

## **Second Adjacent Exhibit & Waiver Request** **KCXU-LP – San Jose, CA**

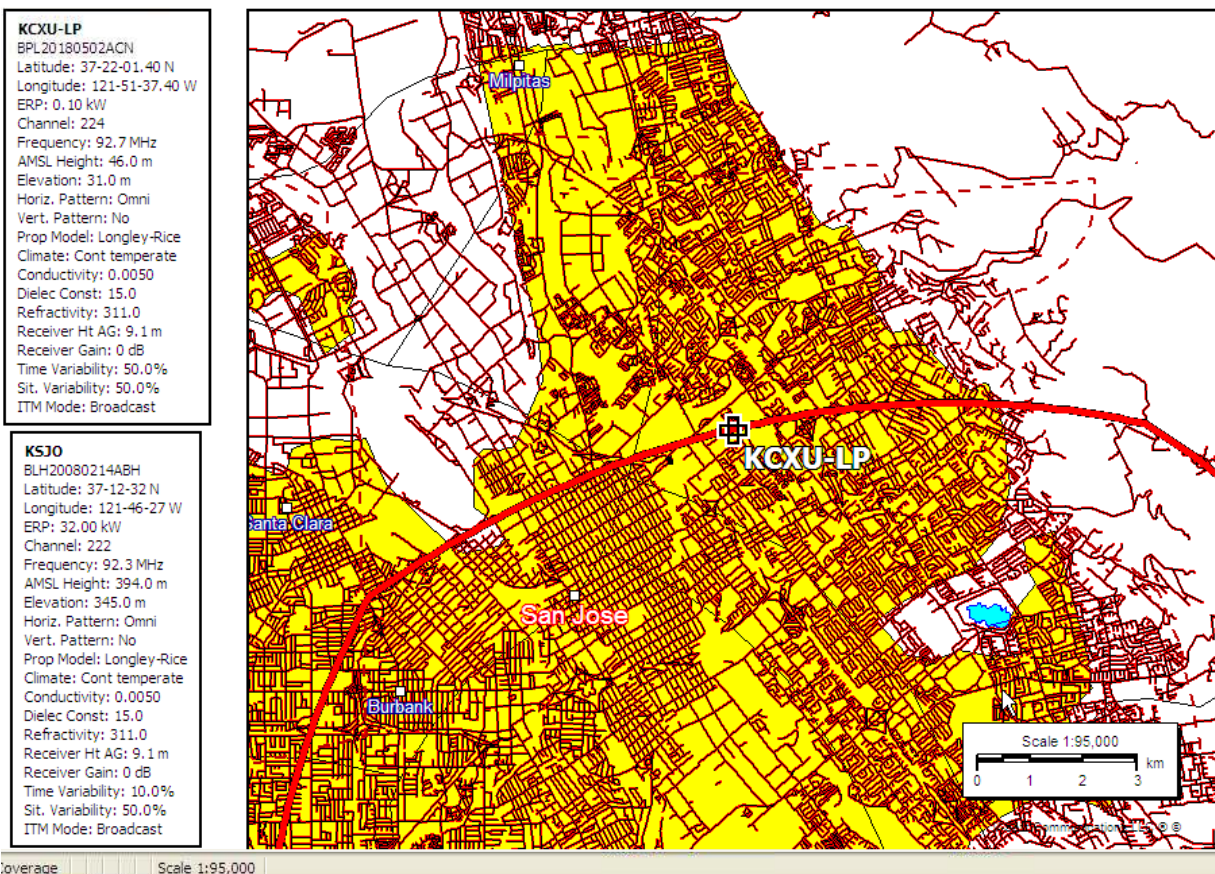
**June 2019**

The attached D/U Ratio Study exported from V-Soft FM Probe 4 software shows calculations of estimated signal strength for KSJO (FM) 94.159 dBuV/m at the site. With additional 40 dBu protection, KSJO would be protected to 134.16 dBu, producing a worst-case interference radius of 13.7 meters at the center of radiation. Full data export of engineering parameters for KSJO continue on the next pages.

The antenna relative fields for an SCA FMV 2-bay dipole antenna array installed at the site are tabulated on the following page at 5 degree increments, accompanied by the manufacturer's data sheet for relative field strength at various depression angles. As shown in the following pages, the area of worst-case interference falls no lower than 12.8 meters above ground at a radius of 1.9 meters. Industrial use structure is single story building. Any interference will remain sufficiently cleared of any population.

Export of engineering parameters from V-Soft is included on the next page.

### **KSJO Second Adjacent field strength at KCXU-LP - calculated to 94.159 dBuV/m**



**D/U Ratio Study via V-Soft Probe 4 software**  
**Exported calculations of Engineering Study**

**KJSO signal calculations at reference point**

Point Information Report

Latitude: 37-22-01.40 N

Longitude: 121-51-37.40 W

**Signal Strength: 94.159 dBuV/m**

Elevation: 30.0 m

Distance From Transmitter: 19.146 km

Azimuth From Transmitter: 336.49 degrees

Call Letters: KSJO

File Number: BLH20080214ABH

Latitude: 37-12-32 N

Longitude: 121-46-27 W

ERP: 32.00 kW

Channel: 222

Frequency: 92.3 MHz

AMSL Height: 394.0 m

Elevation: 345.0 m

Horiz. Antenna Pattern: Omni

Vert. Elevation Pattern: No

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Study Information:

D/U Ratio Study

Signal Resolution: 0.5 km

Study Date: 12/11/2018

Land Cover was not considered in this study.

Primary Terrain: V-Soft 30 Second US Database

Secondary Terrain: V-Soft 3 Second Alaska Terrain

Coordinate System: NAD27

Transmitters:

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Transmitter Information:

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Transmitter Information:

Call Letters: KSJO  
File Number: BLH20080214ABH  
Latitude: 37-12-32 N  
Longitude: 121-46-27 W  
ERP: 32.00 kW  
Channel: 222  
Frequency: 92.3 MHz  
AMSL Height: 394.0 m  
Elevation: 345.0 m  
Horiz. Antenna Pattern: Omni  
Vert. Elevation Pattern: No  
Propagation Model: Longley-Rice  
Climate: Continental temperate  
Conductivity: 0.0050  
Dielectric Constant: 15.0  
Refractivity: 311.0  
Receiver Height AG: 9.1 m  
Receiver Gain: 0 dB  
Time Variability: 10.0%  
Situation Variability: 50.0%  
ITM Mode: Broadcast

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Transmitter Information:

Call Letters: KCXU-LP.C  
File Number: BPL20180502ACN  
Latitude: 37-22-01.40 N  
Longitude: 121-51-37.40 W  
ERP: 0.10 kW  
Channel: 224  
Frequency: 92.7 MHz  
AMSL Height: 46.0 m  
Elevation: 31.0 m  
Horiz. Antenna Pattern: Omni  
Vert. Elevation Pattern: No  
Propagation Model: Longley-Rice  
Climate: Continental temperate  
Conductivity: 0.0050  
Dielectric Constant: 15.0  
Refractivity: 311.0  
Receiver Height AG: 9.1 m  
Receiver Gain: 0 dB  
Time Variability: 50.0%  
Situation Variability: 50.0%  
ITM Mode: Broadcast

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## Elevation profile data – KSJO FM vs KCXU-LP

### KSJO FM

ERP: 32.00 kW

AMSL Height: 394.0 m

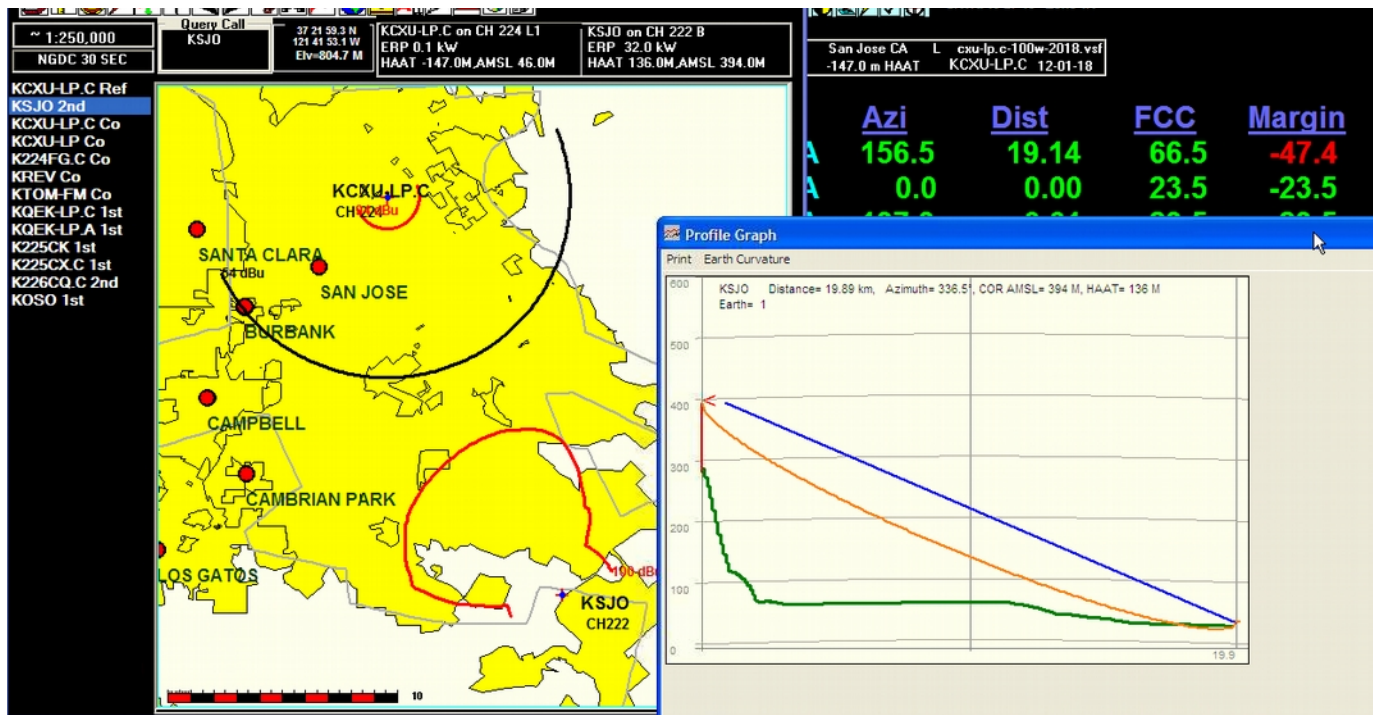
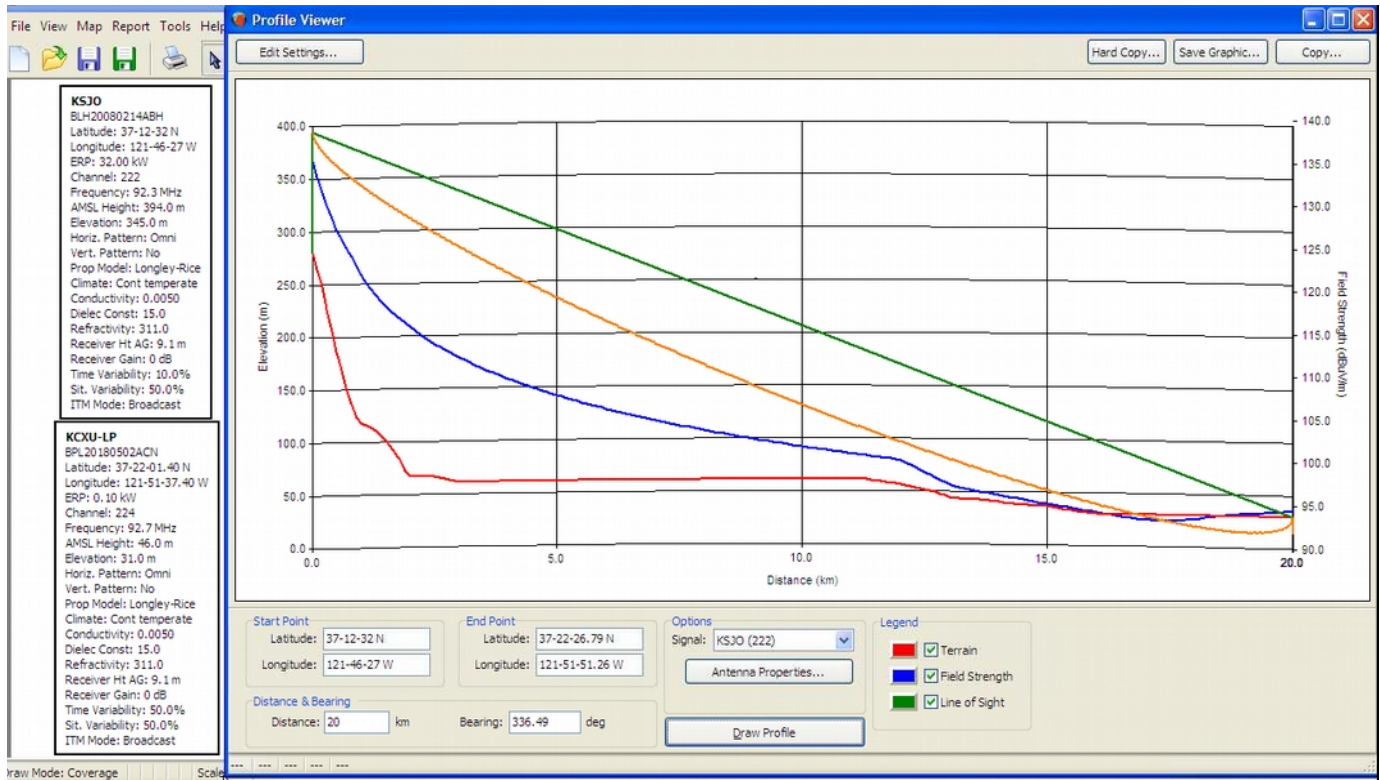
Elevation: 345.0 m

### KCXU-LP

ERP: 0.10 kW

AMSL Height: 46.5 m

Elevation: 31.0 m



**SCA FMV-2 – two bay dipole array**KCXU-LP FM

ERP: 100 watts

AGL: 15.5 meters

Interfering contour: 134.16

depression angle below horizon	relative field	db from relative	ERP	angular distance to contour	vertical distance	horizontal distance	clearance above ground
0	1.000	0.00	100.00	13.732	0.000	13.732	15.500
5	0.967	-0.29	93.51	13.278	1.157	13.228	13.843
10	0.873	-1.18	76.21	11.988	2.082	11.805	12.918
15	0.726	-2.78	52.71	9.969	2.580	9.629	12.420
20	0.545	-5.27	29.70	7.484	2.560	7.032	12.440
25	0.350	-9.12	12.25	4.806	2.031	4.356	12.969
30	0.163	-15.76	2.66	2.238	1.119	1.938	13.881
35	0.010	-40.00	0.01	0.137	0.079	0.112	14.921
40	0.119	-18.49	1.42	1.634	1.050	1.252	13.950
45	0.198	-14.07	3.92	2.719	1.923	1.923	13.077
50	0.235	-12.58	5.52	3.227	2.472	2.074	12.528
55	0.240	-12.40	5.76	3.296	2.700	1.890	12.300
60	0.222	-13.07	4.93	3.048	2.640	1.524	12.360
65	0.189	-14.47	3.57	2.595	2.352	1.097	12.648
70	0.148	-16.59	2.19	2.032	1.910	0.695	13.090
75	0.104	-19.66	1.08	1.428	1.379	0.370	13.621
80	0.060	-24.44	0.36	0.824	0.811	0.143	14.189
85	0.018	-34.89	0.03	0.247	0.246	0.022	14.754
90	0.023	-32.77	0.05	0.316	0.316	0.000	14.684