EXHIBIT A

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of FOUR SEASONS PEORIA, LLC, licensee of full-power digital television station WAOE-DT, Channel 10 in Oswego, Illinois, in support of its application for modification of Construction Permit LMS-0000189533, which authorizes operation with a Distributed Transmission System (DTS) comprised of two single-frequency network (SFN) nodes and a new DTS reference site. The purpose of this modification is to propose a different antenna pattern, antenna radiation center and effective radiated power for the DTS-2 node at the John Hancock Center building in Chicago. No change in the DTS-1 facility is proposed herein.

AUTHORIZED DTS REFERENCE COORDINATE

As part of the original DTS application (LMS-0000189533), we requested that the reference coordinates for the proposed WAOE-DT DTS facility be changed to 41-22-31.0 N, 88-38-59.6 W (NAD83). That change was subsequently authorized by the Commission.

Below, for completeness, is the justification we used to get the change in the DTS reference coordinates:

The Commission has explained that "[g]enerally, a station would use its current reference point based on its [] facility [as set forth in the Post-Transition DTV Table of Allotments, §73.622(i)], or the Order granting it a new channel, as appropriate."[1] However,

[1] See Digital Television Distributed Transmission System Technologies, Report and Order, 23 FCC Rcd 16731, 16748-49, para. 29 (2008) ("DTS R&O").

EXHIBIT A

"upon the appropriate public interest showing, a station may request a change in its reference point, just as stations have done historically, providing certain criteria are met. Such changes in reference points are subject to a station showing that the resulting service area circle fully encompasses the station's authorized service area."

In 47 U.S.C. § 73.626(b), the Commission stated that for the purpose of the DTS rules a station's "authorized service area" is defined as "the area within its predicted noise-limited service contour determined using the facilities authorized for the station in a license or construction permit for non-DTS, single-transmitter-location operation."

Changing WAOE-DT's reference point serves the public interest because it will permit WAOE-TV to place a transmitter on the John Hancock Building, extending the station's service into Northeast Illinois, while preserving service to all of the viewers within the WAOE-TV's authorized service area (as determined with reference to its authorized construction permit). The addition of a transmitter in downtown Chicago will make WAOE-TV's signal more accessible to over-the-air viewers in Oswego, Illinois, who as part of the Chicago market typically would direct their antennas northeast, toward Chicago, rather than southwest, where WAOE-TV's presently authorized transmitter is located.[2]

Moreover, the resulting service area circle fully encompasses the WAOE-DT service area recently authorized in LMS-0000168790. In the DTS R&O, the Commission determined that "[a]s an alternative to the Table of Distances Approach for determining the hypothetically maximized service area, full-power stations may use the 'largest station' provision in section

[2] See In the Matter of Application of Connecticut Public Broadcasting, Inc. to Convert to DTS Operation, Memorandum Opinion and Order, 35 FCC Rcd. 8978 ¶ 14 (2020), aff'd PMCM TV, LLC v. FCC, No. 20-1334 (D.C. Cir. June 25, 2021).

EXHIBIT A

73.622(f)(5) of the rules." When the Commission revised its DTS Rules in 2021, it confirmed that "the largest station alternative, an alternative to the Table of Distances by which stations may seek to use DTS to match the geographic coverage of the largest station in their market, remains unchanged."

In the Chicago Designated Market Area (DMA), the largest station, from a coverage area standpoint, is WLS-TV, Channel 22. That station has a maximization authorization with file number LMS-0000086908. The dipole-adjusted noise-limited F(50,90) service contour of authorized WLS-TV comprises 41,867 square kilometers. The resulting F(50,90) allowable service arc from the proposed WAOE-DT DTS reference site extends 115.4 kilometers. In Exhibit B, we have plotted the new reference site, the 115.4-kilometer F(50,90) reference service arc and the 36 dBu F(50,90) service contour of WAOE-DT, as authorized in LMS-0000168790, which forms the first SFN node as described below. As shown in Exhibit B, the authorized service area of WAOE-DT lies completely within the allowable 115.4-kilometer service arc derived from the service area of WLS-TV, the largest station in the Chicago market. Therefore, the requested change in reference coordinates for the DTS facility meets the Commission's requirements in this regard.

We will now describe each SFN node separately and then treat the entire DTS facility as a whole. It is important to note that no change in the Oswego Node (DTS-1) is proposed herein.

EXHIBIT A

OSWEGO NODE (WAOE-DT DTS-1 Reference Facility)

It is proposed to construct a facility that duplicates the recently authorized WAOE-DT facility (LMS- 0000168790) as the DTS-1 reference facility for the station. It is important to note that, as a result, no "loss area" will be created by this proposal. No change in the authorized WAOE-DT transmitter site, effective radiated power, antenna pattern or antenna height is proposed herein. It is intended to use a Dielectric TLS-V6/VP-R C260 elliptically-polarized antenna that has the same horizontal azimuth pattern as the authorized Alive Telecom custom cardioid directional antenna (FCC Antenna ID No.1009004). The antenna will be mounted at the 404-meter level of an existing 418.6-meter tower. The effective radiated power for the facility is 30.0 kW in the horizontal plane.

It should be noted that the recently authorized WAOE-DT facility (now proposed DTS-1) exceeds the power/height limits for a high-band VHF station located in Zone 1, as set forth in Section 73.622(f)(7)(ii) of the Commission's Rules. However, since the area within the WAOE-DT F(50,90) service contour, as authorized in LMS-0000168790 comprises 30,582 square kilometers, and it is smaller than that of the WLS-TV authorized service contour (41,867 square kilometers), it means that the WAOE-DT DTS-1 facility proposed herein continues to meet the requirements of Section 73.622(f)(5) of the Rules, which stipulates that the Commission's power/height limitations of Section 73.622(f)(7)(ii) can be exceeded as long as the coverage area of the proposed operation does not exceed that of the largest station in the same market.

EXHIBIT A

Below are operating parameters for the Oswego SFN node (DTS-1) on Channel 10:

Site coordinates: 41-16-54.6 N, 88-56-11.1 W (NAD83)

Site elevation: 192.6 meters AMSL

Overall tower height: 418.6 meters AMSL

FCC Antenna Structure Registration Number: 1028357

Antenna height above ground: 404 meters

Antenna height above mean sea level: 596.6 meters

Antenna height above average terrain: 212 meters

Antenna make/model: Dielectric TLS-V6/VP-R C260

Polarization: Elliptical

FCC Antenna ID Number: To Be Determined

Antenna orientation: 45 degrees true

Electrical beam tilt: 7.1 degrees

Effective radiated power: 30.0 kW

Exhibit C is a map upon which the predicted service contours are plotted. As shown, the community of Oswego, Illinois, is completely encompassed by the proposed 43 dBu city-grade service contour. Azimuth and elevation pattern data for the existing antenna is provided in Exhibit D. A power density calculation appears as Exhibit E.

Since no change in the overall height or location of the existing WAOE-DT tower is

EXHIBIT A

proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the FCC issued Antenna Structure Registration Number 1028357 to this tower.

CHICAGO NODE (WAOE-DT DTS-2 Facility)

It is proposed to install a Dielectric elliptically-polarized directional panel antenna on the west tower atop the existing 425.2-meter John Hancock Center building in Chicago. The antenna radiation center will be 386.2 meters above street level. The proposed effective radiated power for the facility is 13.25 kW in the horizontal plane.

It should be noted that the newly proposed WAOE-DT DTS-2 facility exceeds the power/height limits for a high-band VHF station located in Zone 1, as set forth in Section 73.622(f)(7)(ii) of the Commission's Rules. However, since the area within the proposed DTS-2 F(50,90) service contour comprises 11,515 square kilometers, and it is smaller than that of the largest station in the Chicago market (as previously mentioned, WLS-TV, with an authorized service contour comprising 41,867 square kilometers), it means that the WAOE-DT DTS-2 facility proposed herein continues to meet the requirements of Section 73.622(f)(5) of the Rules, which stipulates that the Commission's power/height limitations of Section 73.622(f)(7)(ii) can be exceeded as long as the coverage area of the proposed operation does not exceed that of the largest station in the same market.

EXHIBIT A

Below are the revised operating parameters for the Chicago DTS-2 node on Channel 10:

Site coordinates: 41-53-56.1 N, 87-37-23.2 W (NAD83)

Site elevation: 180.7 meters AMSL

Overall structure height: 425.2 meters AMSL

FCC Antenna Structure Registration Number: 1009013

Antenna height above ground: 386.2 meters

Antenna height above mean sea level: 566.9 meters

Antenna height above average terrain: 387.8 meters

Antenna make/model: Dielectric THA-C1-2H/2H-1-R-S-H70V30

FCC Antenna ID Number: To Be Determined

Antenna orientation: 230 degrees

Polarization: Elliptical

Electrical beam tilt: none

Effective radiated power: 13.25 kW

Exhibit F is a map upon which we have plotted the predicted service contours of the Chicago DTS node. Azimuth and elevation pattern data for the proposed Dielectric antenna are provided in Exhibit G, and detailed power density calculation appears in Exhibit H.

Since no change in the overall height or location of the existing communications tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the Federal Communications Commission issued Antenna Structure Registration Number 1009013 to this tower.

EXHIBIT A

PROPOSAL MEETS THE REQUIREMENTS OF THE FCC'S DTS RULES

The proposed WAOE-DT Channel 10 facility meets all of the requirements of Section 73.626(f) of the Commission's DTS Rules based on the following analysis.

Exhibit I is a map on which we have plotted the 36 dBu F(50,90) coverage contours of the two SFN nodes in the DTS facility. As shown, each node's contour overlaps the contour of the other facility in the system. In addition, in Exhibits C and F, we plotted the 43 dBu city-grade coverage contours resulting from the Oswego and Chicago DTS nodes. As shown in those exhibits, the community of Oswego lies within both of these contours.

In Exhibit J-1, we have plotted the transmitter sites of the two DTS nodes in relation to an arc originating from the revised DTS reference site and defined by the coverage area of the largest station in the Chicago DMA, of which WAOE-DT is a part. As noted previously the largest station in this market is WLS-TV, Channel 22, and its authorization LMS-0000086908. Based upon its noise-limited dipole-adjusted F(50,90) service area, the resultant arc has a radius of 115.4 kilometers. As shown, both of the DTS nodes have transmitter sites located within the Largest Station in the Market arc. In Exhibit J-2, we have demonstrated that the 36 dBu F(50,90) service contours of the DTS facilities are completely contained within the same 115.4 kilometer arc from the new WAOE-DT reference site. Thus, the instant proposal meets the requirements of the FCC's prior DTS service contour Rules.

The new DTS Rules recently adopted by the Commission state that the 36 dBu F(50,50) contour of a high-band VHF SFN node must be located within an F(50,50)-based arc originating from the DTS reference site. Again, we utilized the Largest Station in the Market

EXHIBIT A

exception to define the radius of this arc. WLS-TV has a noise-limited dipole adjusted F(50,50) contour that encompasses an area containing 74,024 square kilometers. This translates to an arc with a radius of 153.5 kilometers. We provide a map in Exhibit K that shows both WAOE-DT SFN nodes have 36 dBu F(50,50) service contours that are completely contained within the reference arc.

The newly adopted Rules also require that the 23.8 dBu F(50,10) contour of the DTS node be located within an interference F(50,10)-based arc from the reference site. Once again, we utilized WLS-TV, the largest station in the Chicago DMA to define the radius of this arc. WLS-TV has a 36 dBu F(50,10) interference contour that encompasses an area containing 196,589 square kilometers. This translates to an arc with a radius of 250.1 kilometers. We provide a map in Exhibit L that shows that both of the proposed WAOE-DT SFN nodes have 23.8 dBu F(50,10) interference contours that are completely contained within the previously defined reference arc.

Finally, in Exhibit M, we provide the summary results from a TVStudy interference study, which was conducted using a cell size of 1.0 kilometer as well as an increment spacing of 0.4 kilometer. It concludes that, with respect to outgoing interference, the newly proposed WAOE-DT DTS facility on Channel 10 meets the Commission's de minimis interference criteria to all co-channel and adjacent-channel full-power and Class A facilities.

It is important to note that the interference study indicates that the newly proposed WAOE-DT DTS facility would receive predicted interference to 1.71% of its service population from a proposed full-power television station on Channel 9 in Freeport, Illinois (LMS-0000195673). That interference is hereby accepted by WAOE-DT and can be ignored.

EXHIBIT A

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

KEVIN T. FISHER

September 12, 2022

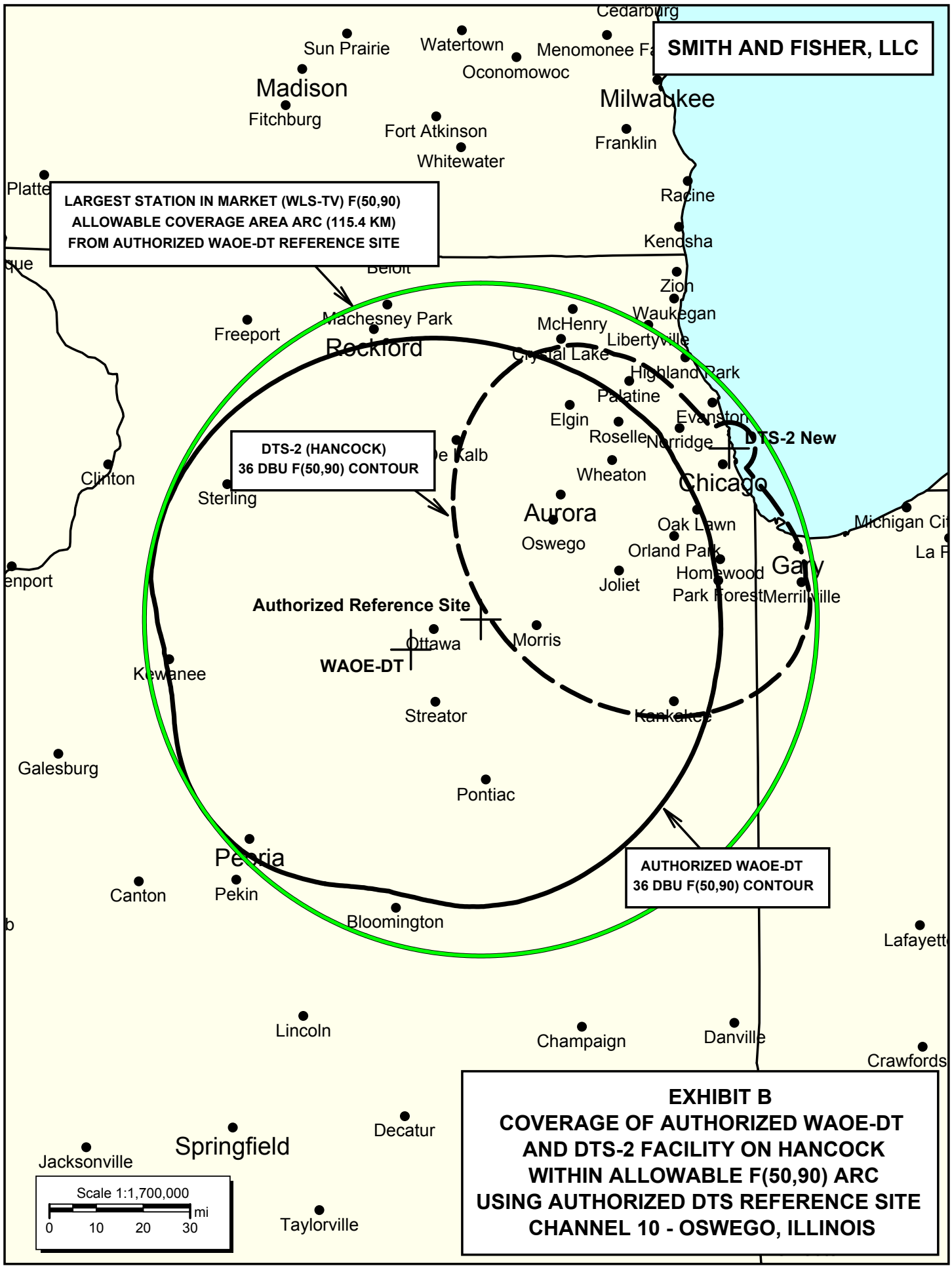
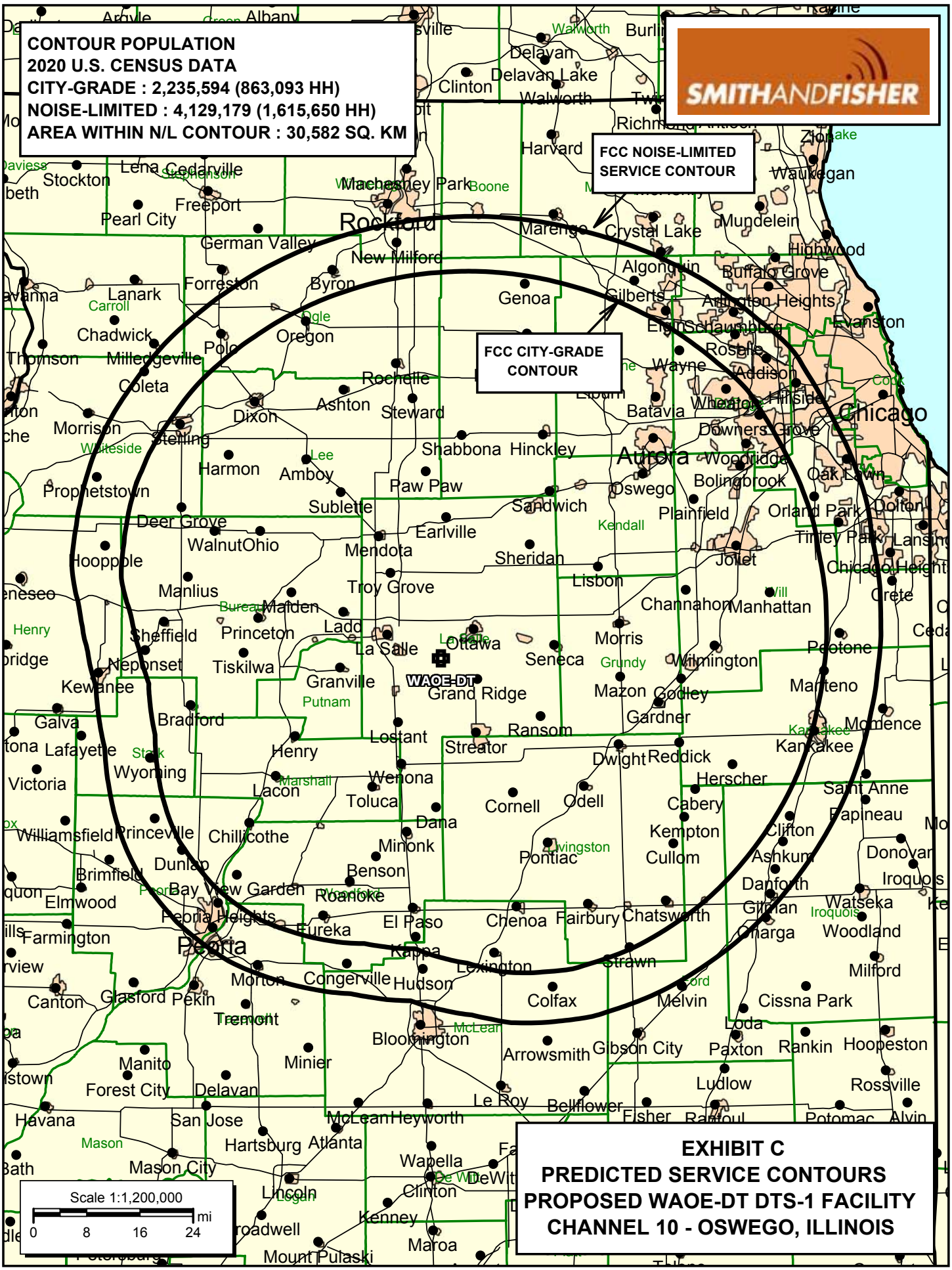
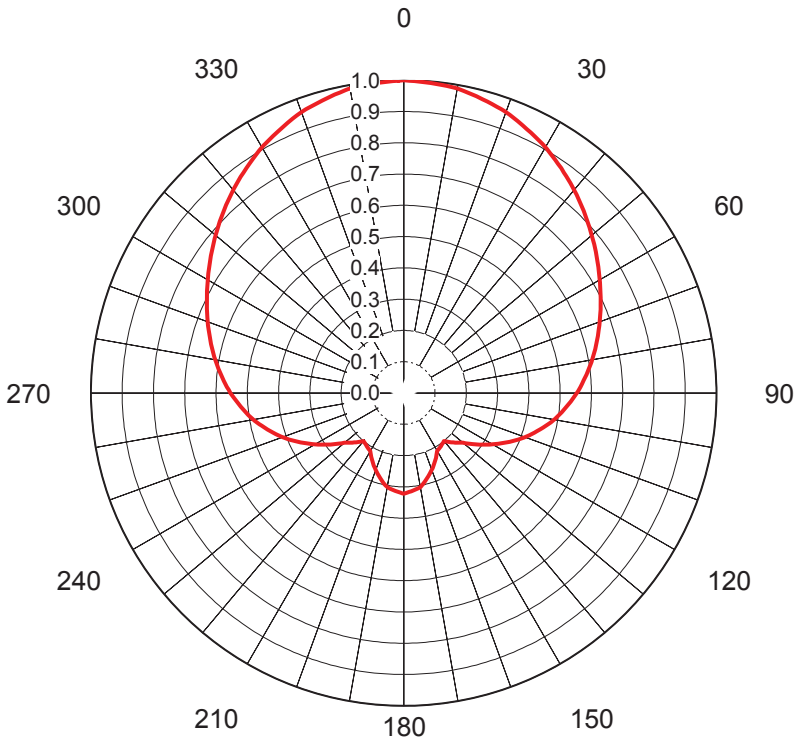


EXHIBIT B
COVERAGE OF AUTHORIZED WAOE-DT AND DTS-2 FACILITY ON HANCOCK WITHIN ALLOWABLE F(50,90) ARC USING AUTHORIZED DTS REFERENCE SITE CHANNEL 10 - OSWEGO, ILLINOIS


CONTOUR POPULATION
2020 U.S. CENSUS DATA
CITY-GRADE : 2,235,594 (863,093 HH)
NOISE-LIMITED : 4,129,179 (1,615,650 HH)
AREA WITHIN N/L CONTOUR : 30,582 SQ. KM
SMITHANDFISHER
FCC NOISE-LIMITED SERVICE CONTOUR
FCC CITY-GRADE CONTOUR
WAOE-DT
Rockford
Peoria
Aurora
Chicago
Joliet
Waukegan
Scale 1:1,200,000
mi
0
8
16
24
EXHIBIT C
PREDICTED SERVICE CONTOURS
PROPOSED WAOE-DT DTS-1 FACILITY
CHANNEL 10 - OSWEGO, ILLINOIS

Dielectric®

EXHIBIT D



AZIMUTH PATTERN
Horizontal Polarization

In Free Space

Proposal No.	**C-71915-6**
Date	**7-Sep-22**
Call Letters	**WAOE**
Channel	**10**
Frequency	**195 MHz**
Antenna Type	**TLS-V6/VP-R C260**
Gain	**2.55 (4.06dB)**
	Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	1.000	36	0.872	72	0.656	108	0.428	144	0.206	180	0.322	216	0.206	252	0.428	288	0.656	324	0.872
1	0.999	37	0.866	73	0.650	109	0.421	145	0.207	181	0.320	217	0.204	253	0.436	289	0.661	325	0.877
2	0.998	38	0.860	74	0.645	110	0.413	146	0.208	182	0.319	218	0.203	254	0.443	290	0.667	326	0.883
3	0.997	39	0.854	75	0.640	111	0.405	147	0.210	183	0.317	219	0.201	255	0.451	291	0.673	327	0.889
4	0.996	40	0.848	76	0.634	112	0.396	148	0.211	184	0.316	220	0.200	256	0.459	292	0.678	328	0.895
5	0.994	41	0.842	77	0.628	113	0.387	149	0.213	185	0.314	221	0.205	257	0.466	293	0.684	329	0.901
6	0.993	42	0.835	78	0.623	114	0.379	150	0.214	186	0.312	222	0.209	258	0.474	294	0.689	330	0.907
7	0.992	43	0.829	79	0.618	115	0.370	151	0.219	187	0.311	223	0.214	259	0.481	295	0.695	331	0.912
8	0.991	44	0.823	80	0.612	116	0.362	152	0.224	188	0.309	224	0.219	260	0.489	296	0.701	332	0.917
9	0.990	45	0.817	81	0.606	117	0.354	153	0.228	189	0.308	225	0.223	261	0.495	297	0.706	333	0.922
10	0.989	46	0.810	82	0.600	118	0.345	154	0.233	190	0.306	226	0.228	262	0.502	298	0.712	334	0.927
11	0.986	47	0.804	83	0.595	119	0.336	155	0.238	191	0.302	227	0.233	263	0.508	299	0.717	335	0.932
12	0.982	48	0.798	84	0.589	120	0.328	156	0.243	192	0.297	228	0.238	264	0.515	300	0.723	336	0.936
13	0.979	49	0.791	85	0.583	121	0.320	157	0.248	193	0.293	229	0.242	265	0.521	301	0.729	337	0.941
14	0.976	50	0.785	86	0.577	122	0.312	158	0.252	194	0.288	230	0.247	266	0.528	302	0.735	338	0.946
15	0.973	51	0.779	87	0.571	123	0.304	159	0.257	195	0.284	231	0.255	267	0.535	303	0.742	339	0.951
16	0.969	52	0.773	88	0.566	124	0.296	160	0.262	196	0.280	232	0.263	268	0.541	304	0.748	340	0.956
17	0.966	53	0.766	89	0.560	125	0.287	161	0.266	197	0.275	233	0.271	269	0.548	305	0.754	341	0.959
18	0.963	54	0.760	90	0.554	126	0.279	162	0.271	198	0.271	234	0.279	270	0.554	306	0.760	342	0.963
19	0.959	55	0.754	91	0.548	127	0.271	163	0.275	199	0.266	235	0.287	271	0.560	307	0.766	343	0.966
20	0.956	56	0.748	92	0.541	128	0.263	164	0.280	200	0.262	236	0.296	272	0.566	308	0.773	344	0.969
21	0.951	57	0.742	93	0.535	129	0.255	165	0.284	201	0.257	237	0.304	273	0.571	309	0.779	345	0.973
22	0.946	58	0.735	94	0.528	130	0.247	166	0.288	202	0.252	238	0.312	274	0.577	310	0.785	346	0.976
23	0.941	59	0.729	95	0.521	131	0.242	167	0.293	203	0.248	239	0.320	275	0.583	311	0.791	347	0.979
24	0.936	60	0.723	96	0.515	132	0.238	168	0.297	204	0.243	240	0.328	276	0.589	312	0.798	348	0.982
25	0.932	61	0.717	97	0.508	133	0.233	169	0.302	205	0.238	241	0.336	277	0.595	313	0.804	349	0.986
26	0.927	62	0.712	98	0.502	134	0.228	170	0.306	206	0.233	242	0.345	278	0.600	314	0.810	350	0.989
27	0.922	63	0.706	99	0.495	135	0.223	171	0.308	207	0.228	243	0.354	279	0.606	315	0.817	351	0.990
28	0.917	64	0.701	100	0.489	136	0.219	172	0.309	208	0.224	244	0.362	280	0.612	316	0.823	352	0.991
29	0.912	65	0.695	101	0.481	137	0.214	173	0.311	209	0.219	245	0.370	281	0.618	317	0.829	353	0.992
30	0.907	66	0.689	102	0.474	138	0.209	174	0.312	210	0.214	246	0.379	282	0.623	318	0.835	354	0.993
31	0.901	67	0.684	103	0.466	139	0.205	175	0.314	211	0.213	247	0.387	283	0.628	319	0.842	355	0.994
32	0.895	68	0.678	104	0.459	140	0.200	176	0.316	212	0.211	248	0.396	284	0.634	320	0.848	356	0.996
33	0.889	69	0.673	105	0.451	141	0.201	177	0.317	213	0.210	249	0.405	285	0.640	321	0.854	357	0.997
34	0.883	70	0.667	106	0.443	142	0.203	178	0.319	214	0.208	250	0.413	286	0.645	322	0.860	358	0.998
35	0.877	71	0.661	107	0.436	143	0.204	179	0.320	215	0.207	251	0.421	287	0.650	323	0.866	359	0.999

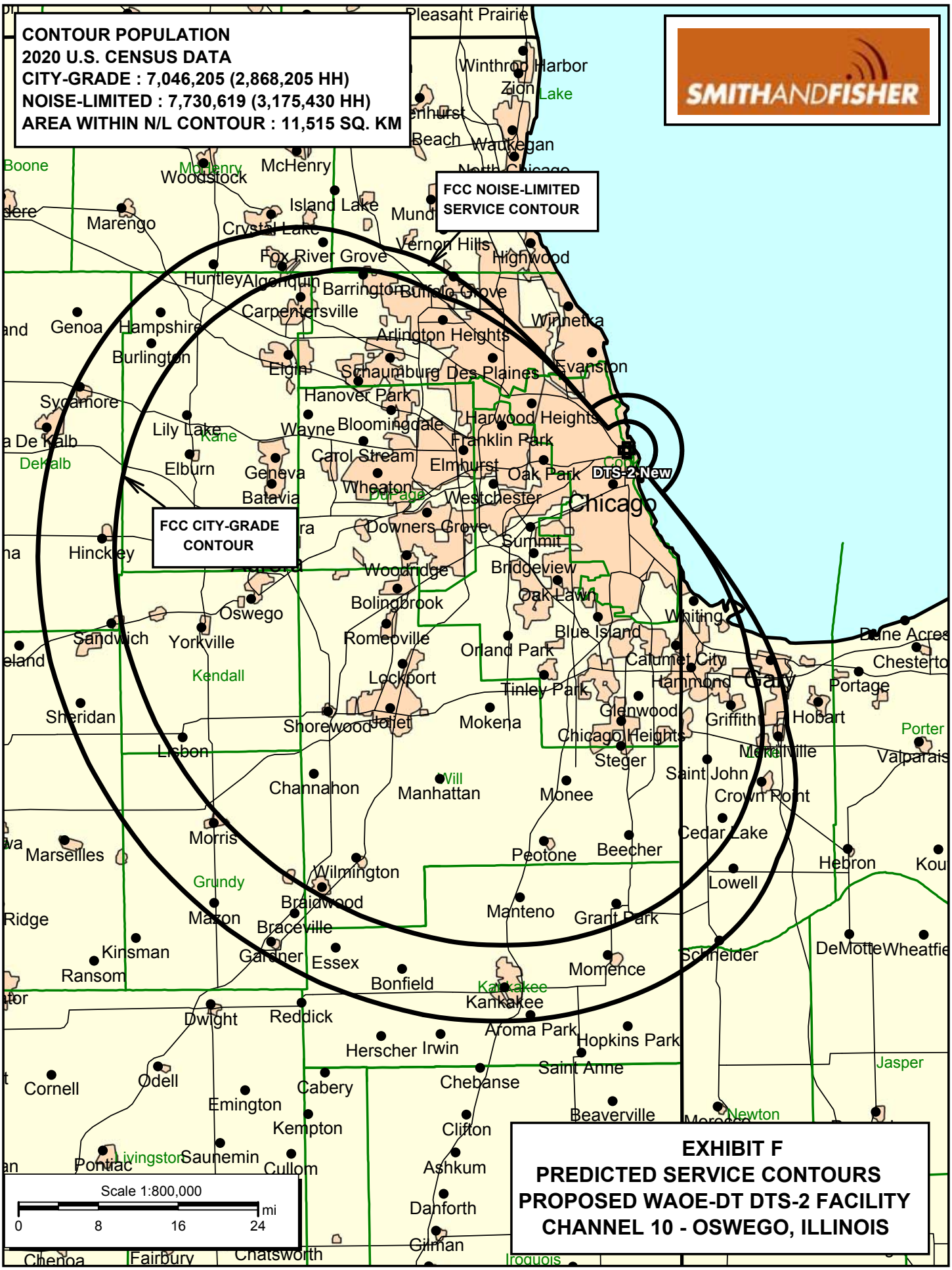
EXHIBIT E

POWER DENSITY CALCULATION

PROPOSED WAOE-DT DTS-1 FACILITY
CHANNEL 10 – OSWEGO, ILLINOIS
[MODIFICATION OF LMS-0000189533]

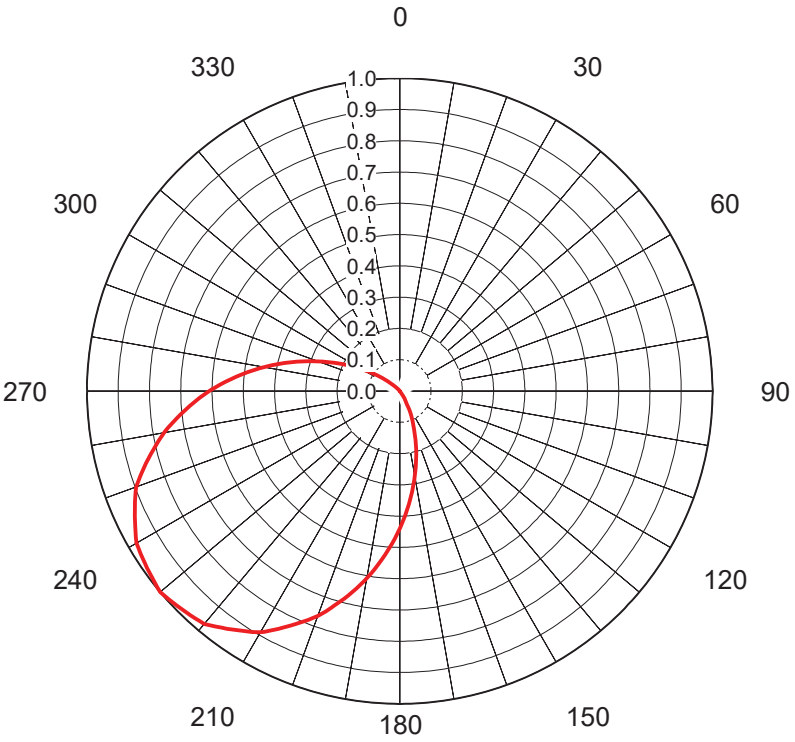
Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Oswego DTS-1 facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 30.0 kW (H,V), an antenna radiation center 402.6 meters above ground, and the specific elevation pattern of the proposed Dielectric antenna, maximum power density two meters above ground of 0.00034 mW/cm^2 is calculated to occur 204 meters northeast of the base of the tower. Since this value is only 0.2 percent of the 0.2 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating in the High VHF Television Band, 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.


CONTOUR POPULATION
2020 U.S. CENSUS DATA
CITY-GRADE : 7,046,205 (2,868,205 HH)
NOISE-LIMITED : 7,730,619 (3,175,430 HH)
AREA WITHIN N/L CONTOUR : 11,515 SQ. KM
SMITHANDFISHER
FCC NOISE-LIMITED SERVICE CONTOUR
FCC CITY-GRADE CONTOUR
DTS-2 New
Chicago
Pleasant Prairie
Winthrop Harbor
Zion
Lake
Waukegan
Boone
McHenry
Woodstock
Marengo
Island Lake
Crystal Lake
Fox River Grove
Vernon Hills
Highwood
Huntley
Algonquin
Barrington
Buffalo Grove
Carpentersville
Genoa
Hampshire
Burlington
Arlington Heights
Winnetka
Elgin
Schaumburg
Des Plaines
Evanston
Sycamore
Hanover Park
Lily Lake
Kane
Wayne
Bloomingdale
Harwood Heights
Franklin Park
DeKalb
Elburn
Geneva
Carol Stream
Elmhurst
Oak Park
Batavia
Wheaton
Du Page
Westchester
Downers Grove
Summit
Hinckley
Bridgeview
Woodridge
Oak Lawn
Oswego
Bolingbrook
Whiting
Sandwich
Yorkville
Romeoville
Blue Island
Orland Park
Calumet City
Kendall
Lockport
Hammond
Gary
Portage
Tinley Park
Sheridan
Glenwood
Griffith
Hobart
Shorewood
Joliet
Mokena
Chicago Heights
Porter
Lisbon
Merrillville
Valparaiso
Steger
Saint John
Channahon
Will
Manhattan
Monee
Crown Point
Morris
Cedar Lake
Marseilles
Peotone
Beecher
Hebron
Grundy
Wilmington
Lowell
Braidwood
Manteno
Grant Park
Ridge
Mazon
Braceville
Schneider
Kinsman
Gardner
Essex
DeMotte
Wheatfield
Ransom
Momence
Bonfield
Kankakee
Dwight
Reddick
Aroma Park
Hopkins Park
Herscher
Irwin
Saint Anne
Jasper
Cornell
Odell
Cabery
Chebanse
Emington
Beaverville
Newton
Kempton
Clifton
Livingston
Pontiac
Saunemin
Cullom
Ashkum
Danforth
Gilman
Chenoa
Fairbury
Chatsworth
Iroquois
Scale 1:800,000
mi
0
8
16
24
EXHIBIT F
PREDICTED SERVICE CONTOURS
PROPOSED WAOE-DT DTS-2 FACILITY
CHANNEL 10 - OSWEGO, ILLINOIS

Dielectric®

EXHIBIT G



AZIMUTH PATTERN
Horizontal Polarization

In Free Space

Proposal No.	**C-71915-3**
Date	**9-Jul-22**
Call Letters	**WAOE**
Channel	**10**
Frequency	**195 MHz**
Antenna Type	**THA-C1-2H/2H-1-R-S -H70V**
Gain	**5.19 (7.15dB)**
	Calculated

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.000	36	0.000	72	0.000	108	0.000	144	0.015	180	0.440	216	0.939	252	0.871	288	0.308	324	0.000
1	0.000	37	0.000	73	0.000	109	0.000	145	0.019	181	0.456	217	0.948	253	0.857	289	0.292	325	0.000
2	0.000	38	0.000	74	0.000	110	0.000	146	0.023	182	0.473	218	0.956	254	0.844	290	0.276	326	0.000
3	0.000	39	0.000	75	0.000	111	0.000	147	0.027	183	0.490	219	0.964	255	0.831	291	0.262	327	0.000
4	0.000	40	0.000	76	0.000	112	0.000	148	0.031	184	0.507	220	0.972	256	0.818	292	0.248	328	0.000
5	0.000	41	0.000	77	0.000	113	0.000	149	0.035	185	0.524	221	0.975	257	0.805	293	0.234	329	0.000
6	0.000	42	0.000	78	0.000	114	0.000	150	0.039	186	0.541	222	0.978	258	0.792	294	0.220	330	0.000
7	0.000	43	0.000	79	0.000	115	0.000	151	0.048	187	0.558	223	0.980	259	0.778	295	0.206	331	0.000
8	0.000	44	0.000	80	0.000	116	0.000	152	0.058	188	0.575	224	0.983	260	0.765	296	0.192	332	0.000
9	0.000	45	0.000	81	0.000	117	0.000	153	0.068	189	0.592	225	0.986	261	0.750	297	0.178	333	0.000
10	0.000	46	0.000	82	0.000	118	0.000	154	0.077	190	0.609	226	0.989	262	0.734	298	0.164	334	0.000
11	0.000	47	0.000	83	0.000	119	0.000	155	0.087	191	0.625	227	0.992	263	0.718	299	0.150	335	0.000
12	0.000	48	0.000	84	0.000	120	0.000	156	0.097	192	0.640	228	0.994	264	0.703	300	0.136	336	0.000
13	0.000	49	0.000	85	0.000	121	0.000	157	0.107	193	0.656	229	0.997	265	0.687	301	0.126	337	0.000
14	0.000	50	0.000	86	0.000	122	0.000	158	0.116	194	0.672	230	1.000	266	0.672	302	0.116	338	0.000
15	0.000	51	0.000	87	0.000	123	0.000	159	0.126	195	0.687	231	0.997	267	0.656	303	0.107	339	0.000
16	0.000	52	0.000	88	0.000	124	0.000	160	0.136	196	0.703	232	0.994	268	0.640	304	0.097	340	0.000
17	0.000	53	0.000	89	0.000	125	0.000	161	0.150	197	0.718	233	0.992	269	0.625	305	0.087	341	0.000
18	0.000	54	0.000	90	0.000	126	0.000	162	0.164	198	0.734	234	0.989	270	0.609	306	0.077	342	0.000
19	0.000	55	0.000	91	0.000	127	0.000	163	0.178	199	0.750	235	0.986	271	0.592	307	0.068	343	0.000
20	0.000	56	0.000	92	0.000	128	0.000	164	0.192	200	0.765	236	0.983	272	0.575	308	0.058	344	0.000
21	0.000	57	0.000	93	0.000	129	0.000	165	0.206	201	0.778	237	0.980	273	0.558	309	0.048	345	0.000
22	0.000	58	0.000	94	0.000	130	0.000	166	0.220	202	0.790	238	0.978	274	0.541	310	0.039	346	0.000
23	0.000	59	0.000	95	0.000	131	0.000	167	0.234	203	0.803	239	0.975	275	0.524	311	0.035	347	0.000
24	0.000	60	0.000	96	0.000	132	0.000	168	0.248	204	0.815	240	0.972	276	0.507	312	0.031	348	0.000
25	0.000	61	0.000	97	0.000	133	0.000	169	0.262	205	0.828	241	0.964	277	0.490	313	0.027	349	0.000
26	0.000	62	0.000	98	0.000	134	0.000	170	0.276	206	0.841	242	0.957	278	0.473	314	0.023	350	0.000
27	0.000	63	0.000	99	0.000	135	0.000	171	0.292	207	0.853	243	0.949	279	0.456	315	0.019	351	0.000
28	0.000	64	0.000	100	0.000	136	0.000	172	0.308	208	0.866	244	0.942	280	0.440	316	0.015	352	0.000
29	0.000	65	0.000	101	0.000	137	0.000	173	0.325	209	0.878	245	0.934	281	0.423	317	0.012	353	0.000
30	0.000	66	0.000	102	0.000	138	0.000	174	0.341	210	0.891	246	0.927	282	0.407	318	0.008	354	0.000
31	0.000	67	0.000	103	0.000	139	0.000	175	0.358	211	0.899	247	0.919	283	0.390	319	0.004	355	0.000
32	0.000	68	0.000	104	0.000	140	0.000	176	0.374	212	0.907	248	0.912	284	0.374	320	0.000	356	0.000
33	0.000	69	0.000	105	0.000	141	0.004	177	0.390	213	0.915	249	0.904	285	0.358	321	0.000	357	0.000
34	0.000	70	0.000	106	0.000	142	0.008	178	0.407	214	0.923	250	0.897	286	0.341	322	0.000	358	0.000
35	0.000	71	0.000	107	0.000	143	0.012	179	0.423	215	0.931	251	0.884	287	0.325	323	0.000	359	0.000

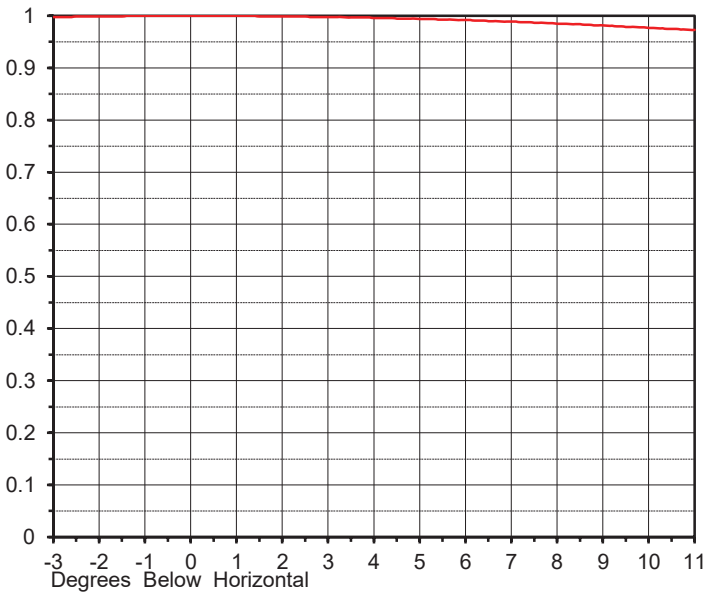
Dielectric®

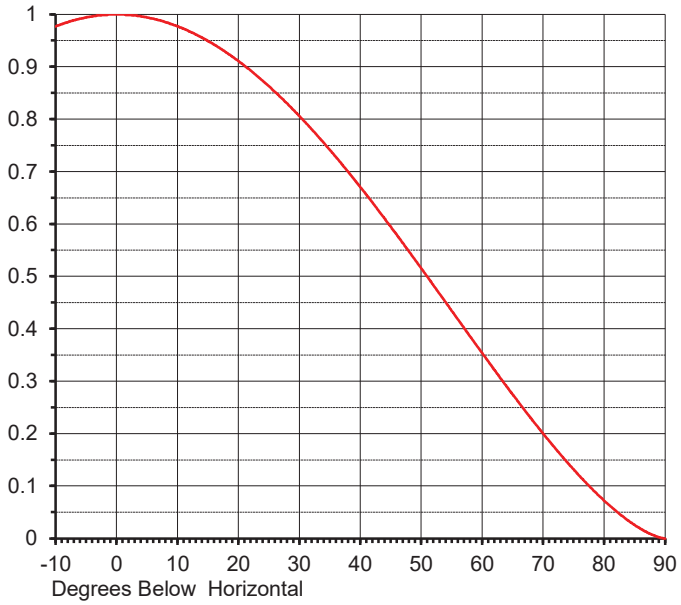
EXHIBIT G

ELEVATION PATTERN

Proposal No.	**C-71915-3**
Date	**9-Jul-22**
Call Letters	**WAOE**
Channel	**10**
Frequency	**195 MHz**
Antenna Type	**THA-C1-2H/2H-1-R-S -H7(**

RMS Directivity at Main Lobe	**1.1 (0.41 dB)**	Beam Tilt	**0.00 deg**
RMS Directivity at Horizontal	**1.1 (0.41 dB)**	Pattern Number	**01H011000**
	Calculated		





Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.977	10.0	0.977	30.0	0.806	50.0	0.515	70.0	0.200
-9.0	0.982	11.0	0.973	31.0	0.794	51.0	0.499	71.0	0.186
-8.0	0.985	12.0	0.967	32.0	0.781	52.0	0.483	72.0	0.172
-7.0	0.989	13.0	0.962	33.0	0.768	53.0	0.467	73.0	0.158
-6.0	0.992	14.0	0.956	34.0	0.755	54.0	0.451	74.0	0.145
-5.0	0.994	15.0	0.949	35.0	0.741	55.0	0.434	75.0	0.132
-4.0	0.996	16.0	0.942	36.0	0.728	56.0	0.418	76.0	0.119
-3.0	0.998	17.0	0.935	37.0	0.714	57.0	0.402	77.0	0.107
-2.0	0.999	18.0	0.927	38.0	0.700	58.0	0.386	78.0	0.095
-1.0	1.000	19.0	0.919	39.0	0.685	59.0	0.370	79.0	0.083
0.0	1.000	20.0	0.911	40.0	0.670	60.0	0.354	80.0	0.072
1.0	1.000	21.0	0.902	41.0	0.656	61.0	0.338	81.0	0.062
2.0	0.999	22.0	0.893	42.0	0.641	62.0	0.322	82.0	0.052
3.0	0.998	23.0	0.883	43.0	0.625	63.0	0.306	83.0	0.043
4.0	0.996	24.0	0.873	44.0	0.610	64.0	0.290	84.0	0.034
5.0	0.994	25.0	0.863	45.0	0.595	65.0	0.275	85.0	0.026
6.0	0.992	26.0	0.852	46.0	0.579	66.0	0.259	86.0	0.018
7.0	0.989	27.0	0.841	47.0	0.563	67.0	0.244	87.0	0.012
8.0	0.985	28.0	0.830	48.0	0.547	68.0	0.229	88.0	0.007
9.0	0.982	29.0	0.818	49.0	0.531	69.0	0.215	89.0	0.002
								90.0	0.000

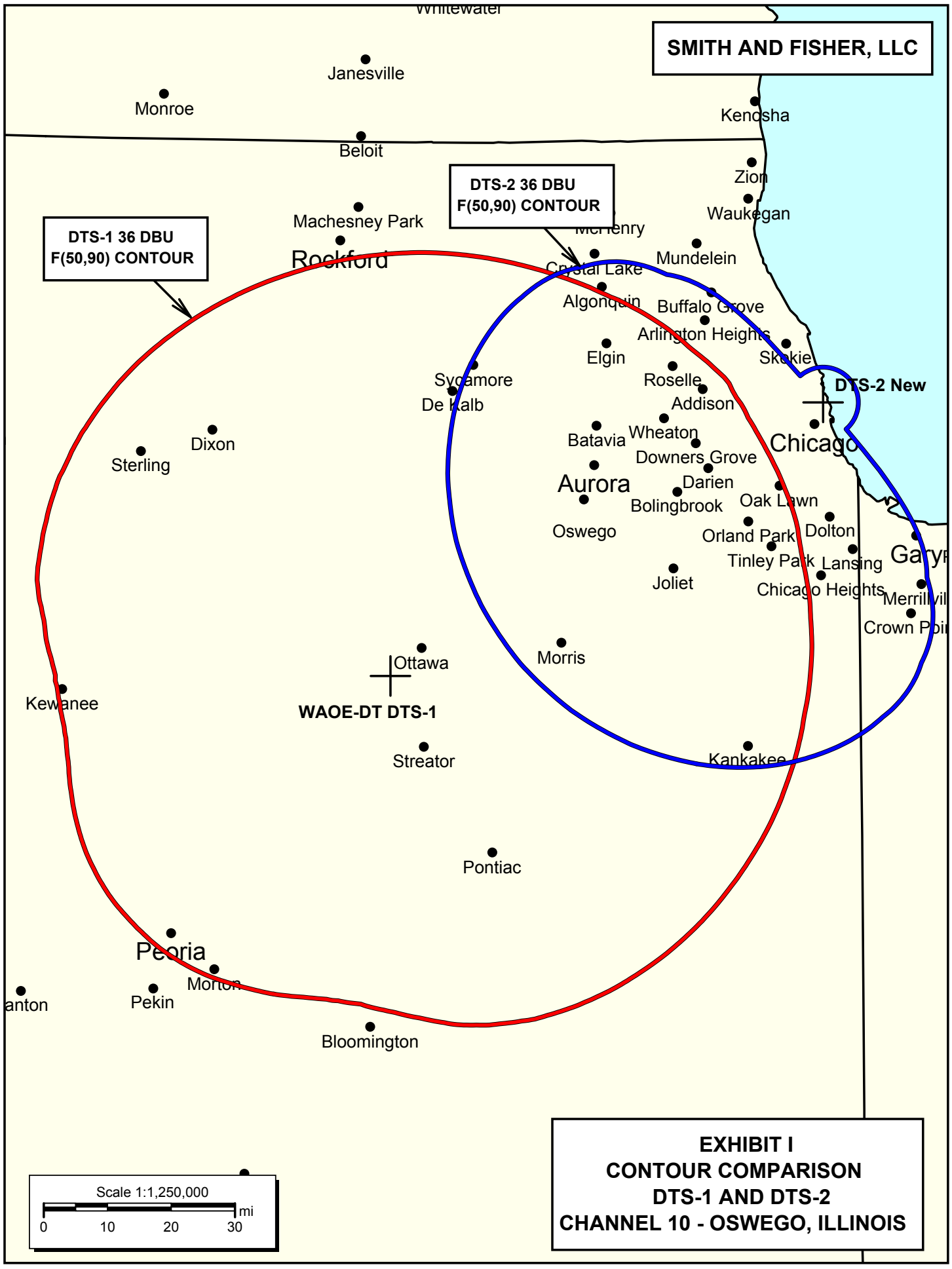
EXHIBIT H

POWER DENSITY CALCULATION

PROPOSED WAOE-DT DTS-2
CHANNEL 10 – OSWEGO, ILLINOIS
[MODIFICATION OF LMS-0000189533]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Oswego facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 13.25 kW (H,V), an antenna radiation center 386 meters above ground, and the specific elevation pattern of the proposed Dielectric antenna, maximum power density two meters above ground of 0.0011 mW/cm^2 is calculated to occur 458 meters southwest of the base of the building. Since this is only 0.55 percent of the 0.2 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating in the High VHF Television Band, 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 participate in the John Hancock Center RF safety protocols and 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.


SMITH AND FISHER, LLC
DTS-1 36 DBU
F(50,90) CONTOUR
DTS-2 36 DBU
F(50,90) CONTOUR
DTS-2 New
WAOE-DT DTS-1
Whitewater
Janesville
Monroe
Beloit
Kenosha
Zion
Waukegan
Machesney Park
Rockford
McHenry
Mundelein
Crystal Lake
Algonquin
Buffalo Grove
Arlington Heights
Elgin
Skokie
Sycamore
De Kalb
Roselle
Addison
Batavia
Wheaton
Chicago
Downers Grove
Aurora
Darien
Oak Lawn
Bolingbrook
Oswego
Orland Park
Dolton
Tinley Park
Lansing
Joliet
Chicago Heights
Merrillville
Crown Point
Dixon
Sterling
Morris
Ottawa
Kewanee
Streator
Kankakee
Pontiac
Peoria
Morton
Pekin
Bloomington
Scale 1:1,250,000
0 10 20 30 mi
EXHIBIT I
CONTOUR COMPARISON
DTS-1 AND DTS-2
CHANNEL 10 - OSWEGO, ILLINOIS

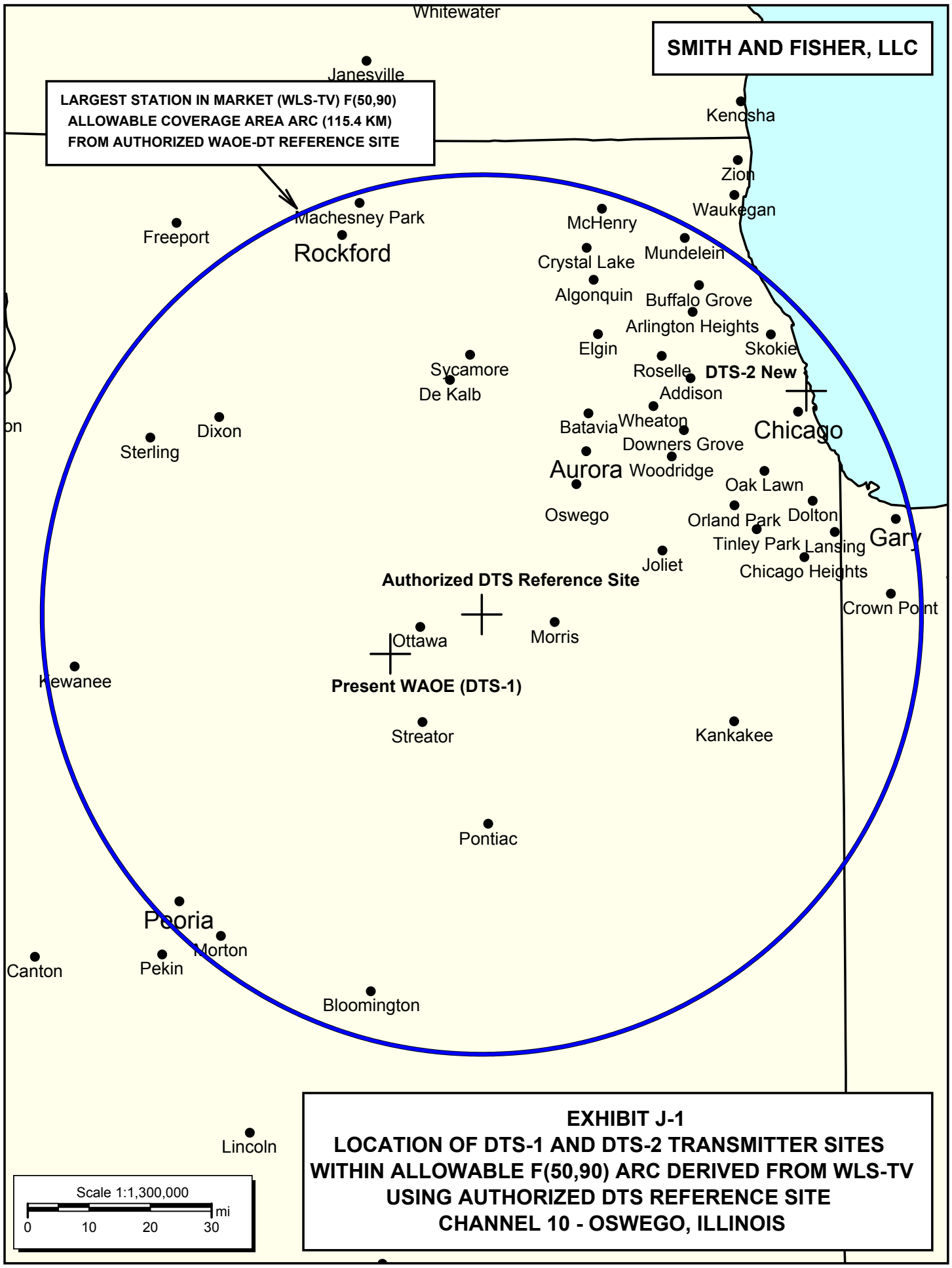


EXHIBIT J-1
LOCATION OF DTS-1 AND DTS-2 TRANSMITTER SITES
WITHIN ALLOWABLE F(50,90) ARC DERIVED FROM WLS-TV
USING AUTHORIZED DTS REFERENCE SITE
CHANNEL 10 - OSWEGO, ILLINOIS

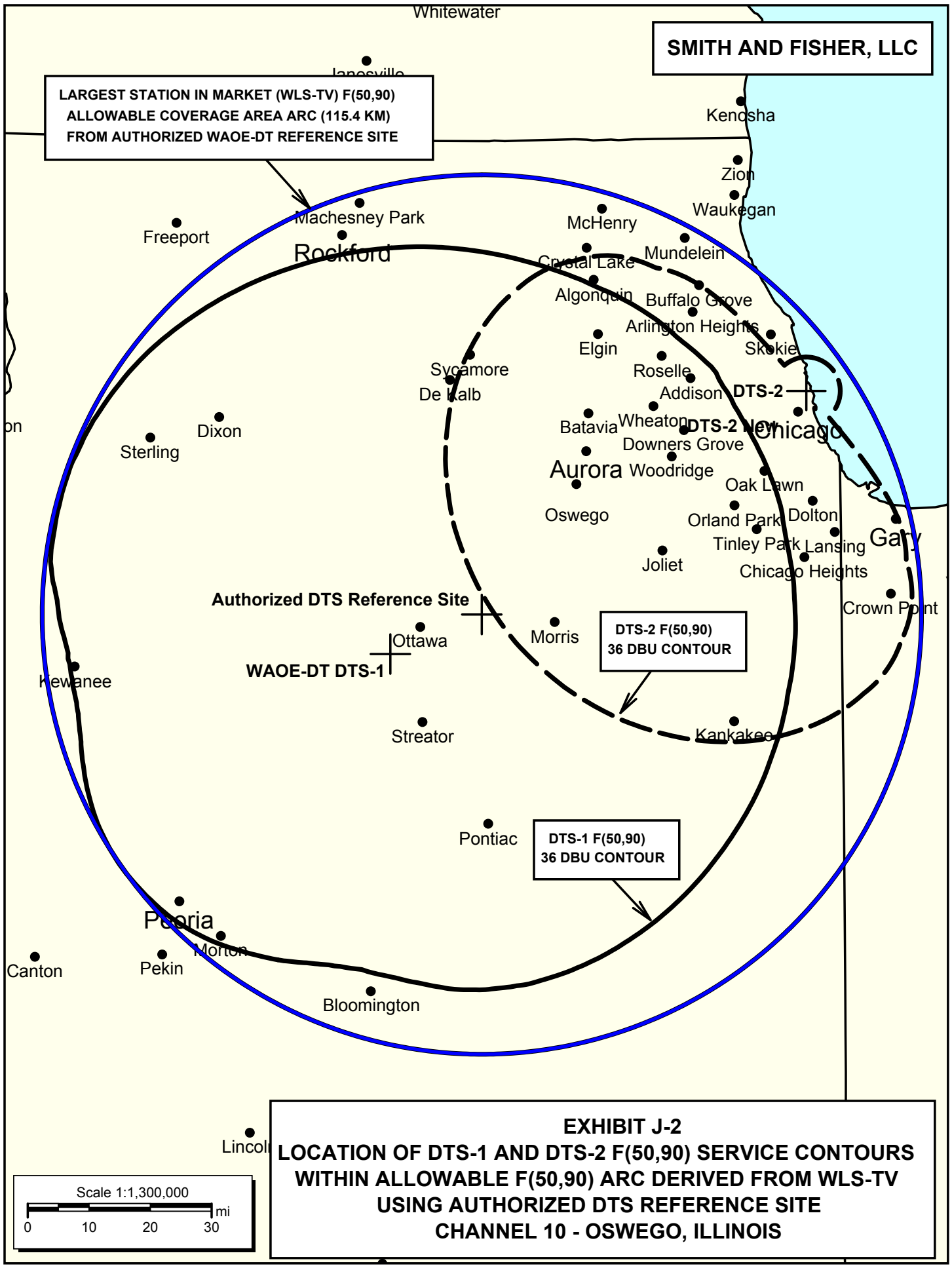
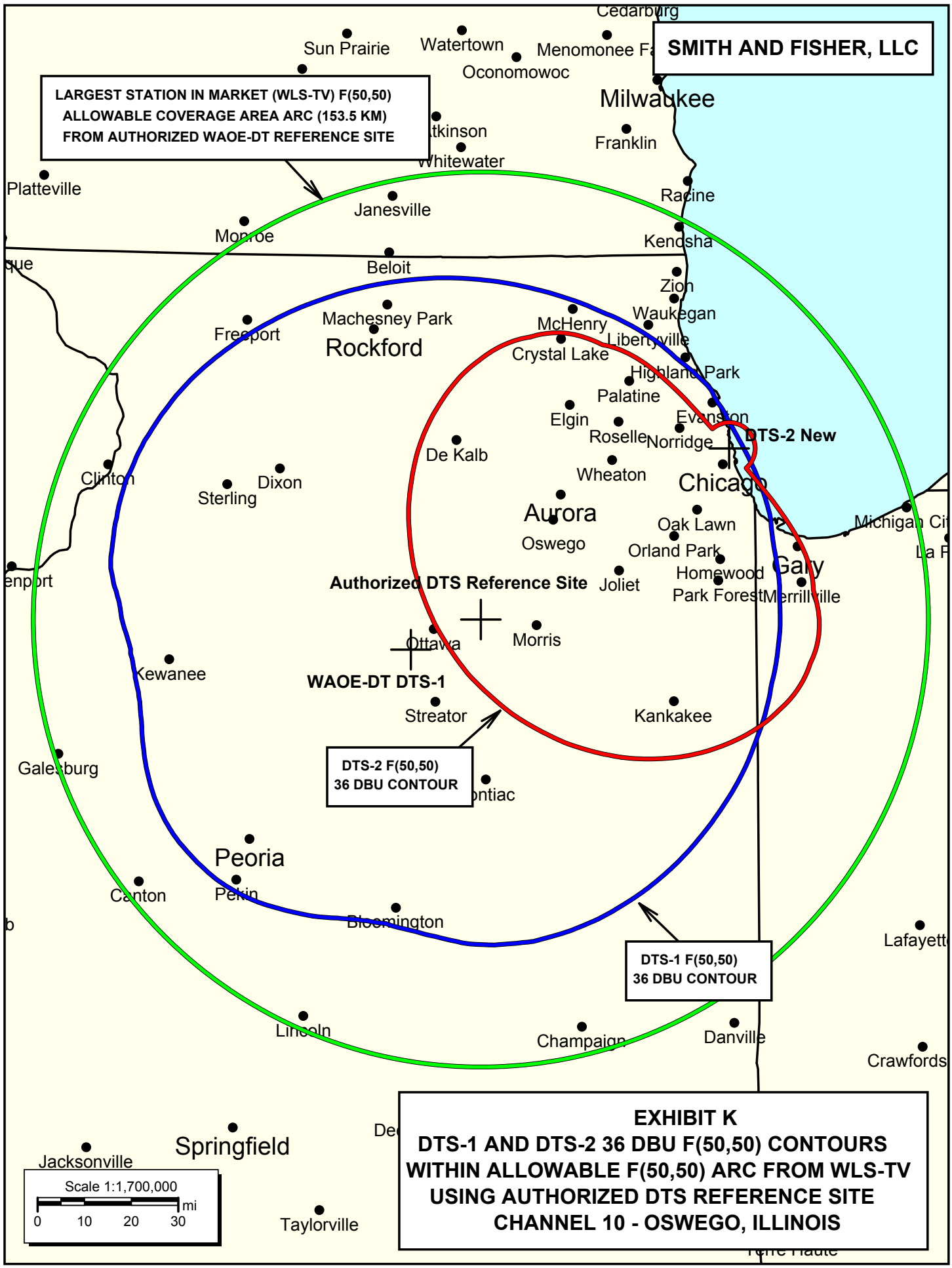


EXHIBIT J-2
LOCATION OF DTS-1 AND DTS-2 F(50,90) SERVICE CONTOURS WITHIN ALLOWABLE F(50,90) ARC DERIVED FROM WLS-TV USING AUTHORIZED DTS REFERENCE SITE
CHANNEL 10 - OSWEGO, ILLINOIS


SMITH AND FISHER, LLC
LARGEST STATION IN MARKET (WLS-TV) F(50,50)
ALLOWABLE COVERAGE AREA ARC (153.5 KM)
FROM AUTHORIZED WAOE-DT REFERENCE SITE
DTS-2 New
Authorized DTS Reference Site
WAOE-DT DTS-1
DTS-2 F(50,50)
36 DBU CONTOUR
DTS-1 F(50,50)
36 DBU CONTOUR
Scale 1:1,700,000
0 10 20 30 mi
Cedarburg
Sun Prairie
Watertown
Menomonee Fa
Oconomowoc
Milwaukee
Franklin
Whitewater
Platteville
Janesville
Racine
Monroe
Kenosha
Beloit
Zion
Waukegan
Machesney Park
McHenry
Freeport
Rockford
Crystal Lake
Libertyville
Highland Park
Palatine
Elgin
Evanston
Roselle
Norridge
De Kalb
Clinton
Wheaton
Dixon
Sterling
Chicago
Aurora
Oak Lawn
Oswego
Orland Park
Homewood
Joliet
Park Forest
Merrillville
Gary
Michigan Ci
Morris
Ottawa
Kewanee
Streator
Kankakee
Galesburg
Peoria
Pekin
Canton
Bloomington
Lafayett
Lincoln
Champaign
Danville
Crawfords
Springfield
Jacksonville
Taylorville
EXHIBIT K
DTS-1 AND DTS-2 36 DBU F(50,50) CONTOURS
WITHIN ALLOWABLE F(50,50) ARC FROM WLS-TV
USING AUTHORIZED DTS REFERENCE SITE
CHANNEL 10 - OSWEGO, ILLINOIS

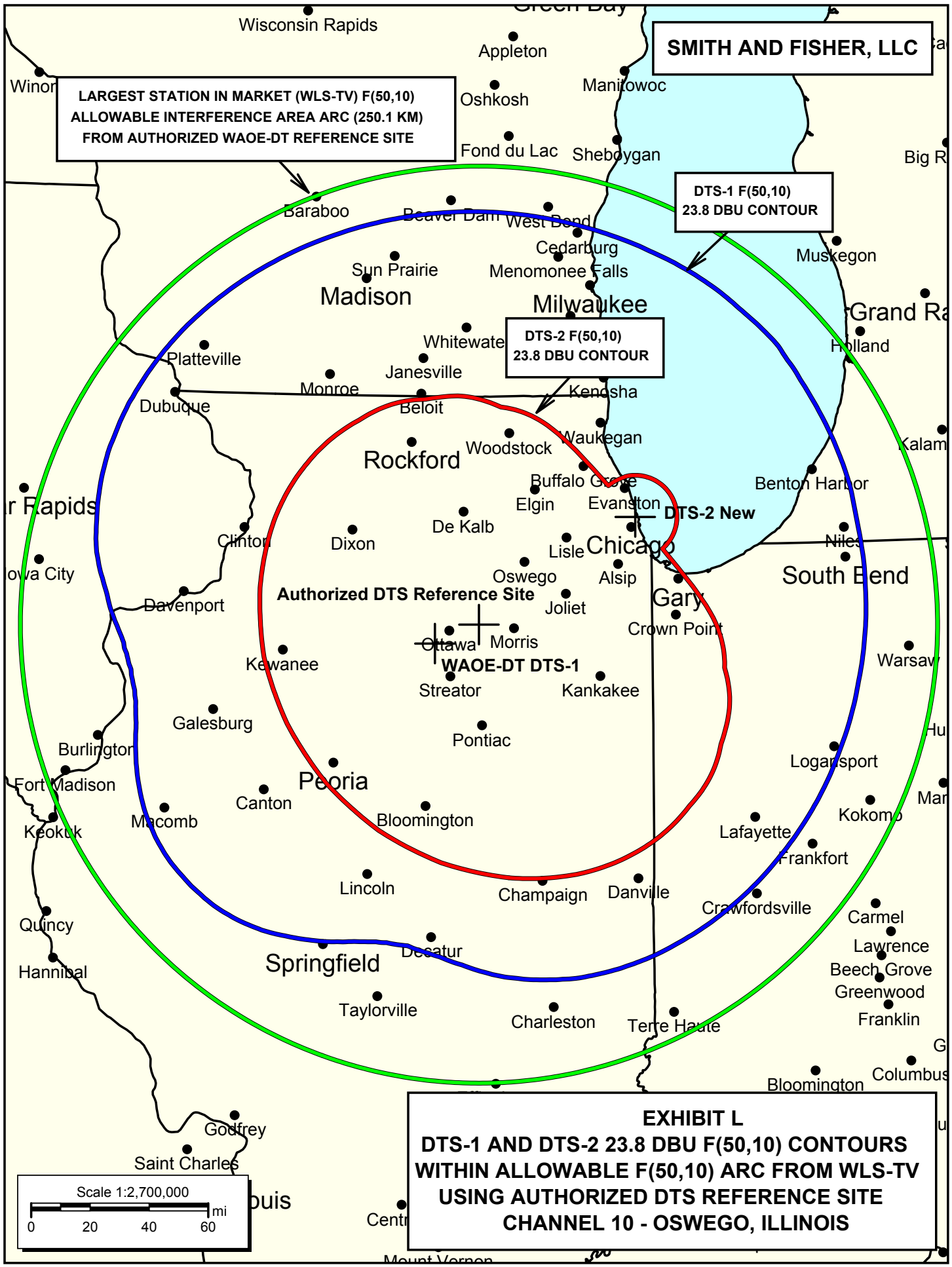


EXHIBIT L
DTS-1 AND DTS-2 23.8 DBU F(50,10) CONTOURS WITHIN ALLOWABLE F(50,10) ARC FROM WLS-TV USING AUTHORIZED DTS REFERENCE SITE
CHANNEL 10 - OSWEGO, ILLINOIS

EXHIBIT M

TVSTUDY INTERFERENCE ANALYSIS RESULTS
PROPOSED WAOE-DT DTS
CHANNEL 10 – OSWEGO, ILLINOIS
[MODIFICATION OF LMS-0000189533]

Study created: 2022.09.12 13:04:49

Study build station data: LMS TV 2022-08-28
Proposal: WAOE D10 DD CP OSWEGO, IL
File number: BLANK0000189533
Facility ID: 52280
Station data: User record
Record ID: 23
Country: U.S.
Zone: I
Ref. lat.: 41 22 31.00 N
Ref. long.: 88 38 59.60 W
DTS sites: 2

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	NEW	D9	DT	APP	FREEPORT, IL	BLANK0000195673	111.1 km
Yes	WILL-TV	D9	DT	APP	URBANA, IL	BPEDT20100406ABJ	148.5
Yes	WILL-TV	D9	DT	LIC	URBANA, IL	BLEDT20050920AEE	148.5
No	WISH-TV	D9	DT	LIC	INDIANAPOLIS, IN	BLANK0000055426	264.1
Yes	WGEM-TV	D10	DT	LIC	QUINCY, IL	BLANK0000105998	276.0
Yes	WTHI-TV	D10	DT	CP	TERRE HAUTE, IN	BLANK0000191700	260.2
Yes	WTHI-TV	D10	DT	LIC	TERRE HAUTE, IN	BLCDT20090622ACG	260.1
Yes	WILX-TV	D10	DT	LIC	ONONDAGA, MI	BLCDT20120404ACG	357.5
Yes	KTTC	D10	DT	LIC	ROCHESTER, MN	BLCDT20101102ACA	394.2
Yes	KTTC	D10	DT	CP	ROCHESTER, MN	BLANK0000035728	394.2
No	WCIX	D11	DT	LIC	SPRINGFIELD, IL	BLANK0000113046	190.6
No	WCIX	D11	DT	CP	SPRINGFIELD, IL	BLANK0000127610	190.6
No	WLFI-TV	D11	DT	LIC	LAFAYETTE, IN	BLCDT20040520AIX	203.3
No	WISC-TV	D11	DT	LIC	MADISON, WI	BLANK0000126605	200.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied, DTS site # 1:

Channel: D10
Latitude: 41 16 54.60 N (NAD83)
Longitude: 88 56 11.10 W
Height AMSL: 596.6 m
HAAT: 410.7 m
Peak ERP: 30.0 kW
Antenna: Dielectric TLS-V6/VP-R C260 (ID 1009004) 45.0 deg
Elev Pattrn: Generic
Elec Tilt: 7.10

36.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	20.0 kW	415.3 m	106.6 km
45.0	30.0	442.6	112.7
90.0	20.0	406.6	105.9
135.0	9.21	396.9	98.7
180.0	1.50	401.6	85.0
225.0	3.11	394.4	90.1
270.0	1.50	401.7	85.0
315.0	9.21	423.6	100.5

Database HAAT does not agree with computed HAAT
Database HAAT: 411 m Computed HAAT: 410 m

ERP exceeds maximum
ERP: 30.0 kW ERP maximum: 11.2 kW

Record parameters as studied, DTS site # 2:

Channel: D10
Latitude: 41 53 56.10 N (NAD83)
Longitude: 87 37 23.20 W
Height AMSL: 566.9 m
HAAT: 387.8 m
Peak ERP: 13.2 kW
Antenna: Dielectric-Custom Cardioid 0.0 deg
Elev Pattrn: Generic

36.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.000 kW	391.5 m	7.6 km
45.0	0.000	391.8	7.6
90.0	0.000	391.4	7.6
135.0	0.000	391.8	7.6
180.0	2.56	385.3	88.0
225.0	12.8	385.2	100.6
270.0	4.90	380.8	92.8
315.0	0.005	384.5	40.7

**DTS proposal has coverage outside reference facility and distance limit

Distance to Canadian border: 370.0 km

Distance to Mexican border: 1701.7 km

Conditions at FCC monitoring station: Allegan MI
DTS site # 1 Bearing: 58.2 degrees Distance: 287.0 km
DTS site # 2 Bearing: 59.6 degrees Distance: 158.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
DTS site # 1 Bearing: 270.1 degrees Distance: 1375.9 km
DTS site # 2 Bearing: 268.4 degrees Distance: 1486.0 km

Study cell size: 1.00 km
Profile point spacing: 0.40 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

---- Below is IX received by proposal BLANK0000189533 ----

**MX with BLANK0000195673 APP scenario 1, 1.71% interference received
**MX with BLANK0000195673 APP scenario 2, 1.69% interference received
**MX with BLANK0000195673 APP scenario 3, 1.71% interference received
**MX with BLANK0000195673 APP scenario 4, 1.69% interference received