	0.318	73.0	0.034
-6.0	0.411	14.0	0.186	34.0	0.186	54.0	0.328	74.0	0.030
-5.0	0.324	15.0	0.225	35.0	0.176	55.0	0.325	75.0	0.026
-4.0	0.282	16.0	0.222	36.0	0.145	56.0	0.311	76.0	0.022
-3.0	0.408	17.0	0.184	37.0	0.100	57.0	0.288	77.0	0.018
-2.0	0.620	18.0	0.128	38.0	0.064	58.0	0.259	78.0	0.015
-1.0	0.820	19.0	0.080	39.0	0.088	59.0	0.227	79.0	0.012
0.0	0.956	20.0	0.067	40.0	0.144	60.0	0.194	80.0	0.009
1.0	1.000	21.0	0.073	41.0	0.194	61.0	0.162	81.0	0.007
2.0	0.948	22.0	0.064	42.0	0.227	62.0	0.133	82.0	0.005
3.0	0.816	23.0	0.034	43.0	0.239	63.0	0.108	83.0	0.004
4.0	0.641	24.0	0.013	44.0	0.230	64.0	0.089	84.0	0.003
5.0	0.477	25.0	0.063	45.0	0.202	65.0	0.074	85.0	0.002
6.0	0.388	26.0	0.107	46.0	0.164	66.0	0.065	86.0	0.001
7.0	0.384	27.0	0.135	47.0	0.133	67.0	0.058	87.0	0.001
8.0	0.399	28.0	0.143	48.0	0.132	68.0	0.054	88.0	0.000
9.0	0.376	29.0	0.136	49.0	0.165	69.0	0.050	89.0	0.000
								90.0	0.000

Summary

Proposal No.	**20200430WTG**
Date	**30-Apr-20**
Call Letters	**WFMY**
Channel	**51**
Frequency	**695 MHz**
Antenna Type	**TFU-8WB-R C160**

Antenna

		Hpol
ERP:	**250 kW**	**(23.98 dBk)**
Peak Gain	12.53	(10.98 dBd)

Antenna Input Power

20.0 kW **(13.00 dBk)**

Transmission Line

Type:	**Rigid**	Attenuation:	**(2.38 dB)**
Size:	**6-1/8"**	Efficiency:	**57.9%**
Impedance:	**75 Ohm**		
Length:	**1825 ft**	**556.3 m**	

Transmitter Output

34.5 kW **(15.38 dBk)**

Transmitter filter losses not included