

Old Fashion Baptist Church

Butte, MT

Technical Certifications

As shown below, the proposed facility meets the applicable engineering standards and assignment requirements of 47 CFR §73.203, §73.207, §73.213, §73.215, §73.509, and §73.515, with the exception of KTVM-TV (Facility ID 18066). Protection for this facility is documented on the next page of this exhibit.

CP Mod ASRN 1323672 Old Fashion Baptist Church Of Butte CH# 201A - 88.1 MHz, Pwr= 1 kw, HAAT= -165.5 M, COR= 1731.9 M Average Protected F(50-50)= 10.16 km Omni-directional											
REFERENCE										DISPLAY DATES	
45 57 02.50 N.										DATA 07-26-23	
112 30 44.30 W.										SEARCH 07-26-23	
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kw)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)
06 2C	KTVM-TV	LI	_HN	40.5	8.30	46 00 27.00	19.200	21.1	117.5	138.6R	-130.3M
Butte		MT		220.5	BLCDT-20100629AVB	112 26 32.99	591	2566			
201A	KFGL	CP	_VN	72.6	0.05	45 57 03.00	5.000		---Reference---		
Butte		MT		252.6	0000167455	112 30 42.00	43	1729	Old Fashion Baptist Church		
201A	KOFK-FM	LIC	_EN	109.3	102.62	45 38 19.70	0.500	71.9	24.2	20.7	42.5
Bozeman		MT		290.2	BLED20170710AAQ	111 15 58.80	213	1756	Guild of St. Peter Educati		
203C1	KYPH	LIC	_CN	8.9	89.72	46 44 52.70	5.200	4.2	49.4	75.4	37.3
Helena		MT		189.0	BLED20170727AFU	112 19 52.00	576	2248	Montana State University -		

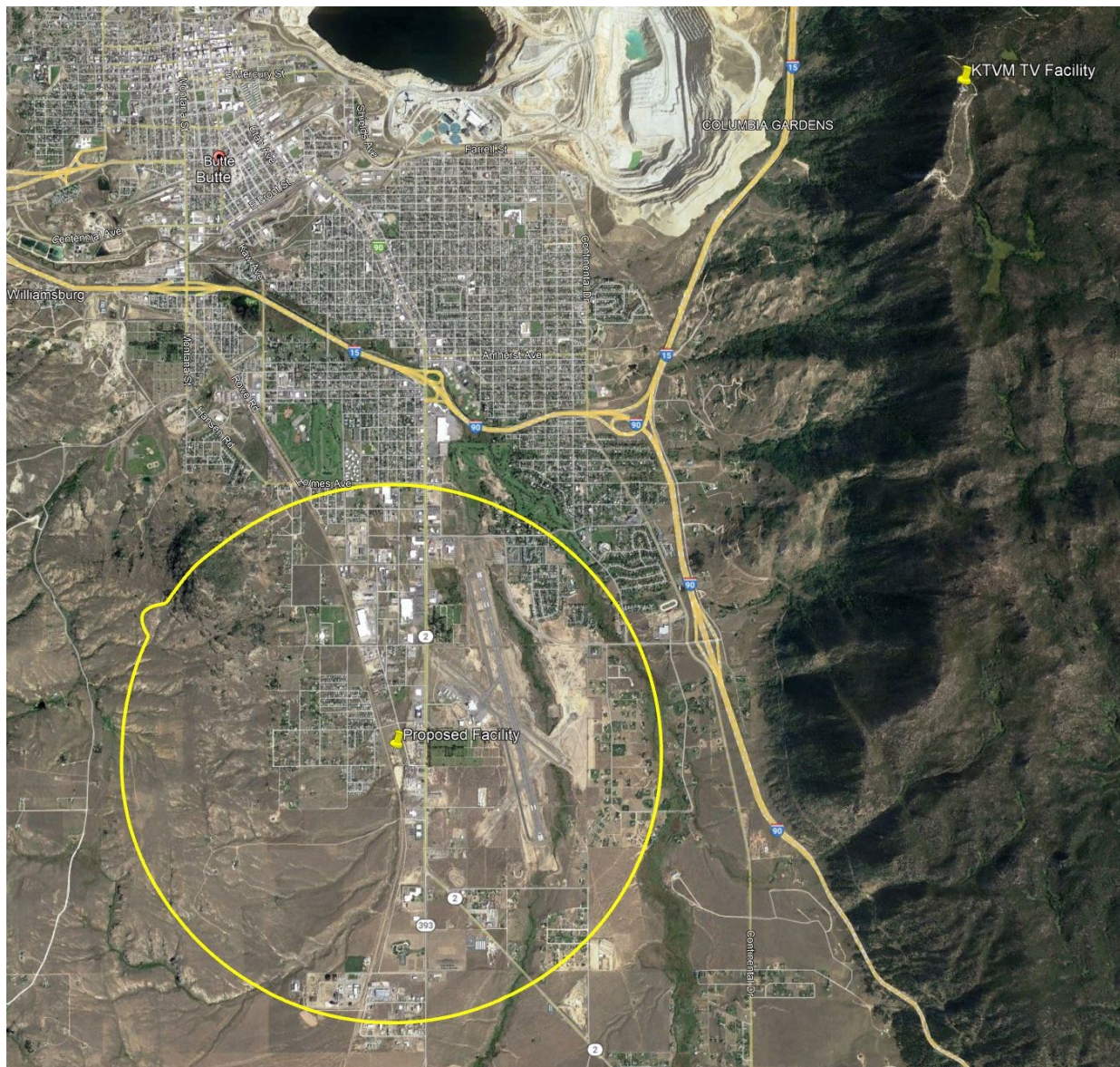
Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 In & Out distances between contours are shown at closest points. Reference zone= - ZN2, Co to 3rd adjacent.
 All separation margins (if shown) include rounding.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
 « = Station meets FCC minimum distance spacing for its class.

Channel 6 Protection

The proposed facility lies within 265 km of KTVM-TV, Butte, MT (Facility ID 18066), so potential interference to KTVM-TV must be considered and appropriate technical means applied to minimize interference as required by 47 C.F.R. §73.525.

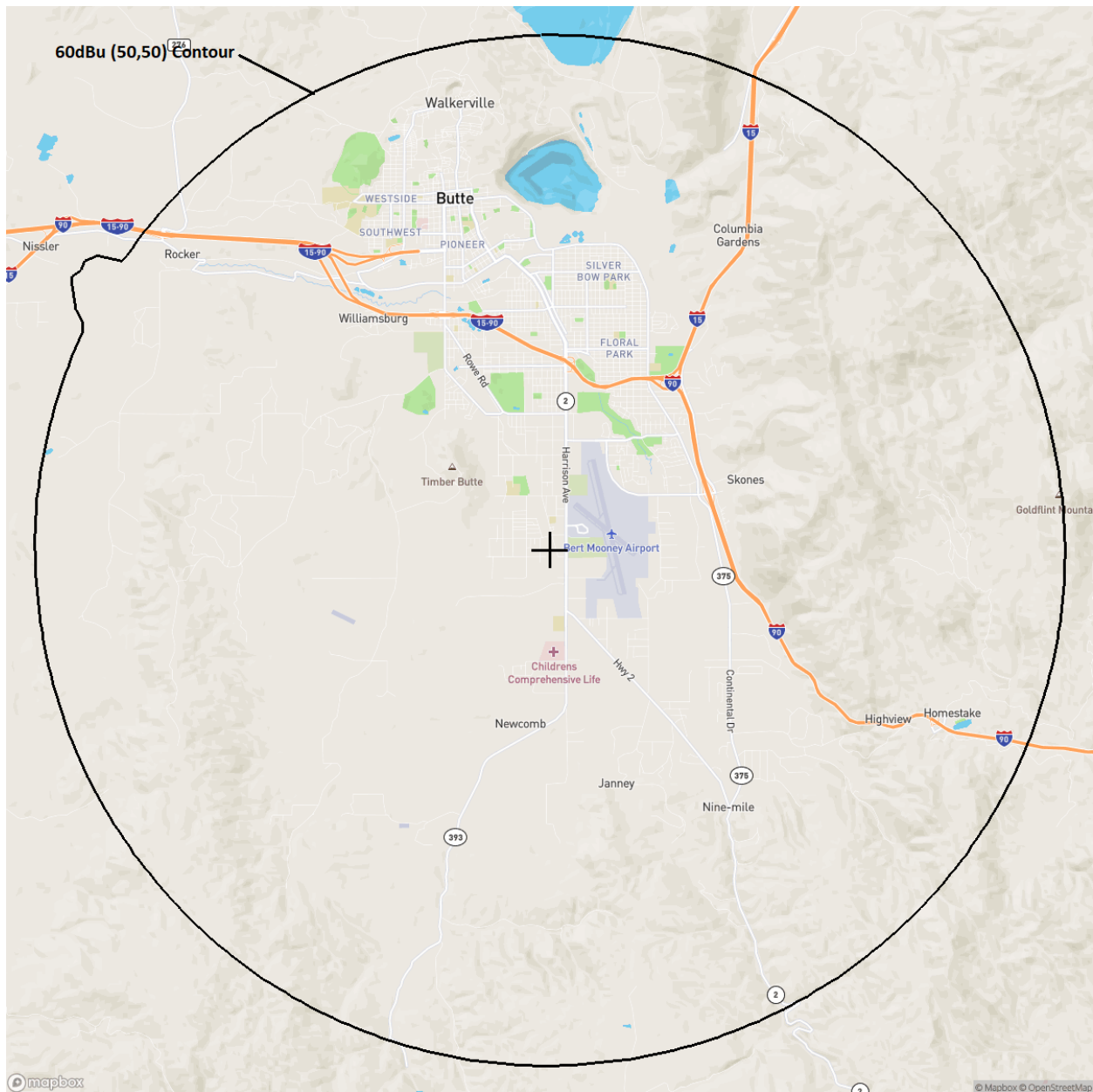
The map below shows the proposed facility in relation to the KTVM-TV facility, which is 8.3km from the proposed facility. As shown, the site is within the protected contour of KTVM-TV, which necessitates additional analysis to evaluate predicted interference to KTVM-TV. The proposed facility is located at a predicted signal level of 99.9 dBμ (50,50) for KTVM-TV, making the entire area of interference within the 83.5 dBμ (50,10) contour of the proposed facility (§73.525(e)(1)(vii)). The 83.5dB contour is plotted below.

Using these methods, the area of interference contains a total of 1,744 persons (2020 Census), well below the permitted number of persons (3,000) in §73.525(c).



City of License Coverage

The map below demonstrates community coverage requirements for the city of license, fulfilling the requirement of 47 CFR §73.515, NCE FM transmitter location.



Environmental Effect

The proposed facility is excluded from environmental processing under 47 CFR §1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments).

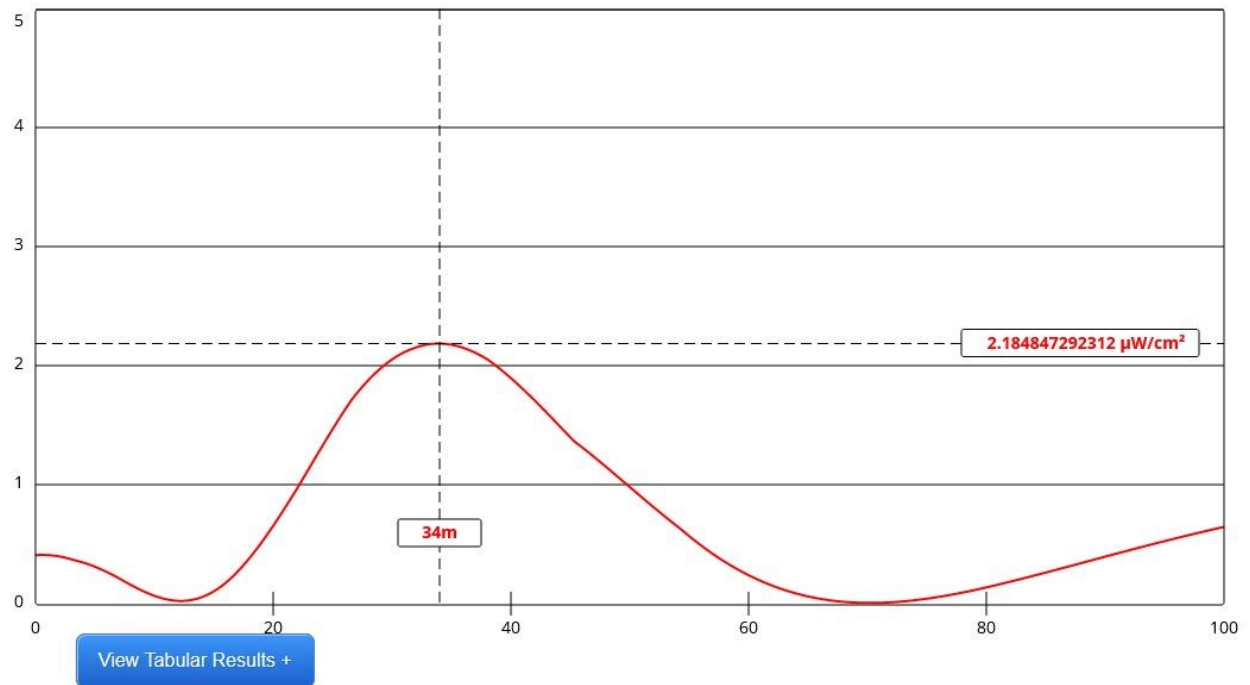
The proposed site is not in an officially designated wilderness area, wildlife preserve, flood plain, or near a site that is either listed or eligible for listing in the National Register of Historic Places. The proposed construction will not adversely affect any listed or proposed threatened or endangered species or their critical habitats, or any sites significant to Native American Religious practice, and will not involve any significant change in surface features. The applicant does not propose to light the antenna support structure with high intensity white lighting.

The proposed facility is located on the grounds of Old Fashion Baptist Church, which is owned by the applicant. The applicant will locate the facility on a 43m guyed tower with a 3 bay, 0.7λ circularly polarized antenna mounted at 40m on the tower. There are no other emitters planned on the tower. The base of the tower will be fenced to prevent unauthorized personnel from accessing the tower.

Shown below is the output of the Commission's FM Model program, with a maximum calculated exposure of $2.18 \mu\text{W}/\text{cm}^2$, well below the maximum permissible exposure for the general public, or 1.1% of the limit of $200 \mu\text{W}/\text{cm}^2$.

The applicant is cognizant of their responsibility to protect those workers whose duties require that they be in the vicinity of the antenna from exposure to radio frequency fields in excess of those outlined above. To that end, signage will be attached to the base of the antenna support structure warning all workers of the potential for harmful exposure and directing them to contact the responsible person at the broadcast station. That person will ascertain whether the worker will be in areas where there is an exposure hazard, and if so, arrange to shut down the transmitter(s). The permittee/licensee will also coordinate with other users of the site to reduce power or cease operation in order to protect persons having access to the site, tower or antenna from radiofrequency radiation in excess of Commission guidelines.

For these reasons, the applicant believes that a Commission grant of this application would not have a significant environmental impact.



Channel Selection	Channel 201 (88.1 MHz) ▼		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other" ▼		
Height (m)	40	Distance (m)	100
ERP-H (W)	1000	ERP-V (W)	1000
Num of Elements	3	λ	0.7
Num of Points	500	Apply	