

ENGINEERING EXHIBIT

Application for Digital Television Station Construction Permit

prepared for

North Texas Public Broadcasting, Inc.

KERA-TV Dallas, TX

Facility ID 49324

Ch. 14 975 kW 514 m

North Texas Public Broadcasting, Inc. (“NTPB”) is the licensee of television station KERA-TV, Channel 14, Dallas, TX, Facility ID 49324 (BMLEDT-20060223ABB). KERA-TV is licensed to operate with 474 kW effective radiated power (“ERP”) at an antenna height above average terrain (“HAAT”) of 500 meters with a nondirectional antenna. *NTPB* proposes herein to relocate the KERA-TV facility to another site. A waiver is requested of the FCC’s April 5, 2013 freeze on contour extensions.

The tower owner of KERA-TV’s licensed site has advised *NTPB* that the tower will be dismantled and the land developed for other purposes. The proposed KERA-TV facility will employ an existing shared tower structure located 3.9 km from the licensed site. The proposed tower is associated with FCC Antenna Structure Registration number 1059733 and is currently utilized by other full-power television and FM radio stations. No change to the overall structure height will result from this proposal.

As proposed herein, KERA-TV will operate at 975 kW ERP and 514 meters HAAT with a directional antenna. The proposed antenna is an elliptically polarized ERI model ATW21H3-ESC170-14H (30 percent vertical polarization). The maximum horizontally polarized ERP is 975 kW and the maximum vertically polarized ERP is 292.5 kW. The vertically polarized component will not exceed the horizontally polarized component at any azimuth.

The directional antenna's azimuthal patterns are depicted in Figures 1 and 1A for horizontal and vertical polarization, respectively. The antenna's elevation pattern is depicted in Figures 2 and 2A.

A map is supplied as Figure 3 which depicts the standard predicted coverage contours. This map includes the location of Dallas, KERA-TV's principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1) as the entire principal community will be encompassed by the 48 dBμ contour.

Population and Coverage

The proposed KERA-TV facility's predicted service population provides a 99.5 percent match of the MB Docket 87-268 Seventh Report and Order Appendix B facility, as detailed in the following table.

Digital Television Population Summary

Population Summary (2000 Census) OET Bulletin 69 method	Appendix B	Proposed
Within Noise Limited Contour	5,463,243	5,438,627
Not affected by terrain losses	5,462,690	5,438,099
Lost to all interference	0	0
Net DTV Service	5,462,690	5,438,099
Match of Appendix B	---	99.55%

Contour Extension – Waiver Request

The FCC's Public Notice¹ of April 5, 2013 (DA 13-618) imposed limitations on the filing and processing of full power station applications that propose an increase in their authorized noise-limited service contour ("NLSC"). As proposed herein, the KERA-TV NLSC (41 dBμ) will be extended beyond the currently authorized contour location in some directions.

¹"Media Bureau Announces Limitations on the Filing and Processing of Full Power and Class A Television Station Modification Applications, Effective Immediately, and Reminds Stations of Spectrum Act Preservation Mandate," DA 13-618, Public Notice, released April 5, 2013.

DA 13-618 contemplates waiver of the contour extension limitation for certain cases by stating:

The Bureau will consider, on a case-by-case basis, requests for waiver of the filing limitation imposed by this Public Notice when a modification application is necessary or otherwise in the public interest for technical or other reasons to maintain quality service to the public, such as when zoning restrictions preclude tower construction at a particular site or when unforeseen events, such as extreme weather events or other extraordinary circumstances, require relocation to a new tower site.

For the case at hand, KERA-TV's operation at its licensed site must cease because the tower will be dismantled. The tower owner has advised *NTPB* that the land at the current site will be developed for other purposes. The licensed site will therefore be unavailable to *NTPB* for reasons beyond its control and KERA-TV must change sites.

As proposed herein KERA-TV will be relocated to an existing tower structure nearby to the licensed site. The proposed site is shared with nine other full power television and eight FM radio stations.² The proposed site is 3.9 km south of the licensed site. A directional antenna system is proposed which has suppression to the south (the direction of the site move) and avoids losses in the opposite direction (to the north).

To minimize the areas of service loss there will be an unavoidable contour extension as shown on Figure 4. Although there would be extension of the NLSC in some directions, the total area within the proposed KERA-TV NLSC does not exceed that of the licensed KERA-TV. The proposed KERA-TV NLSC would encompass 36,022 square km which does not exceed the 36,033 square km within the licensed KERA-TV NLSC.

² Television stations licensed to employ the same site as that proposed for KERA-TV are KTVT(TV) Ch. 19 Fort Worth TX, KTXA(TV) Ch. 29 Fort Worth TX, KDAF(TV) Ch. 32 Dallas TX, KDFI(TV) Ch. 36 Dallas TX, KPXD-TV Ch. 42 Arlington TX, KDTN(TV) Ch. 43 Denton TX, KDTX-TV Ch. 45 Dallas TX, KTXD-TV Ch. 46 Greenville TX, and KSTR-DT Ch. 48 Irving TX. FM stations KERA(FM) Ch. 211C0 Dallas TX, KLNO(FM) Ch. 231C Fort Worth TX, KBFB(FM) Ch. 250C Dallas TX, KLUV(FM) Ch. 254C Dallas TX, KJKK(FM) Ch. 262C Dallas TX, KJKK(FM) Ch. 262C Dallas TX, KVIL(FM) Ch. 279C Highland Park – Dallas TX, and KRLD-FM Ch. 287C Dallas TX have licensed auxiliary antenna operations at this tower.

A summary of the area and population for the licensed and proposed KERA-TV facilities is provided below.

KERA-TV Coverage Contour Gain-Loss		
41 dBμ Contour (NLSC)	Area (sq. km)	Population (2000 Census)
Licensed KERA-TV	36,033.0	5,371,908
Proposed KERA-TV	36,022.1	5,395,815
Loss Area	2,117.1	19,802
Gain Area	2,106.2	43,709

The loss population of 19,802 persons represents 0.37 percent of the licensed facility's population and is outweighed over two-fold by the gain population of 43,709 persons. The contour comparison map of Figure 4A shows that the entire loss area is considered "well served" since at least five other television stations provide contour overlap. The §73.622(e) service contours from 18 other full service digital television stations overlap portions of the loss area (listed in Table 1), where nearly all of the loss area is within the service contour of at least eight other stations and all of the loss area is within the service contour of at least five other stations. KERA-TV is not an affiliate of any of the four major television networks.

A waiver of the DA 13-618 contour extension limitations is justified in this case for the reasons stated above. In sum, KERA-TV must relocate due to extraordinary circumstances beyond *NTPB*'s control, the new site is an existing tower in close proximity to the licensed site, a directional antenna will be employed to minimize loss of service, and the total area within the proposed NLSC does not exceed that of the licensed facility.

Allocation and Interference

The proposed facility expands the KERA-TV service contour beyond that established by Appendix B values. A detailed interference study per OET Bulletin 69³ shows that the proposal

³FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). The implementation of OET-69 for this study followed the guidelines of OET-69 as specified therein. A cell size of 2 km was employed. Comparisons of various results of this computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation.

complies with the 0.5 percent limit of new interference caused to pertinent nearby digital television and Class A television stations. The interference study output report is provided as Table 2.

The proposed 975 kW ERP exceeds the maximum allowed for the antenna HAAT of 514 meters currently permitted by §73.622(f)(8)(i). Section 73.622(f)(5) permits the maximum ERP to be exceeded in order to provide the same geographic coverage area as the largest station within the same market. The total area within the proposed KERA-TV 41 dBμ contour is 36,022 square kilometers, which does not exceed the 46,664 square kilometers within the 36 dBμ contour area of WFAA (Ch. 8 Dallas, TX, BLCDT-20110110AAH). A coverage contour comparison map is provided as Figure 5. Thus, the ERP specified herein is in compliance with §73.622(f)(5) of the Commission's Rules.

The nearest FCC monitoring station is 572 km distant at Kingsville, TX. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with "quiet" zones specified in §73.1030(a) and (b). There are no authorized AM stations within 3.2 kilometers of the site. The site location is beyond the border areas requiring international coordination.

Human Exposure to Radiofrequency Electromagnetic Field

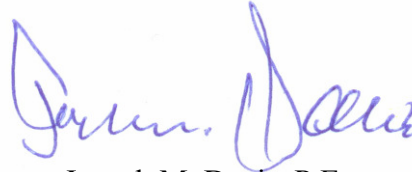
The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. Based on OET-65 equation (10), and considering 10 percent antenna relative field in downward elevations (pattern data shows less than 10 percent relative field at angles 10 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $2.0 \mu\text{W}/\text{cm}^2$, which is 0.6 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 the proposal 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 from RF electromagnetic field exposure in excess of FCC guidelines.

This exhibit is limited to the evaluation of exposure to RF electromagnetic field. The proposed transmitting antenna will be installed among existing top-mounted antennas on the candelabra of a support structure which was constructed prior to March 16, 2001. No change in structure height is proposed.

Certification

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.



Joseph M. Davis, P.E.
May 17, 2013

Chesapeake RF Consultants, LLC
207 Old Dominion Road
Yorktown, VA 23692
703-650-9600

List of Attachments

Figure 1, 1A	Antenna Azimuthal Patterns
Figure 2, 2A	Antenna Elevation Pattern
Figure 3	Proposed Coverage Contours
Figure 4	Coverage Contour Comparison
Figure 4A	Loss Area Alternative Services
Figure 5	Maximum ERP per §73.622(f)
Table 1	Alternative Television Services in Loss Area
Table 2	OET Bulletin 69 Interference Study
Form 340	Saved Version of Engineering Sections from FCC Form at Time of Upload

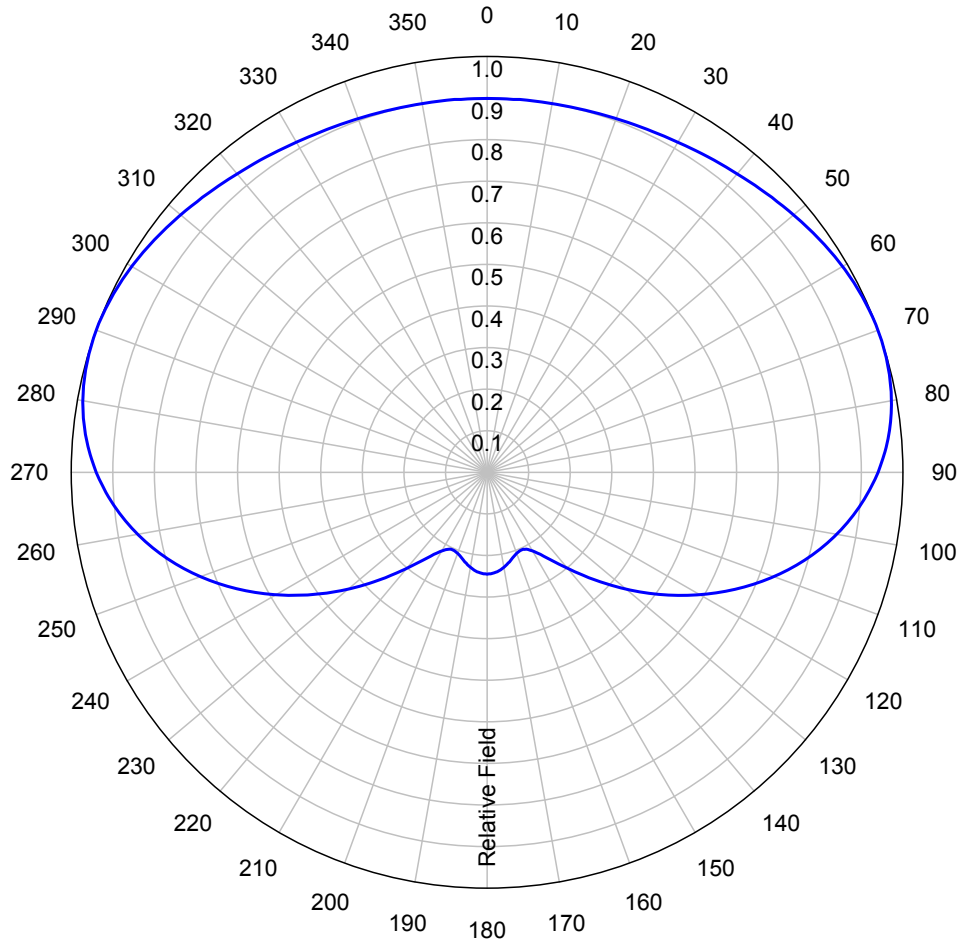
This material was entered May 17, 2013 for filing electronically. Since the FCC's electronic filing system may be accessed by anyone with the applicant's account number and password, and electronic data may otherwise be altered in an unauthorized fashion, we cannot be responsible for changes made subsequent to our entry of this data and related attachments.

AZIMUTH PATTERN

Type: ATW-C170
 Directivity: Numeric dBd
 1.70 2.30
 Peak(s) at: _____

Channel: 14
 Location: Dallas, Texas
 Polarization: Horizontal

Note: Pattern shape and directivity may vary with channel and mounting configuration.



Preliminary, subject to final design

ELECTRONICS RESEARCH, INC. **ERI**

Figure 1
Antenna Azimuthal Pattern
Horizontal Polarization
KERA-TV Dallas, TX
Facility ID 49324
Ch. 14 975 kW 514 m

prepared for
North Texas
Public Broadcasting, Inc.

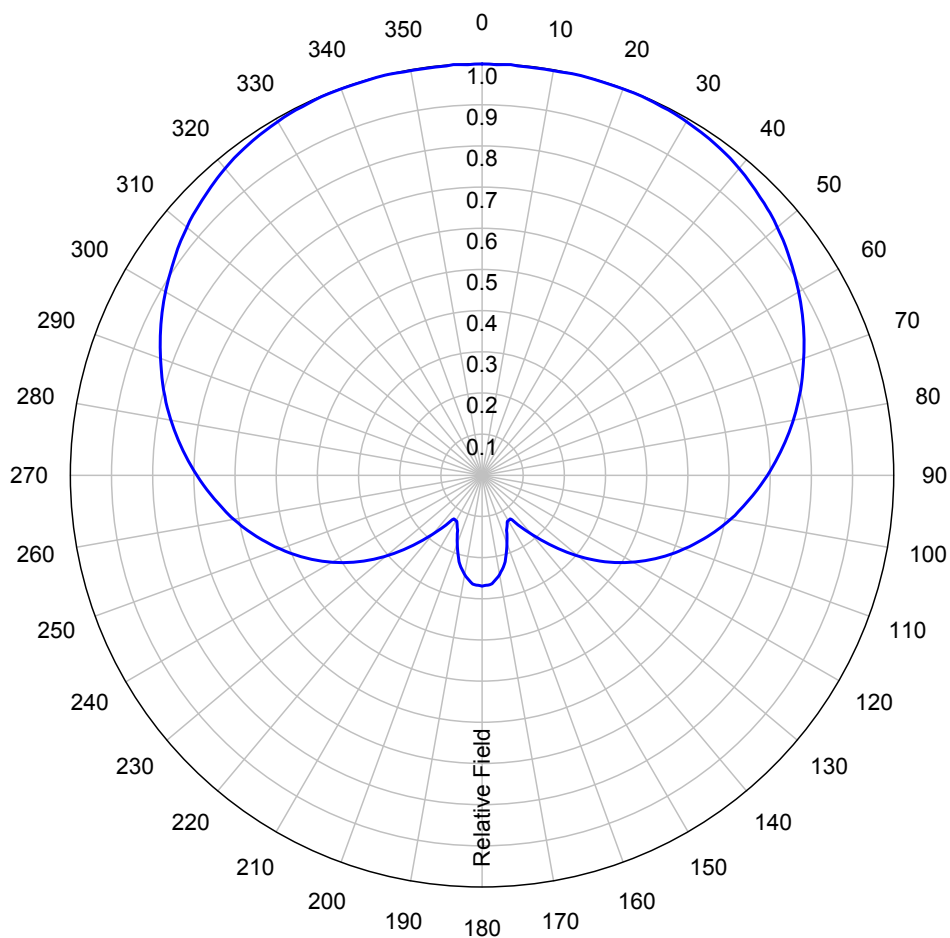
May, 2013



AZIMUTH PATTERN

Type: ATW-V20
Numeric 2.00 dBd 3.01
Directivity:
Peak(s) at:

Channel: 14
Location: Dallas, Texas
Polarization: Vertical
Note: Pattern shape and directivity may vary with
channel and mounting configuration.



Preliminary, subject to final design and review.

ELECTRONICS RESEARCH, INC. **ERI**



Figure 1A
Antenna Azimuthal Pattern
Vertical Polarization (Ref 30%)
KERA-TV Dallas, TX
Facility ID 49324
Ch. 14 975 kW 514 m

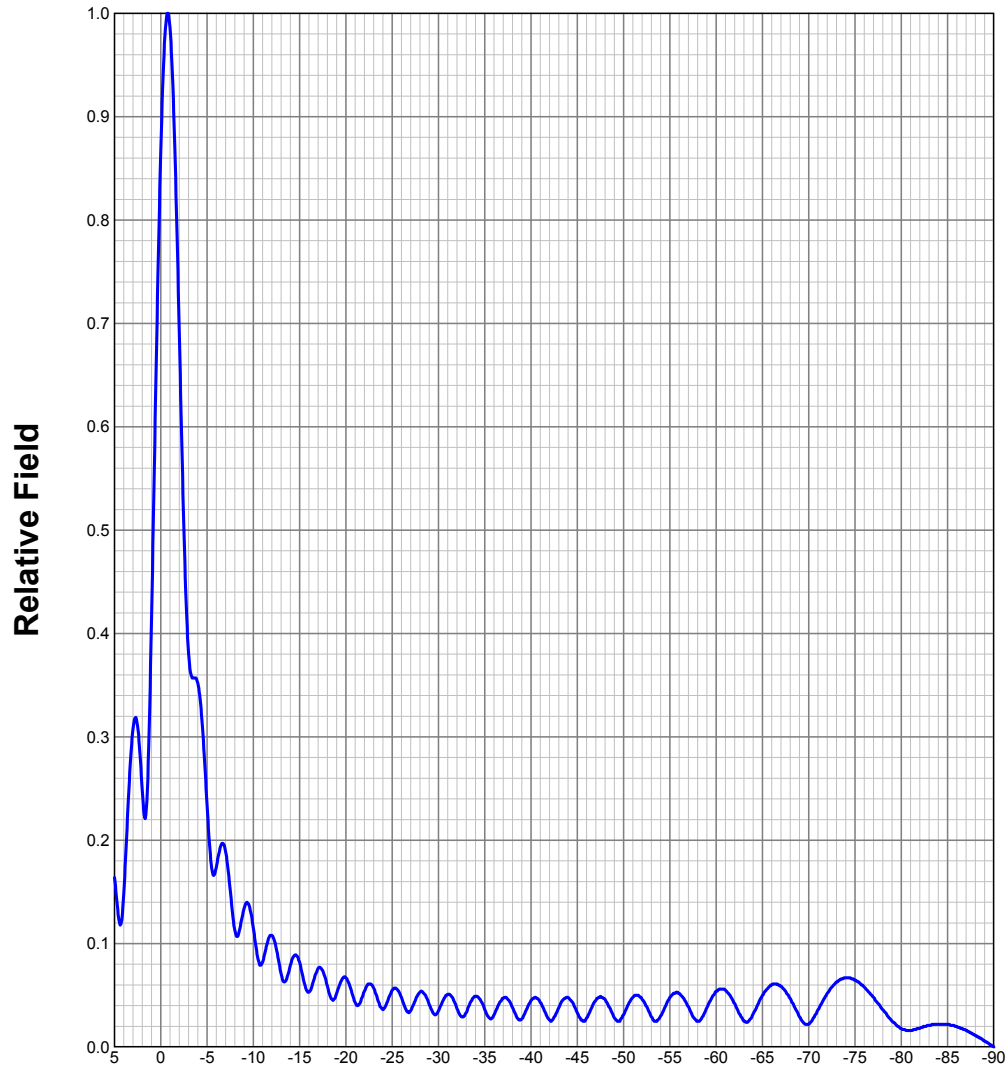
prepared for
North Texas
Public Broadcasting, Inc.

May, 2013

ELEVATION PATTERN

Type: ATW21H3H
 Directivity: Numeric dBd
 Main Lobe: -21.00 -13.22
 Horizontal: -15.79 -11.98

Channel: 14
 Location:
 Beam Tilt: -0.75
 Polarization: Horizontal



Preliminary, subject to final design

ELECTRONICS RESEARCH, INC. ERI

Figure 2
Antenna Elevation Pattern
KERA-TV Dallas, TX
Facility ID 49324
Ch. 14 975 kW 514 m

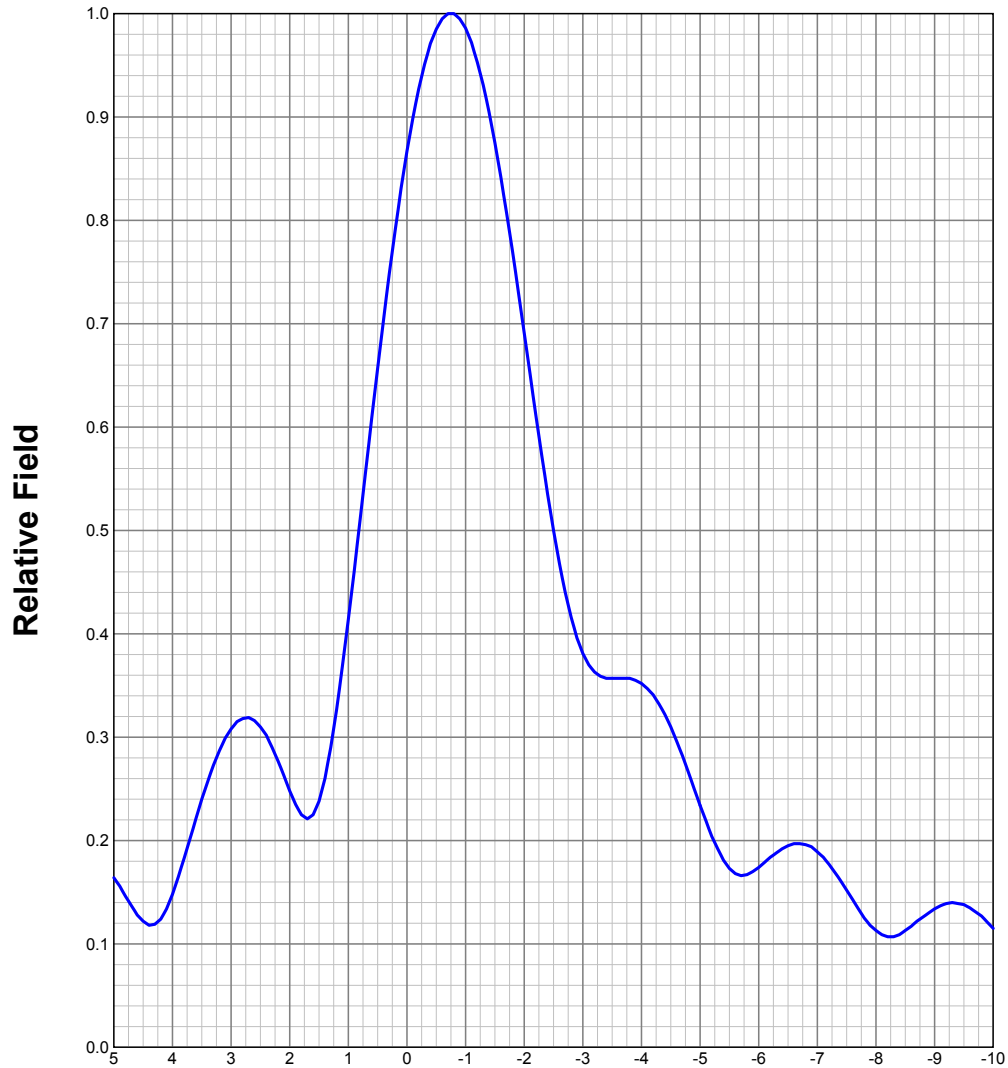
prepared for
North Texas
Public Broadcasting, Inc.

May, 2013



ELEVATION PATTERN

Type:	ATW21H3H		Channel:	14
Directivity:	Numeric	dBd	Location:	Dallas, Texas
Main Lobe:	21.00	13.22	Beam Tilt:	-0.75
Horizontal:	15.79	11.98	Polarization:	Horizontal



Preliminary, subject to final design

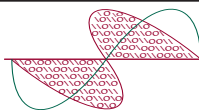
ELECTRONICS RESEARCH, INC. ERI

**Figure 2A - Detail
Antenna Elevation Pattern
KERA-TV Dallas, TX
Facility ID 49324
Ch. 14 975 kW 514 m**

prepared for
**North Texas
Public Broadcasting, Inc.**

May, 2013





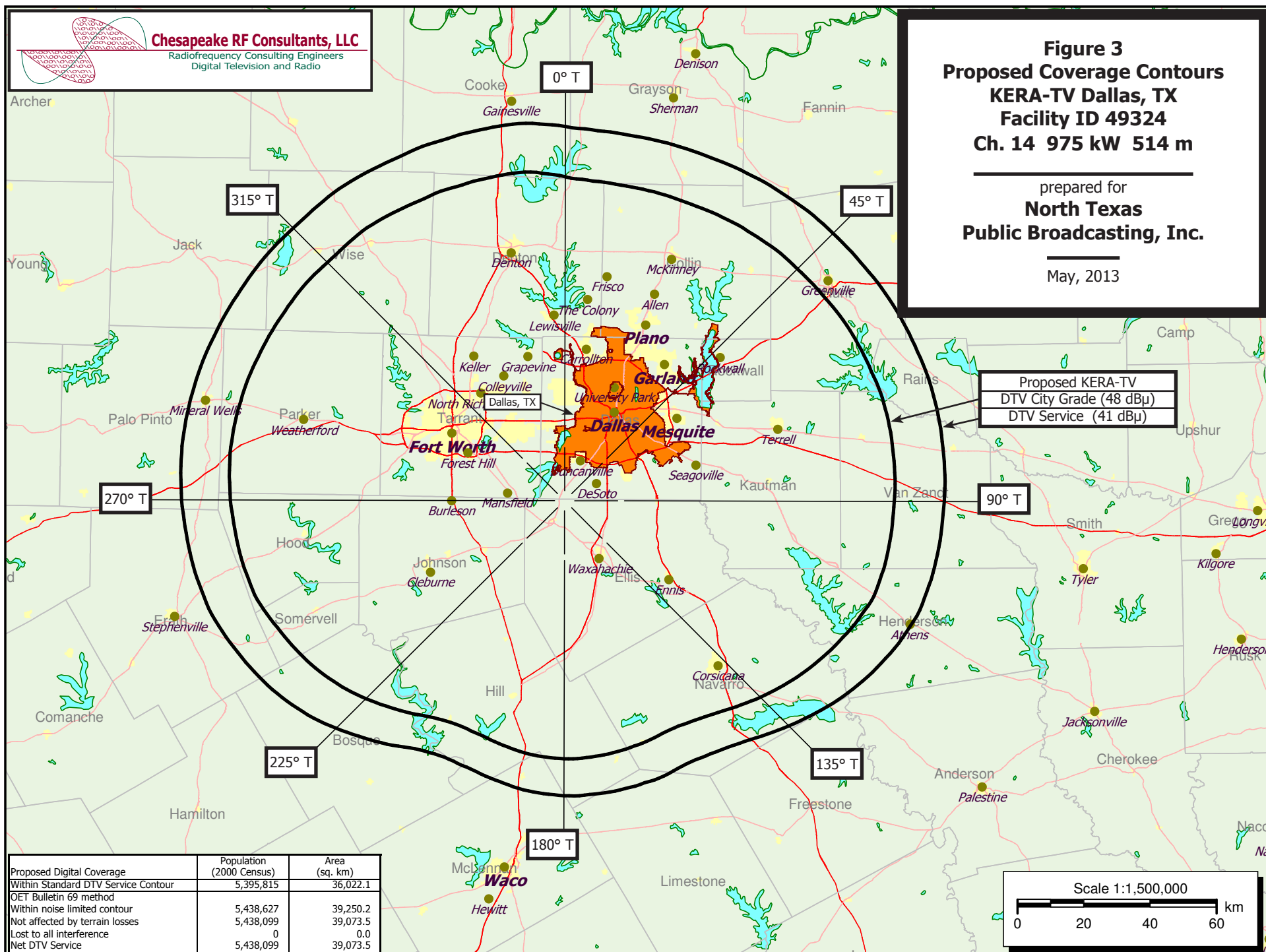
Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

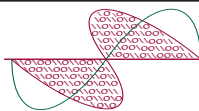
Figure 3
Proposed Coverage Contours
KERA-TV Dallas, TX
Facility ID 49324
Ch. 14 975 kW 514 m

prepared for
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Public Broadcasting, Inc.

May, 2013

Proposed KERA-TV
DTV City Grade (48 dBμ)
DTV Service (41 dBμ)





Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 4
Coverage Contour Comparison
KERA-TV Dallas, TX
Facility ID 49324
Ch. 14 975 kW 514 m

prepared for
North Texas
Public Broadcasting, Inc.

May, 2013

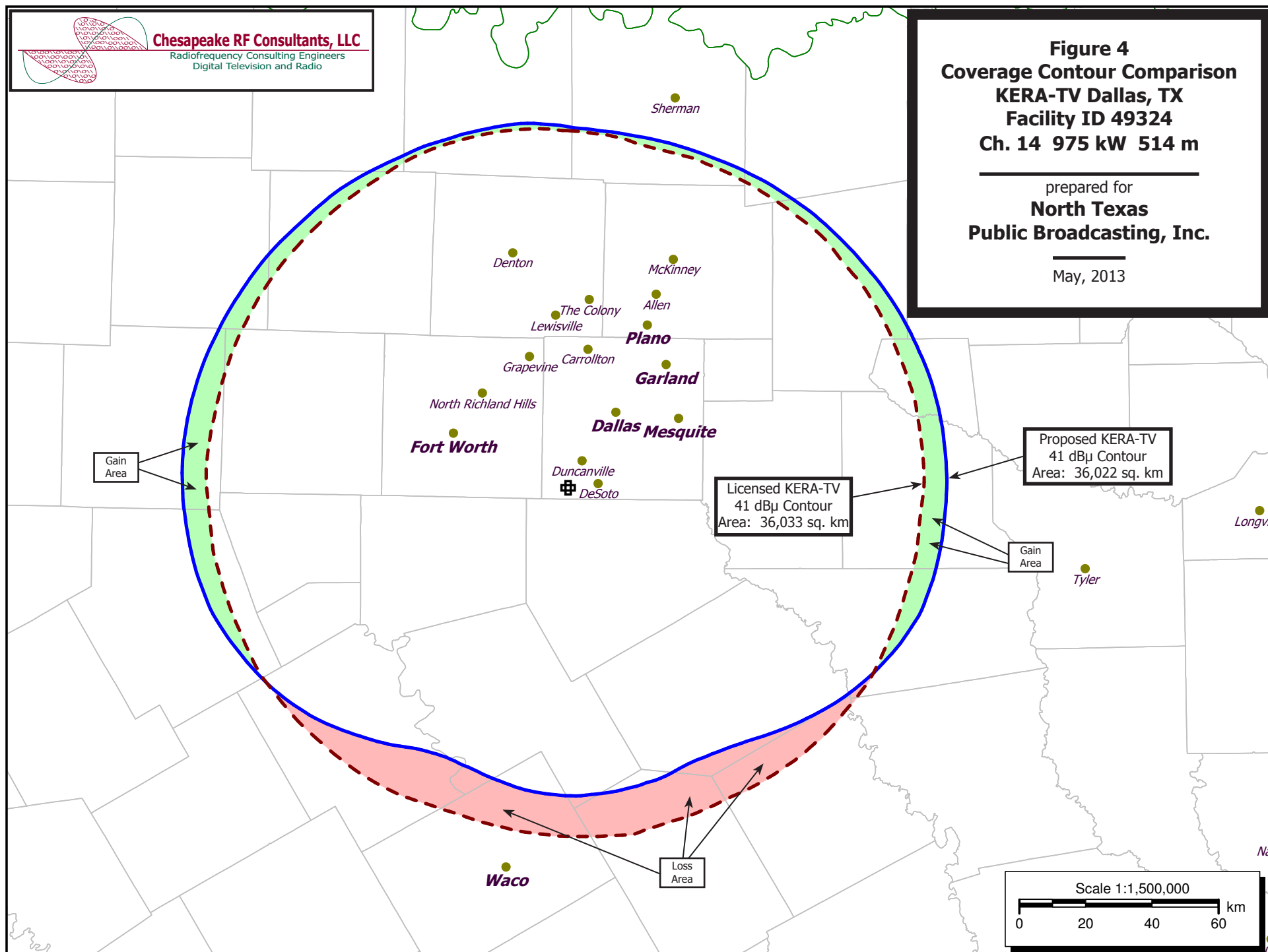
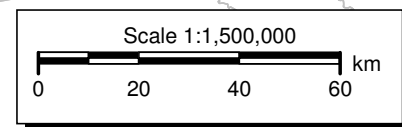
Gain
Area

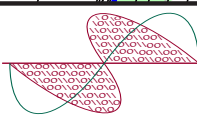
Licensed KERA-TV
41 dBμ Contour
Area: 36,033 sq. km

Proposed KERA-TV
41 dBμ Contour
Area: 36,022 sq. km

Gain
Area

Loss
Area





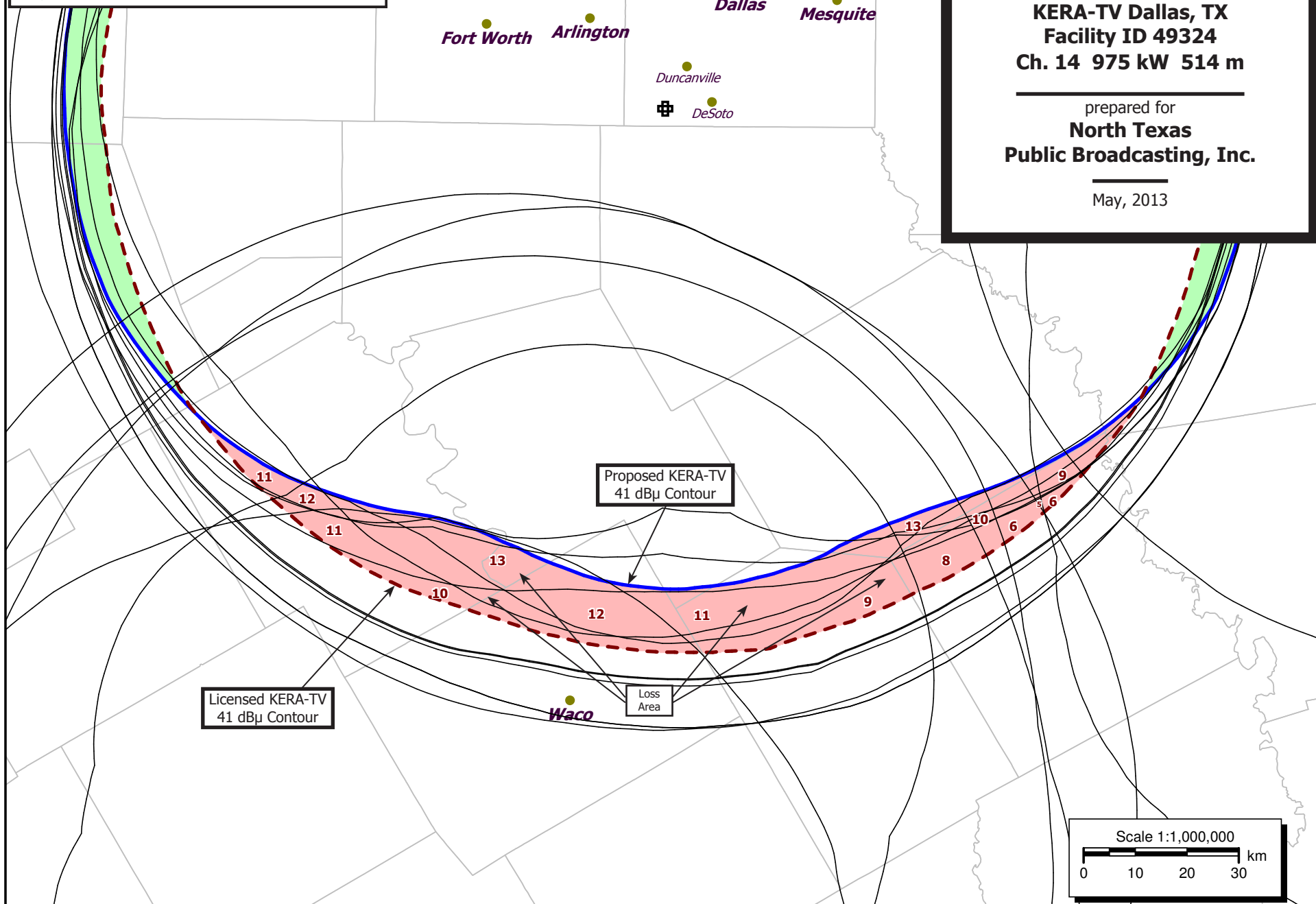
Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

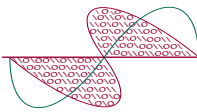
Garland
North Richland Hills
Haltom City
Irving
Dallas
Mesquite
Fort Worth
Arlington
Duncanville
DeSoto

Figure 4A
Loss Area Alternative Services
KERA-TV Dallas, TX
Facility ID 49324
Ch. 14 975 kW 514 m

prepared for
North Texas
Public Broadcasting, Inc.

May, 2013





Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 5
Maximum ERP per §73.622(f)
KERA-TV Dallas, TX
Facility ID 49324
Ch. 14 975 kW 514 m

prepared for
North Texas
Public Broadcasting, Inc.

May, 2013

Proposed KERA-TV
DTV Service Contour 41 dBμ
Area: 36,022 sq. km

WFAA(DT) Ch. 8 Dallas, TX
BLC DT-20110110AAH
DTV Service Contour 36 dBμ
Area: 46,664 sq. km

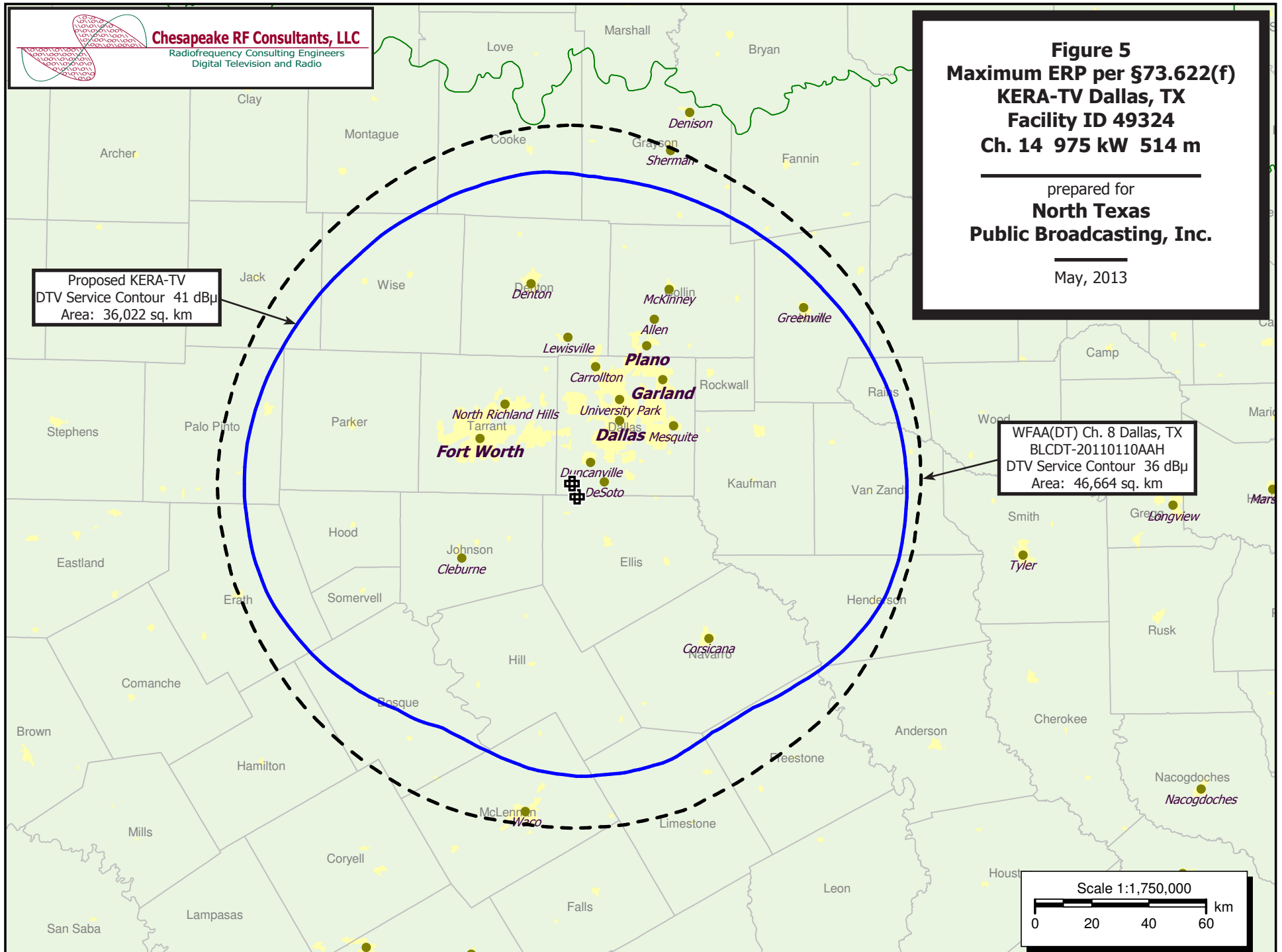
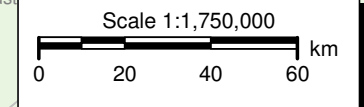


Table 1

**Alternate Television Services in Loss Area: Station Listing
North Texas Public Broadcasting, Inc.**

Callsign	Ch.	Location	File Number
KAZD	39	Lake Dallas, TX	BLCDT-20100924ABM
KCEN-TV	9	Temple, TX	BLCDT-20021010AAB
KDAF	32	Dallas, TX	BLCDT-20010606ABJ
KDFW	35	Dallas, TX	BLCDT-20090508AAB
KDTN	43	Denton, TX	BLEDT-20040301AAH
KDTX-TV	45	Dallas, TX	BLCDT-20041105AON
KETK-TV	22	Jacksonville, TX	BMLCDT-20120516ABW
KLTV	7	Tyler, TX	BLCDT-20090622AAT
KNCT	46	Belton, TX	BLEDT-20100322ACY
KSTR-DT	48	Irving, TX	BLCDT-20100826AFG
KTVT	19	Fort Worth, TX	BLCDT-20121115ABM
KTXA	29	Fort Worth, TX	BLCDT-20110127AAG
KWKT-TV	44	Waco, TX	BLCDT-20090612AIS
KWTX-TV	10	Waco, TX	BLCDT-20110822AEA
KXAS-TV	41	Fort Worth, TX	BLCDT-19981125KG
KXTX-TV	40	Dallas, TX	BLCDT-20021106ABR
KXXV	26	Waco, TX	BLCDT-20050630AFE
WFAA	8	Dallas, TX	BLCDT-20110110AAH

18 Stations Total

Table 2 KERA-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 1 of 3)



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

TW Census data selected 2000
Data Base Selected
/space/software/cdbs/pt_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 05-16-2013 Time: 12:29:27

Record Selected for Analysis

KERA-TV USERRECORD-01 DALLAS TX US
Channel 14 ERP 975. kW HAAT 515. m RCAMSL 00718 m
Latitude 032-32-36 Longitude 0096-57-32
Status APP Zone 2 Border Site number: 01
Dir Antenna Make usr Model AND_C170 Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility (site # 01) does not meet maximum height/power limits
Channel 14 ERP = 975.00 HAAT = 515.

Site number	1		
Azimuth	ERP	HAAT	41.0 dBu F(50,90)
(Deg)	(kW)	(m)	(km)
0.0	787.996	503.3	112.5
45.0	879.011	510.2	114.0
90.0	861.510	516.6	114.2
135.0	133.117	502.9	96.0
180.0	58.524	495.4	89.0
225.0	133.117	519.2	97.3
270.0	861.510	531.7	115.2
315.0	879.011	537.1	115.7

Evaluation toward Class A Stations from site # 01

No Spacing violations or contour overlap
to Class A stations from site # 01

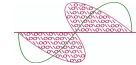
Class A Evaluation Complete

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Table 2 KERA-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 2 of 3)



Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station	Call	City/State	ARN
14	KERA-TV	DALLAS TX	USERRECORD01	

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	K14LM	SAN ANTONIO TX	375.0	LIC	BLTTA 20031022AAB
15	KHPZ-CA	ROUND ROCK TX	225.8	CP	BDFCDTA 20120514ACR

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application Ref. No.
14	K14LM	SAN ANTONIO TX	BLTTA -20031022AAB

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
14	KVAT-LD	AUSTIN TX	119.3	APP	BDISDTL -20090617ACF
14	KERA-TV	DALLAS TX	378.8	PLN	DTVPLN -DTVP0493
14	KNTA-LP	NEW BRAUNFELS TX	49.3	LIC	BLTTL -20071231AAM
15	KMXU-LP	SAN ANTONIO TX	0.0	CP	BDFCDTL -20090909ABX
15	KMXU-LP	SAN ANTONIO TX	0.0	CP MOD	BMP TTL -20060321AES
16	KHCE-TV	SAN ANTONIO TX	29.5	LIC	BLEDT -20110215AEM
18	KNIC-DT	BLANCO TX	28.4	LIC	BLCDT -20091019ADG
21	KXAN-TV	AUSTIN TX	119.6	LIC	BLCDT -20050630AAG
22	KLRU	AUSTIN TX	119.0	LIC	BLEDT -20040305ACK
28	KYVV-TV	DEL RIO TX	138.9	APP	BMPCDT -20080618ACC
14	KERA-TV	DALLAS TX	375.0	APP	USERRECORD-01

Proposed station is beyond the site to
nearest cell evaluation distance

Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application Ref. No.
15	KHPZ-CA	ROUND ROCK TX	BDFCDTA -20120514ACR

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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Table 2 KERA-TV OET Bulletin 69 Interference Study
(worst-case scenarios shown page 3 of 3)



14	KVAT-LD	AUSTIN TX	33.7	APP	BDISDTL	-20090617ACF
15	KXVA	ABILENE TX	261.0	LIC	BLCDT	-20110520ADO
15	NEW	COLLEGE STATION TX	122.0	APP	BNPDTL	-20090825AWN
15	KVHC-LP	KERRVILLE TX	153.9	LIC	BLTTL	-20040212AAR
15	KMXU-LP	SAN ANTONIO TX	152.5	CP	BDFCDTL	-20090909ABX
15	KMXU-LP	SAN ANTONIO TX	152.5	CP MOD	BMPTTL	-20060321AES
15	KAVU-TV	VICTORIA TX	201.9	LIC	BLCDT	-20060627ABY
16	KADT-LD	AUSTIN TX	33.7	CP	BPDTL	-20130502ACC
16	KADT-LD	GEORGETOWN TX	17.5	LIC	BLDTL	-20130422ADL
14	KERA-TV	DALLAS TX	225.8	APP	USERRECORD-01	

Proposed station is beyond the site to
nearest cell evaluation distance

#####

Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
14	KERA-TV	DALLAS TX	USERRECORD-01

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
------	------	------------	----------	--------	----------------------

Total scenarios = 1

Result key: 1

Scenario 1 Affected station 3
Before Analysis

Results for: 14A TX DALLAS USERRECORD01 APP

HAAT 515.0 m, ATV ERP 975.0 kW		
	POPULATION	AREA (sq km)
within Noise Limited Contour	5438627	39250.2
not affected by terrain losses	5438099	39073.5
lost to NTSC IX	0	0.0
lost to additional IX by ATV	0	0.0
lost to ATV IX only	0	0.0
lost to all IX	0	0.0

Potential Interfering Stations Included in above Scenario 1

#####

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

Section VII Preparer's Certification

I certify that I have prepared Section VII (Engineering Data) on behalf of the applicant, and that after such preparation, I have examined and found it to be accurate and true to the best of my knowledge and belief.

Name JOSEPH M. DAVIS, P.E.	Relationship to Applicant (e.g., Consulting Engineer) CONSULTING ENGINEER	
Signature	Date 5/17/2013	
Mailing Address CHESAPEAKE RF CONSULTANTS LLC 207 OLD DOMINION ROAD		
City YORKTOWN	State or Country (if foreign address) VA	Zip Code 23692-
Telephone Number (include area code) 7036509600	E-Mail Address (if available) JOSEPH.DAVIS@RF-CONSULTANTS.COM	

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

SECTION VII - DTV Engineering

Complete Questions 1-5, and provide all data and information for the proposed facility, as requested in Technical Specifications, Items 1-13.

Pre-Transition Certification Checklist: An application concerning a pre-transition channel must complete questions 1(a)-(c), and 2-5. A correct answer of "Yes" to all of the questions will ensure an expeditious grant of a construction permit application to change pre-transition facilities. However, if the proposed facility is located within the Canadian or Mexican borders, coordination of the proposal under the appropriate treaties may be required prior to grant of the application. An answer of "No" will require additional evaluation of the applicable information in this form before a construction permit can be granted.

Post-Transition Expedited Processing. An application concerning a post-transition channel must complete questions 1(a), (d)-(e), and 2-5. A station applying for a construction permit to build its post-transition channel will receive expedited processing if its application (1) does not seek to expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"); (2) specifies facilities that match or closely approximate those defined in the new DTV Table Appendix B facilities; and (3) is filed within 45 days of the effective date of Section 73.616 of the rules adopted in the Report and Order in the Third DTV Periodic Review proceeding, MB Docket No. 07-91.

1.	The proposed DTV facility complies with 47 C.F.R. Section 73.622 in the following respects: (a) It will operate on the DTV channel for this station as established in 47 C.F.R. Section 73.622. (b) It will operate a pre-transition facility from a transmitting antenna located within 5.0 km (3.1 miles) of the DTV reference site for this station as established in 47 C.F.R. Section 73.622. (c) It will operate a pre-transition facility with an effective radiated power (ERP) and antenna height above average terrain (HAAT) that do not exceed the DTV reference ERP and HAAT for this station as established in 47 C.F.R. Section 73.622. (d) It will operate at post-transition facilities that do not expand the noise-limited service contour in any direction beyond that established by Appendix B of the Seventh Report and Order in MB Docket No. 87-268 establishing the new DTV Table of Allotments in 47 C.F.R. § 73.622(i) ("new DTV Table Appendix B"). (e) It will operate at post-transition facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the new DTV Table Appendix B.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> N/A <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
2.	The proposed facility will not have a significant environmental impact, including exposure of workers or the general public to levels of RF radiation exceeding the applicable health and safety guidelines, and therefore will not come within 47 C.F.R. Section 1.1307. Applicant must submit the Exhibit called for in Item 13.	<input checked="" type="radio"/> Yes <input type="radio"/> No
3.	Pursuant to 47 C.F.R. Section 73.625, the DTV coverage contour of the proposed facility will encompass the allotted principal community.	<input checked="" type="radio"/> Yes <input type="radio"/> No
4.	The requirements of 47 C.F.R. Section 73.1030 regarding notification to radio astronomy installations, radio receiving installations and FCC monitoring stations have either been satisfied or are not applicable.	<input checked="" type="radio"/> Yes <input type="radio"/> No
5.	The antenna structure to be used by this facility has been registered by the Commission and will not require registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely effect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	<input checked="" type="radio"/> Yes <input type="radio"/> No

SECTION VII - DTV Engineering

TECHNICAL SPECIFICATIONS

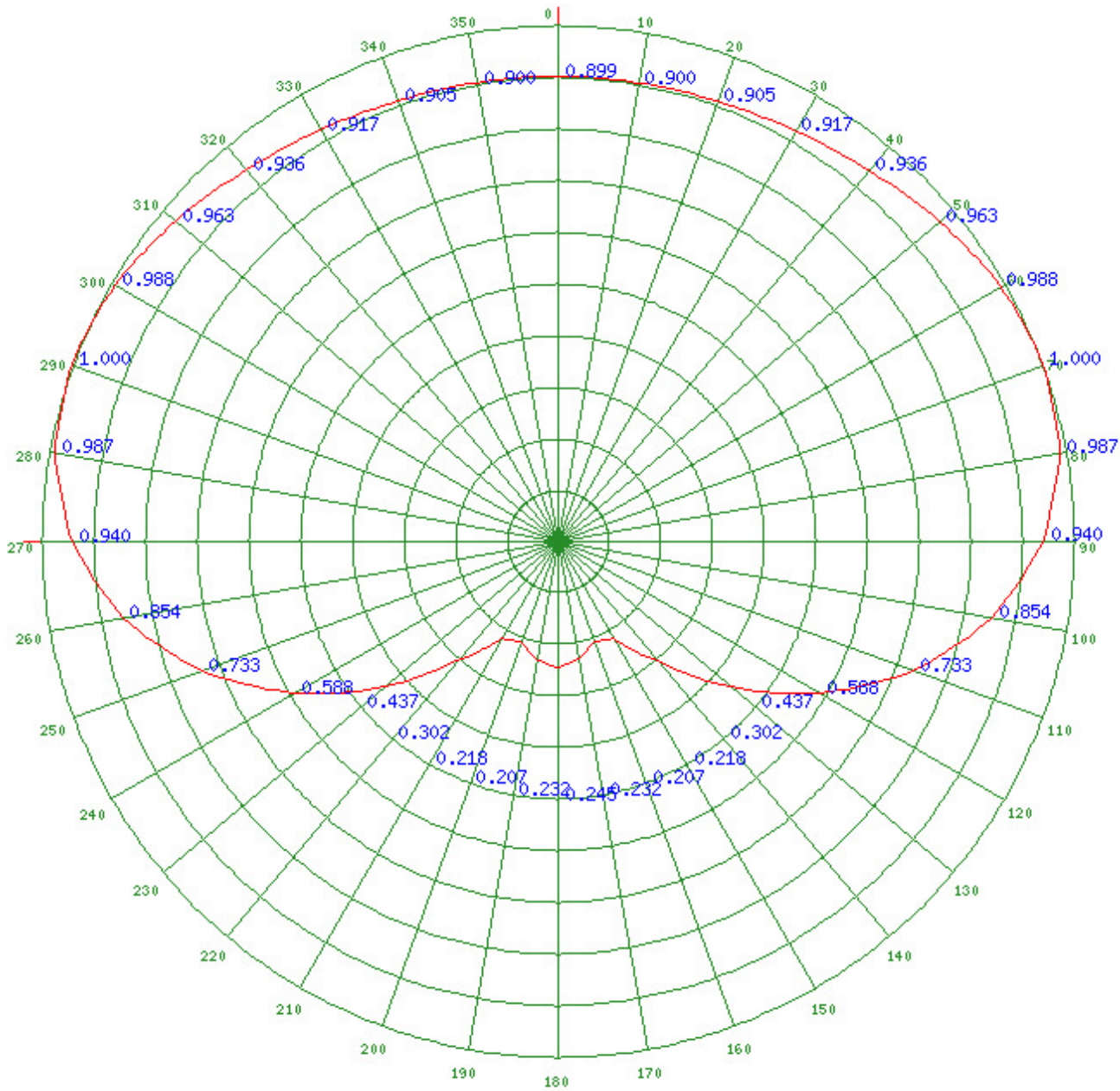
Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

TECH BOX																																																																																																																																			
1.	Channel Number: DTV 14 Analog TV, if any																																																																																																																																		
2.	Zone: <input type="radio"/> I <input checked="" type="radio"/> II <input type="radio"/> III																																																																																																																																		
3.	Antenna Location Coordinates: (NAD 27) Latitude: Degrees 32 Minutes 32 Seconds 36 <input checked="" type="radio"/> North <input type="radio"/> South Longitude: Degrees 96 Minutes 57 Seconds 32 <input checked="" type="radio"/> West <input type="radio"/> East																																																																																																																																		
4.	Antenna Structure Registration Number: 1059733 <input type="checkbox"/> Not Applicable <input type="checkbox"/> Notification filed with FAA																																																																																																																																		
5.	Antenna Location Site Elevation Above Mean Sea Level:										248.1 meters																																																																																																																								
6.	Overall Tower Height Above Ground Level:										498.4 meters																																																																																																																								
7.	Height of Radiation Center Above Ground Level:										469.4 meters																																																																																																																								
8.	Height of Radiation Center Above Average Terrain (HAAT):										514.4 meters																																																																																																																								
9.	Maximum Effective Radiated Power (average power):										975 kW																																																																																																																								
10.	Antenna Specifications: a. Manufacturer ERI Model ATW21H3-ESC170-14H b. Electrical Beam Tilt: 0.75 degrees <input type="checkbox"/> Not Applicable c. Mechanical Beam Tilt: degrees toward azimuth degrees True <input checked="" type="checkbox"/> Not Applicable Attach as an Exhibit all data specified in 47 C.F.R. Section 73.625(c). [Exhibit 35] d. Polarization: <input type="radio"/> Horizontal <input type="radio"/> Circular <input checked="" type="radio"/> Elliptical e. Directional Antenna Relative Field Values: <input type="checkbox"/> Not applicable (Nondirectional) [For a composite directional (not off-the-shelf) antenna, press the following button to fill in the relative field values subform.] [Relative Field Values] <div style="text-align: center;">10e. Directional Antenna Relative Field Values [Fill in this subform for a composite directional (not off-the-shelf) antenna, only.]</div> <table border="1"><thead><tr><th colspan="12">e. Directional Antenna Relative Field Values:</th></tr><tr><th colspan="12">Rotation (Degrees): <input checked="" type="checkbox"/> No Rotation</th></tr><tr><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th><th>Degrees</th><th>Value</th></tr></thead><tbody><tr><td>0</td><td>0.899</td><td>10</td><td>0.9</td><td>20</td><td>0.905</td><td>30</td><td>0.917</td><td>40</td><td>0.936</td><td>50</td><td>0.963</td></tr><tr><td>60</td><td>0.988</td><td>70</td><td>1</td><td>80</td><td>0.987</td><td>90</td><td>0.94</td><td>100</td><td>0.854</td><td>110</td><td>0.733</td></tr><tr><td>120</td><td>0.588</td><td>130</td><td>0.437</td><td>140</td><td>0.302</td><td>150</td><td>0.218</td><td>160</td><td>0.207</td><td>170</td><td>0.232</td></tr><tr><td>180</td><td>0.245</td><td>190</td><td>0.232</td><td>200</td><td>0.207</td><td>210</td><td>0.218</td><td>220</td><td>0.302</td><td>230</td><td>0.437</td></tr><tr><td>240</td><td>0.588</td><td>250</td><td>0.733</td><td>260</td><td>0.854</td><td>270</td><td>0.94</td><td>280</td><td>0.987</td><td>290</td><td>1</td></tr><tr><td>300</td><td>0.988</td><td>310</td><td>0.963</td><td>320</td><td>0.936</td><td>330</td><td>0.917</td><td>340</td><td>0.905</td><td>350</td><td>0.9</td></tr><tr><td colspan="2">Additional Azimuths</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="text-align: center; color: red;">Relative Field Polar Plot</div>											e. Directional Antenna Relative Field Values:												Rotation (Degrees): <input checked="" type="checkbox"/> No Rotation												Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	Degrees	Value	0	0.899	10	0.9	20	0.905	30	0.917	40	0.936	50	0.963	60	0.988	70	1	80	0.987	90	0.94	100	0.854	110	0.733	120	0.588	130	0.437	140	0.302	150	0.218	160	0.207	170	0.232	180	0.245	190	0.232	200	0.207	210	0.218	220	0.302	230	0.437	240	0.588	250	0.733	260	0.854	270	0.94	280	0.987	290	1	300	0.988	310	0.963	320	0.936	330	0.917	340	0.905	350	0.9	Additional Azimuths											
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If a directional antenna is proposed, the requirements of 47 C.F.R. Sections 73.625(c) must be satisfied. Exhibit required.											[Exhibit 36]																																																																																																																								
11.	Does the proposed facility satisfy the pre-transition interference protection provisions of 47 C.F.R. Section 73.623(a) (Applicable only if Certification Checklist Items 1(a), (b), or (c) are answered "No.") and/or the post-transition interference protection										<input checked="" type="radio"/> Yes <input type="radio"/> No																																																																																																																								

	provisions of 47 C.F.R. Section 73.616?	[Exhibit 37]
	If "No," attach as an Exhibit justification therefor, including a summary of any related previously granted waivers.	
12.	If the proposed facility will not satisfy the coverage requirement of 47 C.F.R. Section 73.625, attach as an Exhibit justification therefor. (Applicable only if Certification Checklist item 3 is answered "No.")	[Exhibit 38]
13.	Environmental Protection Act. Submit in an Exhibit the following: a. If Certification Checklist Item 2 is answered "Yes," a brief explanation of why an Environmental Assessment is not required. Also describe in the Exhibit the steps that will be taken to limit RF radiation exposure to the public and to persons authorized access to the tower site. By checking "Yes" to Certification Checklist Item 2, the applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic exposure in excess of FCC guidelines. If Certification Checklist Item 2 is answered "No," an Environmental Assessment as required by 47 C.F.R Section 1.1311.	[Exhibit 39]
PREPARERS CERTIFICATION ON PAGE 8 MUST BE COMPLETED AND SIGNED.		

Any specified rotation has already been applied to the plotted pattern.
 Field strength values shown on a rotated pattern may differ from the listed values
 because intermediate azimuths are interpolated between entered azimuths.

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