

**Comprehensive Technical Exhibit**  
*Application for Construction Permit*  
**KFXP-DT – Pocatello, Idaho**  
**Compass Communications of Idaho, Inc.**  
**June, 2008**

**General**

The following engineering statement and attached exhibits have been prepared for **Compass Communications of Idaho, Inc.**, licensee of television station KFXP(TV) at Pocatello, Idaho, and are in support of their application for construction permit for post-transition KFXP-DT facilities.<sup>1</sup>

KFXP(TV) currently operates on channel 31 as an NTSC facility with out a construction permit for a DTV facility. In the post-transition environment, KFXP-DT will operate on channel 31 pursuant to the Appendix B table of allotments. This application is therefore for KFXP to flash-cut to digital facilities at or before the conclusion of NTSC operations in 2009.

**Discussion of KFXP-DT Allotment and Proposed Facilities**

The Appendix B table of allotments specifies that KFXP-DT would operate on channel 31 with a maximum effective radiated power of 72.3 kW at a center of radiation of 447 meters above average terrain using Antenna ID 75065. Although the pattern contained in that Antenna ID is similar in shape to the current KFXP(TV) antenna, it is not identical. The current KFXP(TV) directional antenna will be utilized for KFXP-DT in the post-transition environment. The applicant therefore proposes to modify the directional pattern associated with the KFXP-DT allotment.

In addition to modifying the associated directional pattern, the proposed facility would also operate with a slightly reduced maximum effective radiated power, and at a center of radiation above average terrain slightly higher than listed in Appendix B. The applicant proposes that

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<sup>1</sup> The Facility ID for KFXP(TV) is 78910.

KFXP-DT operate with a maximum effective radiated power of 68.5 kW. The proposed center of radiation would be at 452.6 meters above average terrain.<sup>2</sup>

The map in Exhibit E-1 depicts the proposed noise limited service contour and the allocated noise limited service contour. Subsequent to Exhibit E-1 is a tabulation comprising Exhibit E-2, which lists the distances to the proposed and allocated noise limited service contours. These two exhibits demonstrate that the proposed noise limited service contour would not extend more than five miles beyond the allocated noise limited service contour.

Although the noise limited service contour would be extended along certain azimuths, this change in the footprint of the facility would not result in impermissible interference to other facilities in the region. Exhibits E-3 and E-4 provide an outgoing interference study for the proposed facility based on Longley-Rice methods. As these two exhibits demonstrate, the proposed facility is not predicted to cause any interference to any other proposed or existing facility.

The change in the predicted noise limited service contour along certain azimuths will also change the service area of the facility relative to the Appendix B facilities. Exhibits E-5 and E-6 illustrate the predicted service area of the proposed facility. As these exhibits demonstrate, the population of the DTV service area would decrease slightly from the Appendix B value of 207 thousand to 205,360 persons by the 2000 Census. The predicted service area population of the proposed facility is 99.2 percent of the value allocated in Appendix B.

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<sup>2</sup> Change in COR relative to average terrain is being made to bring the actual antenna height into consistency with a 360 radial sample of a 3-second linearly interpolated terrain database.

The proposed facility would comply with the principal community coverage requirements of Section 73.625 of the Commission's Rules. Exhibit E-7 illustrates the predicted 48 and 41 dBu F(50,90) service contours overlaid on the predicted Longley-Rice coverage. As this map demonstrates, the community of license, Pocatello, Idaho, would receive a signal level in excess of 48 dBu.

The antenna that would be utilized by the proposed facility is a Systems With Reliability (SWR) model SWMPS28BF/31. This is a directional antenna with 1.6 degrees of electrical beam tilt. No mechanical beam tilt is utilized or proposed. Exhibit E-8 contains the data required under Section 73.625(c) of the Commission's Rules.

The proposed facility would not constitute a significant environmental impact. This statement is predicated on two important facts. First, the proposed facility would utilize the existing KFXP(TV) antenna system. As a result of the use of this existing antenna, no additional excavation or construction is required at the site. Secondly, the proposed facility would not constitute an RF exposure hazard to persons at the site.

For the proposed KFXP-DT operation, all areas of the site would lie within an area where the antenna radiation is at 0.2 relative field. The predicted power density from KFXP-DT based on this assumption is therefore given by the following equation:

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$$S = \frac{33.4(E_{\text{rel}})^2(ERP)}{h^2}$$

The relative field component is assumed to have 0.2 as a value. The effective radiated power is simply the maximum effective radiated power of the proposed facility, which is 68.5 kW or

68,500 Watts. The denominator term is the height of the center of radiation minus 2 meters to accommodate the average human height. This term therefore has 154 meters as a value since the center of radiation is 156 meters above ground level. The resulting worst case power density for KFXP-DT is  $3.85 \mu\text{W}/\text{cm}^2$ . It is further assumed that this power density occurs at all points in the vicinity of the tower.

Similar assumptions were made for the other three facilities at the site. These include KPVI(TV) on channel 6, KPVI-DT on channel 23, and K27JI. Using the appropriate parameters, the predicted power density for each of these three facilities is  $0.545 \mu\text{W}/\text{cm}^2$ ,  $4.96 \mu\text{W}/\text{cm}^2$ , and  $0.005 \mu\text{W}/\text{cm}^2$ . The predicted power density at the site is the sum of these four values or  $9.36 \mu\text{W}/\text{cm}^2$ .

The uncontrolled environment condition of the applicable safety standard imposes an upper limit of  $200 \mu\text{W}/\text{cm}^2$  for the frequency range occupied by channel six. This is the most stringent requirement of any of the frequency ranges of interest. Since the aggregate power density is predicted to be less than this value, it is apparent that the proposed facility would not constitute an RF exposure hazard to persons at the site.

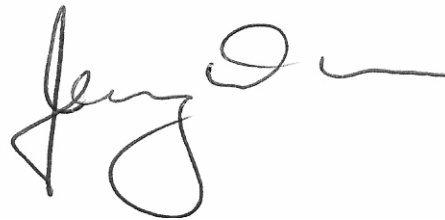
In order to protect workers having access to the site from being exposed to levels of non-ionizing radiation which may exceed the applicable safety standards, the applicant certifies that it will coordinate with other present and future users of the site. Such coordination will include, but is not necessarily limited to, a reduction in transmitter power or cessation of operation.

The provisions of Section 73.1030 of the Commission's Rules are not applicable. This section of the rules is not applicable due to the geographic location of the proposed facility relative to radio astronomy installations, radio receiving installations, and FCC monitoring stations as well as the channel of operation.

The structure utilized by the antenna is registered with the Commission. No change in the antenna system is proposed. As a result, "yes" has been checked for item 5 in this section of the application form pages.

**Affidavit**

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature  
License Expires November 30, 2009

**Jeremy D. Ruck, PE**  
**June 16, 2008**

**KFXP.PRO**

## PROPOSED

Latitude: 42-55-15 N  
Longitude: 112-20-44 W  
ERP: 68.50 kW  
Channel: 31  
Frequency: 575.0 MHz  
AMSL Height: 2058.0 m  
Elevation: 1902.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: Yes  
Elec Tilt: 1.6  
Prop Model: FCC Method

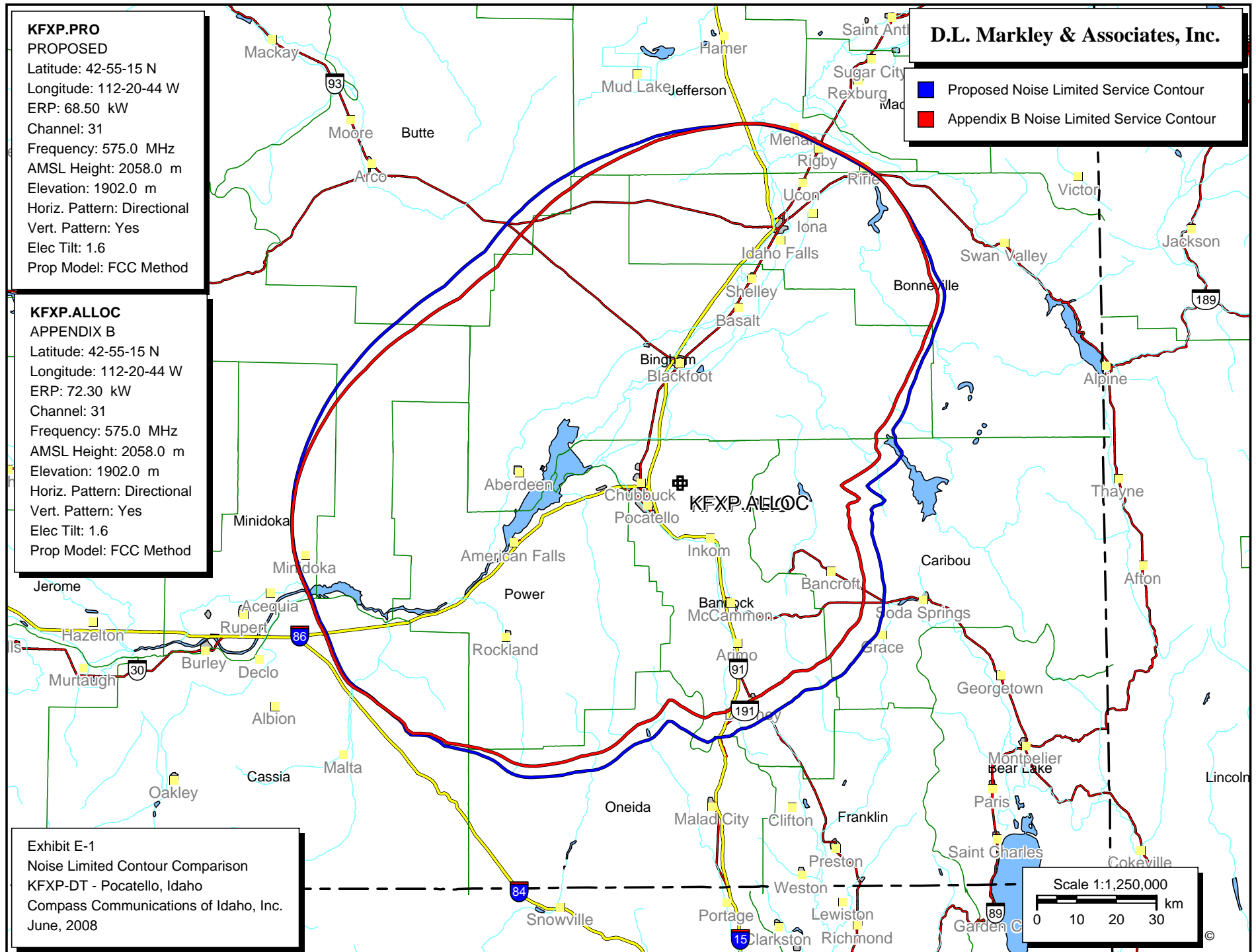
**KFXP.ALLOC**

## APPENDIX B

Latitude: 42-55-15 N  
Longitude: 112-20-44 W  
ERP: 72.30 kW  
Channel: 31  
Frequency: 575.0 MHz  
AMSL Height: 2058.0 m  
Elevation: 1902.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: Yes  
Elec Tilt: 1.6  
Prop Model: FCC Method

**D.L. Markley & Associates, Inc.**

- Proposed Noise Limited Service Contour
- Appendix B Noise Limited Service Contour



## Exhibit E-1

## Noise Limited Contour Comparison

KFXP-DT - Pocatello, Idaho

Compass Communications of Idaho, Inc.

June, 2008

**Exhibit E-2 - Comparison of Proposed and Allocated Noise Limited Service Contours**

Azimuth	HAAT in meters	Allocation NL Contour Distance in kilometers	Proposed NL Contour Distance in kilometers	Contour Distance Difference	
				kilometers	miles
0	507.2	87.2	88.1	0.90	0.56
10	517.4	91.3	91.3	0.00	0.00
20	512.4	92.5	92.1	-0.40	-0.25
30	504.4	91.9	91.5	-0.40	-0.25
40	475.6	88.1	88.3	0.20	0.12
50	416.7	81.4	82.9	1.50	0.93
60	331.6	70.5	73.2	2.70	1.68
70	200.7	57.1	60.8	3.70	2.30
80	178.9	49.7	55.0	5.30	3.29
90	117.6	41.1	47.7	6.60	4.10
100	140.6	42.7	48.7	6.00	3.73
110	204.6	47.0	52.8	5.80	3.60
120	297.5	53.1	58.8	5.70	3.54
130	355.1	56.3	61.9	5.60	3.48
140	375.1	57.4	62.8	5.40	3.36
150	330.5	55.2	60.6	5.40	3.36
160	381.9	56.9	62.6	5.70	3.54
170	417.7	58.4	64.4	6.00	3.73
180	341.8	55.7	61.2	5.50	3.42
190	401.4	61.4	66.4	5.00	3.11
200	480.8	72.7	76.9	4.20	2.61
210	518.9	81.1	83.9	2.80	1.74
220	499.7	85.4	86.6	1.20	0.75
230	534.3	91.7	91.9	0.20	0.12
240	578.4	97.1	96.6	-0.50	-0.31
250	569.3	96.9	96.5	-0.40	-0.25
260	624.3	98.1	97.9	-0.20	-0.12
270	647.5	95.8	96.3	0.50	0.31
280	639.8	90.3	92.0	1.70	1.06
290	634.9	83.6	86.7	3.10	1.93
300	629.5	77.1	81.2	4.10	2.55
310	619.1	72.0	76.8	4.80	2.98
320	604.3	70.8	75.8	5.00	3.11
330	593.4	74.6	79.1	4.50	2.80
340	551.6	78.7	82.0	3.30	2.05
350	512.1	82.9	84.8	1.90	1.18

**D.L. Markley & Associates, Inc.**

*Consulting Engineers*

2104 West Moss Avenue

Peoria, Illinois 61604



**KFXP.PRO****PROPOSED**

Latitude: 42-55-15 N

Longitude: 112-20-44 W

ERP: 68.50 kW

Channel: 31

Frequency: 575.0 MHz

AMSL Height: 2058.0 m

Horiz. Pattern: Directional

Vert. Pattern: Yes

Elec Tilt: 1.6

Prop Model: Longley/Rice

Climate: Cont temperate

Conductivity: 0.0050

Dielec Const: 15.0

Refractivity: 301.0

Receiver Ht AG: 10.0 m

Receiver Gain: 0 dB

Time Variability: 10.0%

Sit. Variability: 50.0%

ITM Mode: Broadcast

**D.L. Markley & Associates, Inc.**

- ☒ KFXP.PRO
- ☐ KPPP-L
- ☐ K27JI.C
- ☐ NEW.A
- ☐ NEW.A
- ☐ K30JW-.C
- ☐ K30JW--D.C
- ☐ K31IU--D.C
- ☐ K31JB--D.C
- ☐ K31JT--D.C
- ☐ KEJT-L-D.C
- ☐ K31KC--D.C
- ☐ K31JO--D.C
- ☐ K31JJ--D.C
- ☐ K61EA.C
- ☐ NEW.A
- ☐ K31FW
- ☐ K31HG
- ☐ K31HH
- ☐ K31HR
- ☐ K31HS
- ☐ K31FQ
- ☐ K31FD
- ☐ K31FP
- ☐ K31DC
- ☐ K31CI
- ☐ NEW.A
- ☐ NEW.A
- ☐ K31FR
- ☐ NEW-D.A

**Exhibit E-3**

Outgoing Interference Study

KFXP-DT - Pocatello, Idaho

Compass Communications of Idaho, Inc.

June, 2008

Scale 1:3,000,000

0 40 80 120 km

Exhibit E-4

Outgoing Interference Population Report Population Tabulation.  
Based on Proposed KFXP-DT Facilities at Pocatello, Idaho.

KFXP.PRO (31) Pocatello, ID - PROPOSED  
Broadcast Type: Digital Service: V  
Lat: 42-55-15 N Lng: 112-20-44 W ERP: 68.5 kW AMSL: 2058.0 m  
TV Outgoing Interference Study  
Signal Resolution: 2.0 km  
Consider NTSC Taboo: Yes  
KWX error points are considered to  
be interference free coverage.  
Default # of radials computed for contours: 72  
Contours calculated using 8 radial HAAT.  
LR Profile Spacing Increment: 1.0 km  
Masked interference points are being  
counted as interference.  
Pop Centroid DB: 2000 US Census (SF1)

Study Date: 6/12/2008  
TV Database Date: 6/10/2008

Primary Terrain: V-Soft 3 Second US Terrain  
Secondary Terrain: V-Soft 30 Second US Database

Population Database: 2000 US Census (SF1)

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Stations Considered:

Call Letters	City	State	Dist	Bear
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KPPP-L (24N)	Pocatello	ID	15.0	246.1
K27JI.C (27Z)	Pocatello	ID	0.0	0.0
NEW.A (28Z)	Pocatello	ID	0.0	0.0
NEW.A (29Z)	Lava Hot Springs	ID	44.3	140.5
K30JW-.C (30-)	Soda Springs	ID	62.3	120.6
K30JW--D.C (30)	Soda Springs	ID	56.8	142.3
K31IU--D.C (31)	Morgan, Etc.	UT	213.4	164.3
K31JB--D.C (31)	Hanna, Etc.	UT	311.0	154.3
K31JT--D.C (31)	Wendover	UT	279.9	210.7
KEJT-L-D.C (31)	Salt Lake City	UT	251.3	177.2
K31KC--D.C (31)	Coalville&adj.	UT	235.3	160.2
K31JO--D.C (31)	Wood River, Etc.	WY	304.1	63.9
K31JJ--D.C (31)	Rock Springs	WY	294.0	121.5
K61EA.C (31+)	Hagerman	ID	209.8	268.7
NEW.A (31+)	Twin Falls	ID	174.6	256.6
K31FW (31N)	Mountain View	WY	268.6	137.9
K31HG (31N)	Wanship	UT	247.5	161.1
K31HH (31N)	Samak	UT	269.8	160.1
K31HR (31N)	Henefer & Echo	UT	228.6	160.4

K31HS (31N)	Malad	ID	94.0	173.0
K31FQ (31N)	Park City, Etc.	UT	257.8	164.3
K31FD (31N)	Boise	ID	318.0	288.2
K31FP (31N)	Heber & Midway	UT	271.7	164.3
K31DC (31N)	Freedom	WY	101.5	77.1
K31CI (31N)	Montpelier	ID	98.4	126.5
NEW.A (31Z)	Twin Falls	ID	179.0	257.2
NEW.A (31Z)	Logan	UT	142.1	166.9
K31FR (31Z)	Preston	ID	100.1	151.9
NEW-D.A (32)	Soda Springs, Etc.	ID	63.1	120.6

Call	Area	HUnits	Contour	Masked	Ix	Unmasked	Ix	%
KPPP-L (24N)	0.0	0	68,735		0		0	0.0
K27JI.C (27Z)	0.0	0	54,505		0		0	0.0
NEW.A (28Z)	0.0	0	54,505		0		0	0.0
NEW.A (29Z)	0.0	0	4,116		0		0	0.0
K30JW-.C (30-)	0.0	0	14,933		0		0	0.0
K30JW--D.C (30)	0.0	0	19,914		0		0	0.0
K31IU--D.C (31)	0.0	0	4,152		0		0	0.0
K31JB--D.C (31)	0.0	0	121		0		0	0.0
K31JT--D.C (31)	0.0	0	5,080		0		0	0.0
KEJT-L-D.C (31)	0.0	0	1,000,315		0		0	0.0
K31KC--D.C (31)	0.0	0	1,607		0		0	0.0
K31JO--D.C (31)	0.0	0	760		0		0	0.0
K31JJ--D.C (31)	0.0	0	32,437		0		0	0.0
K61EA.C (31+)	0.0	0	142		0		0	0.0
NEW.A (31+)	0.0	0	52,414		0		0	0.0
K31FW (31N)	0.0	0	43		0		0	0.0
K31HG (31N)	0.0	0	234		0		0	0.0
K31HH (31N)	0.0	0	95		0		0	0.0
K31HR (31N)	0.0	0	720		0		0	0.0
K31HS (31N)	0.0	0	200		0		0	0.0
K31FQ (31N)	0.0	0	10,962		0		0	0.0
K31FD (31N)	0.0	0	433,767		0		0	0.0
K31FP (31N)	0.0	0	14,031		0		0	0.0
K31DC (31N)	0.0	0	0		0		0	0.0
K31CI (31N)	0.0	0	1,432		0		0	0.0
NEW.A (31Z)	0.0	0	34,658		0		0	0.0
NEW.A (31Z)	0.0	0	174		0		0	0.0
K31FR (31Z)	0.0	0	8,364		0		0	0.0
NEW-D.A (32)	0.0	0	13,036		0		0	0.0

Housing Units    Population

**KFXP.PRO****PROPOSED**

Latitude: 42-55-15 N

Longitude: 112-20-44 W

ERP: 68.50 kW

Channel: 31

Frequency: 575.0 MHz

AMSL Height: 2058.0 m

Horiz. Pattern: Directional

Vert. Pattern: Yes

Elec Tilt: 1.6

Prop Model: Longley/Rice

Climate: Cont temperate

Conductivity: 0.0050

Dielec Const: 15.0

Refractivity: 301.0

Receiver Ht AG: 10.0 m

Receiver Gain: 0 dB

Time Variability: 90.0%

Sit. Variability: 50.0%

ITM Mode: Broadcast

Service Area Population: 205,360

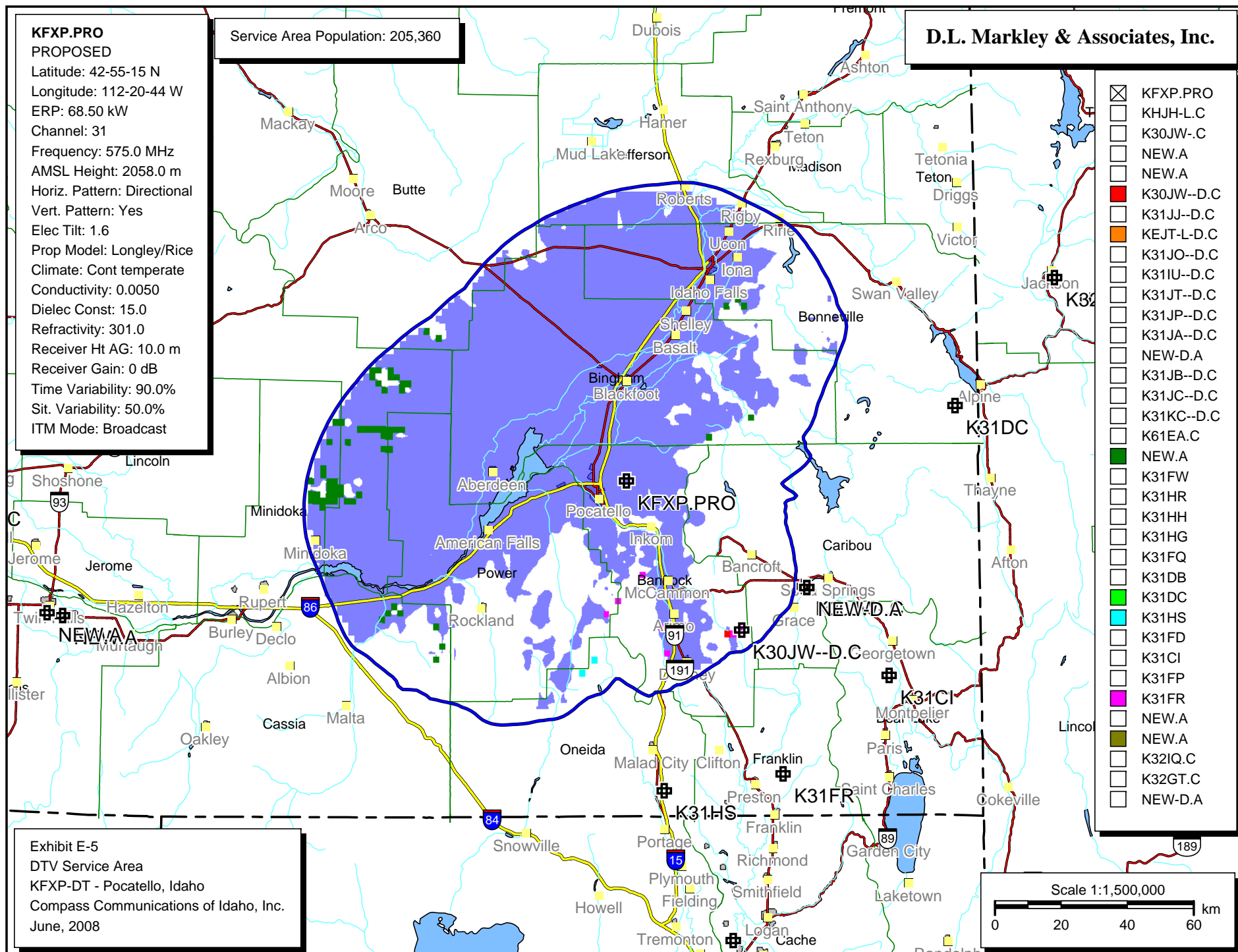
**D.L. Markley & Associates, Inc.**

Exhibit E-6  
 Predicted Service Area Population Tabulation.  
 Tabulation Based on Proposed Facilities.

KFXP.PRO (31) Pocatello, ID - PROPOSED  
 Broadcast Type: Digital Service: V  
 Lat: 42-55-15 N Lng: 112-20-44 W ERP: 68.5 kW AMSL: 2058.0 m  
 TV Incoming Interference Study  
 Interference Considered Within: FCC Contour: 40.416 dBu  
 Signal Resolution: 2.0 km  
 LR Profile Spacing Increment: 1.0 km  
 Consider NTSC Taboo: Yes  
 KWX error points are considered to  
     be interference free coverage.  
 # of radials computed for protected contour: 360  
 Protected contour calculated using 8 radial HAAT.  
 Threshold for reception: 40.4159  
 Pop Centroid DB: 2000 US Census (SF1)

Study Date: 6/16/2008  
 TV Database Date: 6/14/2008

Primary Terrain: V-Soft 3 Second US Terrain  
 Secondary Terrain: V-Soft 30 Second US Database

Population Database: 2000 US Census (SF1)

Percentages calculated using a baseline population of 205,533.

Stations which cause interference:

Call Letters	H Units	Population	%	Area (sq. km)
K30JW--D.C (30)	0	0	0.000	10.82
KEJT-L-D.C (31)	0	0	0.000	3.61
NEW.A (31+)	57	173	0.084	225.52
K31DC (31N)	0	0	0.000	7.22
K31HS (31N)	0	0	0.000	7.22
K31FR (31Z)	1	0	0.000	25.23
NEW.A (31Z)	0	0	0.000	3.61

Masking Summary:

Call Letters	Total Interference		Unique Interference	
	Population	%	Population	%
K30JW--D.C (30)	0	0.000	0	0.000
KEJT-L-D.C (31)	0	0.000	0	0.000
NEW.A (31+)	173	0.084	173	0.084
K31DC (31N)	0	0.000	0	0.000
K31HS (31N)	0	0.000	0	0.000
K31FR (31Z)	0	0.000	0	0.000
NEW.A (31Z)	0	0.000	0	0.000

Stations considered which do not cause interference:

KHJH-L.C (30-)  
 K30JW-.C (30-)  
 NEW.A (30-)  
 NEW.A (30-)  
 K30JW--D.C (30)  
 K31JJ--D.C (31)  
 KEJT-L-D.C (31)  
 K31JO--D.C (31)  
 K31IU--D.C (31)  
 K31JT--D.C (31)  
 K31JP--D.C (31)  
 K31JA--D.C (31)  
 NEW-D.A (31)  
 K31JB--D.C (31)  
 K31JC--D.C (31)  
 K31KC--D.C (31)  
 K61EA.C (31+)  
 K31FW (31N)  
 K31HR (31N)  
 K31HH (31N)  
 K31HG (31N)  
 K31FQ (31N)  
 K31DB (31N)  
 K31DC (31N)  
 K31HS (31N)  
 K31FD (31N)  
 K31CI (31N)  
 K31FP (31N)  
 NEW.A (31Z)  
 NEW.A (31Z)  
 K32IQ.C (32-)  
 K32GT.C (32-)  
 NEW-D.A (32)

Call Letters	City	State	Dist	Bear
KHJH-L.C (30-)	Jackson	WY	142.7	64.6
K30JW-.C (30-)	Soda Springs	ID	62.3	120.6
NEW.A (30-)	Twin Falls	ID	174.7	256.6
NEW.A (30-)	Twin Falls	ID	174.7	256.6
K30JW--D.C (30)	Soda Springs	ID	56.8	142.3
K31JJ--D.C (31)	Rock Springs	WY	294.0	121.5
KEJT-L-D.C (31)	Salt Lake City	UT	251.3	177.2
K31JO--D.C (31)	Wood River, Etc.	WY	304.1	63.9
K31IU--D.C (31)	Morgan, Etc.	UT	213.4	164.3
K31JT--D.C (31)	Wendover	UT	279.9	210.7
K31JP--D.C (31)	Manila, Etc.	UT	326.2	130.9
K31JA--D.C (31)	Fruitland	UT	324.9	157.7
NEW-D.A (31)	Bridger, Etc.	MT	379.0	44.9
K31JB--D.C (31)	Hanna, Etc.	UT	311.0	154.3

K31JC--D.C (31)	Duchesne	UT	347.7	151.4
K31KC--D.C (31)	Coalville&adj.	UT	235.3	160.2
K61EA.C (31+)	Hagerman	ID	209.8	268.7
NEW.A (31+)	Twin Falls	ID	174.6	256.6
K31FW (31N)	Mountain View	WY	268.6	137.9
K31HR (31N)	Henefer & Echo	UT	228.6	160.4
K31HH (31N)	Samak	UT	269.8	160.1
K31HG (31N)	Wanship	UT	247.5	161.1
K31FQ (31N)	Park City, Etc.	UT	257.8	164.3
K31DB (31N)	Bluebell, Etc.	UT	341.2	146.9
K31DC (31N)	Freedom	WY	101.5	77.1
K31HS (31N)	Malad	ID	94.0	173.0
K31FD (31N)	Boise	ID	318.0	288.2
K31CI (31N)	Montpelier	ID	98.4	126.5
K31FP (31N)	Heber & Midway	UT	271.7	164.3
K31FR (31Z)	Preston	ID	100.1	151.9
NEW.A (31Z)	Twin Falls	ID	179.0	257.2
NEW.A (31Z)	Logan	UT	142.1	166.9
K32IQ.C (32-)	Jackson	WY	142.7	64.6
K32GT.C (32-)	Logan	UT	155.9	167.3
NEW-D.A (32)	Soda Springs, Etc.	ID	63.1	120.6

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Totals for KFXP.PRO (31)

Calculation Area Population:	210,825	(	18391.4 sq. km )
Not Affected by Terrain Loss:	205,533	(	13907.3 sq. km )
Total NTSC Interference:	173	(	258.0 sq. km )
DTV Only Interference:	0	(	3.6 sq. km )
Total DTV Interference:	0	(	14.4 sq. km )
Interfered Population:	173	(	261.6 sq. km )
Interference Free:	205,360	(	13645.7 sq. km )

Percent Interference: 0.08

Terrain Blocked Population:	5,292	(	4484.1 sq. km)
Contour Area Population:	210,817		

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Interference Free Breakdown:

White:	178,314	(	86.8% )
Black:	821	(	0.4% )
Hispanic:	16,756	(	8.2% )
Native American:	5,130	(	2.5% )
Asian:	1,656	(	0.8% )
Pacific Islander:	180	(	0.1% )
Mixed Race:	2,360	(	1.1% )
Other:	143	(	0.1% )

Total: 205,360

	Housing Units	Population	% of County
Idaho			
Bannock County			
County Pop	29,102	75,565	
KFXP.PRO (31)	27,793	72,144	
K30JW--D.C (30)	0	0	0.00
K31DC (31N)	0	0	0.00
K31FR (31Z)	1	0	0.00
NEW.A (31Z)	0	0	0.00
Ix Free	27,792	72,144	100.00
Bingham County			
County Pop	14,303	41,735	
KFXP.PRO (31)	14,278	41,709	
NEW.A (31+)	0	0	0.00
Ix Free	14,278	41,709	100.00
Blaine County			
County Pop	12,186	18,991	
KFXP.PRO (31)	19	45	
NEW.A (31+)	0	0	0.00
Ix Free	19	45	100.00
Bonneville County			
County Pop	30,484	82,522	
KFXP.PRO (31)	29,524	80,731	
NEW.A (31+)	50	145	0.18
Ix Free	29,474	80,586	99.82
Butte County			
County Pop	1,290	2,899	
KFXP.PRO (31)	0	0	
Ix Free	0	0	
Caribou County			
County Pop	3,188	7,304	
KFXP.PRO (31)	47	129	
Ix Free	47	129	100.00
Cassia County			
County Pop	7,862	21,416	
KFXP.PRO (31)	63	220	
NEW.A (31+)	7	28	12.73
Ix Free	56	192	87.27
Jefferson County			
County Pop	6,287	19,155	
KFXP.PRO (31)	1,105	3,514	
Ix Free	1,105	3,514	100.00
Minidoka County			
County Pop	7,498	20,174	
KFXP.PRO (31)	70	219	
NEW.A (31+)	0	0	0.00
Ix Free	70	219	100.00



Oneida County			
County Pop	1,755	4,125	
KFXP.PRO (31)	9	7	
Ix Free	9	7	100.00
Power County			
County Pop	2,844	7,538	
KFXP.PRO (31)	2,566	6,815	
NEW.A (31+)	0	0	0.00
Ix Free	2,566	6,815	100.00

**KFXP.PRO**

PROPOSED

Latitude: 42-55-15 N

Longitude: 112-20-44 W

ERP: 68.50 kW

Channel: 31

Frequency: 575.0 MHz

AMSL Height: 2058.0 m

Horiz. Pattern: Directional

Vert. Pattern: Yes

Elec Tilt: 1.6

Prop Model: Longley/Rice

Climate: Cont temperate

Conductivity: 0.0050

Dielec Const: 15.0

Refractivity: 311.0

Receiver Ht AG: 10.0 m

Receiver Gain: 0 dB

Time Variability: 90.0%

Sit. Variability: 50.0%

ITM Mode: Broadcast



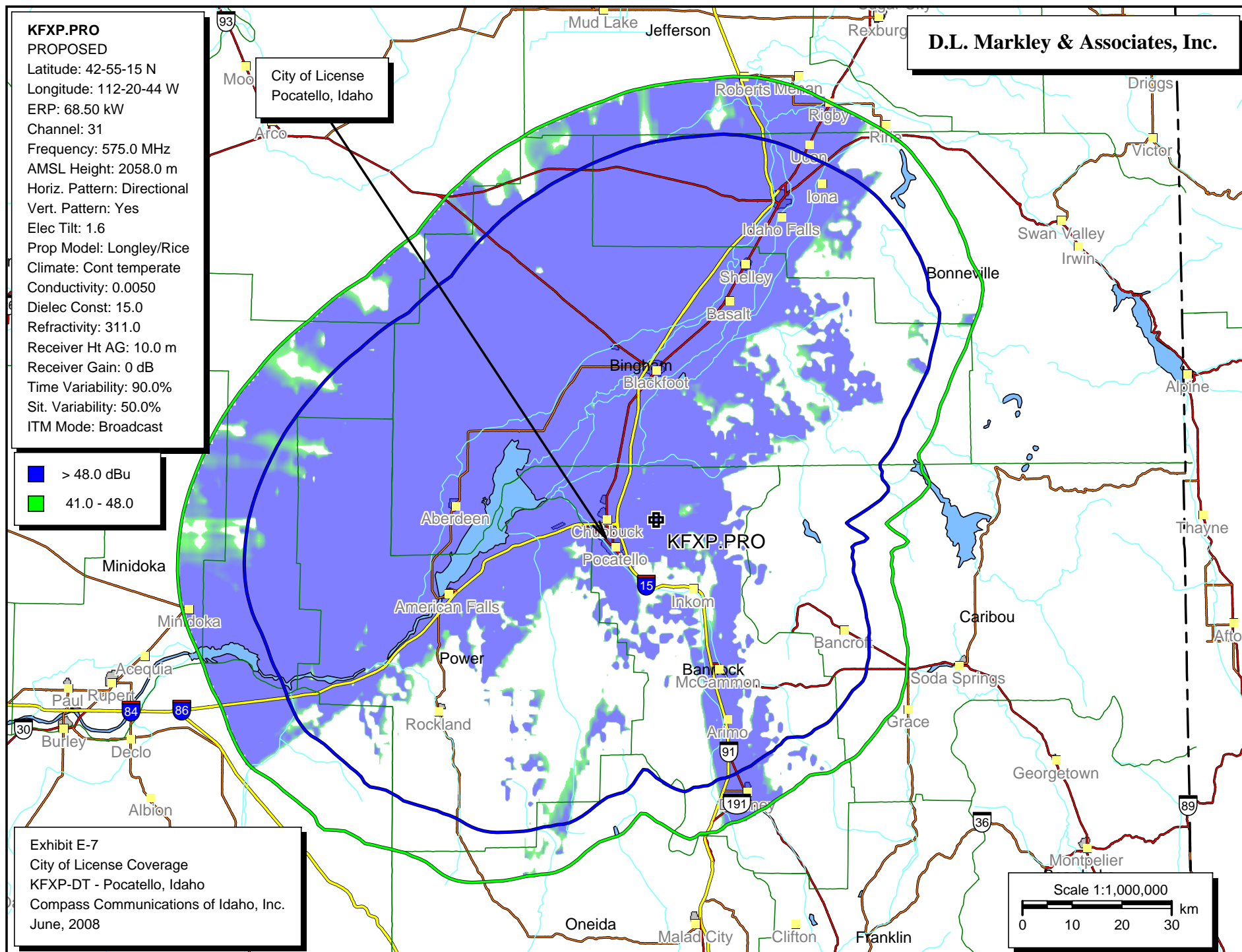
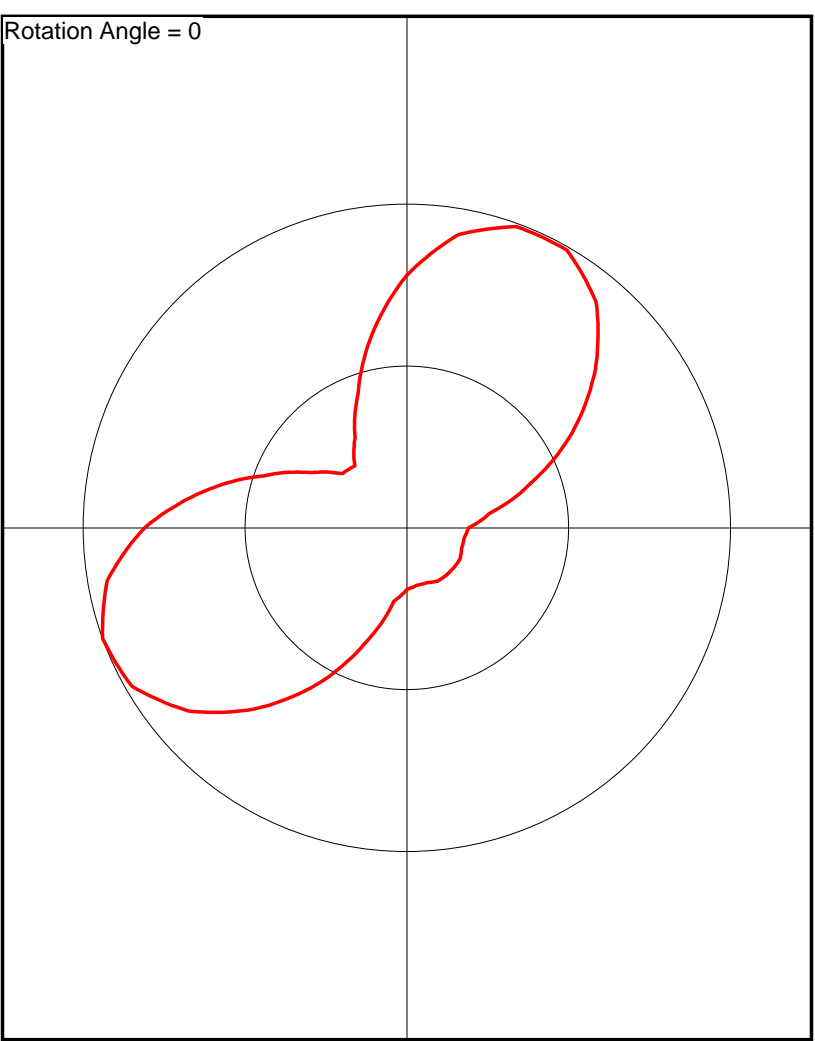
 > 48.0 dBu 41.0 - 48.0**D.L. Markley & Associates, Inc.**

Exhibit E-8 - Horizontal Plane Pattern

Pre-Rotation Antenna Pattern....

Azimuth (deg)	Effective Field
0.0	0.780
10.0	0.920
20.0	0.990
30.0	0.990
40.0	0.910
50.0	0.760
60.0	0.590
70.0	0.410
80.0	0.260
90.0	0.190
100.0	0.180
110.0	0.180
120.0	0.190
130.0	0.190
140.0	0.190
150.0	0.190
160.0	0.180
170.0	0.180
180.0	0.190
190.0	0.230
200.0	0.380
210.0	0.560
220.0	0.730
230.0	0.880
240.0	0.980
250.0	1.000
260.0	0.940
270.0	0.810
280.0	0.640
290.0	0.470
300.0	0.340
310.0	0.260
320.0	0.250
330.0	0.320
340.0	0.440
350.0	0.610

Rotation Angle = 0



**Exhibit E-8 - Directional Antenna Data**

Proposed Television Directional Antenna System - Horizontal Plane Pattern

Station: KFXP-DT

Maximum ERP: 68.5 kW

Azimuth	Relative Field	Relative Power	ERP (kW)	ERP (dBk)
000	0.780	0.6084	41.68	16.20
010	0.920	0.8464	57.98	17.63
020	0.990	0.9801	67.14	18.27
030	0.990	0.9801	67.14	18.27
040	0.910	0.8281	56.72	17.54
050	0.760	0.5776	39.57	15.97
060	0.590	0.3481	23.84	13.77
070	0.410	0.1681	11.51	10.61
080	0.260	0.0676	4.63	6.66
090	0.190	0.0361	2.47	3.93
100	0.180	0.0324	2.22	3.46
110	0.180	0.0324	2.22	3.46
120	0.190	0.0361	2.47	3.93
130	0.190	0.0361	2.47	3.93
140	0.190	0.0361	2.47	3.93
150	0.190	0.0361	2.47	3.93
160	0.180	0.0324	2.22	3.46
170	0.180	0.0324	2.22	3.46
180	0.190	0.0361	2.47	3.93
190	0.230	0.0529	3.62	5.59
200	0.380	0.1444	9.89	9.95
210	0.560	0.3136	21.48	13.32
220	0.730	0.5329	36.50	15.62
230	0.880	0.7744	53.05	17.25
240	0.980	0.9604	65.79	18.18
250	1.000	1.0000	68.50	18.36
260	0.940	0.8836	60.53	17.82
270	0.810	0.6561	44.94	16.53
280	0.640	0.4096	28.06	14.48
290	0.470	0.2209	15.13	11.80
300	0.340	0.1156	7.92	8.99
310	0.260	0.0676	4.63	6.66
320	0.250	0.0625	4.28	6.32
330	0.320	0.1024	7.01	8.46
340	0.440	0.1936	13.26	11.23
350	0.610	0.3721	25.49	14.06

# Exhibit E-8 - Vertical Plane Radiation Pattern

Angle	Relative Field	ERP dBk.
-6.00	0.090	-2.56
-5.40	0.080	-3.58
-5.00	0.030	-12.10
-4.40	0.060	-6.08
-4.00	0.110	-0.82
-3.40	0.120	-0.06
-3.00	0.070	-4.74
-2.60	0.010	-21.64
-2.00	0.160	2.44
-1.40	0.220	5.21
-1.00	0.160	2.44
-0.80	0.100	-1.64
-0.60	0.020	-15.62
-0.40	0.080	-3.58
-0.20	0.200	4.38
0.00	0.320	8.46
0.20	0.450	11.42
0.40	0.580	13.63
0.60	0.700	15.26
0.80	0.810	16.53
1.00	0.890	17.34
1.20	0.960	18.00
1.40	0.990	18.27
1.60	1.000	18.36
1.80	0.980	18.18
2.00	0.930	17.73
2.20	0.860	17.05
2.40	0.760	15.97
2.60	0.650	14.62
2.80	0.540	13.00
3.00	0.420	10.82
3.20	0.300	7.90
3.40	0.210	4.80
3.60	0.160	2.44
3.80	0.160	2.44
4.00	0.190	3.93
4.20	0.210	4.80
4.40	0.230	5.59
4.60	0.230	5.59
4.80	0.210	4.80
5.00	0.180	3.46
5.20	0.140	1.28
5.40	0.090	-2.56
5.60	0.040	-9.60
5.80	0.010	-21.64
6.00	0.050	-7.66
6.20	0.090	-2.56
6.40	0.110	-0.82
6.60	0.130	0.64
6.80	0.130	0.64
7.00	0.120	-0.06
7.20	0.100	-1.64
7.40	0.070	-4.74
7.60	0.040	-9.60
7.80	0.010	-21.64
8.00	0.020	-15.62
8.20	0.050	-7.66
8.40	0.070	-4.74
8.60	0.080	-3.58
8.80	0.090	-2.56
9.00	0.090	-2.56

Note: Relative Field Same for all values of azimuth.  
ERP in dBk based on azimuths of maximum ERP.

