

Modify K295BZ King City, California
Proposed CH 295D – 106.9 MHz – 0.250 kW
October 13, 2020

TECHNICAL NARRATIVE

This Technical Narrative and attached exhibits were prepared on behalf of King City Communications Corporation, ("King City"), licensee of FM translator K295BZ, Channel 295D, Facility ID No. 152685, King City, CA.

King City proposes to modify K295BZ to operate on channel 295D (106.9 MHz) with a slight change to the transmit antenna coordinates and an increase in the effective radiated power and antenna radiation center above ground level. The proposed K295BZ facility will be used as a fill-in translator for co-owned primary station KRKC-FM, Channel 271B (102.1 MHz), Facility ID No. 34885 licensed to King City, CA. The proposed new facility would operate on Channel 295D (106.9 MHz) with 250 watts directional with the transmit antenna located at 24 meters height above ground level and -129 meters HAAT. An exhibit demonstrates that the proposed FCC F(50,50) 54 dBu contour of the proposed facility is contained within the KRKC-FM F(50,50) 54 dBu contour. Therefore, it is believed that this application is in compliance with Section 74.1201(g) of the Commission's rules. The proposed new transmit coordinates are only a few meters from current licensed facility coordinates. The FCC F(50,50) 60 dBu contours of the construction permit and the proposed site overlap. Therefore, no exhibit showing compliance with FCC Section 74.1233(a) "Common Overlap" is provided.

A channel study is included as an exhibit that assumes a Class A 6 kW facility operating on channel 295. This study is provided to FCC staff as a convenience to help identify potential

contour overlap issues. A Section 74.1204 contour protection exhibit shows protection to co-channel full power FM station KQLB Channel 295A, Los Banos, CA. Another Section 74.1204 contour protection exhibit shows protection to third adjacent channel full power FM station KMJV, Channel 292A, Soledad, CA.

Studies has been undertaken to show the proposed facility is in compliance with the FCC's radio frequency emission limits and are attached as exhibits.

K295BZ

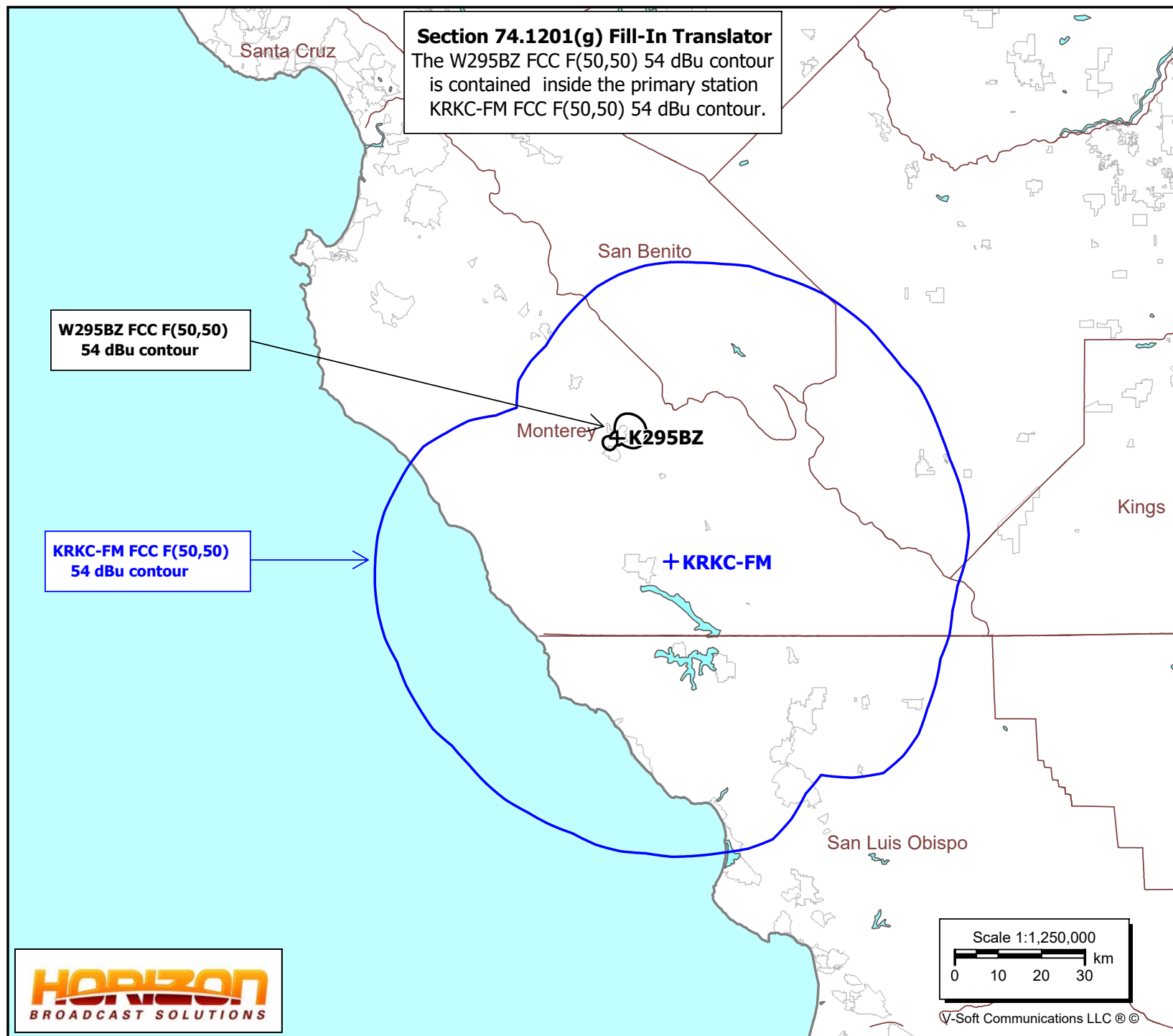
King City, CA
BLFT20160217AAR
Latitude: 36-12-24.90 N
Longitude: 121-08-19.40 W
ERP: 0.25 kW
HAAT: -128.79 m
Channel: 295
Frequency: 106.9 MHz
AMSL Height: 115.0 m
Elevation: 91.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

KRKC-FM

King City, CA
BLH20140902ADZ
Latitude: 35-57-04.20 N
Longitude: 121-00-06.20 W
ERP: 2.85 kW
HAAT: 546 m
Channel: 271
Frequency: 102.1 MHz
AMSL Height: 889.0 m
Elevation: 842.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Section 74.1201(g) Fill-In Translator

The W295BZ FCC F(50,50) 54 dBu contour is contained inside the primary station KRKC-FM FCC F(50,50) 54 dBu contour.



K295BZ Mod Class A FM Channel Study

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REFERENCE                                     DISPLAY DATES
36 12 24.9 N.                               CLASS = A   Int = AA   DATA   09-24-20
121 08 19.4 W.                               Current Spacings to 3rd Adj.  SEARCH 09-25-20
----- Channel 295 - 106.9 MHz -----
Call      Channel  Location      Azi      Dist      FCC      Margin
      Lat.      Lng.      Ant      Power      HAAT
-----
K295BZ    LIC-D 295D   King City      CA   99.5      0.0      84.5      -84.5
36 12 24.8 121 08 18.7 D      0.010 kW   0 M
      King City Communications C      BLFT20160217AAR

KQLB      LIC      295A   Los Banos      CA   18.0      84.0      114.5      -30.5
36 55 34.8 120 50 45.6      6.000 kW   100 M
      Vlb Broadcasting, Inc.      BLH19921207KI

Note: See Section 74.1204 Contour Protection Exhibit - KQLB

KMJV      LIC      292A   Soledad      CA   302.1      14.1      30.5      -16.4
36 16 26.8 121 16 18.7      4.700 kW   113 M
      Wolfhouse Radio Group, Inc      BLH19971222KF

Note: See Section 74.1204 Contour Protection Exhibit - KMJV

KSES-FM   LIC      296A   Seaside      CA   303.6      69.8      71.5      -1.7
36 33 08.9 121 47 20.8      1.750 kW   190 M
      Entravision Holdings, LLC      BLH20150324ABU

KEGT      LIC-N 293A   San Miguel      CA   138.4      64.5      30.5      34.1
35 46 18.8 120 39 48.6 N      6.000 kW   93 M
      Hispanic Target Media, Inc      BLH20170828AAA

KMLM-FM   LIC      297B   Grover Beach  CA   155.0      103.6      68.5      35.1
35 21 36.9 120 39 21.6      3.500 kW   503 M
      Gold Coast Radio, LLC      BLH19980312KC

K294CA    LIC-D 294D   Monterey      CA   303.6      69.8      33.5      36.3
36 33 08.9 121 47 20.8 D      0.250 kW   0 M
      Mount Wilson FM Broadcaste      BLFT20150810ADY

KFRC-FM   LIC      295B   San Francisco  CA   327.0      218.9      177.5      41.4
37 51 03.7 122 29 53.9      80.000 kW   305 M
      Entercom License, LLC      BMLH20050811ABJ

KPIG-FM   LIC      298A   Freedom      CA   324.1      86.3      30.5      55.8
36 50 05.8 121 42 25.8      5.400 kW   103 M
      Smg-Monterey, LLC      BLH20000821ABS

KEZR      LIC-D 293B   San Jose      CA   333.2      124.9      68.5      56.4
37 12 31.8 121 46 30.8 D      42.000 kW   163 M
      Alpha Media Licensee LLC      BLH20080625ABG

K242AT    LIC-D 242D   Salinas, Etc.  CA   332.1      69.1      9.5      59.6
36 45 21.9 121 30 09.8 D      0.250 kW   689 M
      Susan B. Bushell      BLFT20120720ADX
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Section 74.1204 Contour Protection – KMJV

This comprehensive exhibit has been prepared to demonstrate that the proposed K295BZ modification will not cause prohibited interference to KMJV, Channel 292A, Soledad, California.

This statement demonstrates that a lack of population and/or other factors allow this proposal to be compliant with Section 74.1204. The process commonly called “Living Way,” allows for the use of U/D Analysis, also known as “signal strength ratio methodology.” In this instant case the facility to be protected is adjacent and is to be afforded protection from signals 40 dB stronger than they present in the location of the proposed antenna location.

The KMJV F(50,50) protected contour at the proposed K295BZ application site is 79.0 dBu. Therefore, the proposed K295BZ F(50,10) interfering contour with respect to KMJV is the 119.0 dBu contour. The attached Google Earth screenshot shows the area around the tower and the K295BZ F(50,10) 119 dBu interfering contour is shown in red. The only buildings within the 119 dBu contour is a very small part of the King City Communications Corporation broadcast studio building and a couple of unoccupied buildings that are part of a cemetery complex adjacent to the radio stations. Therefore, it is believed that the proposed modification to K295BZ will not cause prohibited interference to KMJV as there is no population or occupied buildings within the area where interference occurs.

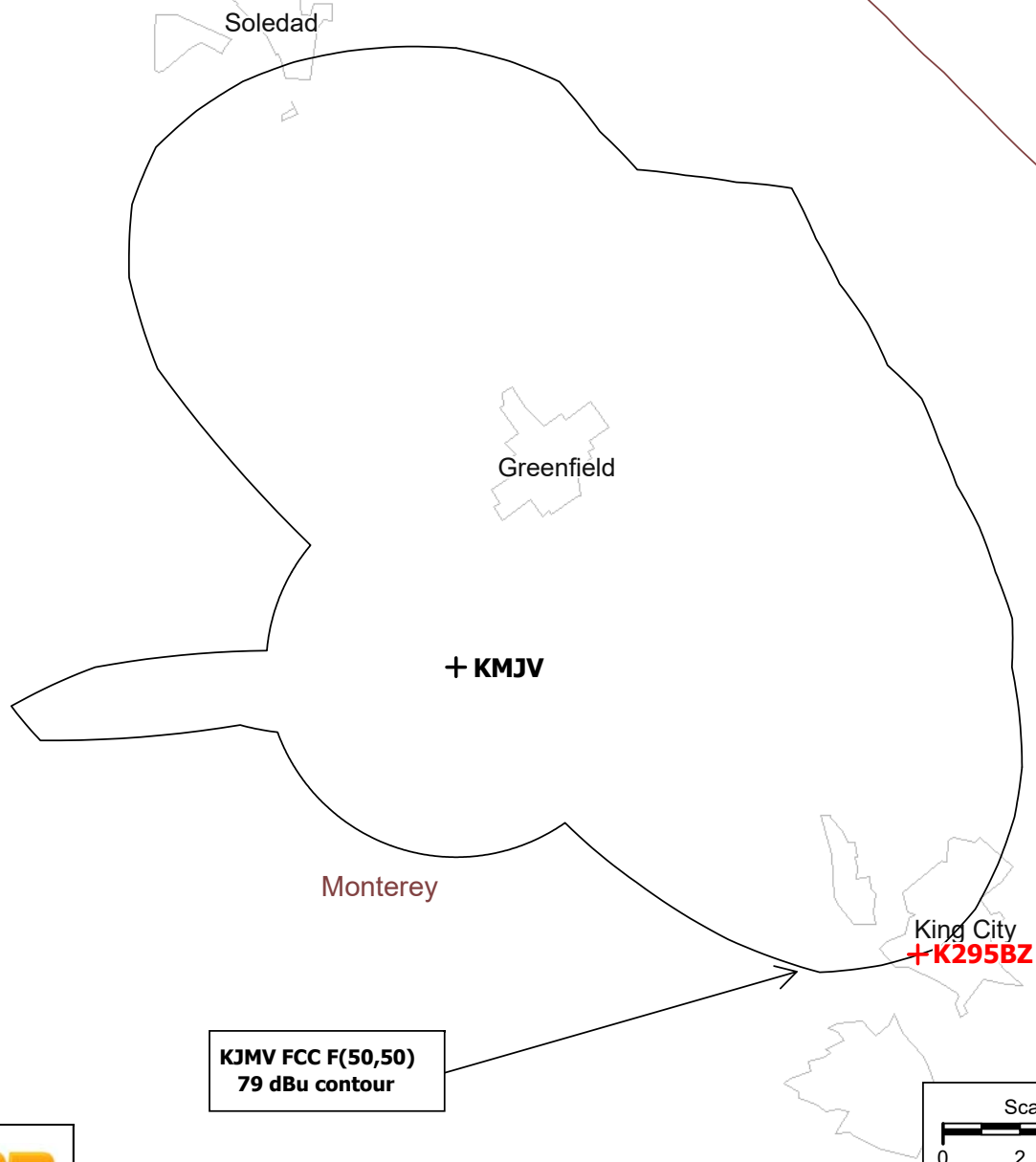
Therefore, it is believed that the proposed K295BZ modification is in compliance with Section 74.1204 with respect to KMJV.

K295BZ

King City, CA
BLFT20160217AAR
Latitude: 36-12-24.90 N
Longitude: 121-08-19.40 W
ERP: 0.25 kW
HAAT: -128.79 m
Channel: 295
Frequency: 106.9 MHz
AMSL Height: 115.0 m
Elevation: 91.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

KMJV

King City, CA
BLH19971222KF
Latitude: 36-16-26.80 N
Longitude: 121-16-18.70 W
ERP: 4.70 kW
HAAT: 113 m
Channel: 292
Frequency: 106.3 MHz
AMSL Height: 393.0 m
Elevation: 366.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Section 74.1204 Contour Protection
KMJB Channel 292A Soledad, CA

KMJV FCC F(50,50)
79 dBu contour



Scale 1:187,500
0 2 4 6 km

V-Soft Communications LLC ©

Area Around K295BZ Tower Site

- Legend
- K295BZ (295)
 - km

F(50,10) 119.0 dBu contour

Unoccupied Buildings

K295BZ (295)

King City Communications
Offices & Studios

Google Earth

©2020 Google

G13

400 ft

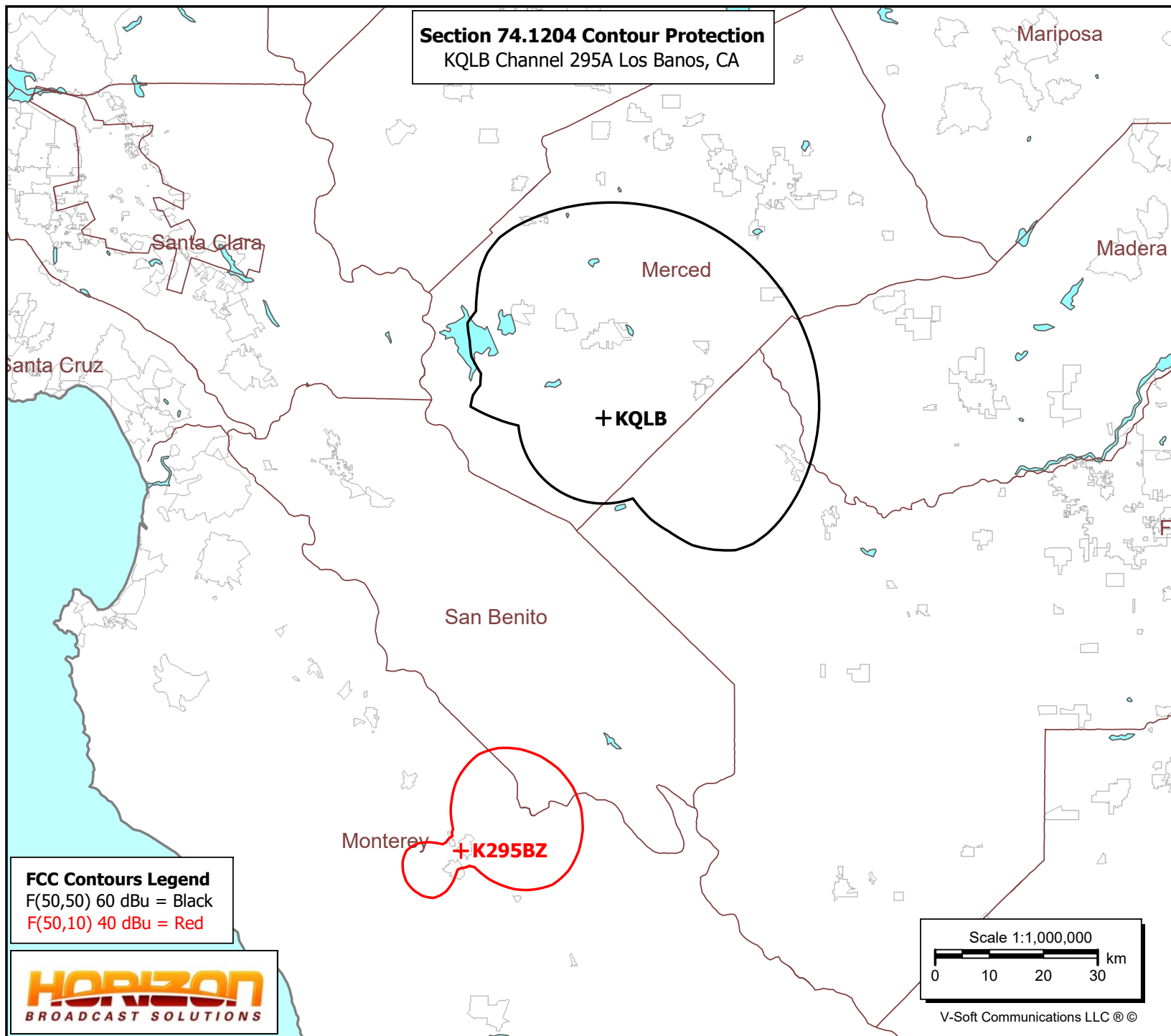


K295BZ

King City, CA
BLFT20160217AAR
Latitude: 36-12-24.90 N
Longitude: 121-08-19.40 W
ERP: 0.25 kW
HAAT: -128.79 m
Channel: 295
Frequency: 106.9 MHz
AMSL Height: 115.0 m
Elevation: 91.0 m
Horiz. Pattern: Directional
Vert. Pattern: No
Prop Model: None

KQLB

Los Banos, CA
BLH19921207KI
Latitude: 36-55-34.80 N
Longitude: 120-50-45.60 W
ERP: 6.00 kW
HAAT: 100 m
Channel: 295
Frequency: 106.9 MHz
AMSL Height: 257.0 m
Elevation: 232.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

Section 74.1204 Contour Protection
KQLB Channel 295A Los Banos, CA**FCC Contours Legend**

F(50,50) 60 dBu = Black

F(50,10) 40 dBu = Red

HORIZON
BROADCAST SOLUTIONS

Scale 1:1,000,000

0 10 20 30 km

V-Soft Communications LLC ©

Human Exposure to Radiofrequency Electromagnetic Field & Section 106 Compliance (Environmental)

A study has been made to determine whether this proposal is in compliance with 47 C.F.R. 1.1307 of the Commission's rules and with OET Bulletin #65, dated August 1997, regarding human exposure to radio frequency radiation in the vicinity of broadcast towers. King City Communications Corporation ("King City"), is the licensee of FM translator K295BZ, Facility ID No. 152685, King City, CA. King City seeks to modify K295BZ. The transmitting site is an existing self supported tower 25 meters in overall height. The tower is not registered with FCC Antenna Structure Registration (ASR) number. The site is located at 36° 12' 24.9" N ~ 121° 08' 19.4" W (NAD 83). The proposed antenna is a side mounted Kathrein-Scala CA2-FM one bay full wave polarized directional antenna oriented at 60 degrees true azimuth. The antenna will be mounted at 45 degrees slant to achieve dual polarization. The proposed K295BZ facility would operate with 250 watts ERP directional at 24 meters above ground level and -129 meters HAAT. The use of existing transmitting locations has been characterized as being environmentally preferable by the Commission, according to Note 1 of § 1.1306 of the FCC Rules. This modification is believed to be exempt from a Section 106 review by the SHPO/THPO.

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. The Kathrein-Scala antenna is not included in the recently revised FM Model Program. Therefore, using EPA Type One: Ring-and-Stub or "Other", the maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $20.770 \mu\text{W}/\text{cm}^2$ at 6 meters, which is 10.385 percent of the general population/uncontrolled maximum permitted exposure limit.

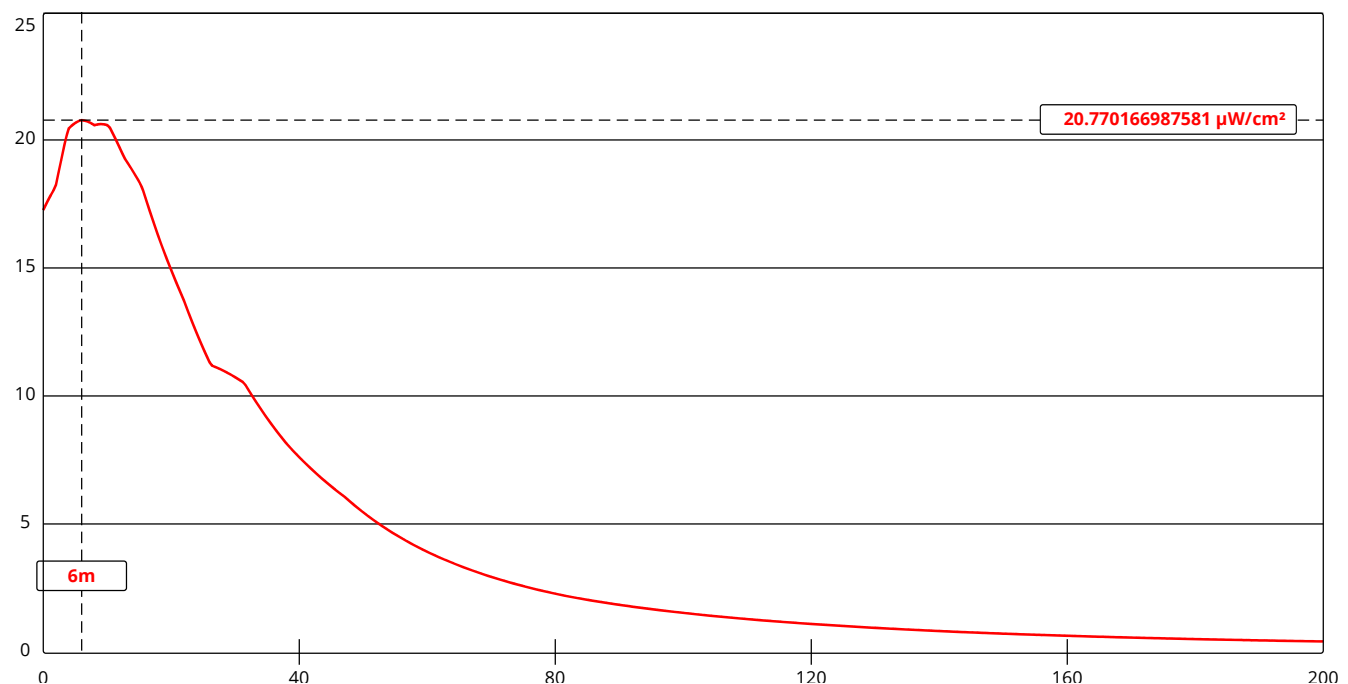
The applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.



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FM Model

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data [published in 1985 by the EPA](#) (<http://nepis.epa.gov/Exe/ZyNET.exe/2000ED2W.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1981+Thru+1985&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A\zyfiles\Index%20Data\81thru85\Tx\00000003\2000ED2W.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h|-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=p|f&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL>). [▼ Show More....](#)



[View Tabular Results +](#)

Channel Selection	Channel 295 (106.9 MHz) ▼		
Antenna Type +	EPA Type 1: Ring-and-Stub or "Other" ▼		
Height (m)	<input type="text" value="24"/>	Distance (m)	<input type="text" value="200"/>
ERP-H (W)	<input type="text" value="250"/>	ERP-V (W)	<input type="text" value="250"/>
Num of Elements	<input type="text" value="1"/>	Element Spacing (λ)	<input type="text" value="1"/>
Num of Points	<input type="text" value="500"/>	<input type="button" value="Apply"/>	