Dielectric®

AZIMUTH PATTERN
Horizontal Polarization

Proposal No.	**C-70409**	
Date	**8-Mar-17**	
Call Letters	**WGME**	
Channel	**36**	
Frequency	**605 MHz**	
Antenna Type	**TFU-30GTH/VP-R O4**	
Gain	**1.39 (1.44dB)**	
	Calculated	
Drawing #	**TFU-4C140-15**	

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.680	36	0.980	72	0.940	108	0.870	144	0.970	180	0.860	216	0.970	252	0.940	288	0.590	324	0.490
1	0.690	37	0.980	73	0.940	109	0.870	145	0.970	181	0.860	217	0.970	253	0.930	289	0.580	325	0.490
2	0.700	38	0.980	74	0.930	110	0.880	146	0.970	182	0.860	218	0.980	254	0.930	290	0.570	326	0.490
3	0.710	39	0.990	75	0.930	111	0.880	147	0.970	183	0.870	219	0.980	255	0.920	291	0.570	327	0.490
4	0.720	40	0.990	76	0.930	112	0.880	148	0.970	184	0.870	220	0.980	256	0.910	292	0.560	328	0.490
5	0.730	41	0.990	77	0.920	113	0.890	149	0.960	185	0.870	221	0.980	257	0.910	293	0.550	329	0.490
6	0.740	42	0.990	78	0.920	114	0.890	150	0.960	186	0.870	222	0.990	258	0.900	294	0.550	330	0.490
7	0.750	43	0.990	79	0.910	115	0.900	151	0.960	187	0.870	223	0.990	259	0.890	295	0.540	331	0.490
8	0.770	44	0.990	80	0.910	116	0.900	152	0.950	188	0.870	224	0.990	260	0.890	296	0.540	332	0.490
9	0.780	45	1.000	81	0.910	117	0.910	153	0.950	189	0.880	225	0.990	261	0.880	297	0.530	333	0.500
10	0.790	46	1.000	82	0.900	118	0.910	154	0.940	190	0.880	226	0.990	262	0.870	298	0.520	334	0.500
11	0.800	47	1.000	83	0.900	119	0.910	155	0.940	191	0.880	227	0.990	263	0.860	299	0.520	335	0.500
12	0.810	48	1.000	84	0.900	120	0.920	156	0.940	192	0.880	228	1.000	264	0.850	300	0.510	336	0.500
13	0.820	49	1.000	85	0.890	121	0.920	157	0.930	193	0.890	229	1.000	265	0.840	301	0.510	337	0.500
14	0.830	50	1.000	86	0.890	122	0.930	158	0.930	194	0.890	230	1.000	266	0.830	302	0.510	338	0.510
15	0.840	51	1.000	87	0.890	123	0.930	159	0.920	195	0.890	231	1.000	267	0.820	303	0.500	339	0.510
16	0.850	52	1.000	88	0.880	124	0.940	160	0.920	196	0.900	232	1.000	268	0.810	304	0.500	340	0.510
17	0.860	53	0.990	89	0.880	125	0.940	161	0.910	197	0.900	233	1.000	269	0.800	305	0.500	341	0.520
18	0.870	54	0.990	90	0.880	126	0.940	162	0.910	198	0.900	234	1.000	270	0.790	306	0.500	342	0.520
19	0.880	55	0.990	91	0.880	127	0.950	163	0.910	199	0.910	235	1.000	271	0.780	307	0.500	343	0.530
20	0.890	56	0.990	92	0.870	128	0.950	164	0.900	200	0.910	236	0.990	272	0.770	308	0.490	344	0.540
21	0.890	57	0.990	93	0.870	129	0.960	165	0.900	201	0.910	237	0.990	273	0.750	309	0.490	345	0.540
22	0.900	58	0.990	94	0.870	130	0.960	166	0.890	202	0.920	238	0.990	274	0.740	310	0.490	346	0.550
23	0.910	59	0.980	95	0.870	131	0.960	167	0.890	203	0.920	239	0.990	275	0.730	311	0.490	347	0.550
24	0.910	60	0.980	96	0.870	132	0.970	168	0.880	204	0.930	240	0.990	276	0.720	312	0.490	348	0.560
25	0.920	61	0.980	97	0.870	133	0.970	169	0.880	205	0.930	241	0.990	277	0.710	313	0.490	349	0.570
26	0.930	62	0.980	98	0.860	134	0.970	170	0.880	206	0.930	242	0.980	278	0.700	314	0.490	350	0.570
27	0.930	63	0.970	99	0.860	135	0.970	171	0.870	207	0.940	243	0.980	279	0.690	315	0.490	351	0.580
28	0.940	64	0.970	100	0.860	136	0.970	172	0.870	208	0.940	244	0.980	280	0.680	316	0.490	352	0.590
29	0.950	65	0.970	101	0.860	137	0.980	173	0.870	209	0.950	245	0.970	281	0.670	317	0.490	353	0.600
30	0.960	66	0.960	102	0.860	138	0.980	174	0.870	210	0.950	246	0.970	282	0.660	318	0.490	354	0.610
31	0.960	67	0.960	103	0.870	139	0.980	175	0.870	211	0.950	247	0.970	283	0.650	319	0.490	355	0.630
32	0.960	68	0.960	104	0.870	140	0.980	176	0.870	212	0.960	248	0.960	284	0.640	320	0.490	356	0.640
33	0.970	69	0.950	105	0.870	141	0.980	177	0.870	213	0.960	249	0.960	285	0.630	321	0.490	357	0.650
34	0.970	70	0.950	106	0.870	142	0.980	178	0.860	214	0.960	250	0.960	286	0.610	322	0.490	358	0.660
35	0.970	71	0.950	107	0.870	143	0.980	179	0.860	215	0.970	251	0.950	287	0.600	323	0.490	359	0.670

Trusted for Decades. Ready for Tomorrow.

AZIMUTH PATTERN
Vertical Polarization

Proposal No.	**C-70409**
Date	**8-Mar-17**
Call Letters	**WGME**
Channel	**36**
Frequency	**605 MHz**
Antenna Type	**TFU-30GTH/VP-R O4**
Gain	**2.41 (3.83dB)**
	Calculated
Drawing #	**TFU-4C140-15-V**
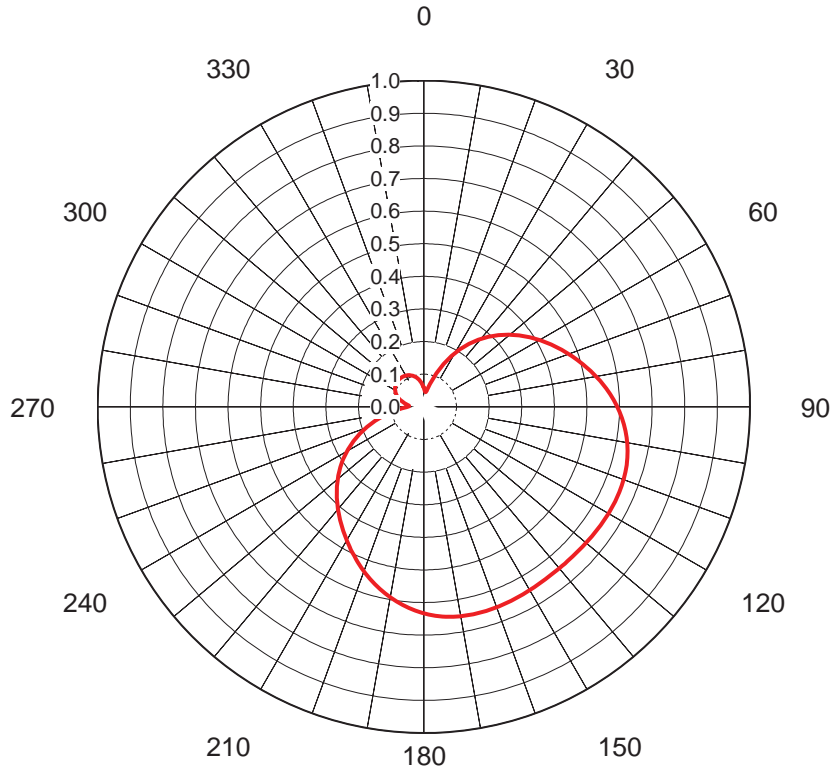
Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.058	36	0.239	72	0.485	108	0.650	144	0.647	180	0.633	216	0.434	252	0.172	288	0.080	324	0.113
1	0.055	37	0.247	73	0.492	109	0.651	145	0.647	181	0.630	217	0.428	253	0.163	289	0.082	325	0.113
2	0.052	38	0.255	74	0.498	110	0.652	146	0.647	182	0.627	218	0.422	254	0.155	290	0.084	326	0.112
3	0.050	39	0.263	75	0.505	111	0.653	147	0.648	183	0.623	219	0.415	255	0.147	291	0.087	327	0.112
4	0.048	40	0.271	76	0.511	112	0.653	148	0.648	184	0.620	220	0.409	256	0.138	292	0.089	328	0.111
5	0.046	41	0.279	77	0.517	113	0.654	149	0.649	185	0.616	221	0.403	257	0.130	293	0.091	329	0.111
6	0.045	42	0.287	78	0.524	114	0.654	150	0.649	186	0.612	222	0.397	258	0.122	294	0.093	330	0.110
7	0.045	43	0.294	79	0.530	115	0.655	151	0.650	187	0.607	223	0.390	259	0.114	295	0.094	331	0.110
8	0.046	44	0.302	80	0.536	116	0.655	152	0.650	188	0.603	224	0.384	260	0.107	296	0.096	332	0.109
9	0.047	45	0.309	81	0.542	117	0.655	153	0.651	189	0.598	225	0.378	261	0.099	297	0.097	333	0.108
10	0.050	46	0.317	82	0.549	118	0.655	154	0.651	190	0.593	226	0.371	262	0.092	298	0.099	334	0.108
11	0.053	47	0.324	83	0.555	119	0.654	155	0.652	191	0.588	227	0.365	263	0.085	299	0.100	335	0.107
12	0.057	48	0.331	84	0.561	120	0.654	156	0.652	192	0.583	228	0.358	264	0.079	300	0.102	336	0.106
13	0.061	49	0.338	85	0.566	121	0.654	157	0.653	193	0.578	229	0.351	265	0.072	301	0.103	337	0.105
14	0.067	50	0.345	86	0.572	122	0.653	158	0.653	194	0.572	230	0.345	266	0.067	302	0.104	338	0.104
15	0.072	51	0.351	87	0.578	123	0.653	159	0.654	195	0.566	231	0.338	267	0.061	303	0.105	339	0.103
16	0.079	52	0.358	88	0.583	124	0.652	160	0.654	196	0.561	232	0.331	268	0.057	304	0.106	340	0.102
17	0.085	53	0.365	89	0.588	125	0.652	161	0.654	197	0.555	233	0.324	269	0.053	305	0.107	341	0.100
18	0.092	54	0.371	90	0.593	126	0.651	162	0.655	198	0.549	234	0.317	270	0.050	306	0.108	342	0.099
19	0.099	55	0.378	91	0.598	127	0.651	163	0.655	199	0.542	235	0.309	271	0.047	307	0.108	343	0.097
20	0.107	56	0.384	92	0.603	128	0.650	164	0.655	200	0.536	236	0.302	272	0.046	308	0.109	344	0.096
21	0.114	57	0.390	93	0.607	129	0.650	165	0.655	201	0.530	237	0.294	273	0.045	309	0.110	345	0.094
22	0.122	58	0.397	94	0.612	130	0.649	166	0.654	202	0.524	238	0.287	274	0.045	310	0.110	346	0.093
23	0.130	59	0.403	95	0.616	131	0.649	167	0.654	203	0.517	239	0.279	275	0.046	311	0.111	347	0.091
24	0.138	60	0.409	96	0.620	132	0.648	168	0.653	204	0.511	240	0.271	276	0.048	312	0.111	348	0.089
25	0.147	61	0.415	97	0.623	133	0.648	169	0.653	205	0.505	241	0.263	277	0.050	313	0.112	349	0.087
26	0.155	62	0.422	98	0.627	134	0.647	170	0.652	206	0.498	242	0.255	278	0.052	314	0.112	350	0.084
27	0.163	63	0.428	99	0.630	135	0.647	171	0.651	207	0.492	243	0.247	279	0.055	315	0.113	351	0.082
28	0.172	64	0.434	100	0.633	136	0.647	172	0.650	208	0.485	244	0.239	280	0.058	316	0.113	352	0.080
29	0.180	65	0.441	101	0.636	137	0.647	173	0.648	209	0.479	245	0.231	281	0.061	317	0.113	353	0.077
30	0.189	66	0.447	102	0.639	138	0.646	174	0.647	210	0.472	246	0.223	282	0.064	318	0.113	354	0.075
31	0.197	67	0.453	103	0.641	139	0.646	175	0.645	211	0.466	247	0.214	283	0.066	319	0.113	355	0.072
32	0.206	68	0.460	104	0.643	140	0.646	176	0.643	212	0.460	248	0.206	284	0.069	320	0.113	356	0.069
33	0.214	69	0.466	105	0.645	141	0.646	177	0.641	213	0.453	249	0.197	285	0.072	321	0.113	357	0.066
34	0.223	70	0.472	106	0.647	142	0.646	178	0.639	214	0.447	250	0.189	286	0.075	322	0.113	358	0.064
35	0.231	71	0.479	107	0.648	143	0.647	179	0.636	215	0.441	251	0.180	287	0.077	323	0.113	359	0.061

Trusted for Decades. Ready for Tomorrow.

ELEVATION PATTERN

Proposal No.	**C-70409**
Date	**8-Mar-17**
Call Letters	**WGME**
Channel	**36**
Frequency	**605 MHz**
Antenna Type	**TFU-30GTH/VP-R O4**

RMS Directivity at Main Lobe   **27.0 (14.31 dB)**   Beam Tilt   **0.75 deg**
RMS Directivity at Horizontal   **16.7 (12.23 dB)**   Drawing Number   **30G270075**
Calculated
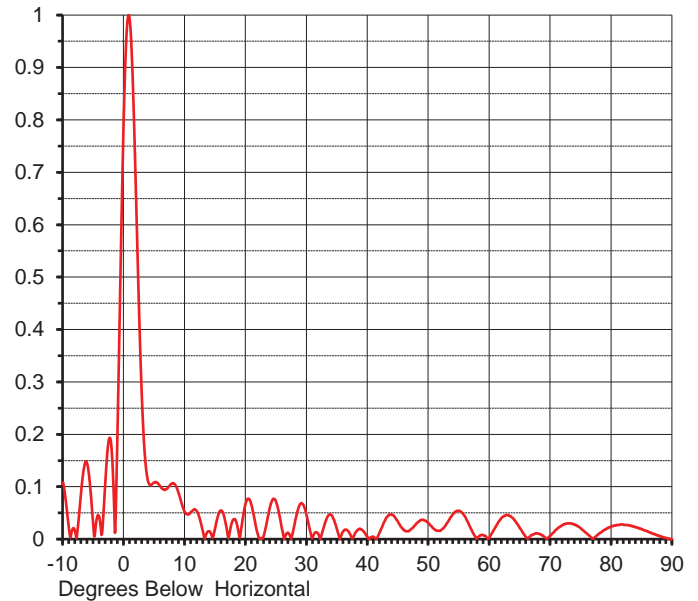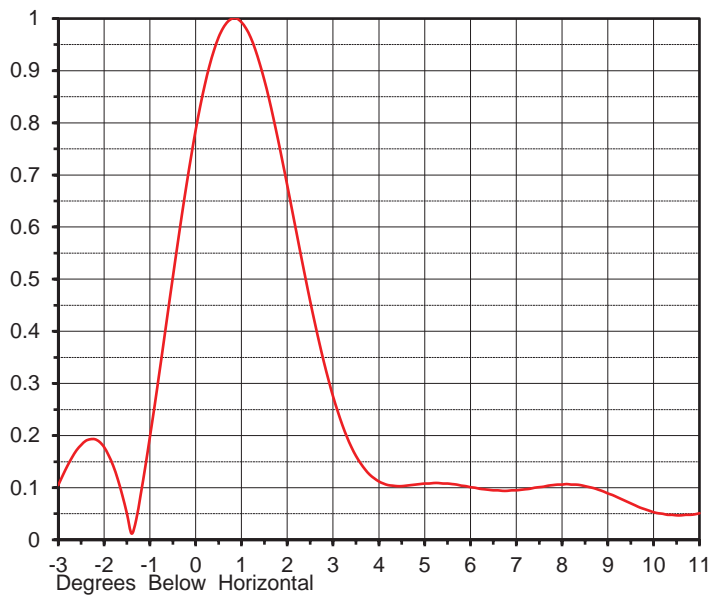
Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.108	10.0	0.051	30.0	0.043	50.0	0.030	70.0	0.007
-9.0	0.015	11.0	0.052	31.0	0.005	51.0	0.018	71.0	0.019
-8.0	0.012	12.0	0.052	32.0	0.006	52.0	0.017	72.0	0.027
-7.0	0.096	13.0	0.011	33.0	0.032	53.0	0.031	73.0	0.030
-6.0	0.141	14.0	0.015	34.0	0.046	54.0	0.048	74.0	0.027
-5.0	0.017	15.0	0.024	35.0	0.016	55.0	0.054	75.0	0.020
-4.0	0.037	16.0	0.054	36.0	0.015	56.0	0.042	76.0	0.010
-3.0	0.124	17.0	0.008	37.0	0.011	57.0	0.018	77.0	0.001
-2.0	0.162	18.0	0.038	38.0	0.013	58.0	0.003	78.0	0.011
-1.0	0.255	19.0	0.003	39.0	0.018	59.0	0.007	79.0	0.019
0.0	0.832	20.0	0.070	40.0	0.003	60.0	0.004	80.0	0.024
1.0	0.981	21.0	0.061	41.0	0.004	61.0	0.024	81.0	0.027
2.0	0.635	22.0	0.007	42.0	0.014	62.0	0.041	82.0	0.027
3.0	0.247	23.0	0.010	43.0	0.040	63.0	0.046	83.0	0.026
4.0	0.108	24.0	0.064	44.0	0.046	64.0	0.037	84.0	0.023
5.0	0.108	25.0	0.069	45.0	0.032	65.0	0.020	85.0	0.019
6.0	0.100	26.0	0.015	46.0	0.017	66.0	0.003	86.0	0.014
7.0	0.096	27.0	0.011	47.0	0.018	67.0	0.008	87.0	0.010
8.0	0.107	28.0	0.030	48.0	0.030	68.0	0.010	88.0	0.005
9.0	0.086	29.0	0.068	49.0	0.037	69.0	0.004	89.0	0.002
								90.0	0.000

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FutureFill refers to broadband panels or limited bandwidth slotted coaxial antennas that can be modified in the field to provide the flexibility to customize the null structure at a future date.
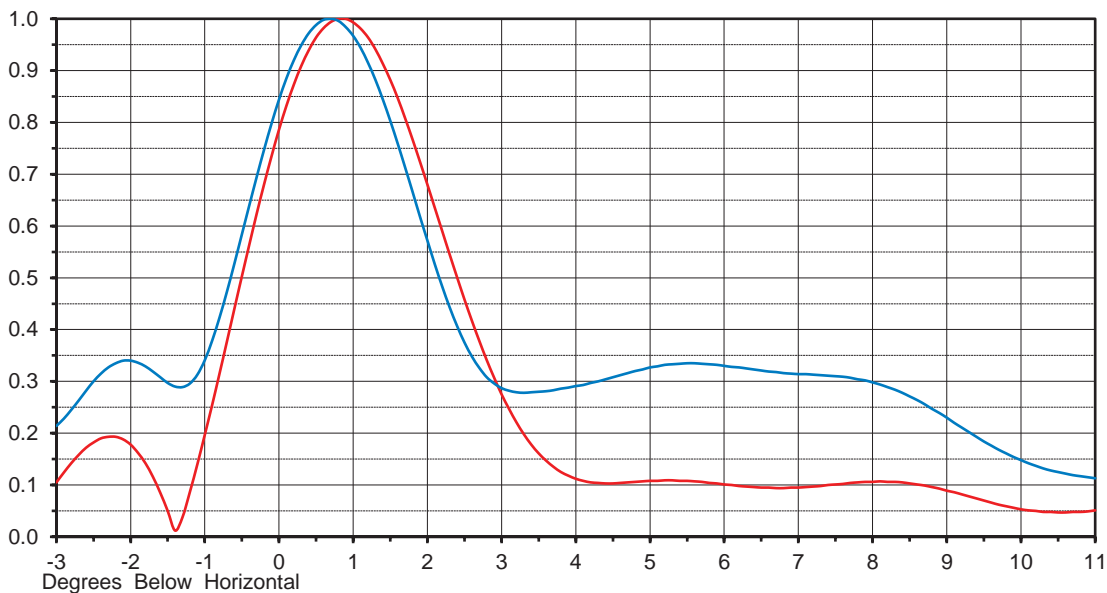
FutureFill OVERLAY

Proposal No.	**C-70409**
Date	**8-Mar-17**
Call Letters	**WGME**
Channel	**36**
Frequency	**605 MHz**
Antenna Type	**TFU-30GTH/VP-R O4**

RMS Directivity	27.0	**(14.31dB)**	Beam Tilt	0.75	Drawing No.	30G270075	Red
RMS Directivity Calculated	16.2	**(12.10dB)**	Beam Tilt	0.70	Drawing No.	30G270075-FF	Blue

Degrees Below Horizontal

Tabulations for 30G270075-FF

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.195	10.0	0.148	30.0	0.056	50.0	0.088	70.0	0.044
-9.0	0.113	11.0	0.113	31.0	0.072	51.0	0.065	71.0	0.038
-8.0	0.140	12.0	0.096	32.0	0.071	52.0	0.058	72.0	0.042
-7.0	0.143	13.0	0.069	33.0	0.123	53.0	0.069	73.0	0.047
-6.0	0.097	14.0	0.088	34.0	0.147	54.0	0.088	74.0	0.048
-5.0	0.198	15.0	0.086	35.0	0.112	55.0	0.094	75.0	0.045
-4.0	0.283	16.0	0.071	36.0	0.106	56.0	0.078	76.0	0.038
-3.0	0.214	17.0	0.114	37.0	0.118	57.0	0.053	77.0	0.031
-2.0	0.340	18.0	0.184	38.0	0.103	58.0	0.045	78.0	0.028
-1.0	0.341	19.0	0.143	39.0	0.094	59.0	0.051	79.0	0.027
0.0	0.844	20.0	0.150	40.0	0.112	60.0	0.051	80.0	0.028
1.0	0.967	21.0	0.182	41.0	0.118	61.0	0.049	81.0	0.029
2.0	0.572	22.0	0.151	42.0	0.102	62.0	0.046	82.0	0.029
3.0	0.287	23.0	0.152	43.0	0.111	63.0	0.037	83.0	0.027
4.0	0.291	24.0	0.211	44.0	0.128	64.0	0.025	84.0	0.023
5.0	0.327	25.0	0.194	45.0	0.121	65.0	0.033	85.0	0.019
6.0	0.330	26.0	0.114	46.0	0.103	66.0	0.054	86.0	0.014
7.0	0.314	27.0	0.103	47.0	0.098	67.0	0.067	87.0	0.010
8.0	0.298	28.0	0.056	48.0	0.106	68.0	0.067	88.0	0.005
9.0	0.230	29.0	0.017	49.0	0.106	69.0	0.057	89.0	0.002
								90.0	0.000

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