

## Engineering Narrative

The Instant Application proposes to modify Station KJKB, Jacksboro, Texas to Channel 238C3 and change its city of license to Scotland, Texas in connection with the Contingent Applications (1) to modify station KFWR, Mineral Wells, Texas, from Channel 240C1 to Channel 240C0 and its city of license to Jacksboro, Texas, (2) to upgrade Station KYBE, Frederick, Oklahoma from Channel 240A to Channel 239C3, and (3) to modify station KKAJ, Ardmore, Oklahoma to Channel 239C2 and change its city of license to Davis, Oklahoma. These changes will result in a net gain in service to approximately 849,000 people.

To achieve these gains, the following changes are required: (1) the vacant allotment at Rule, Texas, must be modified from Channel 239C2 to Channel 288C2 with new allotment coordinates; (2) the vacant allotment at Knox City, Texas, must be modified from Channel 291A to Channel 293A; (3) the vacant allotment at Crowell, Texas, must be modified from Channel 293C3 to Channel 255C3, with new allotment coordinates; and (4) the vacant allotment at Quanah, Texas, must be modified from Channel 255C3 to Channel 251C3, with new allotment coordinates.

A spacing study has been performed for each allotment change. A gain/loss study and a study of other stations serving the loss area has been performed on all licensed stations. The studies conclude that the changes detailed in the following table can be made in compliance with the FCC's rules and policies.

**Table 1: Proposed Change Table**

Community of License	Channel/Class		Reference Point		Distance from Community Reference Point-kM	
	Current	Proposed	Current	Proposed	Current	Proposed
Mineral Wells, TX	240C1		32N39'50" by 98w9'47"		16.7	
Jacksboro, TX		240C0		33n01'50' by 98w00'48"		24.8
Ardmore, OK	239C1		34n9'42" by 97w9'11"		1.6	
Davis, OK		239C2		34n23'08' by 96w54'29"		23.0
Rule, TX	239C2	288C2	33n13'1" by 99w45'45"	33n10'29' by 99w49'26"	12.7	6.6
Knox City, TX	291A	293A	33n25'55" by 99w47'43"	33n25'55' by 99w47'43"	2.7	2.7
Crowell, TX	293C3	255C3	34n1'11" by 99w49'53"	34n03'58' by 99w43'52"	10.7	9.1
Quanah, TX	255C3	251C3	34n10'04" by 99w46'49"	34n24'09' by 99w46'02"	14.9	11.9
Frederick, OK	240A	239C3	34n 23'30" by 99w01'51"	34n23'1 6' by 99w11'33"	1.2	16
Jacksboro, TX	238A		33n19'43" by 98w16'46"		16.7	
Scotland, TX		238C3		33n41'08' by 98w31'43"		6.1

These changes would result in a revised table of allotments as follows:

**Table 2: Proposed Table of Allotments**

Table of Allotments			
State	Community	Present	Proposed
OK	Ardmore	[212C3], [216A], 239C1, 253C3	[212C3], [216A], 253C3
TX	Crowell	293C3	255C3
OK	Frederick	[218C1], 240A	218C1, 239C3
TX	Jacksboro	238A	240C0
TX	Knox City	291A, 297A	293A, 297A
TX	Mineral Wells	240C1	
TX	Quanah	255C3, 265C2	251C3, 265C2
TX	Rule	239C2	288C2
TX	Scotland		238C3
OK	Davis		239C2

[Channel] are reserved channel NCE and not allotted facilities. These are shown here for reference.

The following gains and losses in 60 dBu areas and 60 dBu populations served will result from the changes:

**Table 3: Gain and Loss Table**

Report Callsign or Description	Number	FCC FAC- ID	Community of License	Gain		Loss		Net Gain	
				Population	Area Sq. kM	Population	Area Sq. kM	Population	Area Sq. kM
KFWR	1	31062	Jacksboro, TX	715,927	12,602.0	33,583	2,549.0	682,344	10,053.0
KKAJ-FM	2	11181	Davis, OK	49,172	3,566.1	61,956	5,105.7	-12,784	-1,539.6
Allotment	3		Rule, TX	3,171	773.5	994	773.5	2,177	0.0
Allotment	4		Knox City, TX	0	0.0	0	0.0	0	0.0
Allotment	5		Crowell, TX	1,998	825.3	102	825.3	1,896	0.0
Allotment	6		Quanah, TX	5,252	1,997.4	3,335	1,997.4	1,917	0.0
KYBE	7	67311	Frederick, OK	49,120	2,864.2	10	9.2	49,110	2,855.0
KJKB	8	855	Scotland, TX	132,049	4,080.3	7,572	1,793.5	124,477	2,286.8
				<b>Totals</b>					
				956,689	26,708.8	107,552	13,053.6	849,137	13,655.2

## **Methodology**

### **Spacing Studies**

Standard methodology was used to complete the spacing studies. Current FM allotment, application and licensed facilities records were downloaded from CDBS on March 7, 2008. The distance to each of these records from the proposed reference point were calculated in accordance with the procedures in Section 73.208(c) of the Commission's rules. These distances were compared to the required distances prescribed in Section 73.207(b)(1) of the rules, and the results of this comparison were tabulated in the traditional manner. Where further research or analysis was required to resolve apparent short-spacings, that information is noted in bold type. These studies are reported as Study (#) where # is the local report number as shown in the table entitled Population and Area Gain and Loss Summary (above).

### **Gain Loss Studies**

The gain/loss were performed utilizing rfInvestigator 3.2.71 with the 2000 Census data formatted and provided by rfSoftware.

Gain and Loss areas were determined by comparing the 60 dBu protected service contours of the existing and proposed facilities. For existing facilities, the study utilized licensed height and power. For the proposed allotments, maximum height and power was used for all classes of stations except Class C and Class C0. For Class C stations, actual height and power were used. For Class C0 station, 100 kW at 449 meters was assumed. Terrain was not considered to be a factor in any calculation so that the resulting contour is a circle in all cases.

Utilizing the demographic counting feature of rfInvestigator, which is a centroid based system, the population for each facility or allotment was determined as well as the population for the area where the existing and proposed allotments or facilities overlap. Subtracting the population in the overlap area from the population for each existing station or allotment and each proposed station or allotment yielded the population gain and loss totals. The gain and loss areas were calculated in a similar manner. The results of these studies are shown in figures labeled Figure (#)GL where # is the local report number as shown in the table entitled Population and Area Gain and Loss Summary (above).

## **Remaining Service Studies**

With respect to each loss area identified in the above manner, the number of remaining services was studied to determine whether the area would remain well served (i.e., whether all portions of the area would continue to be served by at least five fulltime stations). For FM stations, the required level of service used in the study was 60 dBu or greater. For AM stations, the coverage was determined utilizing the FCC's Groundwave Equivalent Distance Method and the FCC's M3 Conductivity data and the station's authorized parameters, as listed in CDBS, to calculate the distance to the 0.5 mV/m contour of the station, except that in urban areas (communities with populations of 2500 or more) the 2 mV/m contour was used.

In order to show graphically that service by five stations will remain throughout the loss area, a master list of all stations serving any portion of the area was prepared. From the master list, stations were identified which, collectively, provide service to the entire loss area. These stations were grouped together. No station was included in more than one group. A set of five or more maps was then prepared for each loss area depicting the contours of the stations in each group. The minimum remaining service to any point within the loss area is determined by the number of these maps. For some loss areas, it was possible to show five remaining services covering the entire loss area on a single map.

## **Certification**

This engineering exhibit was prepared by the undersigned officer LKCM Radio Group, LP.  
The studies and conclusions are true and correct to the best of my knowledge and belief.

March 13, 2008

Kevin Prigel  
LKCM Radio Group, LP  
301 Commerce Street, Suite 1600  
Fort Worth, TX 76102

(817) 332-3235  
(817) 332-4630 Fax

KJKB, Scotland, TX

**Exhibit E, Study 8  
Proposed Scotland, Texas Allotment Study**

\*\*\*\*\* FM Channel Spacing Study from CDBS \*\*\*\*\*

CDBS Database Date Mar 7, 2008

Use pre-1989 Class A Spacings: NO

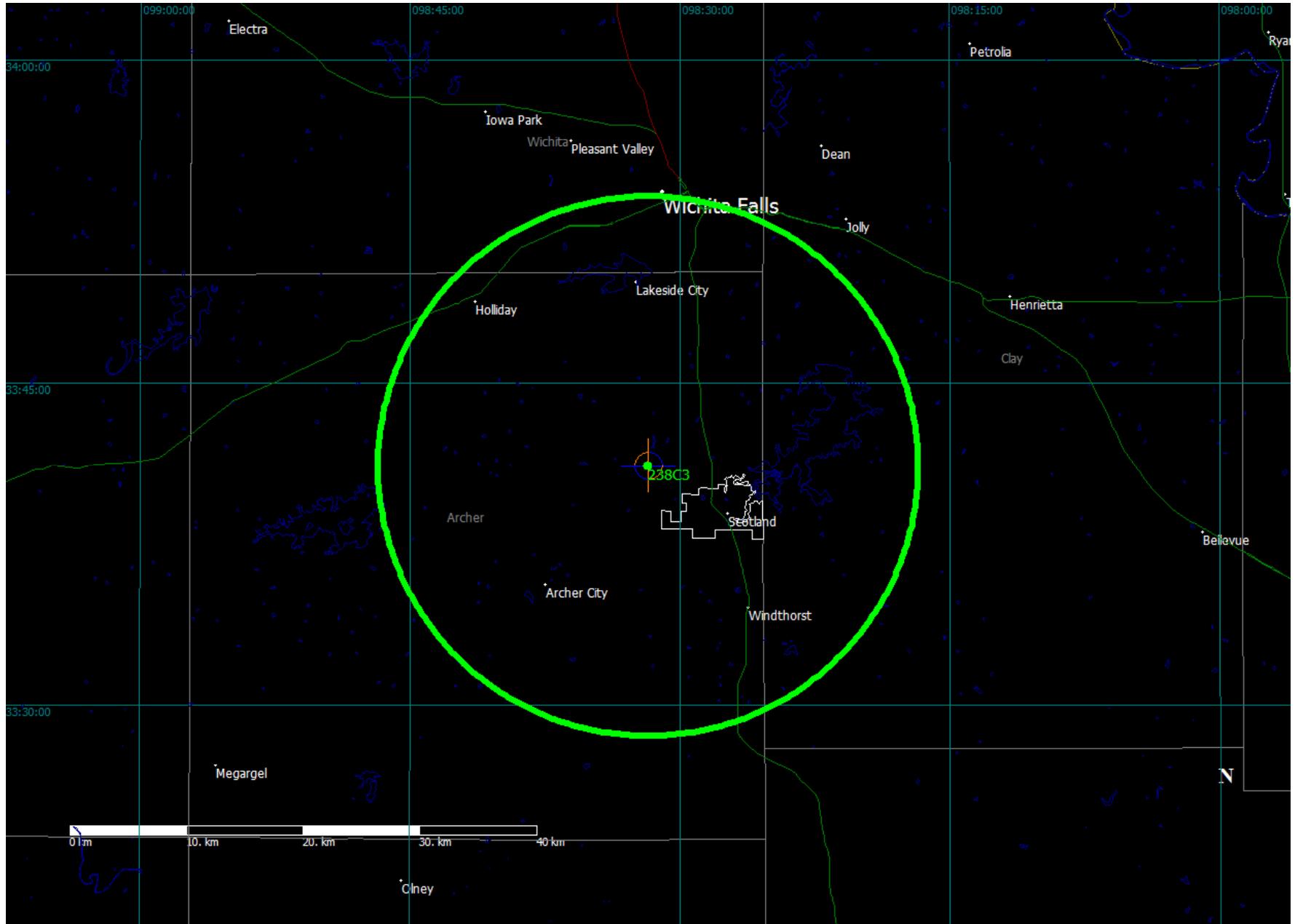
All distances are in km, all bearings are in degrees referenced to true North. Proposed Coordinates: 33°N 41' 08'' X 98°W 31' 43''

Proposed Channel: 238C3 [95.5 MHz]

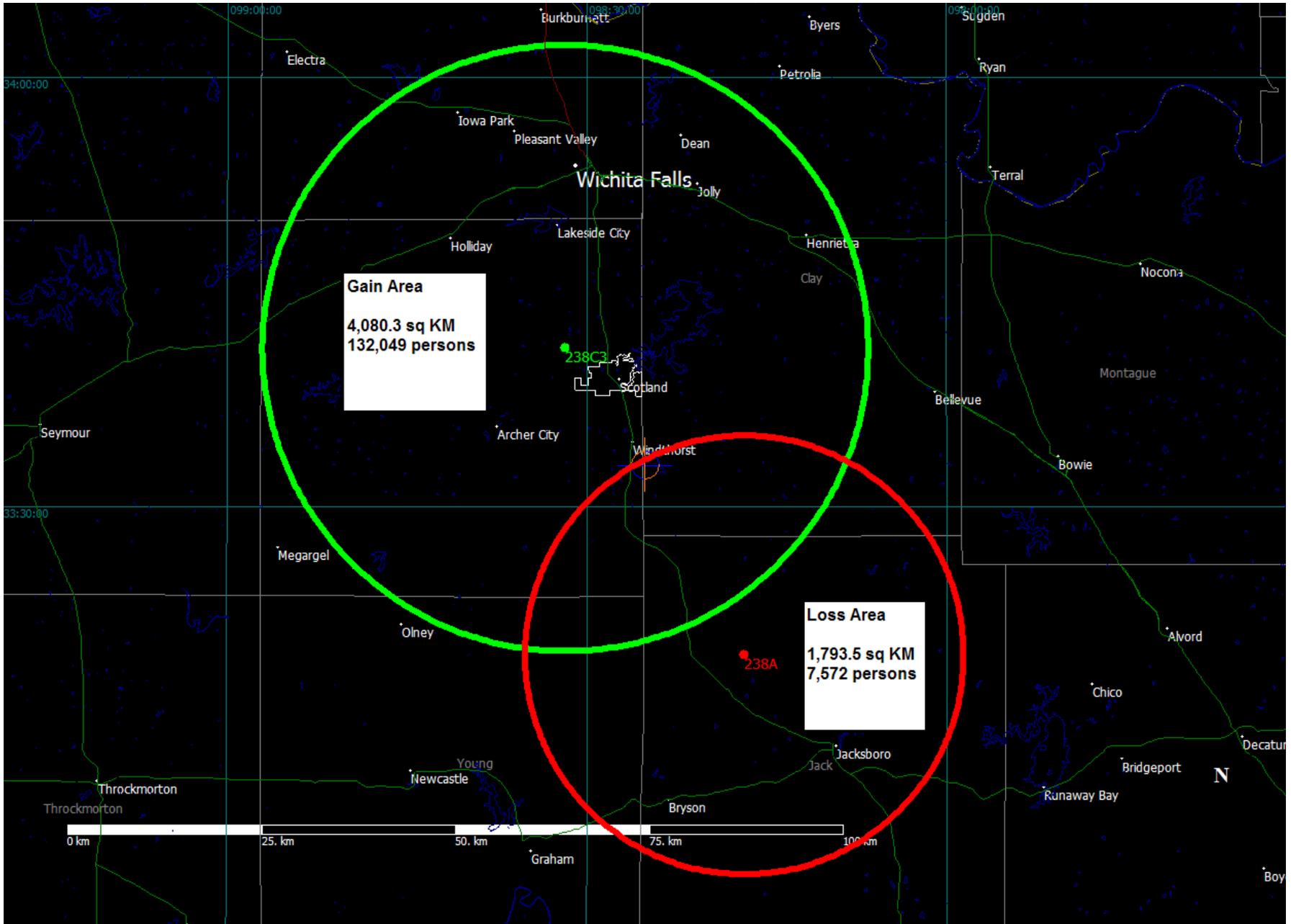
Channel	Class	Callsign	Status	State	City	Distance	Bearing	Min Sep	Clearance
238 : 95.5 MHz	A	KJKB	LIC	TX	JACKSBORO	45.9	150	142	(96.1)
<b>Instant application, change of class and city of license to Scotland, TX</b>									
240 : 95.9 MHz	C*	STAT:ADD	ADD	TX	MINERAL WELLS	80.2	153	96	(15.8)
<b>The proposed rule making for Mineral Wells, TX has been withdrawn.</b>									
239 : 95.7 MHz	C1	KKAJ-FM	LIC	OK	ARDMORE	132.7	70	144	(11.3)
239 : 95.7 MHz	C1	STAT:RSV	RSV	OK	ARDMORE	132.8	70	144	(11.2)
<b>Contingent application proposes new class, allotment point, and city of license for KKAJ-FM. See Davis, OK below.</b>									
239 : 95.7 MHz	C1	STAT:ADD	ADD	OK	HEALDTON	137.7	67	144	(6.3)
239 : 95.7 MHz	C1	STAT:ADD	ADD	OK	HEALDTON	137.7	67	144	(6.3)
<b>The proposed rule making for Healdton, OK was dismissed. [DA-031533, May 8, 2003]</b>									
237 : 95.3 MHz	C3	KMGZ	LIC	OK	LAWTON	99.0	3	99	(0.0)
240 : 95.9 MHz	C0	<b>KFWR CONTINGENT APPLICATION</b>	ADD	TX	JACKSBORO	87.0	147	87	0.0
239 : 95.7 MHz	C3	<b>KYBE CONTINGENT APPLICATION</b>	ADD	OK	FREDERICK	99.1	322	99	0.1
238 : 95.5 MHz	A	STAT:ADD	ADD	OK	SPRINGER	144.7	59	142	2.7
235 : 94.9 MHz	C2	KOLI	LIC	TX	ELECTRA	61.5	316	56	5.5
292 : 106.3 MHz	C2	KBZS	LIC	TX	WICHITA FALLS	22.8	351	17	5.8
239 : 95.7 MHz	C2	STAT:VAC	VAC	TX	RULE	125.9	246	117	8.9
238 : 95.5 MHz	A	STAT:VAC	VAC	TX	CARBON	159.4	190	142	17.4
237 : 95.3 MHz	C3	KBTY	CP	TX	BENJAMIN	118.8	275	99	19.8
237 : 95.3 MHz	C3	STAT:VAC	VAC	TX	BENJAMIN	119.4	273	99	20.4
238 : 95.5 MHz	C2	KWEY-FM	LIC	OK	CLINTON	199.7	348	177	22.7
240 : 95.9 MHz	C1	KFWR	LIC	TX	MINERAL WELLS	118.3	163	76	42.3
240 : 95.9 MHz	C3	KYBE	CP	OK	FREDERICK	85.4	323	43	42.4
237 : 95.3 MHz	C2	KHYI	LIC	TX	HOWE	163.3	98	117	46.3
240 : 95.9 MHz	A	KYBE	LIC	OK	FREDERICK	91.0	329	42	49.0
239 : 95.7 MHz	C2	<b>KKAJ CONTINGENT APPLICATION</b>	ADD	OK	DAVIS	168.6	63	117	51.6

KJKB, Scotland, TX  
Exhibit E, Figure 8A

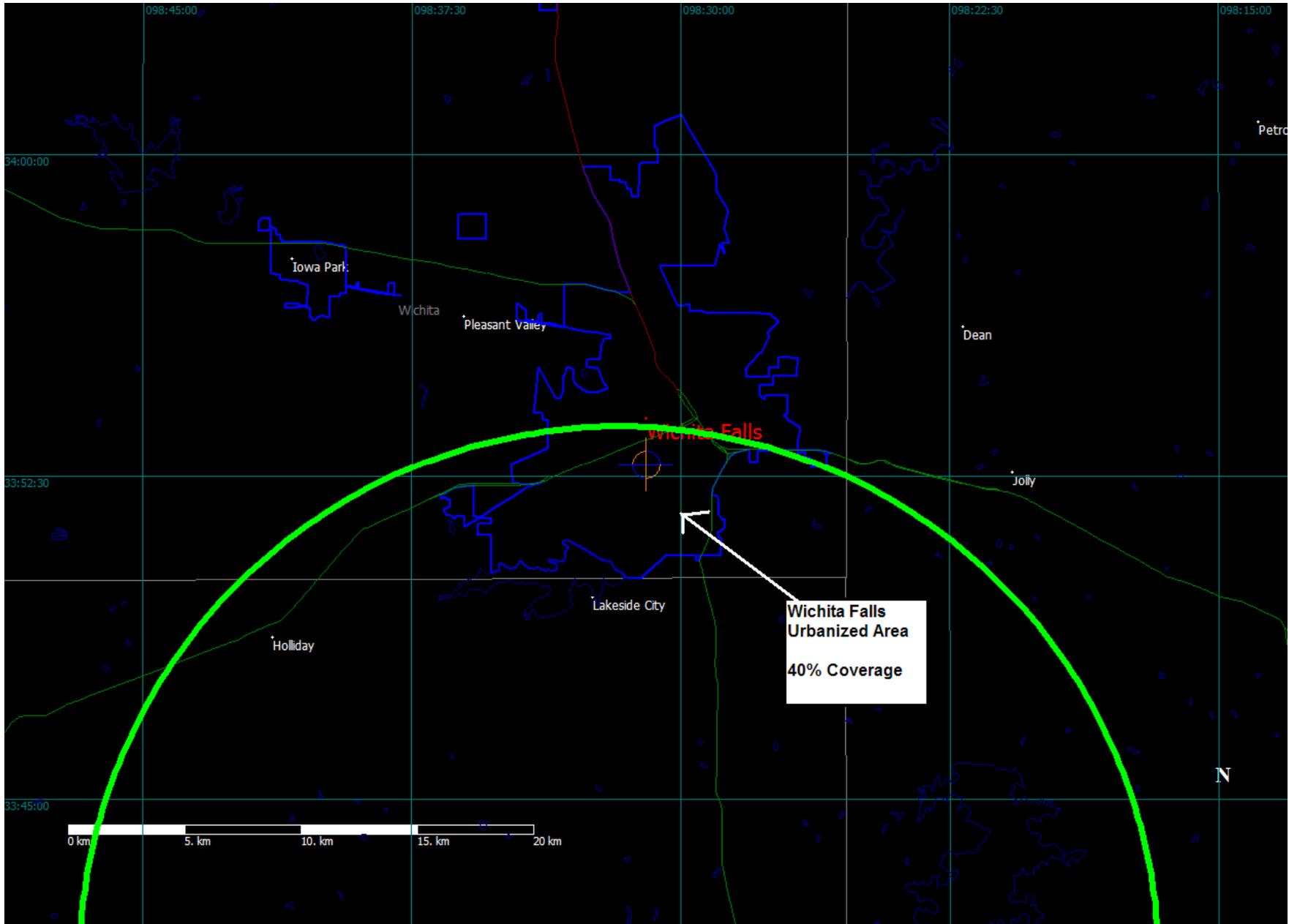
Proposed City of License Coverage, Channel 238C3



Scotland, TX  
Exhibit E, Figure 8GL, Gain/Loss



Scotland, TX  
*Exhibit E, Figure 8T, Tuck Analysis*



***Exhibit E Table 8R***  
***KJKB Jacksboro, TX Remaining Service***

Proponents propose to change the location of operating station KJKB, Jacksboro, TX. Exhibit E, Figure 8 GL, depicts the loss area that will be created by the change.

Exhibit E Figures 8R1-8 consist of maps depicting the remaining stations serving the loss area. Figures 2R1-8 depicts the contours of a unique group of stations, which collectively serve 100 percent of the loss area. No station is represented on more than one map. Therefore, the eight maps, collectively, demonstrate that the entire loss area will continue to be well served by at least 8 other fulltime stations. Most of the area will be served by many more than 8 stations after the proposed changes to KJKB.

Exhibit E Figure 8R1

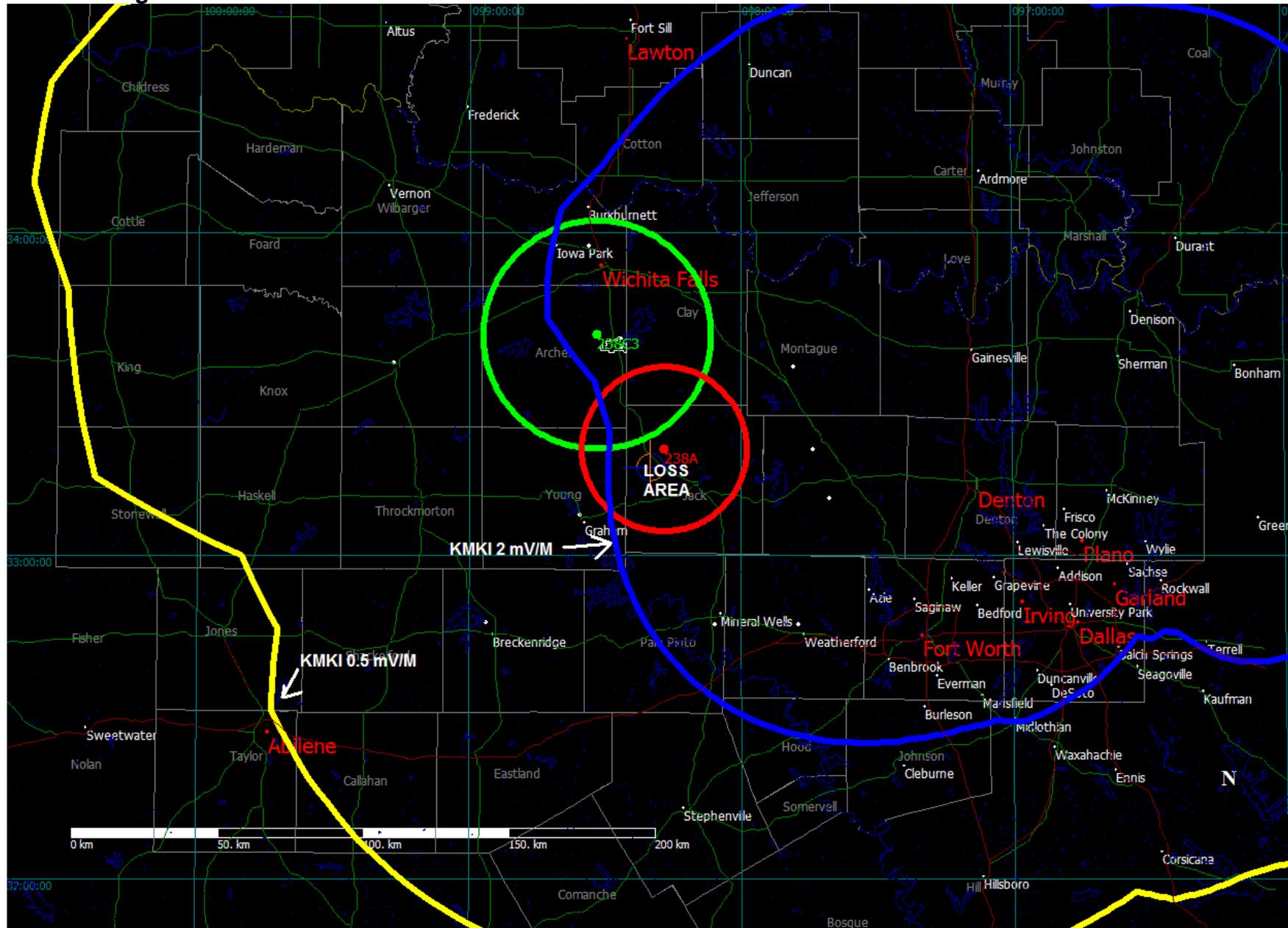


Exhibit E Figure 8R2

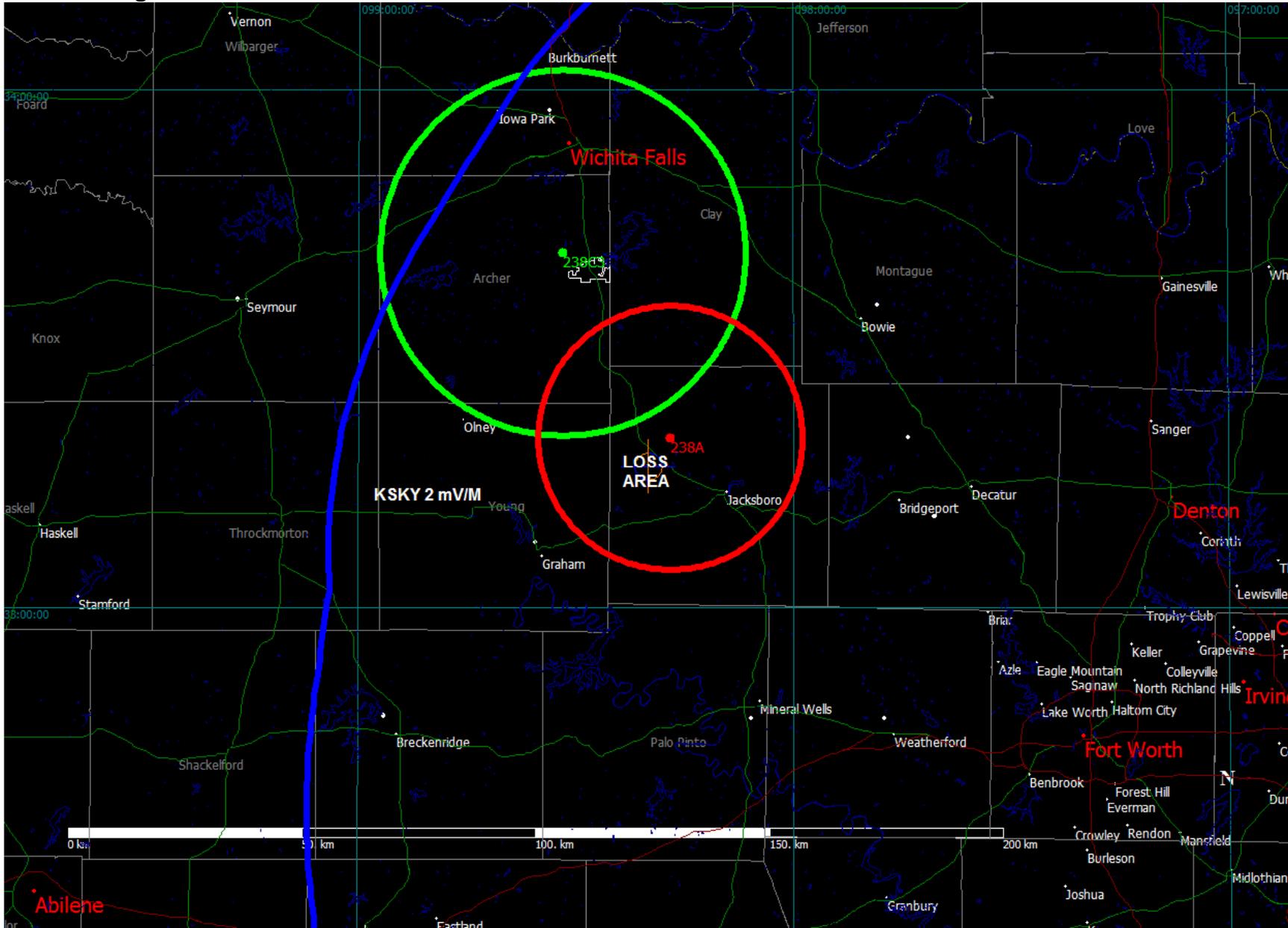


Exhibit E Figure 8R3

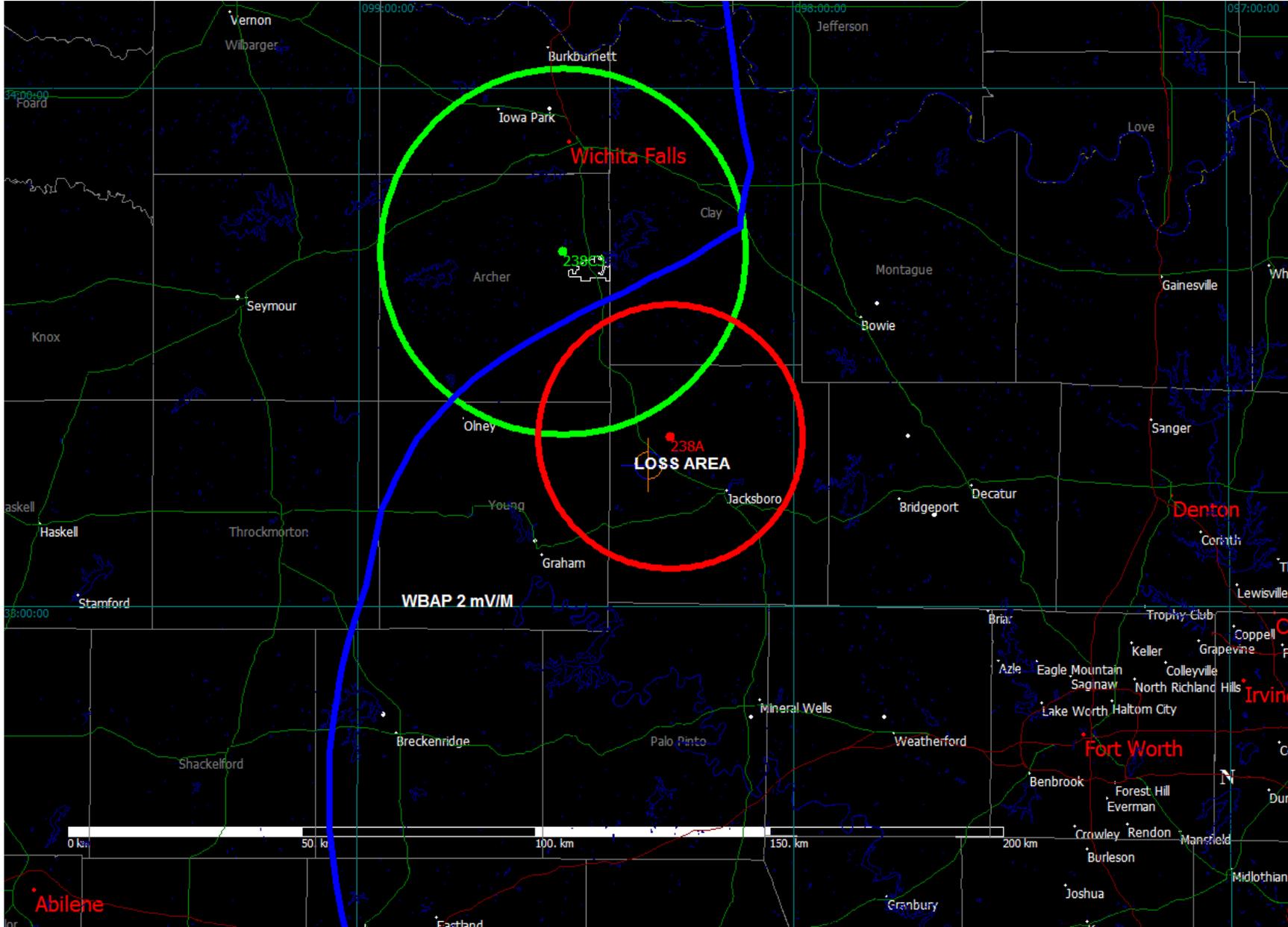


Exhibit E Figure 8R4

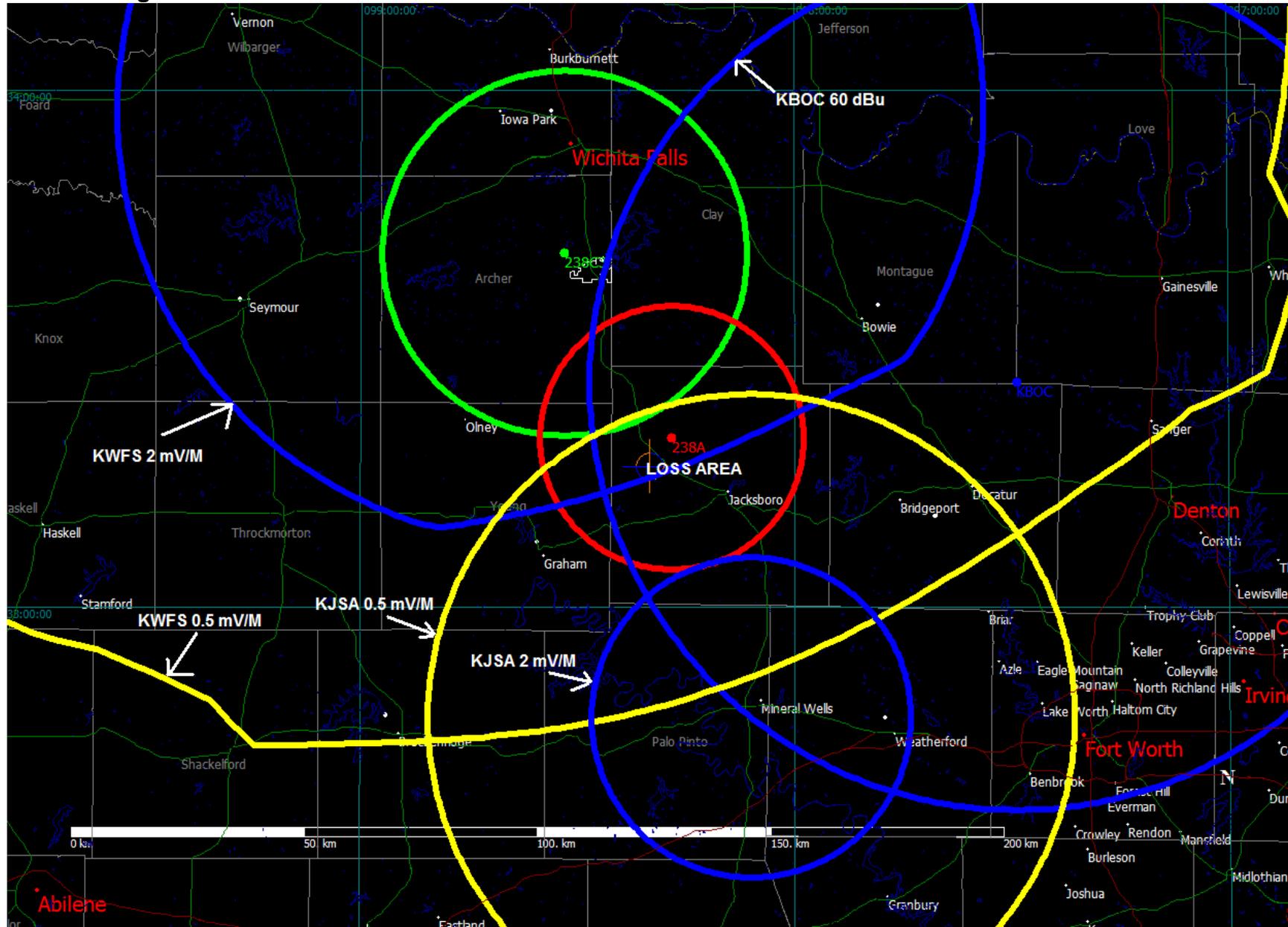


Exhibit E Figure 8R5

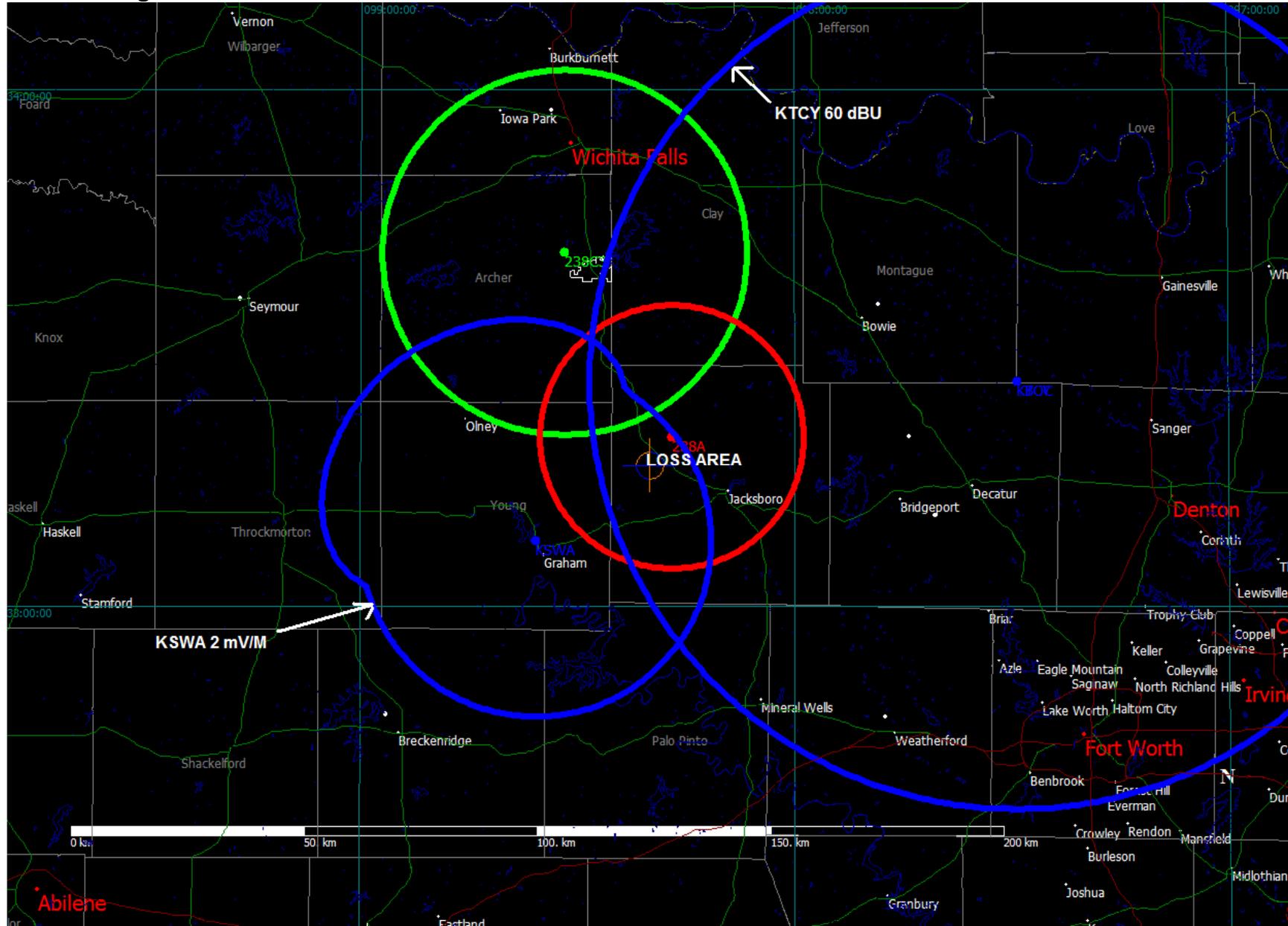


Exhibit E Figure 8R6

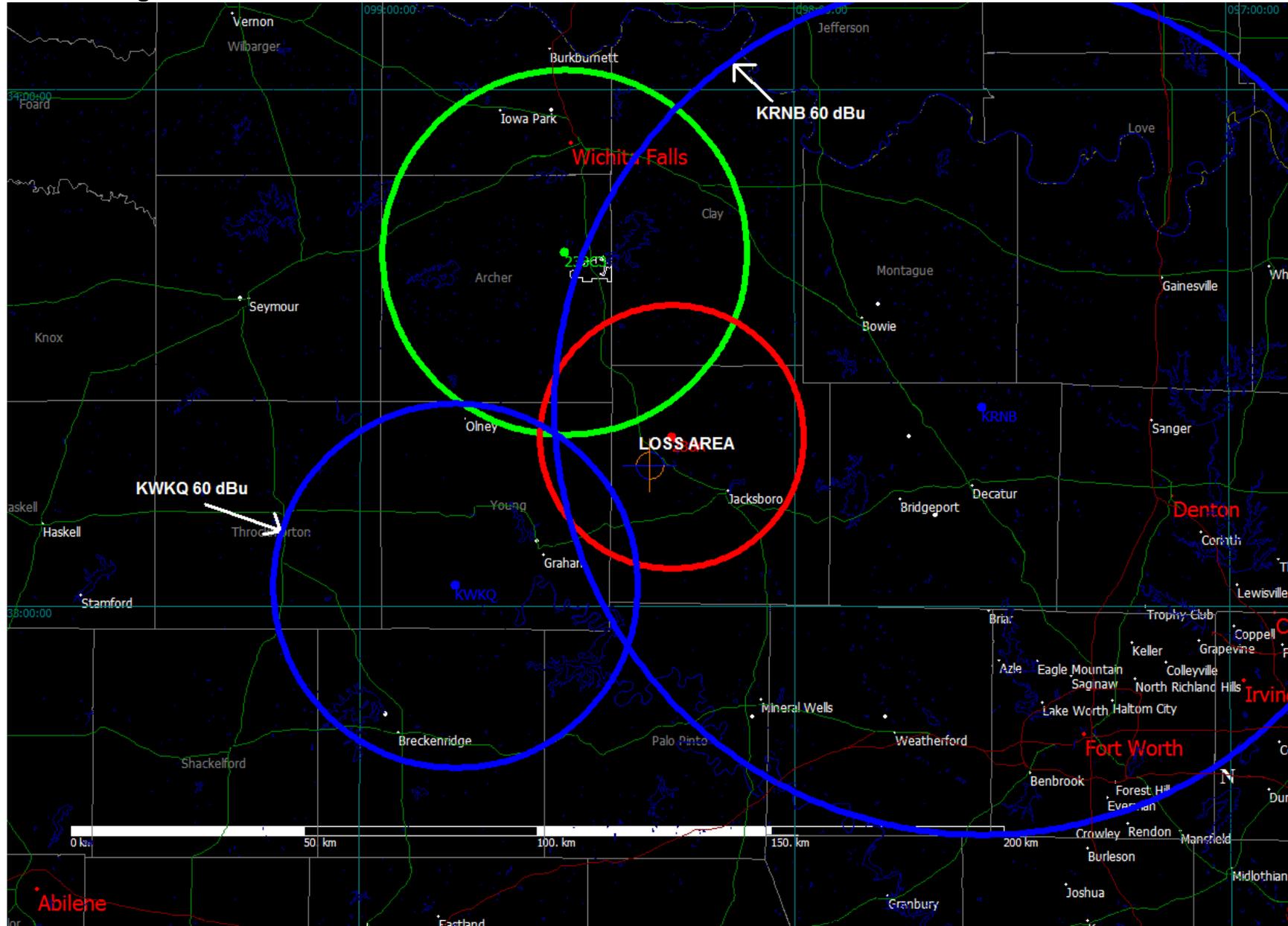


Exhibit E Figure 8R7

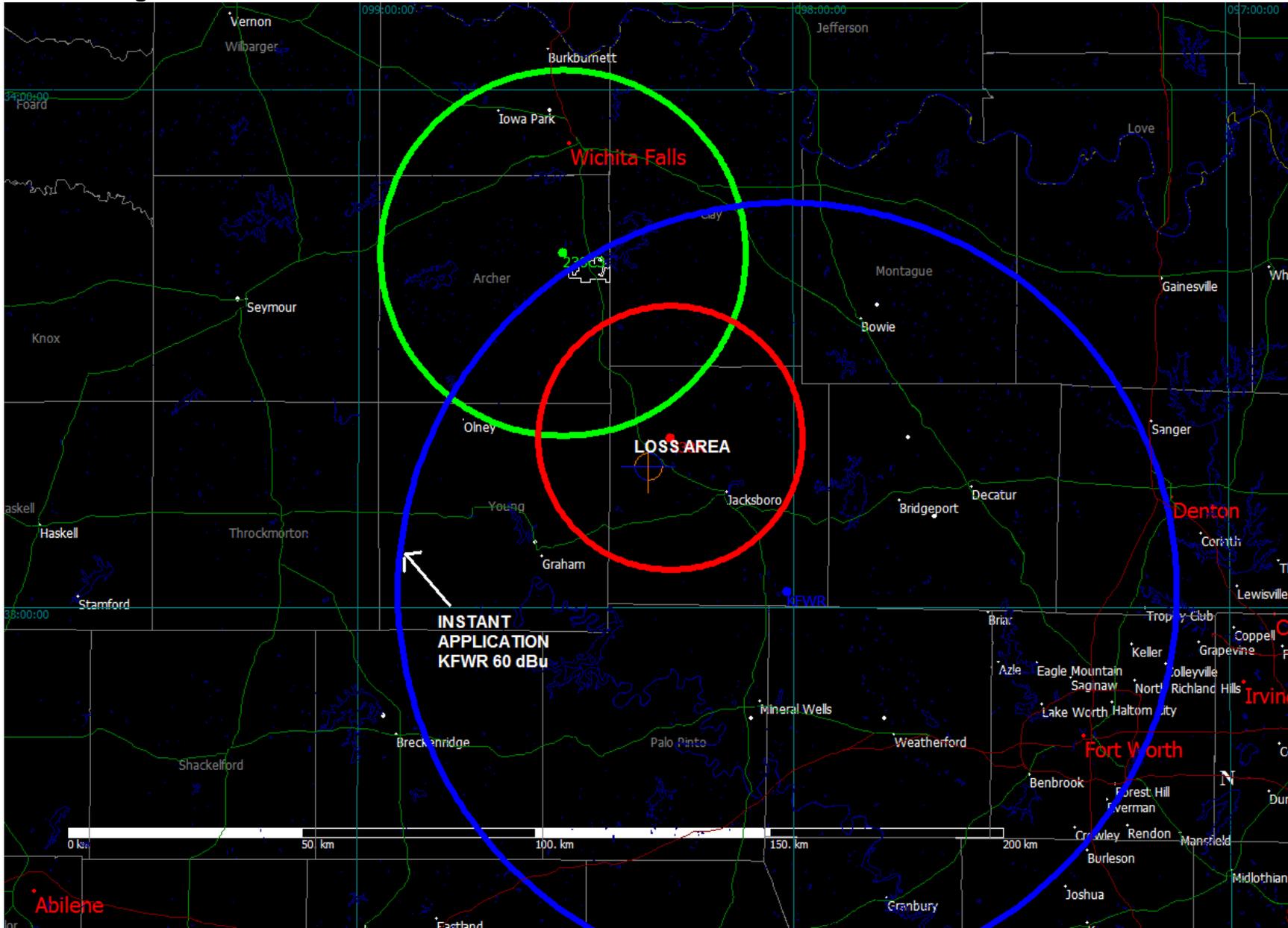


Exhibit E Figure 8R8

