

EXHIBIT A

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of CONNECTICUT PUBLIC BROADCASTING, INC., licensee of television station WEDW-DT, Channel 49 in Stamford, Connecticut, in support of its request for Special Temporary Authority to operate with an interim facility on its post-repack channel, Channel 21, while it's maximization application is pending at the Commission and until such time as it can construct the DTS facility authorized in LMS-0000036047.

It is proposed to mount a Dielectric directional antenna at the 100-meter level of the existing 149.7-meter tower on which the present WEDW-DT Channel 49 antenna is located. Exhibit B is a map upon which the predicted service contours of the proposed Channel 21 STA facility are plotted. As shown, the community of Stamford is completely contained within the proposed city-grade 48 dBu contour.

In Exhibit C, we compare the noise-limited service contours of WEDW-DT on repack Channel 21 as allotted and as proposed herein. As shown, the two contours are nearly identical. The differences result from the slight difference in the antenna pattern from the presently licensed RCA TFU-20JDAS/P antenna and the proposed Dielectric TFU-12DSB-R J antenna. It is worth noting that the RCA antenna line was purchased by Dielectric a number of decades ago and the two antenna patterns are very similar. The proposed STA antenna was the best match available from Dielectric within the constraints of the temporary installation as well as from the standpoint of trying to keep construction costs to a minimum. To the extent that

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a waiver of the Commission's freeze on the extension of station contours is required, it is so respectfully requested.

In support of this waiver request, the proposed service contour has a coverage area of 14,677 square kilometers whereas that allotted to WEDW-DT's repack facility is 14,435 square kilometers. The proposed STA facility's coverage area is only 1.7% different than that of allotment facility. In addition, the greatest extension of the allotted WEDW-DT contour is within 5% of the distance of the allotment contour (4.5% at 198 degrees true). It is also important to note that we have striven to reduce the amount of loss area to the north and northwest of the present WEDW-DT service area to a negligible value. In order to do so, the contour is necessarily extended beyond that of licensed WEDW-DT in certain directions.

In Exhibit D, we provide the licensed and proposed Dielectric (RCA) antenna azimuth patterns. As shown and as stated previously, the two patterns are similar. Also in Exhibit D, we provide elevation pattern data for the proposed Dielectric antenna.

Since there is a slight extension of the allotted WEDW-DT contour proposed herein, we provide in Exhibit E the summary results from a TVStudy interference study, which was conducted using a cell size of 2 kilometers and increment spacing of 1 kilometer. It concludes that the proposed WEDW-DT Channel 21 STA facility meets the Commission's de minimis interference criteria to all co-channel and adjacent-channel post-repack full-power and Class A facilities.

A detailed power density calculation is provided in Exhibit F.

Since no change in the overall height or location of the existing WEDW-DT tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In

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addition, the Federal Communications Commission has issued Antenna Structure Registration Number 1205267 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.

A handwritten signature in blue ink, appearing to read "K. T. Fisher", with a stylized flourish at the end.

KEVIN T. FISHER

July 9, 2019

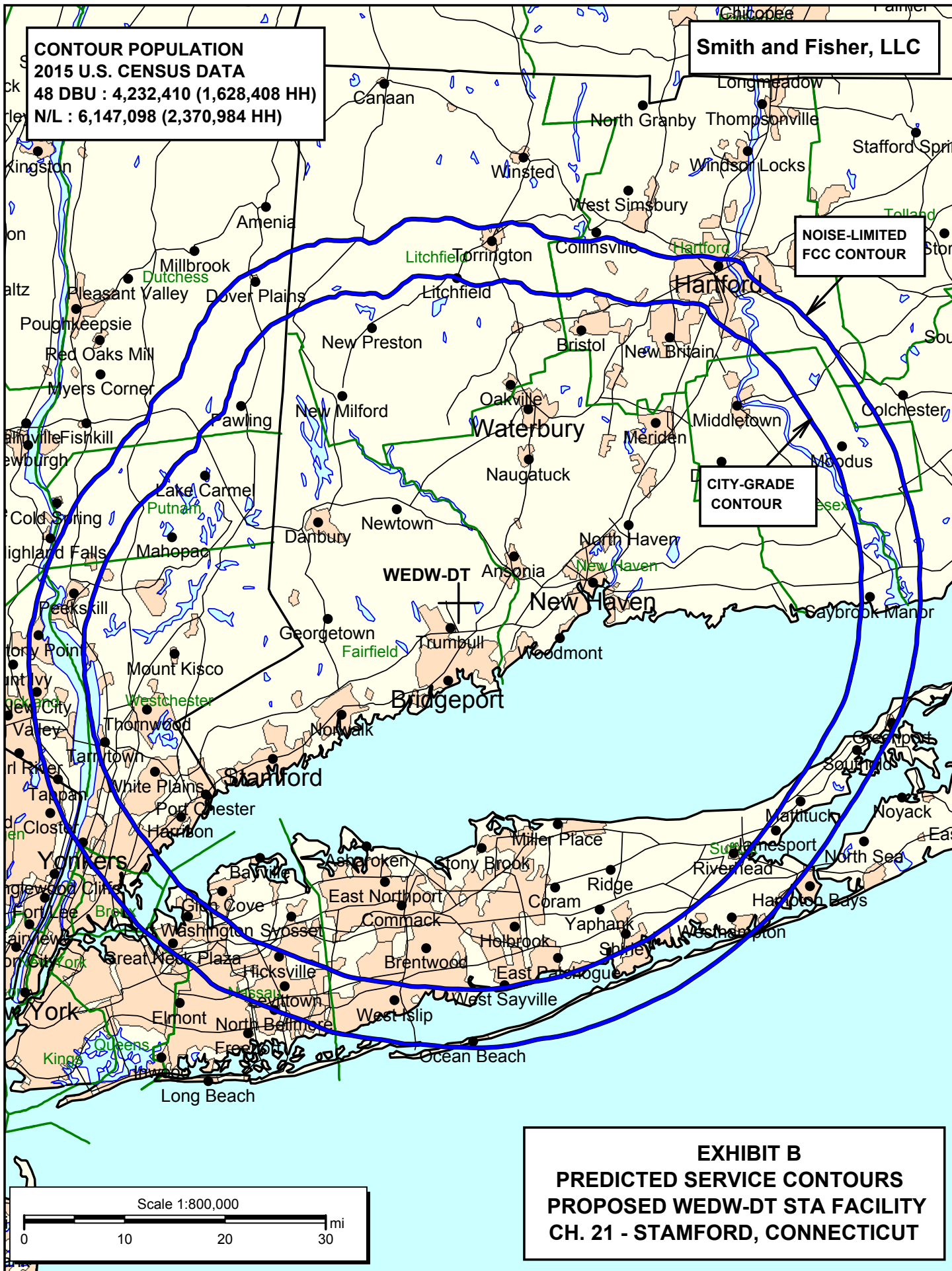
CONTOUR POPULATION
2015 U.S. CENSUS DATA
48 DBU : 4,232,410 (1,628,408 HH)
N/L : 6,147,098 (2,370,984 HH)

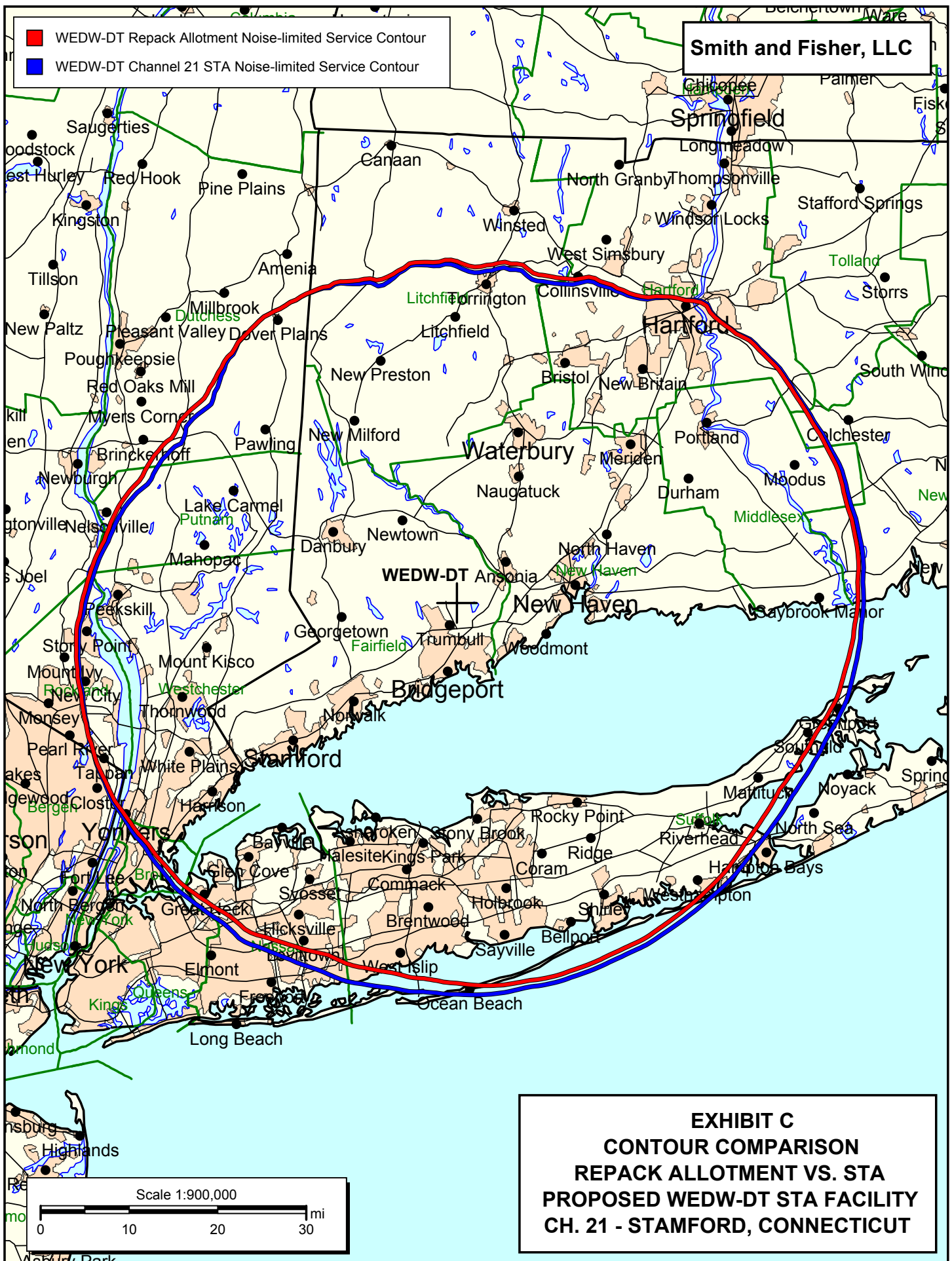
Smith and Fisher, LLC

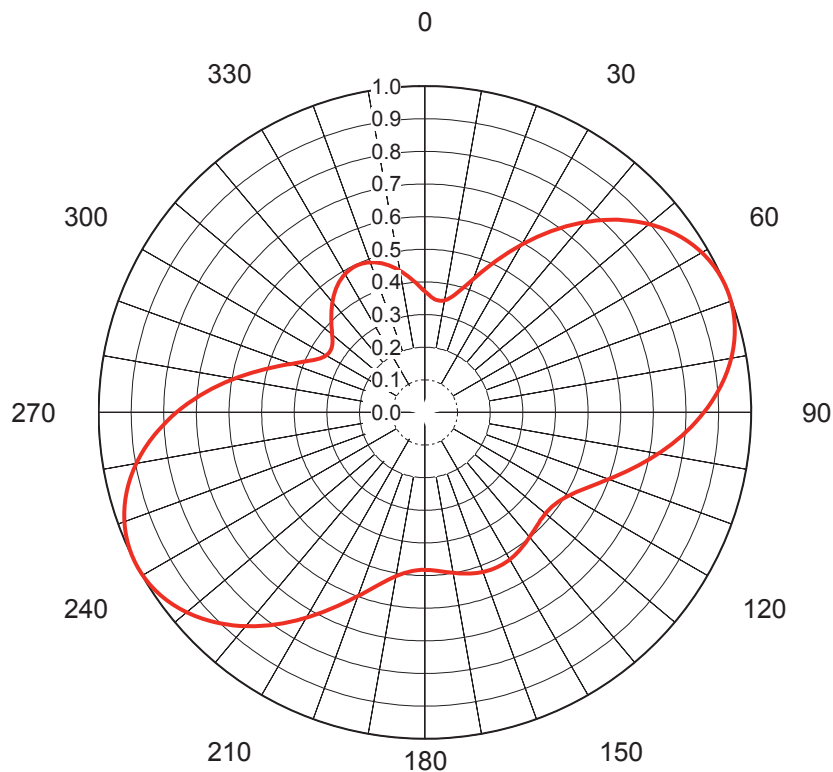
**NOISE-LIMITED
FCC CONTOUR**

**CITY-GRADE
CONTOUR**

WEDW-DT







AZIMUTH PATTERN Horizontal Polarization

In Free Space

Proposal No. **C-71200-3**
Date **20-Dec-18**
Call Letters **WEDW**
Channel **21**
Frequency **515 MHz**
Antenna Type **TFU-12DSB-R J**
Gain **2.22 (3.46dB)**
Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.371	36	0.696	72	0.994	108	0.622	144	0.509	180	0.483	216	0.806	252	0.968	288	0.464	324	0.465
1	0.365	37	0.713	73	0.991	109	0.610	145	0.511	181	0.482	217	0.819	253	0.962	289	0.449	325	0.471
2	0.360	38	0.729	74	0.987	110	0.599	146	0.513	182	0.483	218	0.831	254	0.954	290	0.435	326	0.475
3	0.355	39	0.745	75	0.983	111	0.587	147	0.516	183	0.484	219	0.843	255	0.947	291	0.422	327	0.480
4	0.352	40	0.761	76	0.978	112	0.577	148	0.517	184	0.486	220	0.855	256	0.938	292	0.410	328	0.483
5	0.348	41	0.777	77	0.973	113	0.566	149	0.519	185	0.488	221	0.867	257	0.929	293	0.398	329	0.487
6	0.347	42	0.792	78	0.967	114	0.557	150	0.520	186	0.492	222	0.878	258	0.919	294	0.388	330	0.489
7	0.345	43	0.807	79	0.960	115	0.547	151	0.522	187	0.495	223	0.889	259	0.909	295	0.378	331	0.492
8	0.346	44	0.821	80	0.953	116	0.539	152	0.522	188	0.499	224	0.899	260	0.897	296	0.371	332	0.494
9	0.346	45	0.835	81	0.945	117	0.530	153	0.523	189	0.504	225	0.910	261	0.886	297	0.363	333	0.495
10	0.349	46	0.848	82	0.937	118	0.523	154	0.523	190	0.510	226	0.919	262	0.874	298	0.358	334	0.496
11	0.352	47	0.862	83	0.929	119	0.516	155	0.524	191	0.516	227	0.929	263	0.862	299	0.352	335	0.496
12	0.358	48	0.874	84	0.919	120	0.510	156	0.523	192	0.523	228	0.937	264	0.848	300	0.349	336	0.496
13	0.363	49	0.886	85	0.910	121	0.504	157	0.523	193	0.530	229	0.945	265	0.835	301	0.346	337	0.495
14	0.371	50	0.897	86	0.899	122	0.499	158	0.522	194	0.539	230	0.953	266	0.821	302	0.346	338	0.494
15	0.378	51	0.909	87	0.889	123	0.495	159	0.522	195	0.547	231	0.960	267	0.807	303	0.345	339	0.492
16	0.388	52	0.919	88	0.878	124	0.492	160	0.520	196	0.557	232	0.967	268	0.792	304	0.347	340	0.489
17	0.398	53	0.929	89	0.867	125	0.488	161	0.519	197	0.566	233	0.973	269	0.777	305	0.348	341	0.487
18	0.410	54	0.938	90	0.855	126	0.486	162	0.517	198	0.577	234	0.978	270	0.761	306	0.352	342	0.483
19	0.422	55	0.947	91	0.843	127	0.484	163	0.516	199	0.587	235	0.983	271	0.745	307	0.355	343	0.480
20	0.435	56	0.954	92	0.831	128	0.483	164	0.513	200	0.599	236	0.987	272	0.729	308	0.360	344	0.475
21	0.449	57	0.962	93	0.819	129	0.482	165	0.511	201	0.610	237	0.991	273	0.713	309	0.365	345	0.471
22	0.464	58	0.968	94	0.806	130	0.483	166	0.509	202	0.622	238	0.994	274	0.696	310	0.371	346	0.465
23	0.478	59	0.975	95	0.793	131	0.483	167	0.507	203	0.635	239	0.997	275	0.679	311	0.378	347	0.460
24	0.494	60	0.980	96	0.780	132	0.484	168	0.504	204	0.647	240	0.998	276	0.662	312	0.384	348	0.454
25	0.510	61	0.985	97	0.767	133	0.485	169	0.502	205	0.660	241	1.000	277	0.645	313	0.391	349	0.448
26	0.526	62	0.989	98	0.753	134	0.486	170	0.499	206	0.673	242	1.000	278	0.628	314	0.398	350	0.441
27	0.543	63	0.993	99	0.740	135	0.488	171	0.497	207	0.686	243	1.000	279	0.611	315	0.406	351	0.434
28	0.560	64	0.995	100	0.726	136	0.490	172	0.494	208	0.700	244	0.999	280	0.594	316	0.413	352	0.427
29	0.577	65	0.998	101	0.713	137	0.492	173	0.492	209	0.713	245	0.998	281	0.577	317	0.420	353	0.420
30	0.594	66	0.999	102	0.700	138	0.494	174	0.490	210	0.726	246	0.995	282	0.560	318	0.427	354	0.413
31	0.611	67	1.000	103	0.686	139	0.497	175	0.488	211	0.740	247	0.993	283	0.543	319	0.434	355	0.406
32	0.628	68	1.000	104	0.673	140	0.499	176	0.486	212	0.753	248	0.989	284	0.526	320	0.441	356	0.398
33	0.645	69	1.000	105	0.660	141	0.502	177	0.485	213	0.767	249	0.985	285	0.510	321	0.448	357	0.391
34	0.662	70	0.998	106	0.647	142	0.504	178	0.484	214	0.780	250	0.980	286	0.494	322	0.454	358	0.384
35	0.679	71	0.997	107	0.635	143	0.507	179	0.483	215	0.793	251	0.975	287	0.478	323	0.460	359	0.378

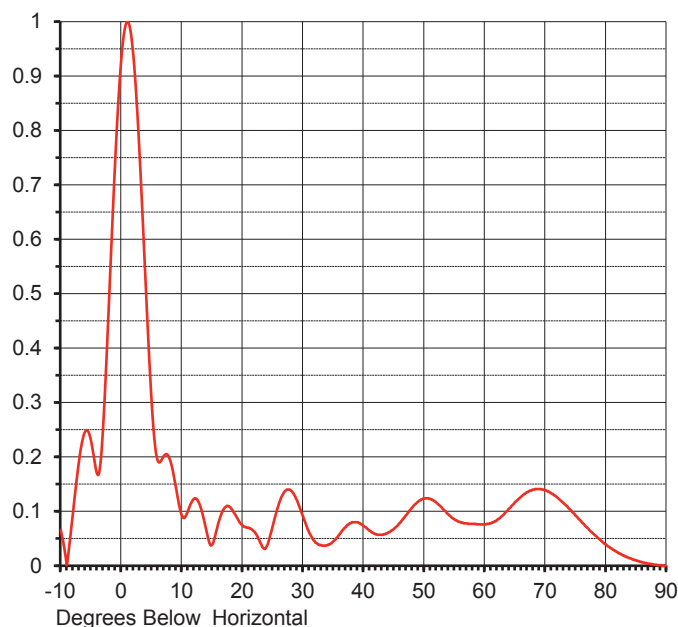
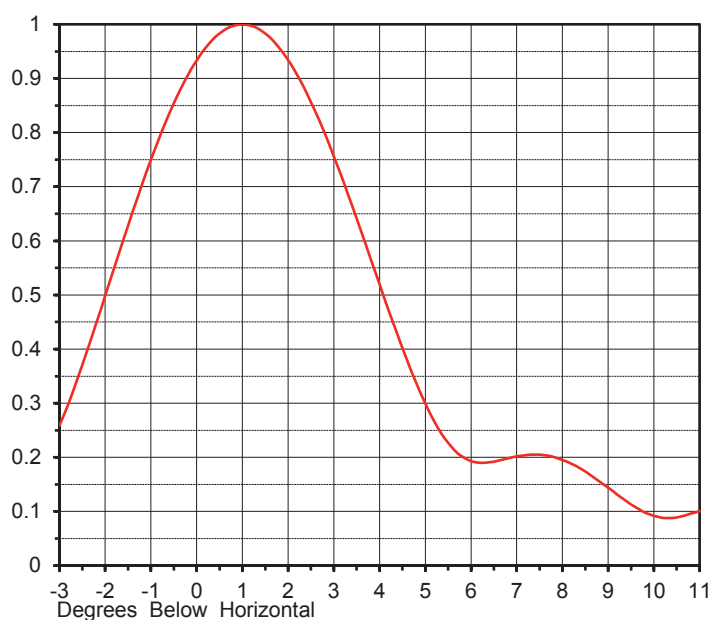
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ELEVATION PATTERN

Proposal No. **C-71200-3**
 Date **20-Dec-18**
 Call Letters **WEDW**
 Channel **21**
 Frequency **515 MHz**
 Antenna Type **TFU-12DSB-R J**

RMS Directivity at Main Lobe **11.7 (10.69 dB)**
 RMS Directivity at Horizontal **10.2 (10.09 dB)**
Calculated

Beam Tilt **1.00 deg**
 Pattern Number **12Q117100**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.065	10.0	0.092	30.0	0.090	50.0	0.124	70.0	0.139
-9.0	0.001	11.0	0.101	31.0	0.061	51.0	0.123	71.0	0.133
-8.0	0.097	12.0	0.123	32.0	0.043	52.0	0.116	72.0	0.125
-7.0	0.192	13.0	0.110	33.0	0.038	53.0	0.105	73.0	0.115
-6.0	0.246	14.0	0.066	34.0	0.038	54.0	0.094	74.0	0.104
-5.0	0.229	15.0	0.039	35.0	0.045	55.0	0.085	75.0	0.092
-4.0	0.169	16.0	0.078	36.0	0.058	56.0	0.080	76.0	0.080
-3.0	0.259	17.0	0.106	37.0	0.071	57.0	0.078	77.0	0.069
-2.0	0.499	18.0	0.107	38.0	0.079	58.0	0.077	78.0	0.058
-1.0	0.750	19.0	0.090	39.0	0.080	59.0	0.076	79.0	0.048
0.0	0.933	20.0	0.074	40.0	0.073	60.0	0.076	80.0	0.039
1.0	1.000	21.0	0.070	41.0	0.064	61.0	0.078	81.0	0.031
2.0	0.934	22.0	0.062	42.0	0.058	62.0	0.084	82.0	0.024
3.0	0.756	23.0	0.041	43.0	0.057	63.0	0.093	83.0	0.018
4.0	0.520	24.0	0.036	44.0	0.061	64.0	0.105	84.0	0.014
5.0	0.300	25.0	0.074	45.0	0.068	65.0	0.117	85.0	0.010
6.0	0.193	26.0	0.114	46.0	0.079	66.0	0.127	86.0	0.006
7.0	0.202	27.0	0.137	47.0	0.093	67.0	0.135	87.0	0.004
8.0	0.195	28.0	0.138	48.0	0.107	68.0	0.140	88.0	0.002
9.0	0.144	29.0	0.120	49.0	0.118	69.0	0.141	89.0	0.001
						90.0	0.000		

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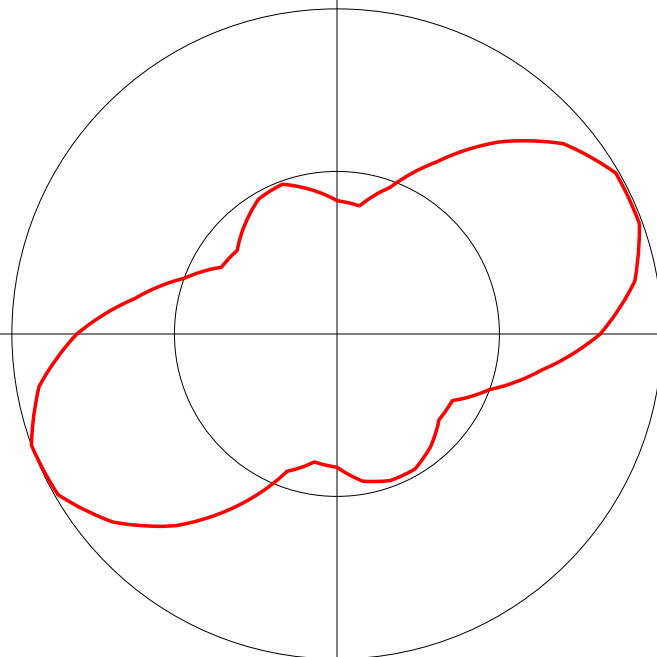
WEDW-DT Allotment Pattern

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	0.41
10.0	0.4
20.0	0.48
30.0	0.61
40.0	0.77
50.0	0.91
60.0	0.99
70.0	0.99
80.0	0.93
90.0	0.81
100.0	0.64
110.0	0.5
120.0	0.41
130.0	0.41
140.0	0.45
150.0	0.48
160.0	0.48
170.0	0.46
180.0	0.41
190.0	0.4
200.0	0.45
210.0	0.61
220.0	0.77
230.0	0.9
240.0	0.99
250.0	1.0
260.0	0.93
270.0	0.8
280.0	0.63
290.0	0.5
300.0	0.41
310.0	0.4
320.0	0.44
330.0	0.48
340.0	0.49
350.0	0.45

Rotation Angle = 0

EXHIBIT D -
LICENSED WEDW-DT



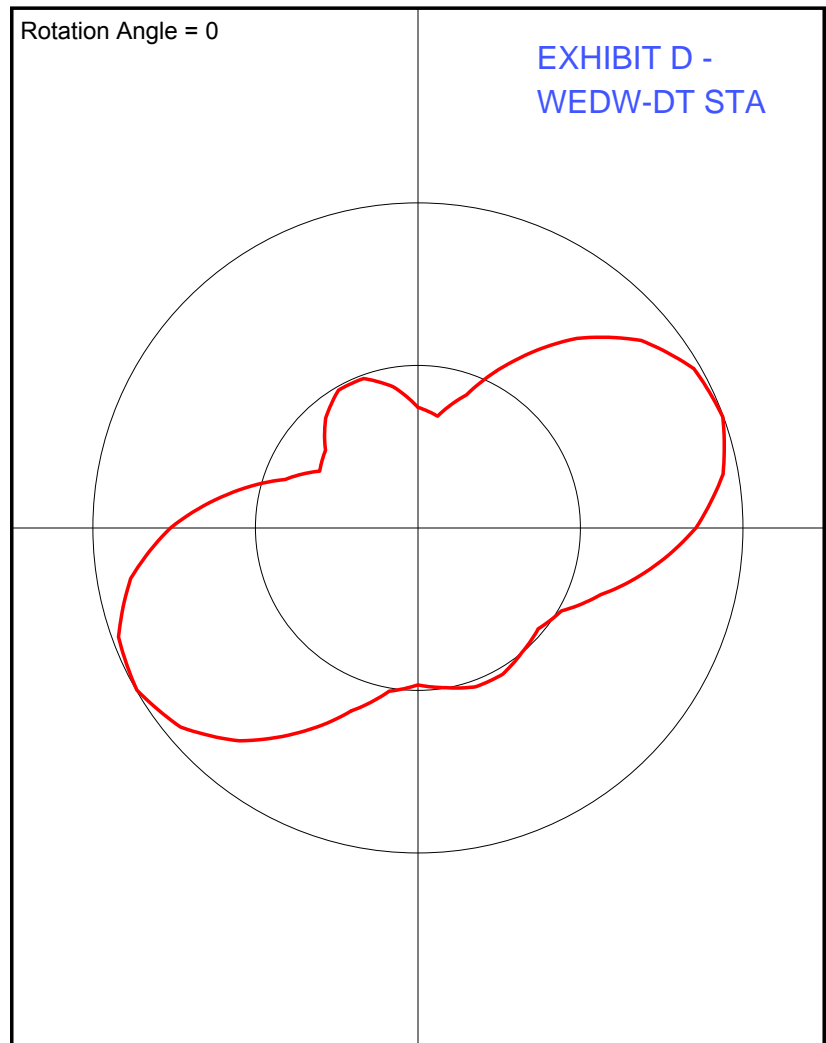
WEDW-DT STA Antenna Pattern

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	0.371
10.0	0.349
20.0	0.435
30.0	0.594
40.0	0.761
50.0	0.897
60.0	0.98
70.0	0.998
80.0	0.953
90.0	0.855
100.0	0.726
110.0	0.599
120.0	0.51
130.0	0.483
140.0	0.499
150.0	0.52
160.0	0.52
170.0	0.499
180.0	0.483
190.0	0.51
200.0	0.599
210.0	0.726
220.0	0.855
230.0	0.953
240.0	0.998
250.0	0.98
260.0	0.897
270.0	0.761
280.0	0.594
290.0	0.435
300.0	0.349
310.0	0.371
320.0	0.441
330.0	0.489
340.0	0.489
350.0	0.441

Rotation Angle = 0

EXHIBIT D -
WEDW-DT STA



TVSTUDY INTERFERENCE ANALYSIS RESULTS
 PROPOSED WEDW-DT STA FACILITY
 CHANNEL 21 – STAMFORD, CONNECTICUT

Study created: 2019.05.01 08:12:03

Study build station data: LMS TV 2019-04-16

Proposal: WEDW D21 DT LIC STAMFORD, CT

File number: BLANK0000029810

Facility ID: 13594

Station data: User record

Record ID: 557

Country: U.S.

Zone: I

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WBZ-TV	D20	DT	CP	BOSTON, MA	BLANK0000034573	198.0 km
No	WBZ-TV	D20	DT	BL	BOSTON, MA	DTVBL25456	198.0
Yes	WSBK-TV	D21	DT	CP	BOSTON, MA	BLANK0000034574	198.0
Yes	WSBK-TV	D21	DT	BL	BOSTON, MA	DTVBL73982	198.0
No	WFXQ-CD	D21	DC	CP	SPRINGFIELD, MA	BLANK0000027611	117.0
No	WFXQ-CD	D21	DC	BL	SPRINGFIELD, MA	DTVBL2650	117.0
No	WMPT	D21	DT	CP	ANNAPOLIS, MD	BLANK0000029874	384.9
No	WFPT	D21	DT	BL	FREDERICK, MD	DTVBL40626	415.7
No	WCPB	D21	DT	BL	SALISBURY, MD	DTVBL40618	381.5
No	WROC-TV	D21	DT	CP	ROCHESTER, NY	BLANK0000055351	416.7
No	WROC-TV	D21	DT	BL	ROCHESTER, NY	DTVBL73964	416.7
No	WUTH-CD	D22	DC	CP	HARTFORD, CT	BLANK0000034459	75.9
Yes	WUTH-CD	D22	DC	BL	HARTFORD, CT	DTVBL74214	75.9
No	WBPX-TV	D22	DT	CP	BOSTON, MA	BLANK0000063303	186.3
No	WBPX-TV	D22	DT	BL	BOSTON, MA	DTVBL7692	198.7
No	WVMA-CD	D22	DC	CP	WINCHENDON, MA	BLANK0000033356	206.3
No	WDVB-CD	D22	DC	CP	EDISON, NJ	BLANK0000034859	89.4
No	WDVB-CD	D22	DC	BL	EDISON, NJ	DTVBL168834	89.4
No	WPHY-CD	D22	DC	CP	TRENTON, NJ	BLANK0000068454	220.9
No	WCWN	D22	DT	CP	SCHENECTADY, NY	BLANK0000033782	164.5
No	WCWN	D22	DT	BL	SCHENECTADY, NY	DTVBL73264	164.5
No	WOLF-TV	D22	DT	CP	HAZLETON, PA	BLANK0000027934	224.7
No	WOLF-TV	D22	DT	BL	HAZLETON, PA	DTVBL73375	224.6

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D21
Latitude: 41 16 44.30 N (NAD83)
Longitude: 73 11 6.40 W
Height AMSL: 258.5 m
HAAT: 220.0 m
Peak ERP: 200 kW
Antenna: Dielectric TFU-WEDW-DT 0.0 deg
Elev Pattn: Generic
Elec Tilt: 1.00

39.5 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	27.5 kW	133.5 m	61.0 km
45.0	137	159.8	71.0
90.0	146	201.7	74.5
135.0	48.2	235.5	71.3
180.0	46.7	244.0	71.7
225.0	163	177.4	73.3
270.0	116	133.7	67.9
315.0	33.0	107.6	59.7

Database HAAT does not agree with computed HAAT

Database HAAT: 220 m Computed HAAT: 174 m

Distance to Canadian border: 395.0 km

Distance to Mexican border: 2762.6 km

Conditions at FCC monitoring station: Canandaigua NY

Bearing: 299.7 degrees Distance: 382.4 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 278.0 degrees Distance: 2686.8 km

No land mobile station failures found

Study cell size: 2.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

No IX check failures found.

POWER DENSITY CALCULATION

PROPOSED WEDW-DT STA FACILITY
CHANNEL 21 – STAMFORD, CONNECTICUT

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Stamford facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 200 kW, an antenna radiation center 100 meters above ground, and the specific elevation pattern of the proposed Dielectric TFU-12DSB-R J antenna, maximum power density two meters above ground of 0.012 mW/cm^2 is calculated to occur 38 meters east-northeast and west-southwest of the base of the tower. Since this is only 3.5 percent of the 0.34 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 21 (512-518 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive non-ionizing radiation.