

**MINOR CHANGE APPLICATION**  
**FAMILY WORSHIP CENTER CHURCH, INC.**  
**K211DY FM TRANSLATOR STATION**  
**CH 211D - 90.1 MHZ - 0.01 KW**  
**NATCHITOCHES LOUISIANA**  
**November 2014**

**EXHIBIT B**

**Interference Study for K211DY Using Proposed Site as Reference**

As noted on Exhibit B1, K211DY is within the predicted 60 dBu contour of third adjacent station KLSA, Channel 214C, Alexandria, Louisiana. Due to the relationship between K211DY and KLSA, a 40 db ratio of the protected and interfering contours applies. We have, therefore, calculated the level of signal of KLSA at the proposed site for K211DY site. A map showing the KLSA contour at the proposed K211DY site is attached as Exhibit B2. The KLSA contour at the proposed K211DY site is 67.6 dBu (50/50), and the corresponding interfering contour for K211DY is 107.6 dBu (50/10). Due to the relatively low power of the translator, the 107.6 dBu interfering contour of the proposed K211DY is limited and extends no farther than 92.3 meters from the antenna. This interference contour, which is tabulated in Exhibit B3, does not reach ground level at any building structure. Public access to the K211DY site is restricted by a locked gate as shown in Exhibit B4. Exhibit B5 is an aerial view of the K221DY tower site showing that the site is restricted access to a distance at least 100.0 meters. As such, KLSA will not receive interference from the K211DY.

Similarly, as noted on Exhibit B1, the proposed K211DY is within the predicted 60 dBu contour of second adjacent station KBIO, Channel 209A, Natchitoches, Louisiana. Due to the relationship between the proposed K211DY and KBIO, a 40 db ratio of the protected and

interfering contours applies. We have, therefore, calculated the level of signal of KBIO at the proposed K211DY new site. A map showing the KBIO contour at the proposed K211DY site is attached as Exhibit B6. The KBIO contour at the proposed K211DY site is 97.0 dBu (50/50), and the corresponding interfering contour for K211DY is 137 dBu (50/10). Due to the relatively low power of the translator, the 137 dBu interfering contour of the proposed K211DY is limited and extends no farther than 3.1 meters from the antenna. This interference contour, which is tabulated in Exhibit B7, does not reach ground level or any building structure. As such, KBIO will not receive interference from the proposed K211DY. Exhibit B8 is a tabulation of the proposed K211DY interference and service contours.

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**EXHIBIT B1**

**Interference Study for K211DY Using Proposed Site as Reference**

REFERENCE		CH# 211D - 90.1 MHZ, Pwr= 0.01 kW, HAAT= 66.4 M, COR= 104 M								DISPLAY DATES	
31 47 44.0 N.		Average Protected F(50-50)= 4.7 km								DATA 11-10-14	
93 08 02.0 W.		Omni-directional								SEARCH 11-11-14	
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	INT (km) COR (M)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
211D Natchitoches	K211DY	LIC	C LA	163.2 343.2	1.00 BLFT20010301ACD	31 47 13.0 93 07 51.0	0.010 62	15.2 100	4.8 Family Worship Center Chur	-18.9*	-18.8*
214C Alexandria	KLXA	LIC	CN LA	114.6 294.9	61.11 BLED19861224KB	31 33 56.0 92 32 50.0	100.000 379	11.5 428	79.2 Bd Supervisors, Louisiana	44.5	-18.3*<
209A Natchitoches	KBIO	LIC	C LA	164.7 344.7	0.99 BLED20010711ABB	31 47 13.0 93 07 52.0	0.100 90	0.7 72	6.4 Radio Maria, Inc.	-4.4*<	-5.6*<
210C1 Shreveport	KDAQ	LIC	CX LA	323.0 142.6	123.10 BLED20090805AAQ	32 40 40.0 93 55 30.0	100.000 284	103.7 351	71.3 Bd Supervisors, Louisiana	14.4	44.9
06ZT Natchez	W30CC	AP	N MS	97.6 278.5	166.78 BDISTVL20090824AAQ	31 35 05.0 91 23 18.0	3.000 95	0.2 105	5.6 Foster Charitable Foundati	135.0R	31.8M
210A Alexandria	KLXA	LIC	CN LA	126.5 306.8	77.85 BLED19981118KB	31 22 40.0 92 28 27.0	3.000 100	37.9 132	25.0 Educational Media Foundati	34.9	45.9
212C1 Monroe	KEDM	LIC	CX LA	47.9 228.5	144.22 BLED20090414ABX	32 39 38.0 91 59 28.0	100.000 261	101.7 285	69.6 University Of Louisia	37.6	67.8
06ZT Lake Charles	K22GT	AP	D N LA	185.6 5.5	175.86 BDISTVL20091021ACI	30 13 16.0 93 18 40.4	3.000 179	0.2 179	5.6 Foster Charitable Foundati	135.0R	40.9M
212C1 Lake Charles	KYLC	LIC	V LA	176.1 356.2	129.19 BLED20010509AAL	30 38 10.0 93 02 33.0	80.000 143	83.1 168	54.9 American Family Associatio	41.6	68.1
211C3 Nacogdoches	KSAU	CP	CX TX	263.2 82.4	147.29 BPED20140701ABQ	31 37 44.0 94 40 44.0	4.800 108	88.4 246	30.4 Stephen F. Austin State Un	54.4	102.6
211C3 Nacogdoches	KSAU	LIC	CN TX	263.2 82.4	147.29 BLED19890731KA	31 37 45.0 94 40 44.0	3.500 137	83.6 246	28.3 Stephen F. Austin State Un	59.1	104.8
06+T Lafayette	KXKW-LP	LI	N LA	145.1 325.7	196.32 BLTVA20090728AEU	30 20 32.0 91 57 46.0	3.000 291	0.2 291	5.6 Delta Media Corporation	135.0R	61.3M

Terrain database is FCC NGDC 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM

Contour distances are on direct line to and from reference station. Reference Zone= West Zone, Co to 3rd adjacent.

Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)

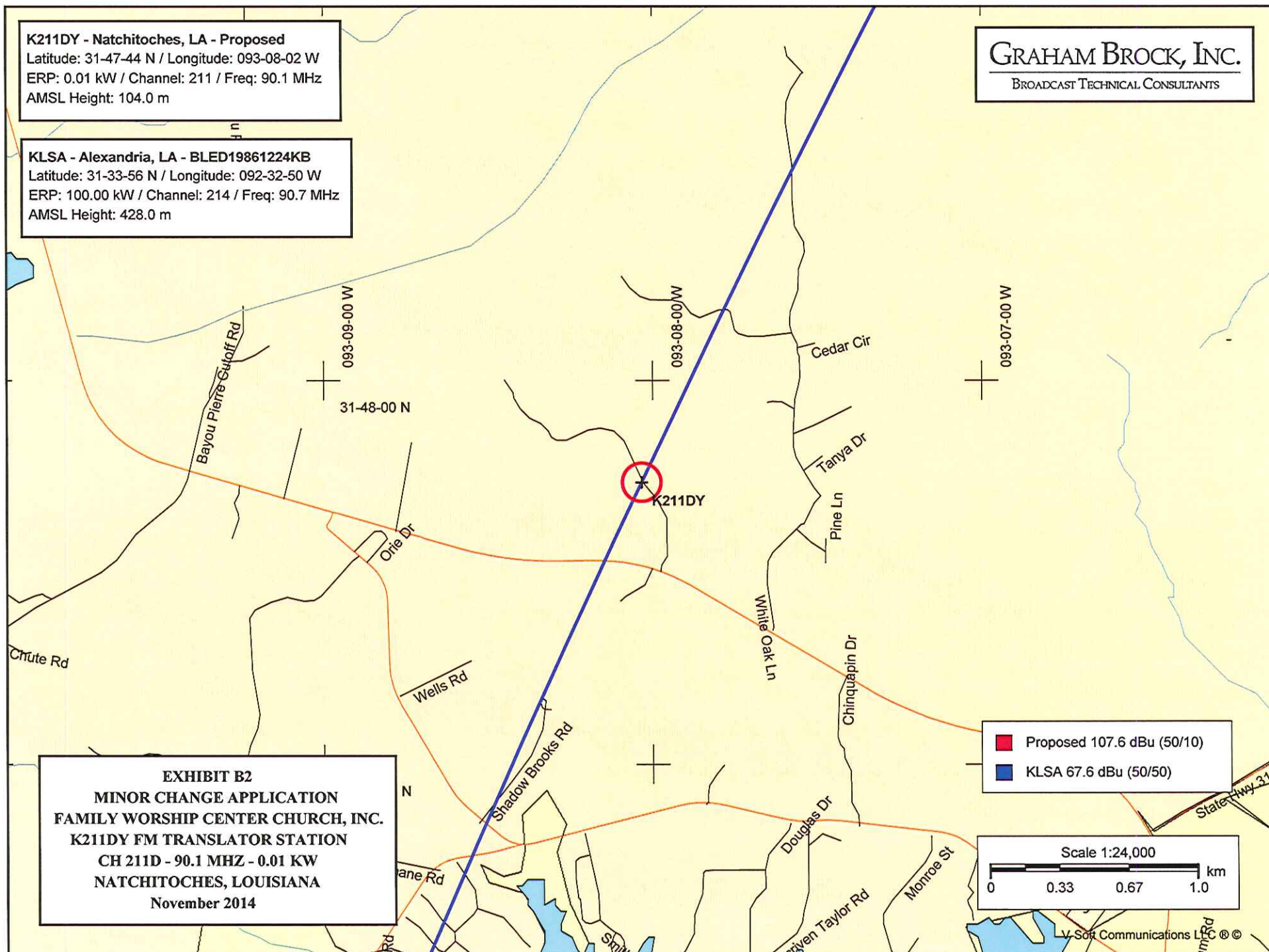
"\*"affixed to 'IN' or 'OUT' values = site inside protected contour.

< = Contour Overlap

**K211DY - Natchitoches, LA - Proposed**  
Latitude: 31-47-44 N / Longitude: 093-08-02 W  
ERP: 0.01 kW / Channel: 211 / Freq: 90.1 MHz  
AMSL Height: 104.0 m

**KLSA - Alexandria, LA - BLED19861224KB**  
Latitude: 31-33-56 N / Longitude: 092-32-50 W  
ERP: 100.00 kW / Channel: 214 / Freq: 90.7 MHz  
AMSL Height: 428.0 m

**GRAHAM BROCK, INC.**  
BROADCAST TECHNICAL CONSULTANTS



**EXHIBIT B2**  
**MINOR CHANGE APPLICATION**  
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**NATCHITOCHES, LOUISIANA**  
**November 2014**

L.V. Scott Communications LLC ©

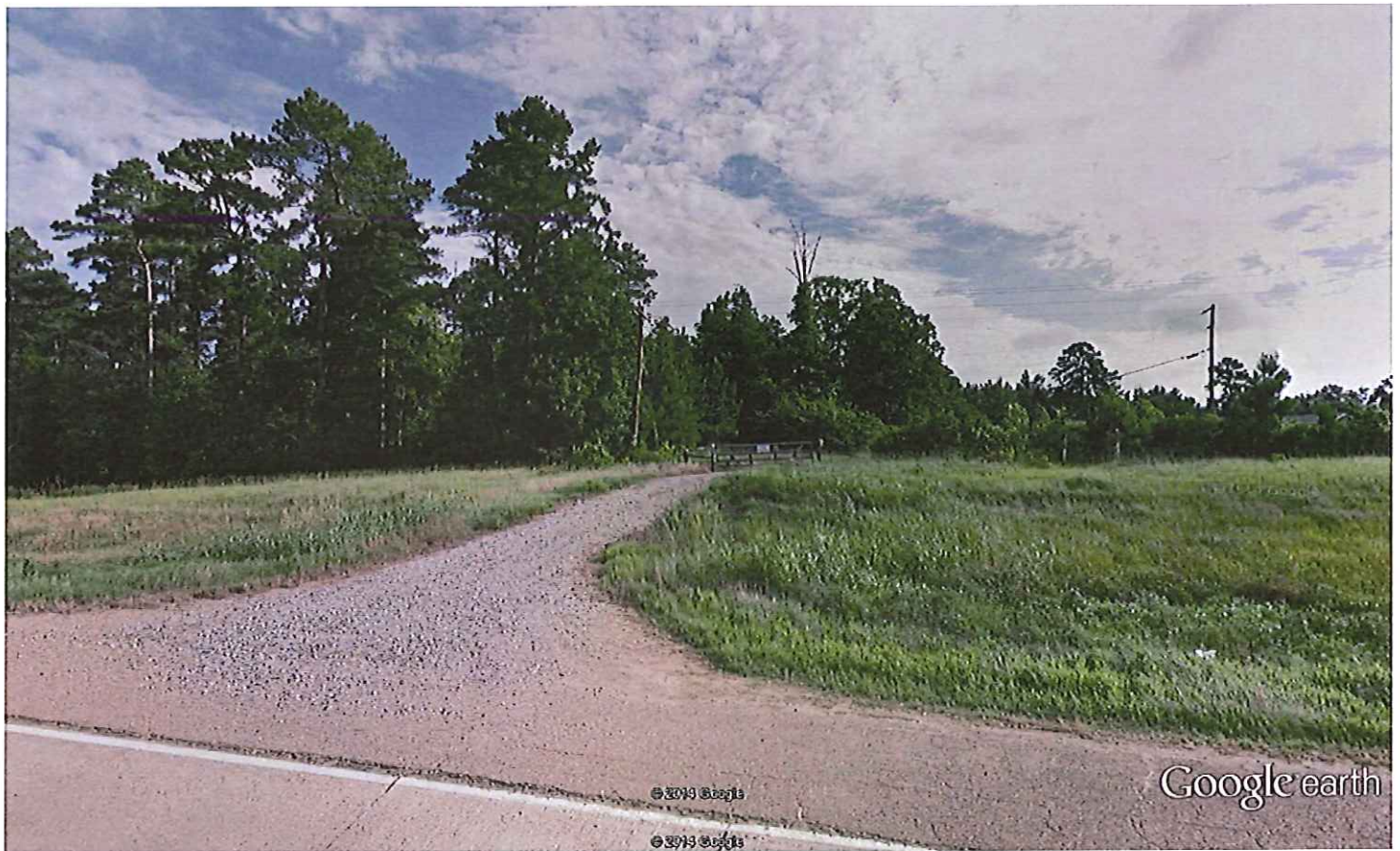
Interference to: KLSA  
 Contour at tower: 67.6 dBu - FCC 50/50  
 Interference Ratio: 40 db

CALL: K221DY  
 POWER (Watts): 10  
 ANTENNA AGL (m): 42.1  
 Desired Contour (dBu - FCC 50/10) 107.6

Antenna SWR FMEC/1  
 Azimuth: Worst Case  
 Relative field: 1.000  
 ERP (Watts) at Azimuth: 10

DEPRESSION ANGLE	ANTENNA RELATIVE FIELD FROM MFG	ERP (WATTS)		DISTANCE TO INTERFERING CONTOUR (m)	HORIZONTAL DISTANCE FROM TOWER (m)	VERTICAL DISTANCE FROM GROUND (m)
0	1.000	10.0	-20.00	92.3	92.3	42.1
5	0.993	9.9	-20.06	91.6	91.3	34.1
10	0.974	9.5	-20.23	89.9	88.5	26.5
15	0.960	9.2	-20.35	88.6	85.5	19.2
20	0.940	8.8	-20.54	86.7	81.5	12.4
25	0.925	8.6	-20.68	85.3	77.3	6.0
30	0.880	7.7	-21.11	81.2	70.3	1.5
35	0.850	7.2	-21.41	78.4	64.2	-2.9
40	0.790	6.2	-22.05	72.9	55.8	-4.7
45	0.740	5.5	-22.62	68.3	48.3	-6.2
50	0.690	4.8	-23.22	63.7	40.9	-6.7
55	0.620	3.8	-24.15	57.2	32.8	-4.8
60	0.560	3.1	-25.04	51.7	25.8	-2.6
65	0.490	2.4	-26.20	45.2	19.1	1.1
70	0.400	1.6	-27.96	36.9	12.6	7.4
75	0.320	1.0	-29.90	29.5	7.6	13.6
80	0.250	0.6	-32.04	23.1	4.0	19.4
85	0.160	0.3	-35.92	14.8	1.3	27.4
90	0.000	0.0	-120.00	0.0	0.0	42.1
WORST CASE HEIGHT AGL (m)						-6.7

**EXHIBIT B3**  
**MINOR CHANGE APPLICATION**  
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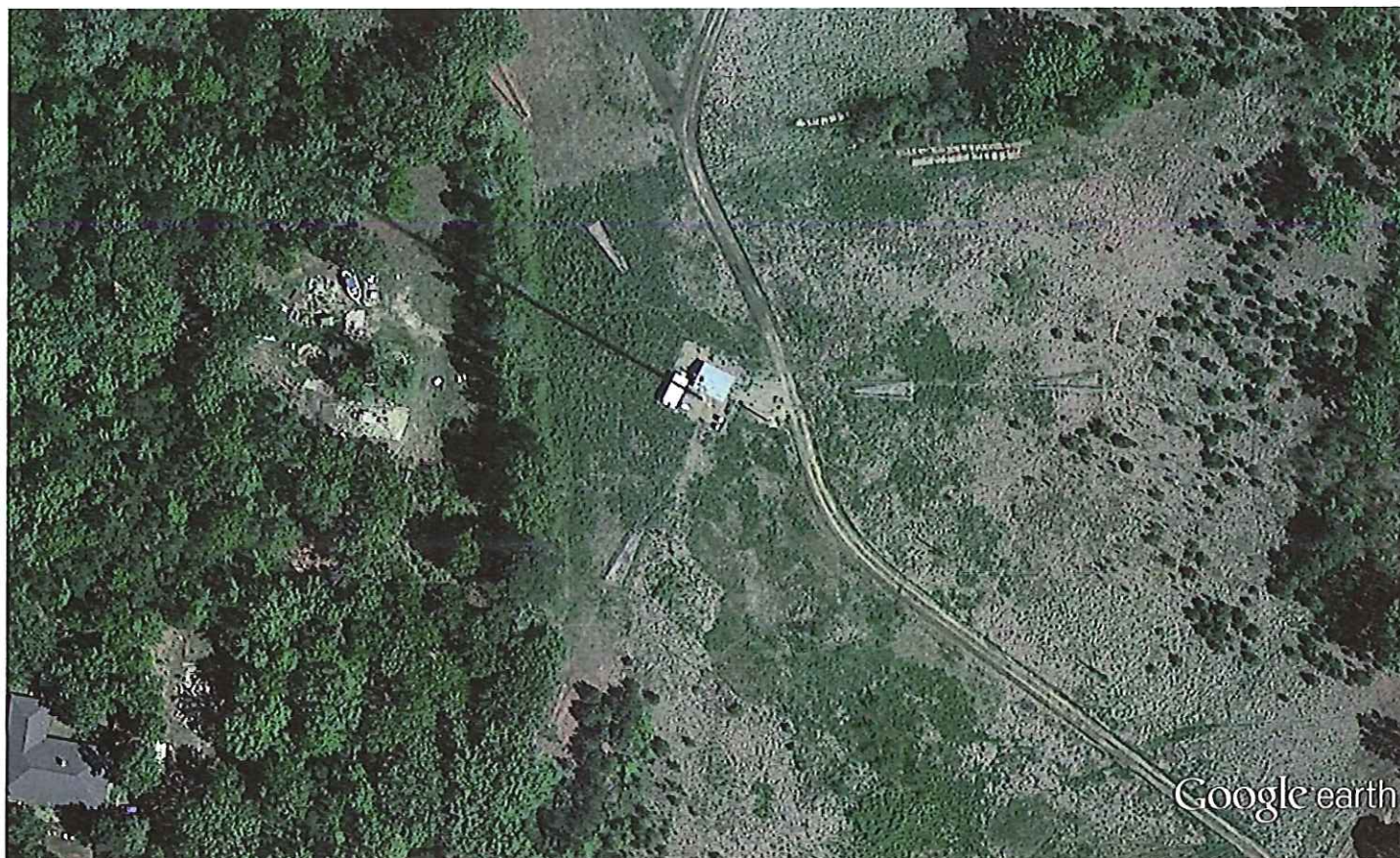
Google earth

feet 10  
meters 4



**EXHIBIT B4**  
**MINOR CHANGE APPLICATION**  
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**NATCHITOCHEs LOUISIANA**  
**November 2014**





Google earth

feet 500  
meters 100



**EXHIBIT B5**  
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**CH 211D - 90.1 MHZ - 0.01 KW**  
**NATCHITOCHES LOUISIANA**  
**November 2014**



**K211DY - Natchitoches, LA - Proposed**  
Latitude: 31-47-44 N / Longitude: 093-08-02 W  
ERP: 0.01 kW / Channel: 211 / Freq: 90.1 MHz  
AMSL Height: 104.0 m

**KBIO - Natchitoches, LA - BLED20010711ABB**  
Latitude: 31-47-13 N / Longitude: 093-07-52 W  
ERP: 0.10 kW / Channel: 209 / Freq: 89.7 MHz  
AMSL Height: 72.0 m

**GRAHAM BROCK, INC.**  
BROADCAST TECHNICAL CONSULTANTS



**EXHIBIT B6**  
**MINOR CHANGE APPLICATION**  
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**K211DY FM TRANSLATOR STATION**  
**CH 211D - 90.1 MHZ - 0.01 KW**  
**NATCHITOCHES, LOUISIANA**  
**November 2014**



Interference to:	KBIO	CALL:	K221DY	Antenna	SWR FMEC/1
Contour at tower:	97 dBu - FCC 50/50	POWER (Watts):	10	Azimuth:	Worst Case
Interference Ratio:	40 db	ANTENNA AGL (m):	42.1	Relative field:	1.000
		Desired Contour (dBu - FCC 50/10)	137	ERP (Watts) at Azimuth:	10

DEPRESSION ANGLE	ANTENNA RELATIVE FIELD FROM MFG	ERP (WATTS)	dBk	DISTANCE TO INTERFERING CONTOUR (m)	HORIZONTAL DISTANCE FROM TOWER (m)	VERTICAL DISTANCE FROM GROUND (m)
0	1.000	10.0	-20.00	3.1	3.1	42.1
5	0.993	9.9	-20.06	3.1	3.1	41.8
10	0.974	9.5	-20.23	3.0	3.0	41.6
15	0.960	9.2	-20.35	3.0	2.9	41.3
20	0.940	8.8	-20.54	2.9	2.8	41.1
25	0.925	8.6	-20.68	2.9	2.6	40.9
30	0.880	7.7	-21.11	2.8	2.4	40.7
35	0.850	7.2	-21.41	2.7	2.2	40.6
40	0.790	6.2	-22.05	2.5	1.9	40.5
45	0.740	5.5	-22.62	2.3	1.6	40.5
50	0.690	4.8	-23.22	2.2	1.4	40.4
55	0.620	3.8	-24.15	1.9	1.1	40.5
60	0.560	3.1	-25.04	1.8	0.9	40.6
65	0.490	2.4	-26.20	1.5	0.6	40.7
70	0.400	1.6	-27.96	1.3	0.4	40.9
75	0.320	1.0	-29.90	1.0	0.3	41.1
80	0.250	0.6	-32.04	0.8	0.1	41.3
85	0.160	0.3	-35.92	0.5	0.0	41.6
90	0.000	0.0	-120.00	0.0	0.0	42.1

WORST CASE HEIGHT AGL (m)	40.4
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**EXHIBIT B7**  
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**EXHIBIT B8**

N. Lat. = 31 47 44 - Tabulated Protected and Interfering Contour Data  
W. Lng. = 93 08 02 - K211DY FM Translator - Natchitoches, Louisiana

HAAT and Distance to Contour,  
FCC, FM 2-10 Mi, 51 pts Method - FCC 30 second terrain database

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5	40-F1	54-F1	100-F1	116-F1	133.8-F1
000	36.0	68.0	0.0100	-20.00	1.000	4.80	15.24	6.71	0.22	0.04	0.00
010	33.4	70.6	0.0100	-20.00	1.000	4.89	15.58	6.83	0.22	0.04	0.00
020	34.1	69.9	0.0100	-20.00	1.000	4.86	15.50	6.80	0.22	0.04	0.00
030	34.5	69.5	0.0100	-20.00	1.000	4.85	15.44	6.78	0.22	0.04	0.00
040	35.6	68.4	0.0100	-20.00	1.000	4.81	15.29	6.72	0.22	0.04	0.00
050	32.1	71.9	0.0100	-20.00	1.000	4.93	15.76	6.89	0.22	0.04	0.00
060	30.6	73.4	0.0100	-20.00	1.000	4.98	15.95	6.96	0.22	0.04	0.00
070	28.9	75.1	0.0100	-20.00	1.000	5.04	16.18	7.04	0.22	0.04	0.00
080	31.5	72.5	0.0100	-20.00	1.000	4.95	15.84	6.92	0.22	0.04	0.00
090	30.8	73.2	0.0100	-20.00	1.000	4.97	15.93	6.95	0.22	0.04	0.00
100	29.0	75.0	0.0100	-20.00	1.000	5.03	16.16	7.03	0.22	0.04	0.00
110	28.8	75.2	0.0100	-20.00	1.000	5.04	16.19	7.04	0.22	0.04	0.00
120	29.3	74.7	0.0100	-20.00	1.000	5.02	16.12	7.02	0.22	0.04	0.00
130	28.9	75.1	0.0100	-20.00	1.000	5.04	16.18	7.04	0.22	0.04	0.00
140	29.9	74.1	0.0100	-20.00	1.000	5.00	16.04	6.99	0.22	0.04	0.00
150	29.7	74.3	0.0100	-20.00	1.000	5.01	16.06	7.00	0.22	0.04	0.00
160	35.5	68.5	0.0100	-20.00	1.000	4.82	15.31	6.73	0.22	0.04	0.00
170	44.1	59.9	0.0100	-20.00	1.000	4.52	14.16	6.33	0.22	0.04	0.00
180	48.8	55.2	0.0100	-20.00	1.000	4.34	13.62	6.08	0.22	0.04	0.00
190	55.2	48.8	0.0100	-20.00	1.000	4.06	12.81	5.72	0.22	0.04	0.00
200	57.9	46.1	0.0100	-20.00	1.000	3.93	12.45	5.55	0.22	0.04	0.00
210	54.5	49.5	0.0100	-20.00	1.000	4.09	12.91	5.76	0.22	0.04	0.00
220	56.0	48.0	0.0100	-20.00	1.000	4.02	12.71	5.67	0.22	0.04	0.00
230	58.1	45.9	0.0100	-20.00	1.000	3.92	12.41	5.54	0.22	0.04	0.00
240	50.8	53.2	0.0100	-20.00	1.000	4.26	13.38	5.97	0.22	0.04	0.00
250	47.4	56.6	0.0100	-20.00	1.000	4.40	13.79	6.16	0.22	0.04	0.00
260	44.7	59.3	0.0100	-20.00	1.000	4.49	14.09	6.29	0.22	0.04	0.00
270	39.3	64.7	0.0100	-20.00	1.000	4.69	14.65	6.55	0.22	0.04	0.00
280	35.4	68.6	0.0100	-20.00	1.000	4.82	15.32	6.73	0.22	0.04	0.00
290	32.2	71.8	0.0100	-20.00	1.000	4.93	15.74	6.88	0.22	0.04	0.00
300	35.3	68.7	0.0100	-20.00	1.000	4.82	15.34	6.74	0.22	0.04	0.00
310	32.4	71.6	0.0100	-20.00	1.000	4.92	15.72	6.88	0.22	0.04	0.00
320	31.7	72.3	0.0100	-20.00	1.000	4.94	15.81	6.91	0.22	0.04	0.00
330	31.9	72.1	0.0100	-20.00	1.000	4.94	15.78	6.90	0.22	0.04	0.00
340	32.0	72.0	0.0100	-20.00	1.000	4.93	15.77	6.89	0.22	0.04	0.00
350	35.4	68.6	0.0100	-20.00	1.000	4.82	15.33	6.74	0.22	0.04	0.00

AMSL= 104.0 M