

## **ENGINEERING EXHIBIT**

### **Digital Television Station Application for Minor Modification of Licensed Facility**

prepared for

**Gray Television Licensee, LLC**

KTTC(DT) Rochester, MN

Facility ID 35678

Ch. 10 94 kW 381 m

*Gray Television Licensee, LLC* (“Gray”) is the licensee of television station KTTC(DT), Channel 10, Facility ID 35678, Rochester MN. KTTC is licensed to operate at 43.1 kW effective radiated power (“ERP”) with a nondirectional antenna having a height above average terrain (“HAAT”) of 381 meters (file# BLCDT-20101102ACA). *Gray* herein seeks a minor modification Construction Permit to authorize increased power for KTTC.

No change to the site location or antenna is proposed. The KTTC antenna is top-mounted on the tower structure corresponding to FCC Antenna Structure Registration (“ASR”) number 1011414.

As proposed herein, the KTTC ERP will be increased to 94 kW. The transmitting antenna is a horizontally polarized nondirectional RCA model TW-15A-10P.

Figure 1 supplies a map that demonstrates compliance with §73.625(a)(1) regarding coverage of the entire principal community. The proposed KTTC facility’s predicted population exceeds 95 percent of the baseline facility’s population as described in the *Incentive Auction Closing and Channel Reassignment Public Notice* (“CCRPN”, DA 17-317, released April 13, 2017).

The proposed KTTC service contour area expands beyond that established by the *CCRPN*. Interference study per FCC OET Bulletin 69<sup>1</sup> shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby full service and Class A television stations except with respect to KCRG-TV (Ch. 9, Facility ID 9719, Cedar Rapids IA). KCRG-TV would receive 0.80 percent additional interference from the proposed KTTC facility.

*Gray* is also the licensee of KCRG-TV and consents to the additional interference to KCRG-TV from KTTC. KCRG-TV has a Construction Permit (file# 0000150618) to change to Channel 32 which, when constructed, will eliminate any interference received from KTTC. FCC processing of this proposal is requested using a 2.0 km cell size and 0.05 km terrain profile increment. The interference study output report is provided as Table 1.

### **Human Exposure to Radiofrequency Electromagnetic Field (Environmental)**

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the FCC's OET Bulletin Number 65. Based on OET-65 equation (10) and considering 20 percent antenna relative field in downward elevations (OET-65 assumed value for VHF TV antennas), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is  $0.86 \mu\text{W}/\text{cm}^2$ , which is 0.4 percent of the general population/uncontrolled maximum permitted exposure limit. This is below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

The general public will not be exposed to RF levels attributable to KTTC in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna

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<sup>1</sup>FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). This analysis employed the FCC's current "TVStudy" software with the default application processing template settings, 2 km cell size, and 0.05 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCC's implementation of TVStudy show excellent correlation.

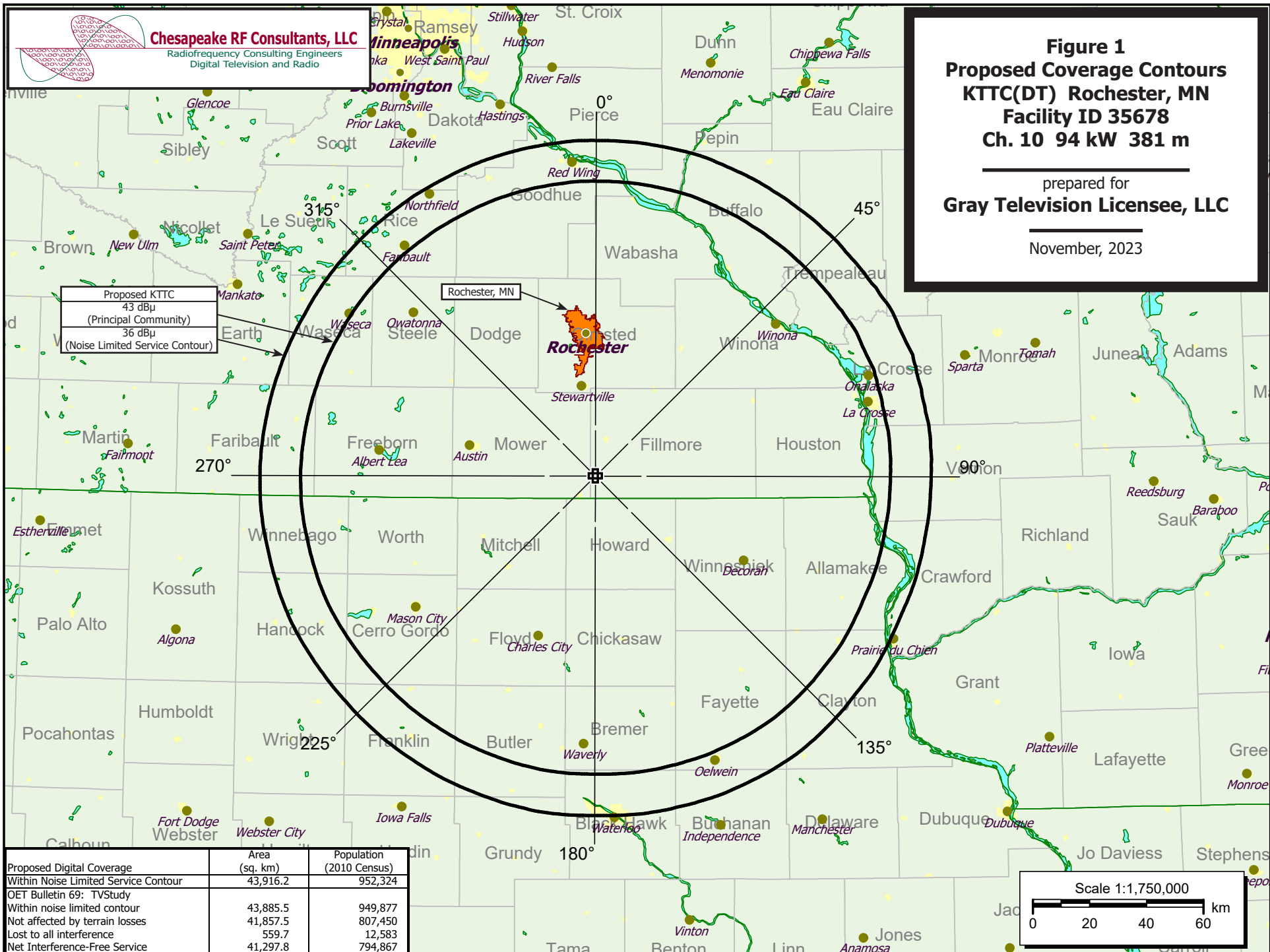
from RF electromagnetic field exposure in excess of FCC guidelines. This exhibit is limited to the evaluation of exposure to RF electromagnetic field.

*List of Attachments*

Figure 1	Proposed Coverage Contours
Table 1	TVStudy Analysis of Proposal
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

**Chesapeake RF Consultants, LLC**

Joseph M. Davis, P.E.	November 13, 2023	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600



**Table 1 KTTC TVStudy Analysis of Proposal**  
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tvstudy v2.2.5 (4uoc83)  
Database: localhost, Study: KTTC\_94kW, Model: Longley-Rice  
Start: 2023.11.13 12:57:47

Study created: 2023.11.13 12:57:47

Study build station data: LMS TV 2023-11-12

Proposal: KTTC D10 DT APP ROCHESTER, MN  
File number: KTTC 94kW  
Facility ID: 35678  
Station data: User record  
Record ID: 217  
Country: U.S.  
Zone: II

Build options:  
Protect pre-transition records not on baseline channel

Search options:  
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	KCRG-TV	D9	DT	LIC	CEDAR RAPIDS, IA	BLANK0000001351	146.9 km
Yes	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK0000218437	174.4
No	WAOW	D9	DT	CP	WAUSAU, WI	BLANK0000224051	264.5
No	WAOW	D9	DT	LIC	WAUSAU, WI	BLCDT20120627ABL	264.5
Yes	WTVK	D10	DT	LIC	OSWEGO, IL	BLANK0000151562	383.0
No	WTVK	D10	DD	LIC	OSWEGO, IL	BLANK0000221162	394.2
No	WGEM-TV	D10	DT	LIC	QUINCY, IL	BLANK0000105998	412.4
Yes	KWCM-TV	D10	DT	LIC	APPLETON, MN	BLEDT20091217ADE	334.8
Yes	WDIO-DT	D10	DT	LIC	DULUTH, MN	BLCDT20090917AAY	358.3
No	KDIN-TV	D11	DT	LIC	DES MOINES, IA	BLANK0000212208	218.5
No	WISC-TV	D11	DT	LIC	MADISON, WI	BLANK0000126605	240.8

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D10  
Latitude: 43 34 15.00 N (NAD83)  
Longitude: 92 25 38.00 W  
Height AMSL: 788.8 m  
HAAT: 381.0 m  
Peak ERP: 94.0 kW  
Antenna: Omnidirectional  
Elev Pattn: Generic

36.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	94.0 kW	382.2 m	117.7 km
45.0	94.0	386.0	118.1
90.0	94.0	382.3	117.8
135.0	94.0	401.1	119.6
180.0	94.0	396.2	119.1
225.0	94.0	386.5	118.1
270.0	94.0	381.7	117.7
315.0	94.0	373.9	117.0

Database HAAT does not agree with computed HAAT  
Database HAAT: 381 m Computed HAAT: 386 m

Distance to Canadian border: 501.6 km

Distance to Mexican border: 1727.4 km

Conditions at FCC monitoring station: Allegan MI  
Bearing: 99.3 degrees Distance: 536.0 km

**Table 1 KTTC TVStudy Analysis of Proposal**  
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Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
Bearing: 254.6 degrees Distance: 1124.1 km

Study cell size: 2.00 km  
Profile point spacing: 0.05 km

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

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Interference to BLANK0000001351 LIC scenario 1

**\*\*IX: 0.80% interference caused**

**See text: KCRG-TV is accepting 0.80% interference**

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KCRG-TV	D9	DT	LIC	CEDAR RAPIDS, IA	BLANK0000001351	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	146.9 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	146.9
	KCCI	D8	DT	LIC	DES MOINES, IA	BLANK00000207654	156.0
	WMWC-TV	D8	DT	APP	GALESBURG, IL	BLANK00000127477	165.7
	KCAU-TV	D9	DT	LIC	SIOUX CITY, IA	BLCDT20100702BMT	359.9
	WSLN	D9	DT	LIC	FREEPORT, IL	BLANK00000221451	220.9
	WILL-TV	D9	DT	APP	URBANA, IL	BPEDT20100406ABJ	367.7
	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK00000218437	321.3
	WAOW	D9	DT	CP	WAUSAU, WI	BLANK00000224051	337.9
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	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	51947.8 1,180,361	50890.3	1,169,486	48673.2	1,111,191	47597.7 1,102,276	2.21 0.80
Undesired			Total IX	Unique IX, before		Unique IX, after	
KTTC D10 DT APP		1210.4	10,084			1075.5 8,915	
KCCI D8 DT LIC		894.8	22,358	786.7	20,830	786.7 20,830	
WMWC-TV D8 DT APP		205.7	8,683	117.0	5,470	117.0 5,470	
KCAU-TV D9 DT LIC		148.2	1,715	36.1	187	36.1 187	
WSLN D9 DT LIC		898.8	28,422	681.8	23,541	681.8 23,541	
WILL-TV D9 DT APP		96.7	3,629	12.1	64	12.1 64	
KMSP-TV D9 DT LIC		135.0	864	87.3	800	4.0 59	
WAOW D9 DT CP		238.8	1,580	131.2	955	107.4 553	

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Interference to BLANK0000001351 LIC scenario 2

**\*\*IX: 0.80% interference caused**

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KCRG-TV	D9	DT	LIC	CEDAR RAPIDS, IA	BLANK0000001351	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	146.9 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	146.9
	KCCI	D8	DT	LIC	DES MOINES, IA	BLANK00000207654	156.0
	WMWC-TV	D8	DT	APP	GALESBURG, IL	BLANK00000127477	165.7
	KCAU-TV	D9	DT	LIC	SIOUX CITY, IA	BLCDT20100702BMT	359.9
	WSLN	D9	DT	LIC	FREEPORT, IL	BLANK00000221451	220.9
	WILL-TV	D9	DT	LIC	URBANA, IL	BLEDT20050920AEE	367.7
	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK00000218437	321.3
	WAOW	D9	DT	CP	WAUSAU, WI	BLANK00000224051	337.9
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	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	51947.8 1,180,361	50890.3	1,169,486	48673.2	1,111,191	47597.7 1,102,276	2.21 0.80
Undesired			Total IX	Unique IX, before		Unique IX, after	
KTTC D10 DT APP		1210.4	10,084			1075.5 8,915	
KCCI D8 DT LIC		894.8	22,358	786.7	20,830	786.7 20,830	
WMWC-TV D8 DT APP		205.7	8,683	121.0	5,470	121.0 5,470	
KCAU-TV D9 DT LIC		148.2	1,715	36.1	187	36.1 187	
WSLN D9 DT LIC		898.8	28,422	697.9	23,882	697.9 23,882	
WILL-TV D9 DT LIC		72.5	1,297	12.1	64	12.1 64	
KMSP-TV D9 DT LIC		135.0	864	87.3	800	4.0 59	

**Table 1 KTTC TVStudy Analysis of Proposal**  
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WAOW D9 DT CP 238.8 1,580 131.2 955 107.4 553

Interference to BLANK0000001351 LIC scenario 3  
\*\*IX: 0.80% interference caused

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KCRG-TV	D9	DT	LIC	CEDAR RAPIDS, IA	BLANK0000001351	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	146.9 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	146.9
	KCCI	D8	DT	LIC	DES MOINES, IA	BLANK0000207654	156.0
	WMWC-TV	D8	DT	APP	GALESBURG, IL	BLANK0000127477	165.7
	KCAU-TV	D9	DT	LIC	SIOUX CITY, IA	BLCDT20100702BMT	359.9
	WSLN	D9	DT	LIC	FREEPORT, IL	BLANK0000221451	220.9
	WILL-TV	D9	DT	APP	URBANA, IL	BPEDT20100406ABJ	367.7
	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK0000218437	321.3
	WAOW	D9	DT	LIC	WAUSAU, WI	BLCDT20120627ABL	337.9
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
51947.8 1,180,361		50890.3 1,169,486		48713.0 1,111,465		47629.5 1,102,522	2.22 0.80
Undesired		Total IX		Unique IX, before		Unique IX, after	
KTTC D10 DT APP		1210.4	10,084			1083.5 8,943	
KCCI D8 DT LIC		894.8	22,358	786.7	20,830	786.7 20,830	
WMWC-TV D8 DT APP		205.7	8,683	117.0	5,470	117.0 5,470	
KCAU-TV D9 DT LIC		148.2	1,715	36.1	187	36.1 187	
WSLN D9 DT LIC		898.8	28,422	693.9	23,709	693.9 23,709	
WILL-TV D9 DT APP		96.7	3,629	12.1	64	12.1 64	
KMSP-TV D9 DT LIC		135.0	864	95.3	811	4.0 59	
WAOW D9 DT LIC		179.0	1,127	91.4	681	75.6 307	

Interference to BLANK0000001351 LIC scenario 4  
\*\*IX: 0.80% interference caused

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KCRG-TV	D9	DT	LIC	CEDAR RAPIDS, IA	BLANK0000001351	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	146.9 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	146.9
	KCCI	D8	DT	LIC	DES MOINES, IA	BLANK0000207654	156.0
	WMWC-TV	D8	DT	APP	GALESBURG, IL	BLANK0000127477	165.7
	KCAU-TV	D9	DT	LIC	SIOUX CITY, IA	BLCDT20100702BMT	359.9
	WSLN	D9	DT	LIC	FREEPORT, IL	BLANK0000221451	220.9
	WILL-TV	D9	DT	LIC	URBANA, IL	BLEDT20050920AEE	367.7
	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK0000218437	321.3
	WAOW	D9	DT	LIC	WAUSAU, WI	BLCDT20120627ABL	337.9
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
51947.8 1,180,361		50890.3 1,169,486		48713.0 1,111,465		47629.5 1,102,522	2.22 0.80
Undesired		Total IX		Unique IX, before		Unique IX, after	
KTTC D10 DT APP		1210.4	10,084			1083.5 8,943	
KCCI D8 DT LIC		894.8	22,358	786.7	20,830	786.7 20,830	
WMWC-TV D8 DT APP		205.7	8,683	121.0	5,470	121.0 5,470	
KCAU-TV D9 DT LIC		148.2	1,715	36.1	187	36.1 187	
WSLN D9 DT LIC		898.8	28,422	710.0	24,050	710.0 24,050	
WILL-TV D9 DT LIC		72.5	1,297	12.1	64	12.1 64	
KMSP-TV D9 DT LIC		135.0	864	95.3	811	4.0 59	
WAOW D9 DT LIC		179.0	1,127	91.4	681	75.6 307	

Interference to BLANK0000001351 LIC scenario 5  
\*\*IX: 0.80% interference caused

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KCRG-TV	D9	DT	LIC	CEDAR RAPIDS, IA	BLANK0000001351	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	146.9 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	146.9
	KCCI	D8	DT	LIC	DES MOINES, IA	BLANK0000207654	156.0
	WMWC-TV	D8	DT	LIC	GALESBURG, IL	BLCDT20120820AAQ	165.7

**Table 1 KTTC TVStudy Analysis of Proposal**  
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KCAU-TV	D9	DT	LIC	SIOUX CITY, IA	BLCDT20100702BMT	359.9
WSLN	D9	DT	LIC	FREEDPORT, IL	BLANK0000221451	220.9
WILL-TV	D9	DT	APP	URBANA, IL	BPEDT20100406ABJ	367.7
KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK0000218437	321.3
WAOW	D9	DT	CP	WAUSAU, WI	BLANK0000224051	337.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
51947.8	1,180,361	50890.3	1,169,486	48725.6	1,116,020	47650.1	1,107,105	2.21	0.80
Undesired		Total IX		Unique IX, before		Unique IX, after			
KTTC D10 DT APP		1210.4	10,084			1075.5	8,915		
KCCI D8 DT LIC		894.8	22,358	786.7	20,830	786.7	20,830		
WMWC-TV D8 DT LIC		145.2	3,843	64.6	641	64.6	641		
KCAU-TV D9 DT LIC		148.2	1,715	36.1	187	36.1	187		
WSLN D9 DT LIC		898.8	28,422	685.9	23,549	685.9	23,549		
WILL-TV D9 DT APP		96.7	3,629	12.1	64	12.1	64		
KMSP-TV D9 DT LIC		135.0	864	87.3	800	4.0	59		
WAOW D9 DT CP		238.8	1,580	131.2	955	107.4	553		

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Interference to BLANK0000001351 LIC scenario 6  
\*\*IX: 0.80% interference caused

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KCRG-TV	D9	DT	LIC	CEDAR RAPIDS, IA	BLANK0000001351	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	146.9 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	146.9
	KCCI	D8	DT	LIC	DES MOINES, IA	BLANK0000207654	156.0
	WMWC-TV	D8	DT	LIC	GALESBURG, IL	BLCDT20120820AAQ	165.7
	KCAU-TV	D9	DT	LIC	SIOUX CITY, IA	BLCDT20100702BMT	359.9
	WSLN	D9	DT	LIC	FREEDPORT, IL	BLANK0000221451	220.9
	WILL-TV	D9	DT	LIC	URBANA, IL	BLCDT20050920AEE	367.7
	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK0000218437	321.3
	WAOW	D9	DT	CP	WAUSAU, WI	BLANK0000224051	337.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
51947.8	1,180,361	50890.3	1,169,486	48725.6	1,116,020	47650.1	1,107,105	2.21	0.80
Undesired		Total IX		Unique IX, before		Unique IX, after			
KTTC D10 DT APP		1210.4	10,084			1075.5	8,915		
KCCI D8 DT LIC		894.8	22,358	786.7	20,830	786.7	20,830		
WMWC-TV D8 DT LIC		145.2	3,843	68.6	641	68.6	641		
KCAU-TV D9 DT LIC		148.2	1,715	36.1	187	36.1	187		
WSLN D9 DT LIC		898.8	28,422	702.0	23,890	702.0	23,890		
WILL-TV D9 DT LIC		72.5	1,297	12.1	64	12.1	64		
KMSP-TV D9 DT LIC		135.0	864	87.3	800	4.0	59		
WAOW D9 DT CP		238.8	1,580	131.2	955	107.4	553		

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Interference to BLANK0000001351 LIC scenario 7  
\*\*IX: 0.80% interference caused

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KCRG-TV	D9	DT	LIC	CEDAR RAPIDS, IA	BLANK0000001351	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	146.9 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	146.9
	KCCI	D8	DT	LIC	DES MOINES, IA	BLANK0000207654	156.0
	WMWC-TV	D8	DT	LIC	GALESBURG, IL	BLCDT20120820AAQ	165.7
	KCAU-TV	D9	DT	LIC	SIOUX CITY, IA	BLCDT20100702BMT	359.9
	WSLN	D9	DT	LIC	FREEDPORT, IL	BLANK0000221451	220.9
	WILL-TV	D9	DT	APP	URBANA, IL	BPEDT20100406ABJ	367.7
	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK0000218437	321.3
	WAOW	D9	DT	LIC	WAUSAU, WI	BLCDT20120627ABL	337.9

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
51947.8	1,180,361	50890.3	1,169,486	48765.4	1,116,294	47682.0	1,107,351	2.22	0.80
Undesired		Total IX		Unique IX, before		Unique IX, after			
KTTC D10 DT APP		1210.4	10,084			1083.5	8,943		
KCCI D8 DT LIC		894.8	22,358	786.7	20,830	786.7	20,830		
WMWC-TV D8 DT LIC		145.2	3,843	64.6	641	64.6	641		



**Table 1 KTTC TVStudy Analysis of Proposal**  
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KCAU-TV D9 DT LIC	148.2	1,715	36.1	187	36.1	187
WSLN D9 DT LIC	898.8	28,422	697.9	23,717	697.9	23,717
WILL-TV D9 DT APP	96.7	3,629	12.1	64	12.1	64
KMSP-TV D9 DT LIC	135.0	864	95.3	811	4.0	59
WAOW D9 DT LIC	179.0	1,127	91.4	681	75.6	307

Interference to BLANK000001351 LIC scenario 8

\*\*IX: 0.80% interference caused

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KCRG-TV	D9	DT	LIC	CEDAR RAPIDS, IA	BLANK000001351	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	146.9 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	146.9
	KCCI	D8	DT	LIC	DES MOINES, IA	BLANK0000207654	156.0
	WMWC-TV	D8	DT	LIC	GALESBURG, IL	BLCDT20120820AAQ	165.7
	KCAU-TV	D9	DT	LIC	SIOUX CITY, IA	BLCDT20100702BMT	359.9
	WSLN	D9	DT	LIC	FREEDPORT, IL	BLANK0000221451	220.9
	WILL-TV	D9	DT	LIC	URBANA, IL	BLED20050920AEE	367.7
	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK0000218437	321.3
	WAOW	D9	DT	LIC	WAUSAU, WI	BLCDT20120627ABL	337.9
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
51947.8		1,180,361		50890.3		1,169,486	2.22
				48765.4		1,116,294	0.80
				47682.0		1,107,351	
Undesired			Total IX		Unique IX, before		Unique IX, after
KTTC D10 DT APP			1210.4		10,084		1083.5
KCCI D8 DT LIC			894.8		22,358		8,943
WMWC-TV D8 DT LIC			145.2		3,843		786.7
KCAU-TV D9 DT LIC			148.2		1,715		20,830
WSLN D9 DT LIC			898.8		28,422		68.6
WILL-TV D9 DT LIC			72.5		1,297		641
KMSP-TV D9 DT LIC			135.0		864		36.1
WAOW D9 DT LIC			179.0		1,127		187
							714.0
							24,058
							12.1
							64
							4.0
							59
							307

Interference to BLANK0000218437 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK0000218437	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	174.4 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	174.4
	WKBT-DT	D8	DT	LIC	LA CROSSE, WI	BLANK0000222842	177.7
	KCAU-TV	D9	DT	LIC	SIOUX CITY, IA	BLCDT20100702BMT	370.9
	KAWA	D9	DT	LIC	BEMIDJI, MN	BLED20091026ABU	311.7
	WAOW	D9	DT	CP	WAUSAU, WI	BLANK0000224051	270.3
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
39134.7		3,857,891		37940.9		3,824,459	0.03
				37009.6		3,798,766	0.00
				36997.6		3,798,677	
Undesired			Total IX		Unique IX, before		Unique IX, after
KTTC D10 DT BL			16.0		111		12.0
KTTC D10 DT APP			32.0		211		82
WKBT-DT D8 DT LIC			4.0		19		24.0
KCAU-TV D9 DT LIC			36.0		391		171
KAWA D9 DT LIC			59.7		4,050		0.0
WAOW D9 DT CP			855.4		22,117		0.0
							36.0
							391
							27.9
							3,103
							811.6
							21,111

Interference to BLANK0000218437 LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN	BLANK0000218437	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	174.4 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	174.4
	WKBT-DT	D8	DT	LIC	LA CROSSE, WI	BLANK0000222842	177.7
	KCAU-TV	D9	DT	LIC	SIOUX CITY, IA	BLCDT20100702BMT	370.9
	KAWA	D9	DT	LIC	BEMIDJI, MN	BLED20091026ABU	311.7
	WAOW	D9	DT	LIC	WAUSAU, WI	BLCDT20120627ABL	270.3

**Table 1 KTTC TVStudy Analysis of Proposal**  
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Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
39134.7	3,857,891	37940.9	3,824,459	37193.5	3,805,461	37181.4	3,805,372	0.03	0.00
Undesired		Total IX		Unique IX, before		Unique IX, after			
KTTC D10 DT BL		16.0	111	16.0	111				
KTTC D10 DT APP		32.0	211			28.0	200		
WKBT-DT D8 DT LIC		4.0	19	0.0	0	0.0	0		
KCAU-TV D9 DT LIC		36.0	391	36.0	391	36.0	391		
KAWF D9 DT LIC		59.7	4,050	27.9	3,103	27.9	3,103		
WAOW D9 DT LIC		667.5	15,393	631.8	14,427	627.8	14,416		

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Interference to BLANK0000151562 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTVK	D10	DT	LIC	OSWEGO, IL	BLANK0000151562	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	383.0 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	383.0
	WSLN	D9	DT	LIC	FREEDPORT, IL	BLANK0000221451	114.5
	WILL-TV	D9	DT	APP	URBANA, IL	BPEDT20100406ABJ	140.0
	WGEM-TV	D10	DT	LIC	QUINCY, IL	BLANK0000105998	250.4
	WTHI-TV	D10	DT	LIC	TERRE HAUTE, IN	BLANK0000199121	262.1
	WILX-TV	D10	DT	LIC	ONONDAGA, MI	BLCDT20120404ACG	383.5
	WCIX	D11	DT	CP	SPRINGFIELD, IL	BLANK0000203114	172.8

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
29366.4	3,724,298	28837.1	3,545,869	27100.1	3,417,694	27100.1	3,417,694	0.00	0.00
Undesired		Total IX		Unique IX, before		Unique IX, after			
KTTC D10 DT BL		8.0	85	0.0	0				
KTTC D10 DT APP		16.1	114			0.0	0		
WSLN D9 DT LIC		440.1	6,731	440.1	6,731	440.1	6,731		
WILL-TV D9 DT APP		24.1	1,855	8.0	320	8.0	320		
WGEM-TV D10 DT LIC		1133.3	67,530	788.6	38,683	780.5	38,654		
WTHI-TV D10 DT LIC		452.1	31,755	115.5	1,913	115.5	1,913		
WILX-TV D10 DT LIC		36.1	50,564	36.1	50,564	36.1	50,564		

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Interference to BLANK0000151562 LIC scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WTVK	D10	DT	LIC	OSWEGO, IL	BLANK0000151562	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	383.0 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	383.0
	WSLN	D9	DT	LIC	FREEDPORT, IL	BLANK0000221451	114.5
	WILL-TV	D9	DT	LIC	URBANA, IL	BLEDT20050920AEE	140.0
	WGEM-TV	D10	DT	LIC	QUINCY, IL	BLANK0000105998	250.4
	WTHI-TV	D10	DT	LIC	TERRE HAUTE, IN	BLANK0000199121	262.1
	WILX-TV	D10	DT	LIC	ONONDAGA, MI	BLCDT20120404ACG	383.5
	WCIX	D11	DT	CP	SPRINGFIELD, IL	BLANK0000203114	172.8

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
29366.4	3,724,298	28837.1	3,545,869	27100.1	3,417,694	27100.1	3,417,694	0.00	0.00
Undesired		Total IX		Unique IX, before		Unique IX, after			
KTTC D10 DT BL		8.0	85	0.0	0				
KTTC D10 DT APP		16.1	114			0.0	0		
WSLN D9 DT LIC		440.1	6,731	440.1	6,731	440.1	6,731		
WILL-TV D9 DT LIC		20.1	1,588	8.0	320	8.0	320		
WGEM-TV D10 DT LIC		1133.3	67,530	788.6	38,683	780.5	38,654		
WTHI-TV D10 DT LIC		452.1	31,755	115.5	1,913	115.5	1,913		
WILX-TV D10 DT LIC		36.1	50,564	36.1	50,564	36.1	50,564		

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Interference to BLEDT20091217ADE LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	KWCM-TV	D10	DT	LIC	APPLETON, MN	BLEDT20091217ADE	
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN	DTVBL35678	334.8 km
	KTTC	D10	DT	APP	ROCHESTER, MN	KTTC 94kW	334.8

**Table 1 KTTC TVStudy Analysis of Proposal**  
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	DKABY-TV	D9	DT	BL	ABERDEEN, SD	DTVBL48659		149.0	
	WDIO-DT	D10	DT	LIC	DULUTH, MN	BLCDT20090917AAY		349.4	
	KBRR	D10	DT	LIC	THIEF RIVER FALLS, MN	BLCDT20090723ADD		315.7	
	KTSD-TV	D10	DT	LIC	PIERRE, SD	BLEDT20090527AGT		314.2	
	KELO-TV	D11	DT	LIC	SIOUX FALLS, SD	BLCDT20090619AAZ		188.1	
	Service area	Terrain-limited			IX-free, before		IX-free, after		Percent New IX
34299.8	252,284	33420.8		244,341	32809.4	239,175	32561.7	238,230	0.75 0.40
Undesired				Total IX	Unique IX, before		Unique IX, after		
KTTC D10 DT BL		144.2		734	68.0	454			
KTTC D10 DT APP		407.9		1,826			315.7	1,399	
DKABY-TV D9 DT BL		36.2		48	0.0	0	0.0	0	
WDIO-DT D10 DT LIC		208.1		3,405	131.8	3,125	115.8	2,978	
KBRR D10 DT LIC		4.0		15	4.0	15	4.0	15	
KTSD-TV D10 DT LIC		331.4		1,292	271.2	1,184	271.2	1,184	
KELO-TV D11 DT LIC		24.0		60	0.0	0	0.0	0	
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Interference to BLCDT20090917AAY LIC scenario 1									
Desired:	Call	Chan	Svc	Status	City, State		File Number		Distance
	WDIO-DT	D10	DT	LIC	DULUTH, MN		BLCDT20090917AAY		
Undesireds:	KTTC	D10	DT	BL	ROCHESTER, MN		DTVBL35678		358.3 km
	KTTC	D10	DT	APP	ROCHESTER, MN		KTTC 94kW		358.3
	KWCM-TV	D10	DT	LIC	APPLETON, MN		BLEDT20091217ADE		349.4
	KRII	D11	DT	LIC	CHISHOLM, MN		BLCDT20090625ABG		134.5
	Service area	Terrain-limited			IX-free, before		IX-free, after		Percent New IX
34689.1	341,506	32854.8		323,042	32467.3	320,460	32223.8	318,860	0.75 0.50
Undesired				Total IX	Unique IX, before		Unique IX, after		
KTTC D10 DT BL		259.4		2,358	239.5	2,318			
KTTC D10 DT APP		506.9		3,958			483.1	3,918	
KWCM-TV D10 DT LIC		143.9		264	124.1	224	120.1	224	
KRII D11 DT LIC		4.0		0	4.0	0	4.0	0	
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Interference to proposal scenario 1									
1.56% interference received									
Desired:	Call	Chan	Svc	Status	City, State		File Number		Distance
	KTTC	D10	DT	APP	ROCHESTER, MN		KTTC 94kW		
Undesireds:	KMSP-TV	D9	DT	LIC	MINNEAPOLIS, MN		BLANK0000218437		174.4 km
	WTVK	D10	DT	LIC	OSWEGO, IL		BLANK0000151562		383.0
	KWCM-TV	D10	DT	LIC	APPLETON, MN		BLEDT20091217ADE		334.8
	WDIO-DT	D10	DT	LIC	DULUTH, MN		BLCDT20090917AAY		358.3
	Service area	Terrain-limited			IX-free		Percent IX		
43885.5	949,877	41857.5		807,450	41297.8	794,867	1.34	1.56	
Undesired				Total IX	Unique IX		Prcnt Unique IX		
KMSP-TV D9 DT LIC		31.8		262	23.9	210	0.06	0.03	
KWCM-TV D10 DT LIC		519.9		11,463	476.2	10,924	1.14	1.35	
WDIO-DT D10 DT LIC		55.7		1,425	15.9	910	0.04	0.11	

**Channel and  
Facility  
Information**

Section	Question	Response
Proposed Community of License	Facility ID	35678
	State	Minnesota
	City	ROCHESTER
	DTV Channel	10
	Designated Market Area	Rochestr-Mason City-Austin
Facility Type	Facility Type	Commercial
	Station Type	Main
Zone	Zone	2

Antenna Location  
Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1011414
Coordinates (NAD83)	Latitude	43° 34' 15.0" N+
	Longitude	092° 25' 38.0" W-
	Structure Type	GTOWER-Guyed Structure Used for Communication Purposes
	Overall Structure Height	400.5 meters
	Support Structure Height	365.8 meters
	Ground Elevation (AMSL)	404.8 meters
Antenna Data	Height of Radiation Center Above Ground Level	384 meters
	Height of Radiation Center Above Average Terrain	381 meters
	Height of Radiation Center Above Mean Sea Level	788.8 meters
	Effective Radiated Power	94 kW

**Antenna  
Technical Data**

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	RCA
	Model	TW-15A-10P
	Rotation	
	Electrical Beam Tilt	Not Applicable
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Horizontal
DTV and DTS: Elevation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
	Uploaded file for elevation antenna (or radiation) pattern data	