



TFU-8WB

**Exhibit No.:**

**Date:** 14 May 2018

**Customer:** Nexstar

**Location:** Jackson, TN

**Antenna Specifications**

Antenna Type **TFU-8WB**

Azimuth Pattern **WB-C160**

Elevation Pattern **08I080105**

**Mechanical Specifications**

Mounting **Side Mounted**

Environmental Protection **No Radome**

Height **14.4 ft** less Lightning Protector **18.4 ft with Lightning Protector**

Weight **564.5 lbs**

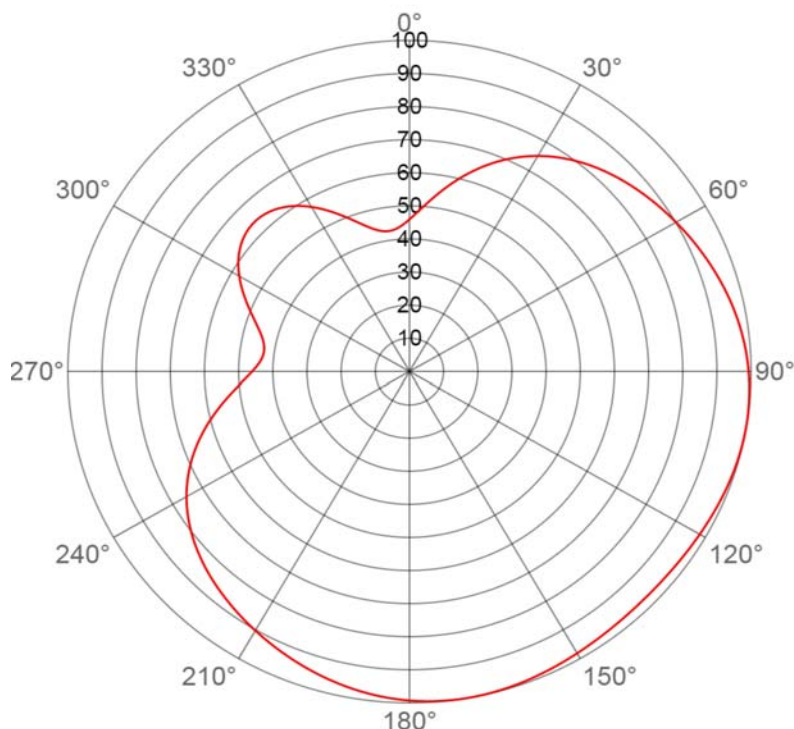
Effective Projected Area **16.8 ft<sup>2</sup>** TIA/EIA-222-G Basic Wind Speed **90 mph**

**Channel Specifications**

Call	CH	Freq	Hpol ERP	Vpol ERP	TPO	Peak	Peak	Peak	Peak
						Main Lobe	Main Lobe	at Horizontal	at Horizontal
						Hpol Gain	Vpol Gain	Hpol Gain	Vpol Gain
<b>WJKT</b>	<b>21</b>	<b>515</b>	<b>56.6</b>	<b>N/A</b>	<b>14.6</b>	<b>12.4</b>	<b>21.2</b>	<b>11.5</b>	<b>19.7</b>

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**Trusted for Decades. Ready for Tomorrow.**



## Horizontal Polarization AZIMUTH PATTERN

Exhibit No.  
Date **14 May 2018**  
Call Letters **WJKT**  
Channel **21**  
Antenna Type **TFU-8WB**  
Location **Jackson, TN**  
Customer **Nexstar**

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

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## ELEVATION PATTERN

Exhibit No.

Date **14 May 2018**

Call Letters **WJKT**

Channel **21**

Antenna Type **TFU-8WB**

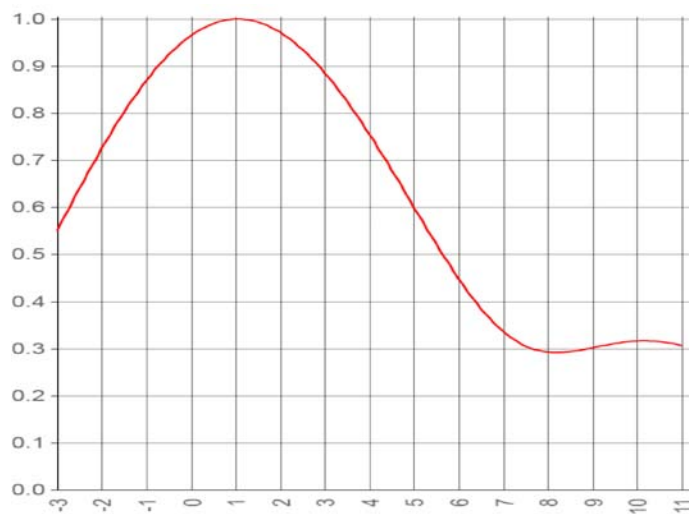
Location **Jackson, TN**

Customer **Nexstar**

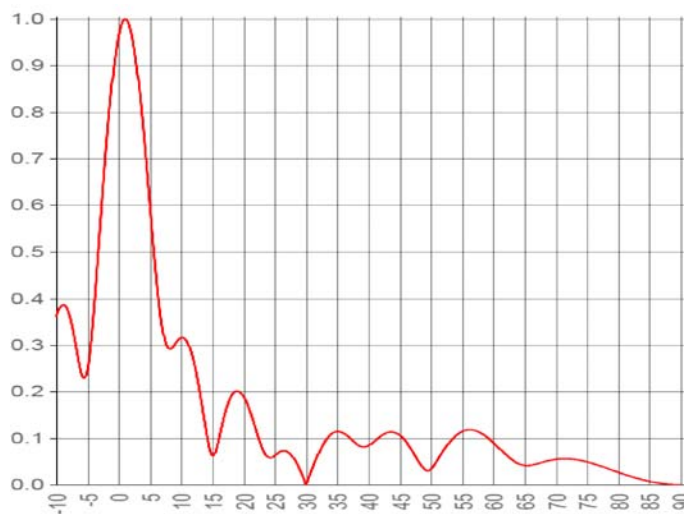
RMS Gain at Main Lobe **8.0 (9.03 dB)**

Beam Tilt **1.05 Degrees**

RMS Gain at Horizontal **7.4 (8.72 dB)**

Drawing # **08I080105**
**Calculated**


Degrees below horizontal



Degrees below horizontal

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10	0.360	10	0.316	30	0.000	50	0.034	70	0.055
-9	0.386	11	0.306	31	0.035	51	0.052	71	0.056
-8	0.368	12	0.265	32	0.067	52	0.073	72	0.056
-7	0.310	13	0.197	33	0.093	53	0.092	73	0.055
-6	0.242	14	0.118	34	0.109	54	0.106	74	0.052
-5	0.248	15	0.063	35	0.115	55	0.115	75	0.049
-4	0.373	16	0.097	36	0.111	56	0.118	76	0.045
-3	0.549	17	0.153	37	0.100	57	0.117	77	0.041
-2	0.724	18	0.189	38	0.088	58	0.111	78	0.036
-1	0.869	19	0.201	39	0.082	59	0.102	79	0.031
0	0.965	20	0.189	40	0.084	60	0.090	80	0.027
1	1.000	21	0.158	41	0.094	61	0.077	81	0.022
2	0.972	22	0.118	42	0.105	62	0.065	82	0.018
3	0.885	23	0.079	43	0.112	63	0.054	83	0.014
4	0.754	24	0.059	44	0.113	64	0.045	84	0.010
5	0.599	25	0.063	45	0.106	65	0.042	85	0.007
6	0.448	26	0.072	46	0.093	66	0.042	86	0.005
7	0.336	27	0.071	47	0.073	67	0.045	87	0.003
8	0.293	28	0.057	48	0.051	68	0.049	88	0.001
9	0.302	29	0.032	49	0.033	69	0.052	89	0.000

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## System Summary

Exhibit No.	
Date	14 May 2018
Call Letters	WJKT
Channel	21
Antenna Type	TFU-8WB
Location	Jackson, TN
Customer	Nexstar

### Antenna

ERP:	56.9 kW (17.55 dBk)
Peak Gain*:	12.4 (10.93 dB)

Antenna Input Power:	4.6 kW
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### Transmission Line

Type:	Flexline Air		
Size:	3"		
Impedance:	50 ohm		
Length:	1358.2 ft (414.0 m)	Attenuation:	5.0 dB
		Efficiency:	31.47 %

### Transmitter Output

14.6 kW (11.64 dBk)

\* Gain is with respect to half wave dipole.

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## Mechanicals

Exhibit No.

Date **14 May 2018**Call Letters **WJKT**Channel **21**Antenna Type **TFU-8WB**Location **Jackson, TN**Customer **Nexstar**

## Preliminary Specifications

### Side Mounted

#### Mechanical Specification without ice TIA-222-G

Basic Wind Speed 90 mph

#### Mechanical Specification with ice TIA-222-G

Ice Design: 0.5 in.

Basic Wind Speed 40 mph

Structure Class II

Exposure Category C

Topography Category 1

Mechanical Specifications		without ice	with ice
Height less Lightning Protector	(H2)	14.4 ft (4.4 m)	
Center of Radiation	(H3)	7.2 ft (2.2 m)	
Effective Projected Area	(EPA)s	16.8 ft <sup>2</sup> (5.1 m <sup>2</sup> )	19.3 ft <sup>2</sup> (5.9 m <sup>2</sup> )
Weight	W	564.5 lbs	1139.4 lbs