

**Technical Exhibit**

**Minor Modification of Licensed Facility Application**

This application complies with all engineering standards and assignment requirements specified in the applicable FCC rules and regulations. Changes to the technical parameters are as indicated below:

	Licensed	Mod of Licensed Facility
Channel / Class	202C2	202C1
Geographical Coordinates NAD 83	42 44 26.0 106 21 36.0	42 44 24.0 106 18 25.0
ASRN	1008931	1009562
Site elevation	2444.5 meters	2456.7 meters
Tower AGL	54.8 meters	107.6 meters
Antenna COR AGL	35.0 meters	70.0 meters
Antenna COR AMSL	2479.5 meters	2526.7 meters
HAAT	559 meters	565 meters
ERP	0.850 kW (H&V, non-DA)	3.7 kW (H&V, non-DA)

Technical Exhibit

**Tabulation of HAAT / ERP / distance to 60 dBu contour**

CH 202C1 42 44 24.0 / 106 18 25.0 3.7 kW ERP (H&V, non-da) 2526.7 m COR AMSL 565 m HAAT

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	1662.8	863.9	3.7000	5.68	1.000	65.79
010	1668.1	858.6	3.7000	5.68	1.000	65.66
020	1668.3	858.4	3.7000	5.68	1.000	65.65
030	1679.8	846.9	3.7000	5.68	1.000	65.35
040	1705.1	821.6	3.7000	5.68	1.000	64.66
045	1724.9	801.8	3.7000	5.68	1.000	64.09
050	1745.6	781.1	3.7000	5.68	1.000	63.48
060	1803.1	723.6	3.7000	5.68	1.000	61.68
070	1884.1	642.6	3.7000	5.68	1.000	58.94
080	2006.9	519.8	3.7000	5.68	1.000	53.54
090	2000.6	526.1	3.7000	5.68	1.000	53.91
100	1947.9	578.8	3.7000	5.68	1.000	56.57
110	1947.7	579.0	3.7000	5.68	1.000	56.58
120	2042.5	484.2	3.7000	5.68	1.000	51.49
130	2202.9	323.8	3.7000	5.68	1.000	42.80
135	2236.9	289.8	3.7000	5.68	1.000	40.86
140	2258.8	267.9	3.7000	5.68	1.000	39.56
150	2323.5	203.2	3.7000	5.68	1.000	35.17
160	2317.3	209.4	3.7000	5.68	1.000	35.66
170	2311.7	215.0	3.7000	5.68	1.000	36.09
180	2288.8	237.9	3.7000	5.68	1.000	37.70
190	2227.4	299.3	3.7000	5.68	1.000	41.41
200	2143.7	383.0	3.7000	5.68	1.000	46.04
210	2059.1	467.6	3.7000	5.68	1.000	50.56
220	1955.5	571.2	3.7000	5.68	1.000	56.25
225	1952.8	573.9	3.7000	5.68	1.000	56.36
230	1961.4	565.3	3.7000	5.68	1.000	55.98
240	1991.0	535.7	3.7000	5.68	1.000	54.47
250	2013.7	513.0	3.7000	5.68	1.000	53.14
260	2094.7	432.0	3.7000	5.68	1.000	48.61
270	2112.1	414.6	3.7000	5.68	1.000	47.68
280	2088.6	438.1	3.7000	5.68	1.000	48.94
290	1857.6	669.1	3.7000	5.68	1.000	59.86
300	1765.9	760.8	3.7000	5.68	1.000	62.86
310	1733.0	793.7	3.7000	5.68	1.000	63.85
315	1711.3	815.4	3.7000	5.68	1.000	64.48
320	1693.0	833.7	3.7000	5.68	1.000	64.99
330	1671.3	855.4	3.7000	5.68	1.000	65.57
340	1673.6	853.1	3.7000	5.68	1.000	65.51
350	1666.4	860.3	3.7000	5.68	1.000	65.70

FCC 30 second Terrain Data  
 (yellow highlighted values establish average HAAT)

**Educational Media Foundation**  
**Minor Modification of Licensed Facility - 0000113904**

**KAIX, Casper, WY**  
**July 2020**

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**Interference Study**

CH 202C1    42 44 24.0 / 106 18 25.0    3.7 kW ERP (H&V, non-da)    2526.7 m COR AMSL    565 m HAAT

CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
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**Reference station:**

202C2 KAIX Casper	LIC WY	270.8 90.8	4.34 0000113904	42 44 26.00 106 21 36.00	0.850 559	2480	Educational Media Foundation
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**Co-channel, first, second, third adjacent channels**

201A KGLL Gillette	LIC WY	22.0 202.6	179.11 BLED20100421AAQ	44 13 49.90 105 27 47.00	0.200 85	12.8 1508	9.0 Real Presence Radio
201C2 KCWC-FM Riverton	LIC WY	265.7 84.1	197.85 BLED19850305KW	42 34 58.80 108 42 38.40	3.000 442	85.6 2776	57.7 Central Wyoming College
202C KLMP Rapid City	LIC SD	47.6 229.3	266.60 BLED20050415ACE	44 19 41.90 103 50 04.70	63.000 522	173.0 2232	73.9 Bethesda Christian Broadcast
202A KLJV Scottsbluff	LIC NE	115.4 297.0	227.34 BMLD20080523AEY	41 50 20.90 103 49 54.80	0.390 238	70.1 1532	23.6 Educational Media Foundation
204A KUWK Kaycee	LIC WY	346.9 166.6	131.82 BLED20131018AIS	43 53 41.30 106 40 50.40	1.600 99	2.0 1664	23.1 University of Wyoming
204C3 KRKY-FM Douglas	CP WY	81.1 261.8	88.69 BPED20190912ABI	42 51 28.90 105 14 04.90	23.000 101	3.8 1658	39.3 Cedar Cove Broadcasting, Inc
204C3 KRKY-FM Douglas	LIC WY	81.1 261.8	88.69 0000101347	42 51 28.90 105 14 04.90	23.000 101	3.8 1658	39.3 Cedar Cove Broadcasting, Inc
205C2 KAIW Saratoga	LIC WY	188.7 8.5	124.68 BLED20170208AAL	41 37 48.90 106 32 02.90	0.580 996	1.6 3339	49.8 University Of Wyoming

**I.F. channels:**

None

**TV Channel 6 Broadcast Station Protection**

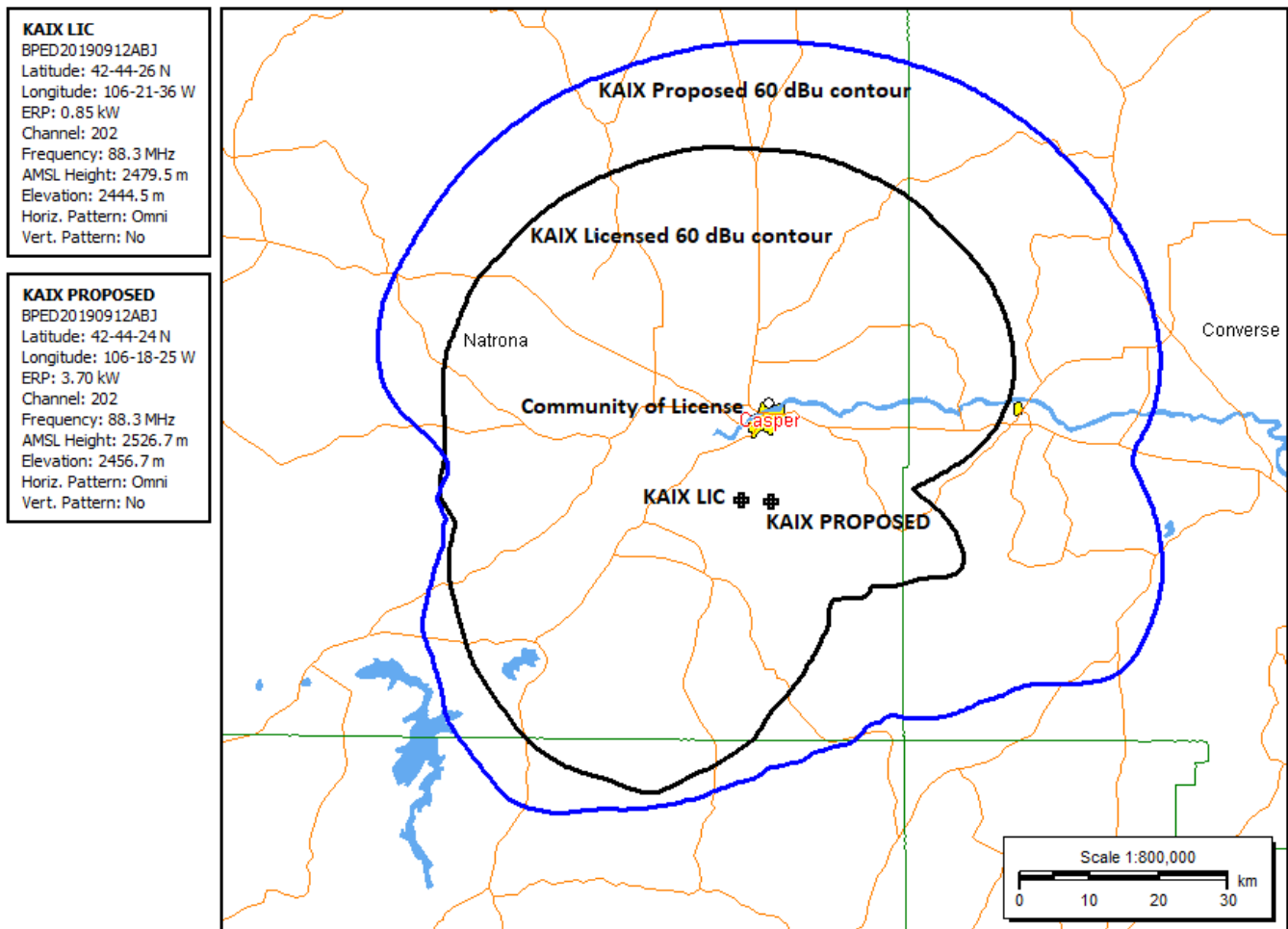
Per Section 73.525(a)(1), NCE-FM stations operating on CH 202 must provide protection to TV Channel 6 broadcast stations located within the distance of 257 km. There are no TV Channel 6 broadcast stations within 257 km of KAIX as proposed, therefore KAIX is in full compliance with all provisions of Section 73.525 with regard to TV Channel 6 protection.

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 FCC 30 second terrain data

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**Community of License Coverage Compliance with 73.515**

Below is a map showing KAIX's licensed and proposed 60 dBu contours. The proposed 60 dBu contour will have overlap with the licensed 60 dBu contour and will continue to provide coverage over the community of license of Casper, WY.



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**Environmental Impact & RFR Compliance Statement**

KAIX will be located at an established communications site that is in compliance with all environmental impact requirements.

KAIX will operate with an ERP of 3.7 kW (H&V) at an antenna COR AGL height of 70 meters. This application proposes to diplex with KLWC which currently has a construction permit to be located on the same tower at the same antenna COR AGL height of 70 meters, and will operate with 6.8 kW (H&V). An ERI Rototiller style 4 bay full wave antenna will be used for the combined facilities of KAIX and KLWC. Based on this antenna, at 29 meters from the tower the RFR of the combined facilities will be a maximum of 6.21% of the general population/uncontrolled MPE limit. KCSP-FM is also located on the tower. It operates with an ERP of 100 kW (H&V) utilizing an ERI SHPX-8C full wave antenna at an antenna COR AGL height of 97 meters. Based on this antenna, at 26 meters from the tower the RFR will be a maximum of 20.71% of the general population/uncontrolled MPE limit. As the RFR of all facilities on the tower combined is less than 100% of the general population/uncontrolled MPE limit, KAIX as proposed is in compliance with all RFR requirements.

RFR hazard warning signs will be posted at the site. The applicant certifies that in cooperation with other users of the site all authorized personnel will be protected from RFR exposure in excess of FCC guidelines while accessing any controlled exposure area, including the tower, by either reducing power or ceasing operations.