

ENGINEERING STATEMENT
RE APPLICATION FOR LICENSE
FCC FILE NO. BPEDT-20110321ADD, TO INCREASE
EFFECTIVE RADIATED POWER
ON BEHALF OF
OKLAHOMA EDUCATIONAL TELEVISION AUTHORITY
KOED-TV, TULSA, OKLAHOMA
CHANNEL 11 47 KW ERP ND 521 METERS HAAT

APRIL 2012

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1420 N Street, N.W., Suite One, Washington, D.C. 20005;

That his qualifications are a matter of record in the Federal Communications Commission;

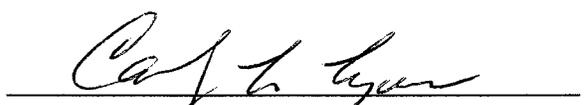
That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.


Donald G. Everist
District of Columbia
Professional Engineer
Registration No. 5714

Subscribed and sworn to before me this 12th day of April, 2012.




Notary Public

My Commission Expires: 2/28/2013

This engineering statement has been prepared on behalf of Oklahoma Educational Television Authority, licensee of KOED-TV, Tulsa, Oklahoma. The purpose of the application is to license the outstanding construction permit for FCC File No. BPEDT-20110321ADD to operate with a non-directional antenna with an effective radiated power ("ERP") of 47 kW.

KOED-TV was licensed to operate on NTSC television Channel 11 with a maximum visual ERP of 316 kW and an antenna height above average terrain ("HAAT") of 521 meters (1709 feet). KOED-TV was allocated DTV Channel 11 with facilities of 21.3 kW directional and HAAT of 521 meters in the revised DTV Table of Allotments. KOED-TV is licensed to operate DTV facilities of 35 kW non-directional at a height above average terrain of 521 meters. While the 35 kW licensed operation is projected to be essentially a match to the current Grade B contour, the KOED-TV staff reports that it has not been their experience and full replication has not been achieved. The staff of KOED-TV is still aware a significant short fall in reception. However, KOED-TV will, when permitted, make application for a higher ERP than 47 kW as it believes based on its receiving a number of viewer complaints of household previously served that 47 kW will not totally replicate its former NTSC service.

Transmitter Site and Power Data

The DTV antenna is side-mounted on the existing multi-use tower. The KOED-TV antenna is located on an existing tower having a total overall structure height above ground of 560.5 meters (1839 feet). The existing transmitter site is located at 9850 South 273rd East Avenue, Oneta, Oklahoma 74429. The registration number for the existing tower is 1011355.

E-1 is a vertical sketch of the existing multi-use tower and the proposed transmitting antenna.

The geographic coordinates of the proposed site are as follows:

North Latitude: 36° 01' 15"

West Longitude: 95° 40' 32"

NAD-27

Equipment Data
(unchanged)

Antenna: RCA, Model TW-9A11-R antenna with 0.75° electrical beam tilt. The vertical plane pattern and other exhibits required by Section 73.625(c) are herein included as Exhibit E-2.

Transmission Line: 579.1 meters (1900 ft) of Myat, Type 601-001 rigid, 50 ohm

Power Data

Transmitter at filter output	7.026 kW	8.739 dBk
Transmission line efficiency/loss	74.3%	1.29 dB
Input power to the antenna	5.22 kW	7.18 dBk
Antenna power gain, Main Lobe	9.0	9.54 dB
Effective Radiated Power, Maximum	47 kW	16.72 dBk

Elevation Data
(unchanged)

Vertical dimension for Channel 11 antenna
20.1 meters
66 feet

Overall height above ground of the existing antenna structure (including beacon and lightning rod)	560.5 meters 1839 feet
Center of radiation of Channel 11 antenna above ground	499.9 meters 1640 feet
Elevation of site above mean sea level	216.4 meters 710 feet
Center of radiation of Channel 11 antenna above mean sea level	716.3 meters 2350 feet
Overall height above mean sea level of existing tower and stacked antenna (including beacon)	776.9 meters 2549 feet
Antenna height above average terrain	521 meters 1709 feet

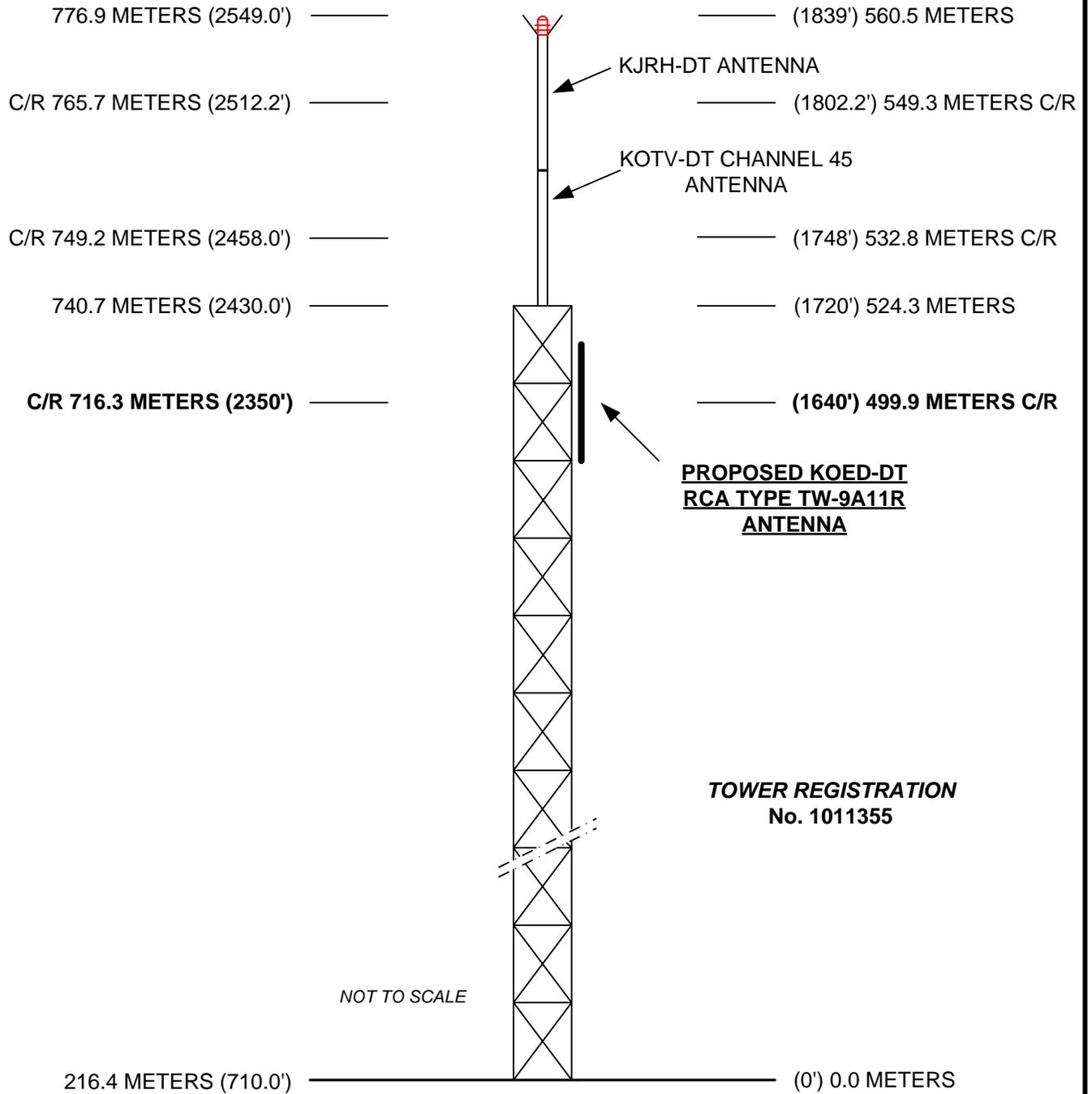
Note: Slight height differences may result due to conversion to metric.

Special Operation Condition

OETA acknowledges that the grant of this DTV license is subject to the special operating condition specified in the outstanding construction permit. Therefore, OETA certifies that it has made a good faith effort to identify and notify potentially affected health care facilities within the KOED service area authorized by the outstanding construction permit (FCC File No. BPEDT-20110321ADD).

ABOVE MEAN SEA LEVEL

ABOVE GROUND



NOT TO SCALE

**PROPOSED KOED-DT
RCA TYPE TW-9A11R
ANTENNA**

**TOWER REGISTRATION
No. 1011355**

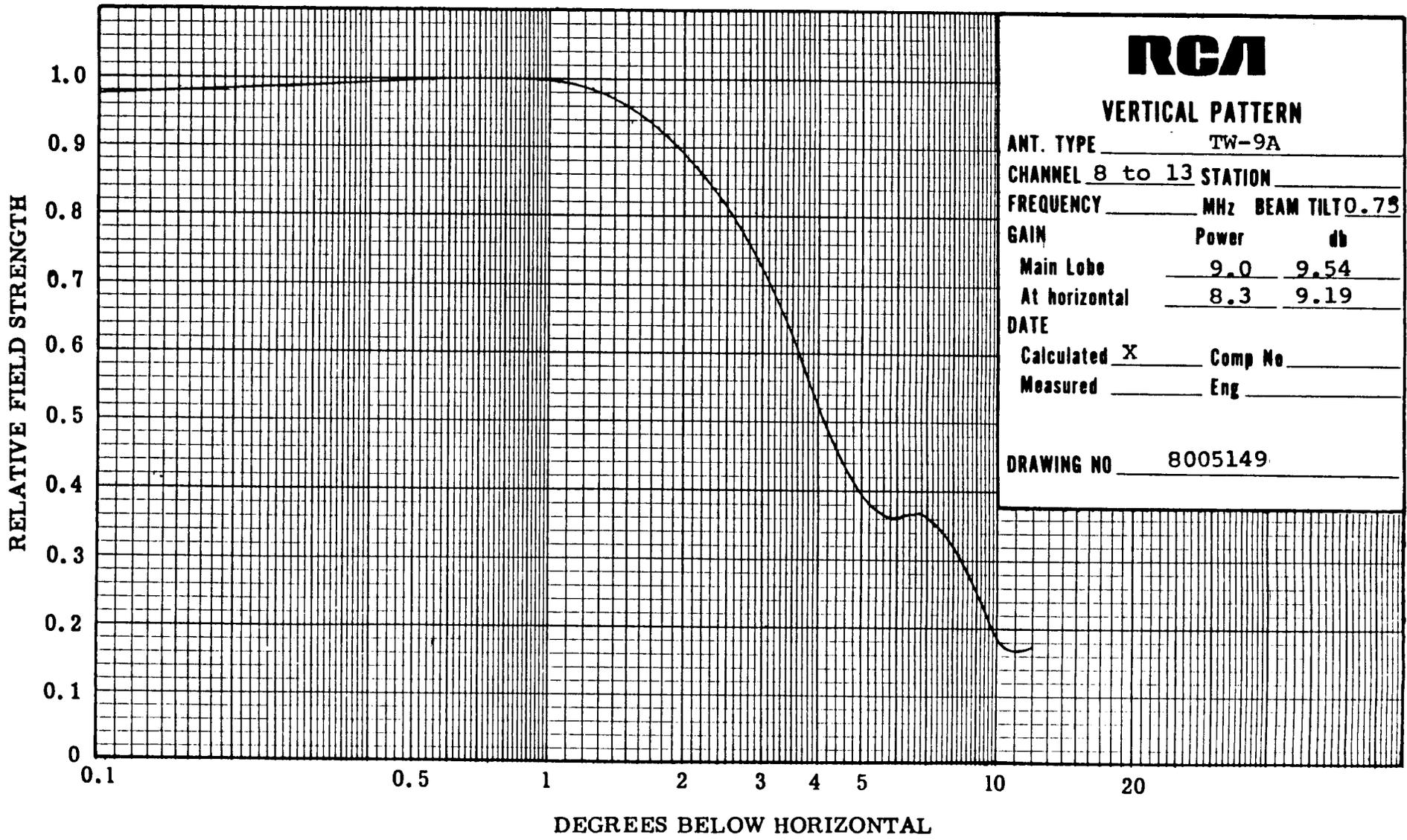
EXHIBIT E-1
TOWER SKETCH
KOED-DT, TULSA, OKLAHOMA
APRIL 2012

Cohen, Dippell and Everist, P.C.

EXHIBIT E-2

ANTENNA MANUFACTURER DATA

KOED-TV, TULSA, OKLAHOMA



RCA

VERTICAL PATTERN

ANT. TYPE TW-9A

CHANNEL 8 to 13 STATION _____

FREQUENCY _____ MHz BEAM TILT 0.75

GAIN	Power	db
Main Lobe	<u>9.0</u>	<u>9.54</u>
At horizontal	<u>8.3</u>	<u>9.19</u>

DATE

Calculated X Comp No _____

Measured _____ Eng _____

DRAWING NO 8005149

Section III - 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 _____		
2. Operating Constants		
Transmitter power output (average power at input to transmission line, after any filter attached to the transmitter, if used)		Transmission line power loss
kW	dBk	dB
Antenna Input power	Maximum antenna power gain	Effective radiated power (average power)
dBk	dB	kW dBk
3. Antenna Data		
Manufacturer	Model	

NOTE: In addition to the information called for in the Certification Checklist, an explanatory exhibit providing full particulars must be submitted for each question for which a "No" response is provided.

CERTIFICATION

4. Main Studio Location. The main studio location complies with 47 C.F.R. Section 73.1125.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	See Explanation in Exhibit No.
5. Constructed Facility. The facility was constructed as authorized in the underlying construction permit or complies with 47 C.F.R. Section 73.1690.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	See Explanation in Exhibit No.
6. Special Operating Conditions. The facility was constructed in compliance with all special operating conditions, terms, and obligations described in the construction permit.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	See Explanation in Exhibit No.
An exhibit may be required. Review the underlying construction permit.			Exhibit No.
7. Transmitter. The transmitter complies with 47 C.F.R. Section 73.1660.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	See Explanation in Exhibit No.

PREPARER'S CERTIFICATION ON PAGE 6 MUST BE COMPLETED AND SIGNED.

APPLICATION FILED PURSUANT TO 47 C.F.R. SECTIONS 73.1675(c) or 73.1690(c).

Only applicants filing this application pursuant to 47 C.F.R. Sections 73.1675(c) or 73.1690(c) must complete the following section.

8. **Changing transmitter power output.** Is this application being filed to authorize a change in transmitter power output caused by the replacement of an omnidirectional antenna with another omnidirectional antenna or an alteration of the transmission line system? See 47 C.F.R. Sections 73.1690(c)(1) and (c)(10). Yes No

9. **Replacing a directional antenna.** Is this application being filed pursuant to 47 C.F.R. Section 73.1690(c)(3) to replace a directional antenna with another directional antenna? Yes No

If "Yes" to the above, the applicant certifies the following:

- a. **Pattern of Directional Antenna.** The proposed theoretical antenna pattern complies with 47 C.F.R. Section 73.1690(c)(3). **Exhibit is required.** Yes No

See Explanation
in Exhibit No.

Exhibit No.

10. Use a **formerly licensed main facility as an auxiliary facility.** Is this application being filed pursuant to 47 C.F.R. Section 73.1675(c)(1) to request authorization to use a formerly licensed main facility as an auxiliary facility and/or change the ERP of the proposed auxiliary facility? Yes No

If "Yes" to the above, the applicant certifies the following:

- a. **Auxiliary antenna service area.** The proposed auxiliary facility complies with 47 C.F.R. Section 73.1675(a). **Exhibit is required.** Yes No

See Explanation
in Exhibit No.

- b. **Environmental Protection Act.** The proposed facility is excluded from environmental processing under 47 C.F.R. Section 1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radio frequency electromagnetic exposure limits for controlled and uncontrolled environments). Yes No

See Explanation
in Exhibit No.

By checking "Yes" above, 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 radio frequency electromagnetic exposure in excess of FCC guidelines.

11. **Change the license status.** Is this application being filed pursuant to 47 C.F.R. Section 73.1690(c)(9) to change the license status from commercial to noncommercial or from noncommercial to commercial? Yes No

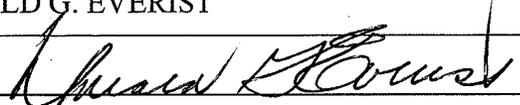
Exhibit No.

If "Yes" to the above, submit an exhibit providing full particulars. For applications changing license status from commercial to noncommercial, include Section II of FCC Form 340 as an exhibit to this application.

PREPARER'S CERTIFICATION ON PAGE 6 MUST BE COMPLETED AND SIGNED.

SECTION III PREPARER'S CERTIFICATION

I certify that I have prepared Section III (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 DONALD G. EVERIST		Relationship to Applicant (e.g., Consulting Engineer) Consulting Engineer	
Signature 		Date April 12, 2012	
Mailing Address Cohen, Dippell and Everist, P.C., 1420 N Street, NW, Suite One			
City Washington		State or Country (if foreign address) DC	ZIP Code 20005
Telephone Number (include area code) (202) 898-0111		E-Mail Address (if available) cde@attglobal.net	

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).