

K226CJ
Whitefish, MT
Proposed Permitted Translator Facility

Application Overview:

The Applicant proposes a minor modification to BNPFT-20130826AAU using the following parameters:

Tech Box:

Channel:	228
Antenna Coordinates:	N48-30-22, W114-20-49 (NAD 27)
ASRN:	N/A
Tower Site Base AMSL:	2078 m
Overall Tower Height AGL:	36 m
COR AGL:	17 m
ERP:	0.25 kW
Directional Antenna (off the shelf):	Scala CA2-CP (180 deg)

Primary Station and Translator Protected Contour Relationship:

Exhibit 1 demonstrates that the proposed fill-in translator facility's protected contour is completely encompassed by the protected contour of the primary station being rebroadcast.

Interference Study (Adjacent Stations):

Exhibit 2 is a contour overlap study demonstrating that the proposed antenna site provides requisite contour protection towards all applications, authorizations, and permits pursuant to Section 74.1204 with the exception of the following:

- K230BJ (BLFT-20140828AAA) on its second adjacent channel

Section 74.1204(a) states that “an application for an FM translator station will not be accepted for filing if the proposed operation would involve overlap of predicted field strength contours with any other station, including commercial and noncommercial educational FM stations, FM translators and Class D (secondary) noncommercial educational FM stations.” However, Section 74.1204(d) states, “the provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or other such factors as may be applicable.” Using the undesired-to-desired ratio method regarding interference to a second or third adjacent frequency, interference is predicted to occur where the translator’s undesired signal exceeds the protection station’s desired signal by more than 40 dB. The free space formula was used to determine the signal strength of the proposed facility, in dBu, at the antenna site of the adjacent station(s).

The signal strength of K230BJ at the proposed site is calculated to be 80.7 dBu. As such, the interfering contour of the proposed facility is its F(50,10) 120.7 dBu contour which extends a maximum distance of 98.7 meters from the proposed tower.

Exhibit 2A includes a satellite view of the proposed translator site. There are no structures or public roads (other than the site access road to the tower and neighboring towers at the site) within the interference contour predicted to be created by the translator. Therefore, due to the absence of “potential listeners” within the interference contour, no interference is expected to occur.

Antenna Located BELOW directional antenna:

The applicant notes that this facility shall be mounted on the same tower as non-directional stations KSPL(FM) and K258AP Kalispell. It will also be located beneath the directional facilities of KUKL(FM) Kalispell, MT. As such, it will have no impact on the azimuth pattern of KUKL(FM).

Downward Radiation Study (FM Model):

The proposed FM Facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields (OET Bulletin 65, Second Edition 97-01, August, 1997). The Commission’s FM Model Power Density Prediction program was employed to determine the Field. Using the Phelps-Dodge "Worst Case" Ring Stub antenna with 1 sections and 1 wavelength spacing, and the AGL height and ERP proposed in this, the highest predicted power density 2 meters above ground is less than 22.3% of the Uncontrolled Standard with a Power Density of 44.6 microwatts per square centimeter 4 meters from the base of the tower.

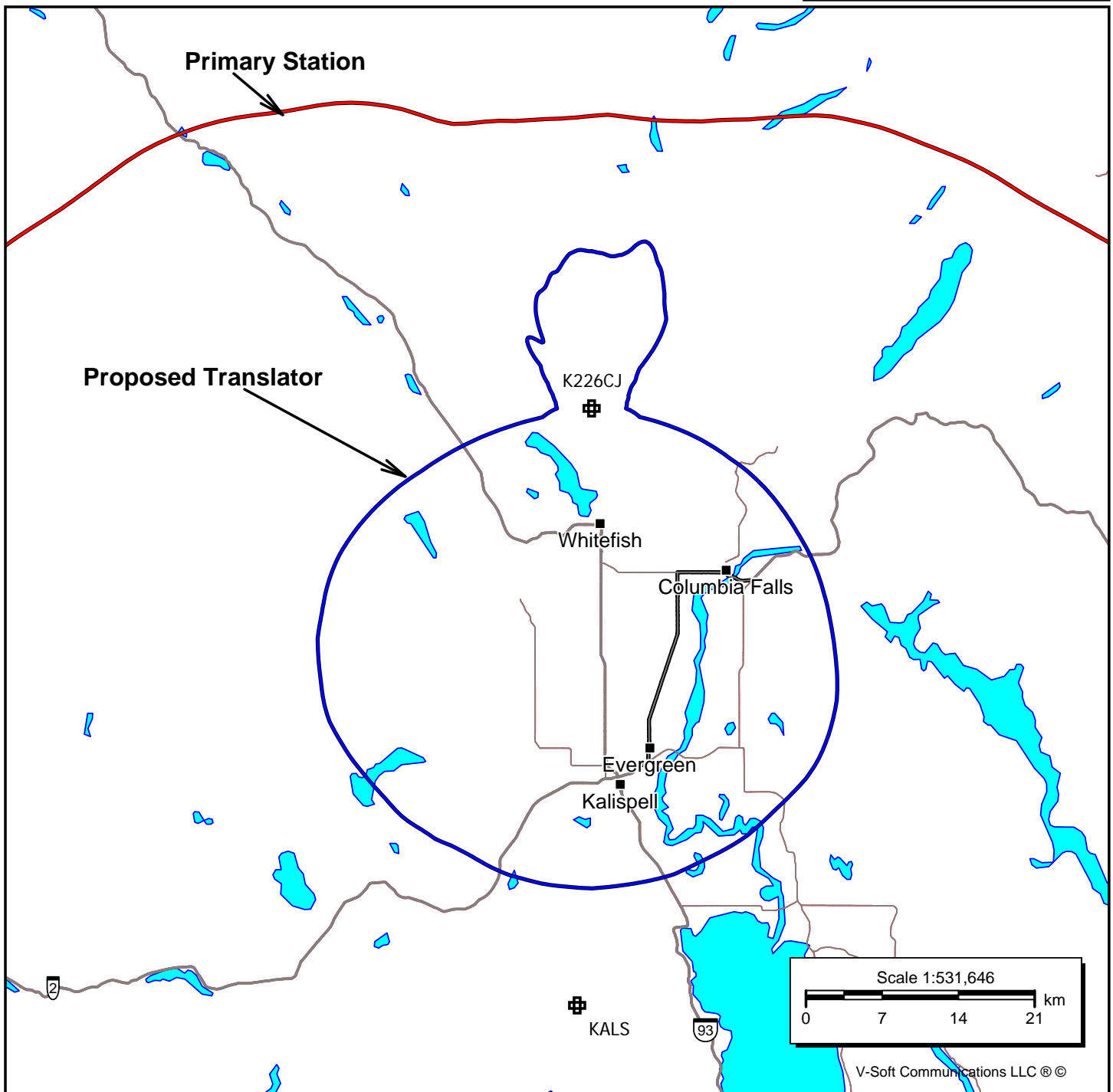
Even though the site will fully comply with the Uncontrolled Site Standards, access to the transmitting site will be restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure to radiofrequency radiation will not exceed the FCC guidelines.

Existing Tower:

The proposed facility is exempt from environmental processing because the facility is not located at a location specified in Section 1.1307(a)(1)-(8) of the Commission's Rules and since the tower in question already exists.

Exhibit 1

**Primary Station Protected Contour
vs.
Proposed Translator Protected Contour**



K226CJ

Proposed
Channel: 228D
Frequency: 93.5 MHz
Latitude: 48-30-22 N
Longitude: 114-20-49 W
COR AGL Height: 17.0 m
COR AMSL Height: 2095.0 m
Base Elevation: 2078.0 m
COR HAAT: 761.5 m
ERP: 0.25 kW
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

KALS

BMLED20150130AKN
Channel: 246C
Frequency: 97.1 MHz
Latitude: 48-00-48 N
Longitude: 114-21-55 W
COR AGL Height: 27.0 m
COR AMSL Height: 2065.0 m
Base Elevation: 2038.0 m
COR HAAT: 758.0 m
ERP: 26.50 kW
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Exhibit 2

Section 74.1204 Interference Tabulations




K226CJ on Channel 228				
Section 74.1204 Contour Overlap Study				
REFERENCE	CH#	228D	- 93.5 MHz, Pwr= 0.25 kW DA, HAAT= 761.5 M, COR= 2095 M	DISPLAY DATES
48 30 22.0 N.			Average Protected F(50-50)= 36.97 km	DATA 10-24-15
114 20 49.0 W.			Standard Directional	SEARCH 11-15-15

Exhibit 2A

Interfering Contour Satellite Map

K226CJ vs K230BJ

Legend

-  K226CJ (228)
-  K226CJ (228) Proposed F(50,10) 120.7 dBu Interfering Contour
-  K230BJ (230) Licensed F(50,50) 80.7 dBu Protected Contour

K226CJ (228)

Google earth

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90 m

