

TECHNICAL STATEMENT
MINOR CHANGE APPLICATION
K255DA GOLDEN, CO
MOUNTAIN COMMUNITY TRANSLATORS, LLC
AUGUST 2020

This Technical Statement is made in support of a minor change application for FM translator station K255DA Boulder, Colorado, facility ID 157875. K255DA is a fill-in translator for KVCU(AM) Boulder, Colorado, facility ID 48965. K255DA seeks to relocate to an existing communications site located on Lookout Mountain near Golden, Colorado. It also seeks to change channels from 255D to 251D. This non-adjacent channel change is allowed pursuant to FCC 17-14 MB Docket 13-249, footnote 22. K255DA was a translator authorized under the 250 mile AM translator window (formerly K295BY Buford, WY). The new proposed transmitter site for K255DA is 149.2 kilometers (91 miles) from the original K295BY or well within the required 250 miles. K255DA is proposing to operate on channel 251 (98.1 mhz), with 250 watts Effective Radiated Power (“ERP”) with a directional composite antenna system comprised of two Nicom BLK 8-E yagi type antennas with dual polarization. The antennas will be oriented at 60 degrees. K255DA also seeks to change its community of license from Boulder to Golden, Colorado to better reflect its new proposed coverage area. The center of radiation will be 13 meters above the ground and 2235 meters Above Mean Sea Level.

Figure 1 is a detailed channel interference study conducted on channel 251D with these new proposed facilities. It shows that the new operation of K255DA will not cause any interference to any existing or proposed FM stations on any of the pertinent same channel or adjacent channels to channel 251, with the exception of 2nd adjacent channel station K249EX Denver, CO, facility ID 157657 on channel 249D, and 2nd adjacent channel station KYGO-FM Denver, CO, facility ID 30829 operating on channel 253C.

Figure 2 shows that K249EX places a 108.8 dB μ contour at the new K255DA site. Figure 3 shows that KYGO-FM places a 103.0 dB μ contour at the new K255DA site. Since KYGO-FM produces a lower signal at the proposed site, it was studied further. The calculated worst case interference contour for K255DA would be 143.0 dB μ . This contour would only extend 7.9 meters from the antenna in any direction. Thus, with a COR of 13 meters above ground, it would not reach the ground at any point. This was also verified by a Vertical Pattern study conducted utilizing the proposed Nicom BLK 8-E antenna systems vertical pattern. Figure 5 shows the results of that study. It shows that the interference contour will be no less than 12 meters about the ground in any azimuth. Lastly, figure 4 shows the predicted worst case 100 dB μ contour showing there will be no population within this contour.

The Community Translators, LLC, respectfully requests a waiver of C.F.R. 74.1204(d) of the Commission's rules based on the fact that there is no population within the area of predicted interference. There are no homes nearby the proposed existing tower site, which is a privately owned with private gated access applicant. K255DA will be located at a communications site known as "Lookout Mountain". The transmitter building is uninhabited and does not have indoor plumbing. Should any unforeseen actual interference be caused, the licensee will immediately cease broadcasting with K255DA until such interference can be eliminated.

Figure 6 is the directional antenna data for the proposed Nicom antenna system to be used.

The proposed operation of K255DA Golden will remain a "Fill-In" operation for Class D AM station KVCU Boulder, Colorado. KVCU(AM) is licensed to operate with 6.8 kilowatts daytime with a non-directional antenna system on 1190 kHz. Figure 7 shows that the proposed 60 dB μ contour for the proposed K255DA will not extend beyond the 2 mv/m daytime contour

of KVCU(AM). Since this is a “Fill-In” translator, the maximum ERP will not exceed the maximum permissible ERP of 250 watts in any azimuth.

It was found that the new proposed operation of K255DA on channel 251D, will satisfy all of the required commission rules and regulations for an FM translator station.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY

K255DA GOLDEN, CO, CH. 251D

REFERENCE
39 43 59.00 N.
105 14 14.00 W.

CH# 251D - 98.1 MHz, Pwr= 0.25 kW DA, HAAT= 206.6 M, COR= 2235 M
Average Protected F(50-50)= 18.83 km
Standard Directional

DISPLAY DATES
DATA 08-26-20
SEARCH 08-27-20

CH CITY	CALL	TYPE STATE	ANT AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
251C	KKFM	LIC CO	163.5 343.8	114.53 BLH19940321KC	38 44 35.90 104 51 45.90	71.000 698	213.6 2949	97.1 Radio License Holding Cbc,	-102.1*	1.1
253C0	KYGO-FM*	LIC D CO	166.0 346.0	6.82 BLH20180912ABA	39 40 24.30 105 13 04.50	100.000 341	8.4 2364	66.1 Bonneville International C	-7.7*	-59.3*
249D	K249EX*	LIC DH CO	166.9 346.9	0.40 0000086444	39 43 46.10 105 14 10.10	0.250	1.1 2253	19.7 Mountain Community Transla	-4.3*	-19.3*
250C1	KXBG	LIC WY	1.5 181.5	129.05 BLH20180214AAD	40 53 41.60 105 11 51.30	100.000 293	120.4 2248	78.1 Citicasters Licenses, Inc.	-9.9	23.6
251D	K251AB	LIC D CO	15.3 195.4	58.37 BLFT19920831TD	40 14 23.90 105 03 20.90	0.250 77	37.5 1615	11.6 Bonneville International C	-0.8	1.4
249C2	KZYR Avon	LIC N CO	264.4 83.6	104.35 BLH20010913AAK	39 38 04.90 106 26 49.10	15.000 134	5.8 3028	54.3 Rocky Mountain Radio Group	94.9	49.8
249C2	KPLS-FM Strasburg	CP CO	103.8 284.5	94.66 BPED20190607AAA	39 31 31.90 104 10 03.90	40.000 89	4.5 1793	40.4 Radio 74 Internationale	66.6	52.8
252D	K206DB Fort Collins	CP D CO	3.2 183.2	84.54 BPFT20190624AAG	40 29 35.90 105 10 54.90	0.011	6.0 2081	3.3 Cedar Cove Broadcasting, I	59.4	69.3
249C3	KPLS-FM Strasburg	LIC N CO	91.7 272.3	88.54 BLED20120315AEJ	39 42 18.90 104 12 18.80	25.000 16	2.3 1621	22.7 Radio 74 Internationale	59.9	65.5
254D	K254DG Greel ey	CP D CO	29.0 209.3	89.62 BNPFT20180328AAS	40 26 14.90 104 43 26.90	0.250	0.3 1504	5.4 Greel ey Broadcasting Corpo	63.0	83.6
248D	K248AP Silverthorne	LIC CO	259.7 79.2	72.48 BLFT20010713ABO	39 36 49.90 106 04 04.00	0.105 -288	0.7 2861	5.7 Krayon's Wild Basin, LLC	68.2	66.6
251C0	KAYW Meeker	CP CO	283.5 101.8	236.16 0000116512	40 11 47.00 107 56 06.00	100.000 372	163.1 2637	64.8 Western Slope Communicatio	69.4	157.9
251C0	KAYW Meeker	CP CO	283.5 101.8	236.17 BPH20161212AAI	40 11 46.80 107 56 06.20	100.000 372	163.1 2637	64.8 Western Slope Communicatio	69.4	157.9
254D	K254CH Laporte	LIC D CO	2.1 182.1	90.36 BLFT20150813ACD	40 32 46.90 105 11 54.90	0.007	0.0 2188	2.8 Boulder Community Broadcas	71.4	86.3
251C0	KAYW Meeker	LIC CO	283.5 101.8	236.06 BLH20070802ABI	40 11 44.80 107 56 02.20	100.000 349	159.9 2609	62.2 Western Slope Communicatio	72.5	159.7
248D	K248AS Woodland Park	LIC CO	162.3 342.5	98.67 BLFT20120927AGP	38 53 09.90 104 53 25.90	0.250 -105	1.1 2215	7.1 Educational Communications	92.9	85.4
252C1	KATR-FM Otis	LIC N CO	67.7 249.1	207.90 BLH19991115AAT	40 25 13.00 102 58 11.80	100.000 169	89.2 1500	59.5 Media Logic, LLC	88.6	101.9
253D	K253AH Colorado Springs	LIC D CO	162.8 343.1	111.77 BMLFT20120312AAD	38 46 14.90 104 51 21.90	0.180 -85	0.1 2142	3.3 United States Cp, LLC	107.0	105.1
248C3	KWUZ Poncha Springs	LIC N CO	205.6 25.1	157.33 BLH20170831BCE	38 27 10.90 106 01 04.00	0.250 834	1.1 3575	45.5 Three Eagles Communication	153.0	111.7
248C2	KSRX Sterling	LIC CO	65.0 246.3	195.00 BMLH20100204ADR	40 27 15.00 103 09 07.90	38.000 171	6.4 1492	54.9 Media Logic LLC	158.4	138.6
252C3	KEJJ Gunnison	RSV-A CO	227.5 46.4	197.32	38 31 21.97 106 54 30.15	25.000 100	35.6 2638	22.7 John Harvey Rees	159.2	153.0
252C3	KEJJ Gunnison	CP CO	227.5 46.4	197.21 BPH20180503ABP	38 31 22.70 106 54 25.00	12.000 111	28.2 2647	19.0 John Harvey Rees	166.5	157.6
254A	KRQU Laramie	LIC N WY	354.1 174.0	176.15 BLH20120723ADO	41 18 38.90 105 27 13.90	0.110 327	0.7 2730	11.6 Appaloosa Broadcasting Com	158.1	160.3
251A	DKNPE Bayard	VAC NE	33.7 214.9	285.38	41 51 11.88 103 19 34.78	6.000 100	96.2 1331	35.6 In Phase Broadcasting, Inc	161.4	174.5
252A	KEJJ Gunnison	LIC CO	227.5 46.4	197.32 BLH19811216AQ	38 31 21.90 106 54 30.10	3.000 91	19.5 2627	13.2 John Harvey Rees	175.3	168.1

CH CI TY	CALL	TYPE STATE	ANT	AZI ---	DI ST FI LE #	LAT LNG	PWR(kW) HAAT (M)	INT(km) COR (M)	PRO(km) LI CENSEE	Page # 2 *IN* (Overl ap in km)	*OUT*
254C1	KSI D-FM Si dney	LIC NE		46. 3 227. 6	236. 39 BLH20180629AAT	41 10 57. 90 103 11 46. 70	100. 000 117	5. 4 1461	48. 3 Flood Communi cations West,	201. 6	187. 0
250C1	KWGB Col by	LIC KS		95. 7 278. 1	318. 29 BLH19981216KD	39 23 24. 00 101 33 36. 60	100. 000 216	94. 5 1296	63. 6 Mel i a Communi cations Inc	197. 6	231. 6
252A	KERM Torri ngton	LIC WY		18. 8 199. 4	265. 88 BLH7692	41 59 40. 80 104 12 06. 80	3. 000 91	32. 6 1370	22. 0 Kath Broadcasti ng Co, LLC	208. 7	223. 3
253C2	KAAI Pal i sade	LIC N_ CO		254. 6 72. 7	270. 57 BLED20150728AAV	39 02 56. 90 108 15 06. 20	0. 860 896	1. 9 3058	35. 4 Educati onal Medi a Foundati	265. 1	227. 1
249C2	KNOZ Orchard Mesa	LIC N_ CO		257. 3 75. 1	311. 20 BLH20120127AI R	39 03 59. 90 108 44 47. 40	5. 000 446	4. 5 2239	66. 8 Varecha, Paul	303. 1	244. 0
253C3	KAAI Pal i sade	LIC CO		257. 3 75. 1	311. 30 0000097718	39 03 56. 90 108 44 50. 40	1. 550 389	2. 6 2184	53. 3 Educati onal Medi a Foundati	305. 1	257. 6
250C	KI SZ-FM Cortez	LIC CO		224. 8 43. 0	365. 65 BLH19780921AG	37 21 47. 90 108 09 02. 20	100. 000 399	59. 1 3104	31. 0 Winton Road Broadcasti ng C	304. 2	323. 7
248C1	KQSK Chadron	LIC NE		28. 3 209. 7	368. 64 BLH19790910AA	42 38 05. 80 103 06 13. 60	100. 000 256	8. 1 1519	63. 2 Eagle Communi cations, Inc.	333. 7	304. 2
248C1	KQSK Chadron	LIC NE		28. 3 209. 7	368. 64 0000120316	42 38 05. 60 103 06 13. 30	100. 000 255	8. 0 1516	62. 9 Eagle Communi cations, Inc.	333. 8	304. 5
253C1	KGRK Gl enrock	LIC WY		345. 3 164. 6	345. 93 BLH20090728ABK	42 44 27. 80 106 18 33. 00	3. 500 518	2. 9 2485	32. 0 Cochi se Broadcasti ng LLC	328. 1	311. 1
249C2	KCYA Rolli ng HI Lls	LIC WY		345. 3 164. 6	345. 93 BLH20100707KNL	42 44 27. 80 106 18 33. 00	3. 600 506	2. 9 2473	31. 0 Cochi se Medi a Li censes LLC	328. 1	311. 5

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= West Zone, 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.

* No actual interference will be caused to either KYGO-FM or K249EX since the worst case 143.0 DBU contour will not cover any population. See the Technical Statement for more details.

K255DA

BLFT20160427ABD

Latitude: 39-43-59 N

Longitude: 105-14-14 W

ERP: 0.25 kW

Channel: 251

Frequency: 98.1 MHz

AMSL Height: 2235.0 m

Elevation: 2197.734 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model:

K249EX

0000086444

Latitude: 39-43-46.14 N

Longitude: 105-14-08.14 W

ERP: 0.25 kW

Channel: 249

Frequency: 97.7 MHz

AMSL Height: 2253.0 m

Elevation: 2243.0 m

Horiz. Pattern: Directional

Vert. Pattern: No

FIGURE 2 - K249EX 108.8 DBU CONTOUR AT SITE**K249EX 108.8 DBU CONTOUR AT SITE**

K255DA
K249EX

KYGO-FM

Scale 1:93,750

0 1 2 3 km

V-Soft Communications LLC ©

K255DA

BLFT20160427ABD

Latitude: 39-43-59 N

Longitude: 105-14-14 W

ERP: 0.25 kW

Channel: 251

Frequency: 98.1 MHz

AMSL Height: 2235.0 m

Elevation: 2197.734 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model:

KYGO-FM

BLH20180912ABA

Latitude: 39-40-24.34 N

Longitude: 105-13-02.54 W

ERP: 100.00 kW

Channel: 253

Frequency: 98.5 MHz

AMSL Height: 2364.0 m

Elevation: 2345.0 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model:

FIGURE 3 - KYGO-FM 103.0 DBU CONTOUR AT SITE**KYGO 103.0 DBU AT SITE****K255DA****KYGO-FM**

Scale 1:93,750

0 1 2 3 km

V-Soft Communications LLC ©

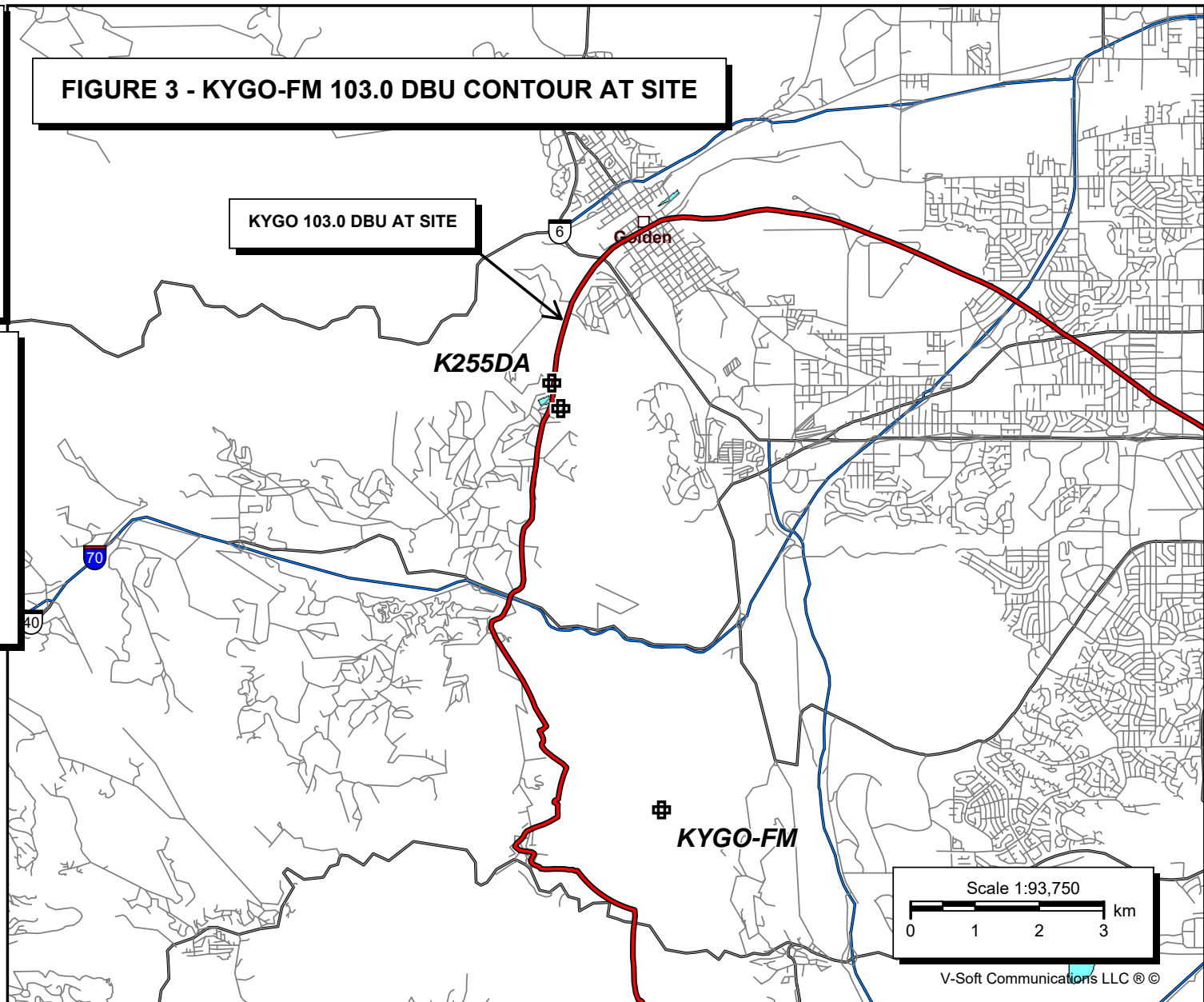


FIGURE 4 - PREDICTED 100 DBU CONTOUR
K255DA GOLDEN, CO, CH. 251D

Coverage Study - NGDC 30 SEC
08-27-2020

K255DA CH251 D , 0.25 kW, 206.6m HAAT, 2235.0m COR AMSL
Interference Contour = 100 dBu. Population = 0

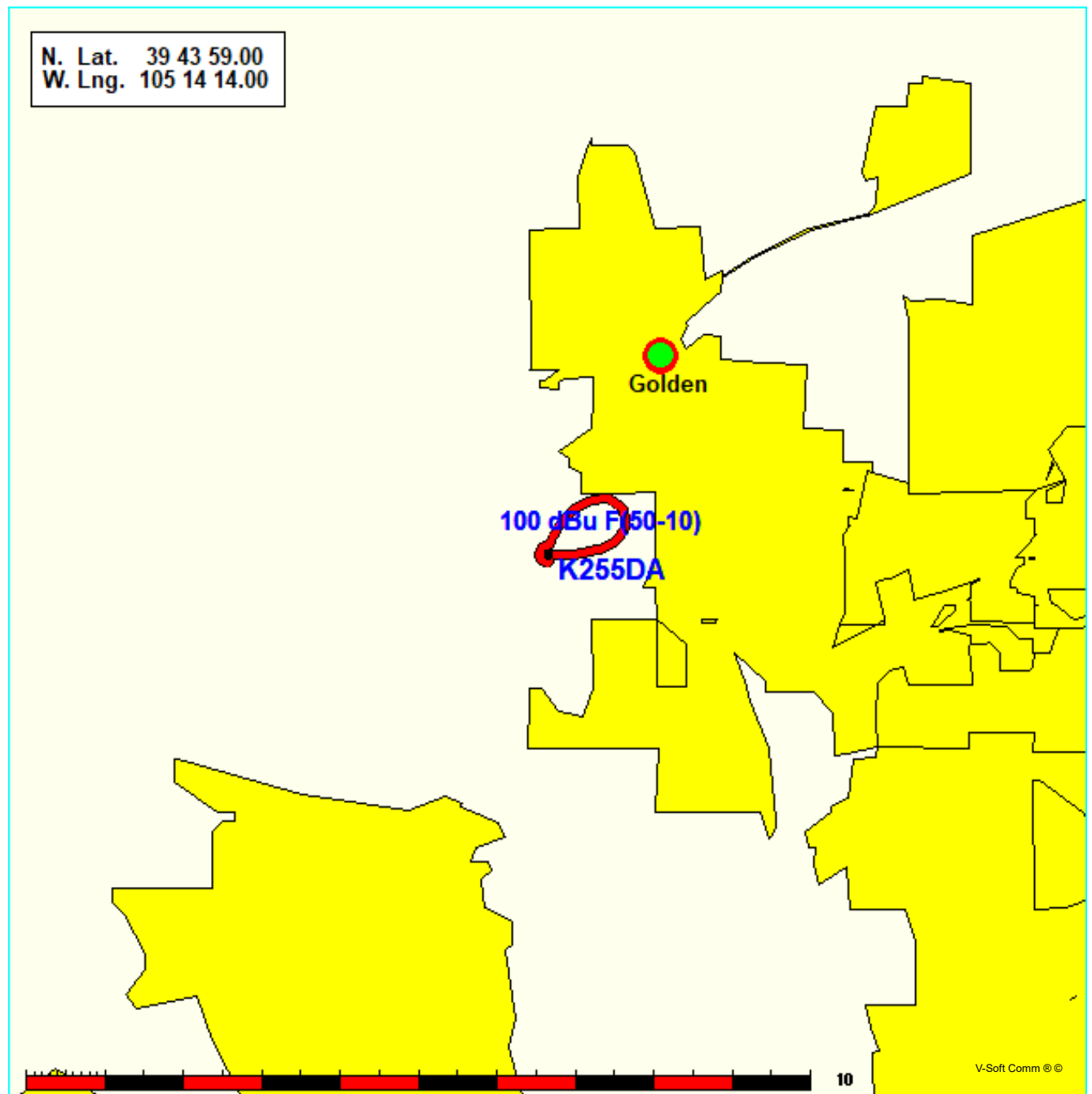


Figure 5 - Vertical Pattern Study

K255DA Golden, CO, Showing Protection to KYGO-FM , Channel: 253
 Geographic Coordinates: N. 394359.00 W. 1051414.00
 74.1204(d) Study - Using USGS 03 SEC Terrain Database
 Translator or LPFM Maximum Licensed ERP = 0.25 kW, Channel: 251
 Translator or LPFM Antenna Height AG = 13 meters
 K255DA Antenna Model = NICOM BLK 8-E

Protected Station's Contour = 102.9124 dBu
 Translator's or LPFM's full Interference contour 142.9124

Review Azimuth = 0 Degrees True
 Horizontal Relative Field at Review Azimuth = 0.100
 Translator/LPFM ERP on the horizontal at Review Azimuth = 0.003 kW
 Distance between stations = 6.8 km
 Protected Station= KYGO-FM, 100 kW, 2364 M meters COR AMSL

Depression Angle From Degree(Deg)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height IX Above Ground (m)
00.00	1.0	0.1	0.0250	002.5081	002.5081	013.000
05.00	0.982	0.1	0.0241	002.4637	002.4544	012.785
10.00	0.952	0.1	0.0227	002.3885	002.3522	012.585
15.00	0.915	0.1	0.0209	002.2942	002.2160	012.406
20.00	0.866	0.1	0.0187	002.1720	002.0411	012.257
25.00	0.796	0.1	0.0158	001.9965	001.8094	012.156
30.00	0.718	0.1	0.0129	001.8016	001.5602	012.099
35.00	0.628	0.1	0.0099	001.5759	001.2909	012.096
40.00	0.528	0.1	0.0070	001.3250	001.0150	012.148
45.00	0.423	0.1	0.0045	001.0617	000.7507	012.249
50.00	0.329	0.1	0.0027	000.8259	000.5309	012.367
55.00	0.247	0.1	0.0015	000.6188	000.3549	012.493
60.00	0.19	0.1	0.0009	000.4765	000.2383	012.587
65.00	0.142	0.1	0.0005	000.3554	000.1502	012.678
70.00	0.134	0.1	0.0004	000.3361	000.1149	012.684
75.00	0.135	0.1	0.0005	000.3386	000.0876	012.673
80.00	0.142	0.1	0.0005	000.3554	000.0617	012.650
85.00	0.15	0.1	0.0006	000.3762	000.0328	012.625
90.00	0.157	0.1	0.0006	000.3945	000.0000	012.605

FIGURE 6 - DIRECTIONAL ANTENNA PATTERN

K255DA

08-27-2020

RMS(V) = .362

Graph is Relative Field

Azi	Field	dBk	kW
000	0.100	-26.021	0.003
010	0.100	-26.021	0.003
020	0.270	-17.393	0.018
030	0.560	-11.057	0.078
040	0.790	-08.068	0.156
050	0.950	-06.466	0.226
060	1.000	-06.021	0.250
070	0.950	-06.466	0.226
080	0.790	-08.068	0.156
090	0.350	-15.139	0.031
100	0.150	-22.499	0.006
110	0.050	-32.041	0.001
120	0.045	-32.956	0.001
130	0.040	-33.979	0.000
140	0.030	-36.478	0.000
150	0.030	-36.478	0.000
160	0.040	-33.979	0.000
170	0.070	-29.119	0.001
180	0.100	-26.021	0.003
190	0.100	-26.021	0.003
200	0.100	-26.021	0.003
210	0.100	-26.021	0.003
220	0.100	-26.021	0.003
230	0.100	-26.021	0.003
240	0.100	-26.021	0.003
250	0.100	-26.021	0.003
260	0.100	-26.021	0.003
270	0.100	-26.021	0.003
280	0.100	-26.021	0.003
290	0.100	-26.021	0.003
300	0.100	-26.021	0.003
310	0.100	-26.021	0.003
320	0.100	-26.021	0.003
330	0.100	-26.021	0.003
340	0.100	-26.021	0.003
350	0.100	-26.021	0.003

Nicom BLK 8-E

Yagi antenna composite

Oriented at 60
degrees

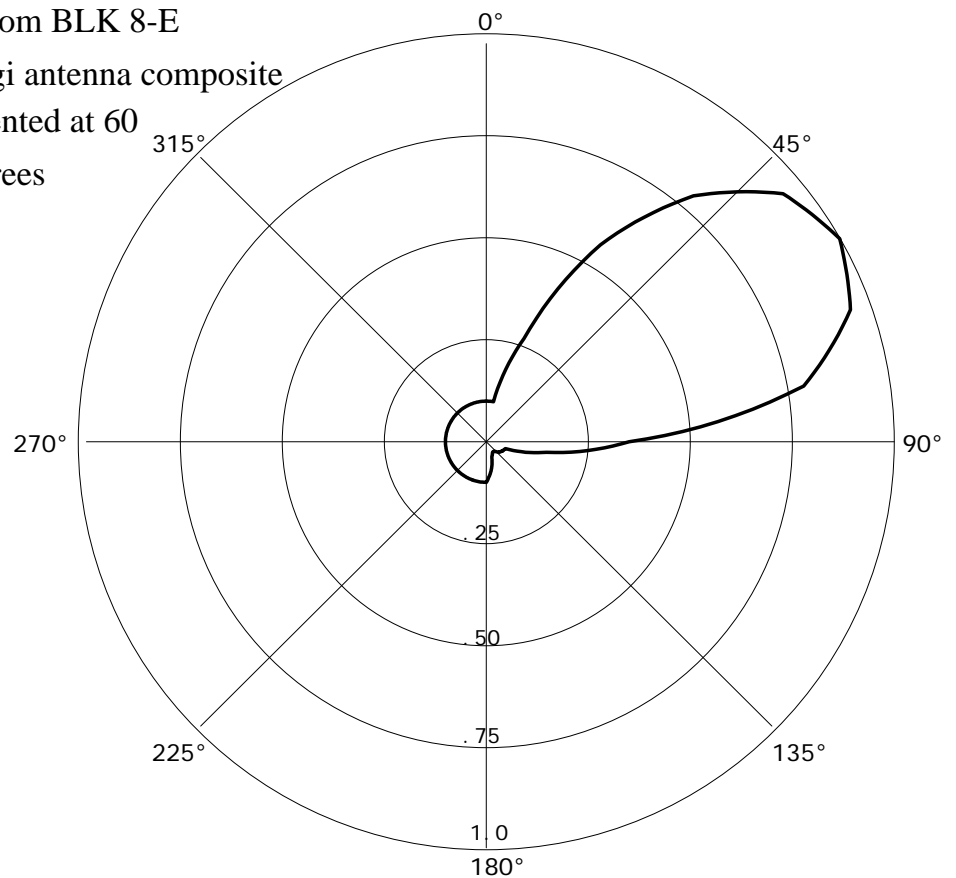


FIGURE 7 - FILL-IN MAP WITH KVCU(AM) BOULDER, CO
K255DA GOLDEN, CO, CH. 251D

Coverage Study - NGDC 30 SEC
08-27-2020

K255DA CH251 D , 0.25 kW, 206.6m HAAT, 2235.0m COR AMSL
Service Contour = 60 dBu.

