

ENGINEERING STATEMENT
APPLICATION FOR A DTV
CONSTRUCTION PERMIT FOR
TELEVISION TRANSLATOR STATION
K30AA, COLORADO SPRINGS, COLORADO
CHANNEL 30 3 KW MAX ERP 2894 METERS RC/AMSL

OCTOBER 2006

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

COHEN, DIPPELL AND EVERIST, P. C.

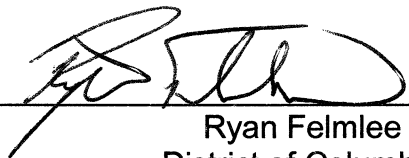
City of Washington)
) ss
District of Columbia)

Ryan Felmlee, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer of the Pennsylvania State University, has successfully completed the Engineer-In-Training examination ("EIT") in the State of Virginia, and is a staff engineer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

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.



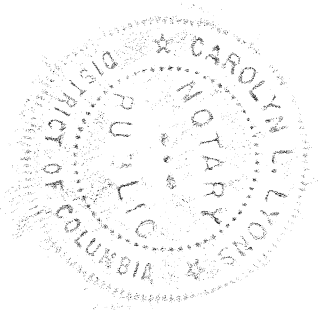
Ryan Felmlee
District of Columbia

Subscribed and sworn to before me this 11th day of October, 2006.



Notary Public

My Commission Expires: 2/28/2008



INTRODUCTION

This engineering statement has been prepared on behalf of Sangre De Cristo Communications, licensee of TV translator K30AA, Colorado Springs, Colorado. This statement supports the licensee's request to convert to DTV operation on the currently licensed analog Channel 30, commonly referred to as "flash-cut" with a DTV effective radiated power ("ERP") of 3 kW directional at a radiation center above mean sea level ("RCAMSL") of 2894 meters.

TRANSMITTER SITE

The existing antenna will be utilized and no significant alteration of the tower is proposed. The existing tower is located approximately 10.6 kilometers south-southwest on Cheyenne Mountain. There is no change in transmitter site. The geographic coordinates of the site follow below.

North Latitude: 38° 44' 45"

West Longitude: 104° 51' 40"

NAD-27

ELEVATION DATA

Elevation of site above mean sea level	2867 meters (9406.2 feet)
Center of radiation of antenna above ground level	27 meters (88.6 feet)
Center of radiation of antenna above mean sea level	2894 meters (9494.8 feet)
Overall height of tower above ground level	28.3 meters (92.8 feet)

The Antenna Structure Registration Number ("ASRN") for the existing tower is 1054001.

EQUIPMENT DATA

Transmitter:	Type-approved
Transmission Line:	Andrew, Type HJ7-50A, 1-5/8", 50 ohm, 63.4 meters (208 feet) with 75.4% efficiency 0.513 dB loss/100 ft
Antenna:	Bogner, B12UB with maximum gain of 15.45 dB

POWER DATA

Transmitter:	0.109 kW	-9.61 dBk
Transmission Line Loss:	1.07 dB	78.1%
Input Into Antenna:	0.086 kW	-10.68 dB
Antenna Gain:	35.1	15.45 dB
ERP:	3 kW	4.77 dBk

As indicated above, the transmitter with typical power output of 109 watts will deliver 86 watts to the input of the antenna. The antenna, having a maximum gain of 15.45 dB will produce maximum ERP of 3 kW. A coverage map providing the protected contour of the proposed facility compared to the currently licensed operation of K30AA has been included as Exhibit E-1 of this report.

OTHER BROADCAST FACILITIES

A brief analysis was completed to determine the presence of stations in the vicinity of the K30AA tower using the October 11, 2006, data contained within the Commission's Consolidated Database System ("CDBS"). Within 500 meters of the proposed site, 16 authorized FM radio stations were identified, eight authorized DTV and NTSC television stations, and 11 other low-power analog television and television translator stations aside from K30AA. There are no AM facilities within 3.2 km of the existing tower. Although no adverse technical affects are expected due to the proposed changes, the licensee will take measures to resolve any problems proven to be related to the changes proposed in this application.

Interference Analysis

A study of predicted interference caused by the proposed K30AA digital translator operation has been performed using the Longley-Rice program for which the source data has been posted by the Commission on its website at http://www.fcc.gov/oet/dtv/dtv_apps.html. The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on a Microsoft Windows XP/Intel platform. Comparison of service/interference areas and population indicates this model closely matches the FCC's digital low-power TV/translator evaluation program. Best efforts have been made to use data and calculation identical to the FCC's program. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 1 sq. km. Using 3-second terrain data sampled approximately every 1.0 km at one-degree azimuth intervals with 1990 census centroids, all studies are based upon data in the current CDBS database update of the FCC's engineering database. A Longley-Rice study was performed with the proposed K30AA digital

translator facilities and all relevant stations listed in the FCC database as of October 11, 2006.

The study results and the included stations are listed in Exhibit E-2.

Other Licensed and Broadcast Facilities

No adverse technical effect is anticipated by the proposed DTV operation to any other FCC licensed facility. If required, the licensee will install filters or take other measures as necessary to resolve the problem.

FCC Rule, Section 1.1307

The proposed 3 kW directional operation will utilize a Bogner, Type B12UB antenna (or equivalent) described above with a center of radiation above ground of 27 meters. The proposed antenna will be side-mounted on an existing tower with an overall height of 28.3 meters above ground. The proposed digital operation of K30AA will create a radiofrequency field at 6.4 $\mu\text{W}/\text{cm}^2$ at the base of the tower. This level is less than 1.7% of the maximum permissible exposure (“MPE”) limit for the general population and uncontrolled environment.

Authorized personnel and rigging contractors will be alerted to the potential zone of high field levels on the tower, and if necessary, the station will operate with reduced power or terminate the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on or near the tower. Workers and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

Environmental Assessment

An environmental assessment (“EA”) is categorically excluded under Section 1.1306 of the FCC Rules and Regulations as the tower was constructed prior to the requirements specified in WT Docket No. 03-128 and the applicant indicates:

- (a)(1) The existing tower is not located in an officially designated wilderness area.
- (a)(2) The existing tower is not located in an officially designated wildlife preserve.
- (a)(3) The proposed facilities will not affect any listed threatened or endangered species or habitats.
- (a)(3)(ii) The proposed facilities will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.
- (a)(4) The proposed facilities located on a tower which was built prior to the adoption of WT Docket No. 03-128 and is grandfathered and has not affected any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.
- (a)(5) The existing tower is not located near any known Indian religious sites.
- (a)(6) The existing tower is not located in a flood plain.
- (a)(7) The installation of the DTV facilities on an existing guyed tower will not involve a significant change in surface features of the ground in the vicinity of the tower.
- (a)(8) It is not proposed to equip the tower with high intensity white lights unless required by the FAA.
- (b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines contained in OET Bulletin No. 65, Edition 97-01, dated August 1997 and Supplement A.

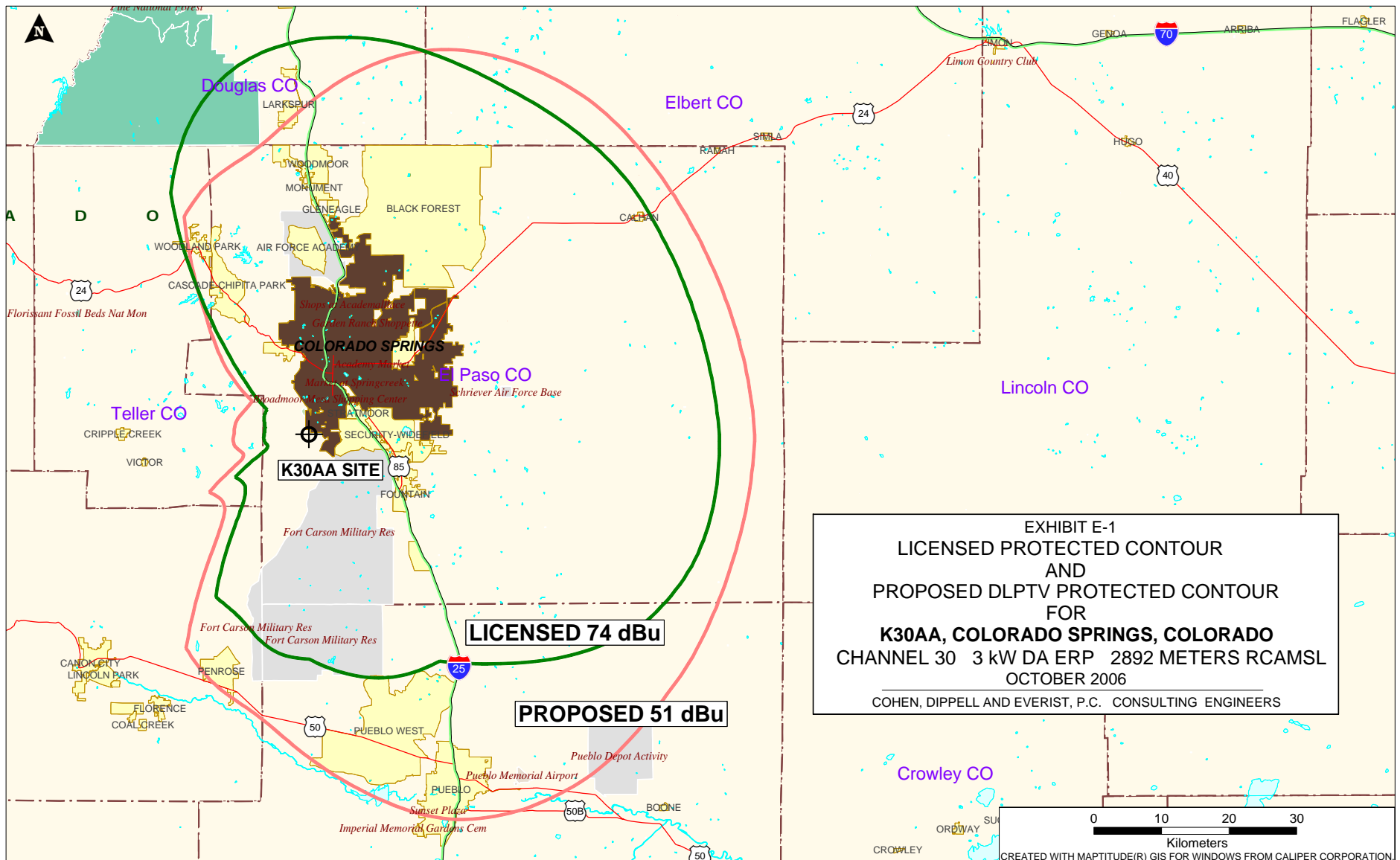


EXHIBIT E-2

DLPTV ANALYSIS RESULTS

FOR THE PROPOSED DIGITAL “FLASH-CUT”

OPERATION OF

K30AA, COLORADO SPRINGS, COLORADO

COHEN, DIPPELL AND EVERIST, P.C.

EXHIBIT E-2
LONGLEY-RICE ANALYSIS
 FOR THE PROPOSED DIGITAL OPERATION OF
 K30AA-D, COLORADO SPRINGS, COLORADO
CH 30 3 KW MAX ERP 2894 METERS RC/AMSL
OCTOBER 2006

<u>Station</u>	<u>City</u>	<u>State</u>	<u>Channel</u>	<u>Distance</u> km	<u>Status</u>	<u>FCC File No.</u>	<u>Interference</u>
K15GU	DOVE CREEK	CO	15	370	LIC	BLTTL-20041227AAF	Beyond Distance
K15FD	HOLYOKE	CO	15	290.4	LIC	BLTT -20011114AAN	Beyond Distance
K15ED	PITKIN	CO	15	143.1	LIC	BLTT -19941109IL	Beyond Distance
K15GL	TRINIDAD, VALDEZ,ETC	CO	15	181.1	LIC	BLTT -20050128AAZ	Beyond Distance
K15FV	RED RIVER	NM	15	233.6	LIC	BLTT -20040415ADS	Beyond Distance
K15DI	VERNAL	UT	15	407.8	LIC	BLTT -19940328JF	Beyond Distance
K16FS	ASHCROFT	CO	16	178.5	LIC	BLTT -20060417AEE	Beyond Distance
K16CT	CORTEZ	CO	16	325.7	LIC	BLTTL-20050802ACW	Beyond Distance
K16EK	IDALIA & S. YUMA CTY	CO	16	232.2	LIC	BLTT -20010919ABB	Beyond Distance
K16DR	JACKS CABIN	CO	16	169	LIC	BLTT -19970106JJ	Beyond Distance
K16EJ	PEETZ & N.LOGAN CTY	CO	16	276.2	LIC	BLTT -20010914AAH	Beyond Distance
K16ET	PLEASANT VALLEY	CO	16	306.1	LIC	BLTT -20030428ADX	Beyond Distance
K16FX	STEAMBOAT SPRINGS	CO	16	255.7	CP	BNPTTL-20000830BKP	Beyond Distance
KZCS-LP	COLORADO SPRINGS	CO	23	0.2	LIC	BLTTL-20021218AAJ	No Interference
K70FL	HARTSEL	CO	23	65.7	CP	BPTT -20040127AMD	Beyond Distance
KDEO-LP	MNT. MORRISON	CO	23	107.6	LIC	BLTTL-20000107ABE	Beyond Distance
K26GY	BRECKENRIDGE	CO	26	141.8	CP	BPTTL-20060331AKO	Beyond Distance
K26GY	BRECKENRIDGE	CO	26	130.7	LIC	BLTTL-20040308AAT	Beyond Distance
KZCO-LP	DENVER	CO	27	107.6	LIC	BLTTL-20050223ABM	Beyond Distance
KGHB-CA	PUEBLO, ETC.	CO	27	0.1	APP	BSTA -20050718AAI	No Interference
KGHB-CA	PUEBLO, ETC.	CO	27	0.1	LIC	BLTT -19961025JB	No Interference
K28HI	BRECKENRIDGE, DILLON	CO	28	137.4	LIC	BLTTL-20040308AAQ	Beyond Distance
KLPD-LP	DENVER	CO	28	135	LIC	BLTTL-20030402AEG	Beyond Distance
KSPK-LP	WALSENBURG	CO	28	124.4	LIC	BLTTL-20050315AGL	Beyond Distance
K28GE	WOODLAND PARK	CO	28	32.3	LIC	BLTTL-19991203AAV	No Interference
NEW	COLORADO SPRINGS	CO	29	0	APP	BSFDTL-20060630ARX	< 2 %

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K58FY	LAKE GEORGE	CO	29	65.8	APP	BDISDTT-20060331BIM	No Interference
K58FY	LAKE GEORGE, ETC.	CO	29	65.8	CP	BPTT -20040109ABN	No Interference
KDEN	LONGMONT	CO	29	150.5	CP MOD	BMPCDT-20060207ABG	No Interference
KDEN	LONGMONT	CO	29	150.5	PRTCT	BMPCDT-20040524AOI	No Interference
K30DL	BLUE MESA	CO	30	129.6	LIC	BLTT -19920206IF	No Interference
K30HJ	CORTEZ, ETC.	CO	30	325.7	LIC	BLTTL-20050802ACR	No Interference
K30EJ	CRESTED BUTTE	CO	30	177.5	LIC	BLTT -19961118JF	No Interference
K30IK	CRIPPLE CREEK, ETC.	CO	30	75.8	LIC	BLTTL-20051229ABH	No Interference
KLPT-LP	DENVER	CO	30	135	LIC	BLTTL-20050812AOP	No Interference
K30DC	DOVE CREEK	CO	30	370	LIC	BLTTL-20041227AAE	Beyond Distance
K30CR	FRASER, ETC.	CO	30	146.8	LIC	BLTT -19890609IK	No Interference
K30IU	GRAND JUNCTION	CO	30	315.3	CP	BNPTTL-20000807AGG	Beyond Distance
NEW	NEW CASTLE	CO	30	247.6	APP	BSFDTT-20060630CJH	No Interference
K30FO	PEETZ & N. LOGAN CTY	CO	30	276.2	LIC	BLTT -20010914AAP	No Interference
K30GO	PLEASANT VALLEY	CO	30	306.1	LIC	BLTT -20030620ABY	No Interference
K30CK	RANGELY	CO	30	370.8	LIC	BLTT -19920401JL	Beyond Distance
NEW	REDSTONE	CO	30	210.8	APP	BSFDTT-20060630CPW	No Interference
K30HA	YUMA	CO	30	234.5	LIC	BLTT -20031229ABT	No Interference
K30GJ	COLFAX	NM	30	244.7	LIC	BLTT -20031103ACV	No Interference
K30EK	DULCE & LUMBERTON	NM	30	269.5	LIC	BLTT -19970626JB	No Interference
K30HS	TAOS NM	NM	30	267.8	CP	BNPTTL-20000831ARW	No Interference
KGWN-TV	CHEYENNE	WY	30	262	CP MOD	BMPCDT-20060707ADA	No Interference
KGWN-TV	CHEYENNE	WY	30	262	PRTCT	BPCDT-19991029ACA	No Interference
K31CW	CARBONDALE	CO	31	229.6	LIC	BLTT -19920414ID	Beyond Distance
K31CT	CORTEZ	CO	31	325.7	LIC	BLTTL-20050802ACX	Beyond Distance
KDVR	DENVER	CO	31	114	LIC	BLCT -19830818KM	< 0.5 %

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NEW	DENVER	CO	31	135	APP	BDCCDTL-20061003ADY	No Interference
K53AR	SALIDA	CO	31	105.2	APP	BDISDTT-20060331AWE	No Interference
K32GQ	ASHCROFT	CO	32	179.3	CP	BNPTTL-20000829AFY	Beyond Distance
K32EO	COLORADO SPRINGS	CO	32	0.2	CP	BPTT -20050908ADK	No Interference
K32EO	COLORADO SPRINGS	CO	32	0.2	LIC	BLTTL-19980824JD	No Interference
NEW	E. EAGLE	CO	32	205.5	APP	BNPTTL-20000828ASJ	Beyond Distance
960102KE	PUEBLO	CO	32	0.1	APP	BPCT -19960102KE	No Interference
KMAS-LP	DENVER	CO	33	107.6	CP	BPTTL-20041129AQW	Beyond Distance
K33EW	WOODLAND PARK	CO	33	32.3	LIC	BLTT -19990126JB	No Interference
K34FB	PUEBLO	CO	34	52.3	LIC	BLTT -19991201ABI	Beyond Distance
KJCS-LP	COLORADO SPRINGS	CO	38	0.1	LIC	BLTTL-19960627JB	No Interference