

EXHIBIT 13  
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OVERLAP REQUIREMENTS  
Rubber City Radio Group, Inc.  
Akron, OH

Figure 13.0 is an allocation study showing the interfering contours for the proposed Channel 228 facilities in relation to the protected contours for all FM broadcast and FM translator stations operating on channels 225 through 231 which require protection consideration. This figure also shows that there will be no prohibited overlap between the facilities proposed in this application to the amended facilities specified in the formerly mutually exclusive “short form” application (BNPFT-20180126ACL) for a new FM translator on Channel 228 in Massillon, Ohio.

As shown in this figure, the proposed Channel 228 operating facilities provide the contour protection required by Section 74.1204(a) of the FCC Rules to all other stations requiring protection consideration except second adjacent channel station WZAK(FM) - Cleveland, Ohio, which operates on Channel 226B, and third adjacent channel station WHBC-FM - Canton, Ohio, which operates on Channel 231B. As is documented below in more detail, however, the proposed facilities are not likely to result in any actual interference to WZAK or WHBC-FM. Thus, based on this lack of interference, Section 74.1204(d) of the FCC Rules permits the attached application to be granted in spite of this prohibited contour overlap.

Section 74.1204(a) of the FCC Rules prohibits any overlap between the proposed 94 dBu contour and the 54 dBu protected contours for both WZAK and WHBC-FM. Compliance with this requirement, however, is obviously not possible from this site, since the proposed site is located within the 54 dBu protected contours for both WZAK and WHBC-FM.

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Figure 13.1 is a map exhibit depicting the predicted 94 dBu contour for the proposed facilities. As shown in this figure, the proposed 94dBu contour extends 1900 meters at its furthest point from the proposed site. This figure also shows that there are buildings and public highways located within this distance of the proposed site. As a result, it was necessary to undertake a more detailed analysis to document that there is no population that is predicted to receive interference within this area of prohibited overlap.

As part of this detailed analysis, it was determined that the predicted WZAK signal strength at the proposed site is 74.7 dBu, while the predicted WHBC-FM signal strength at the proposed site is 72 dBu.<sup>1</sup> Based on the 40 dB undesired to desired (“U/D”) signal strength ratio specified for second and third adjacent channel stations in Section 74.1204(a)(3) of the FCC Rules, a signal level exceeding 114.7 dBu would be required to cause predicted interference to WZAK and a signal level exceeding 112 dBu would be required to cause predicted interference to WHBC-FM. The vertical radiation pattern data for the proposed antenna was utilized in conjunction with free space propagation prediction techniques to calculate the distance to the 112 dBu contour<sup>2</sup> for the proposed facilities at depression angles ranging from 0° down through 90°. The results of these calculations are tabulated in Table 13.2 and depicted in Figure 13.2, which shows a side view of the predicted 112 dBu contour for this proposed antenna system. As shown in this figure, the predicted 112 dBu contour for these proposed operating facilities never

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<sup>1</sup>These signal strength calculations were made using the F(50,50) curves from Section 73.333 of the FCC Rules and terrain data extracted from the NGDC 30 second terrain database.

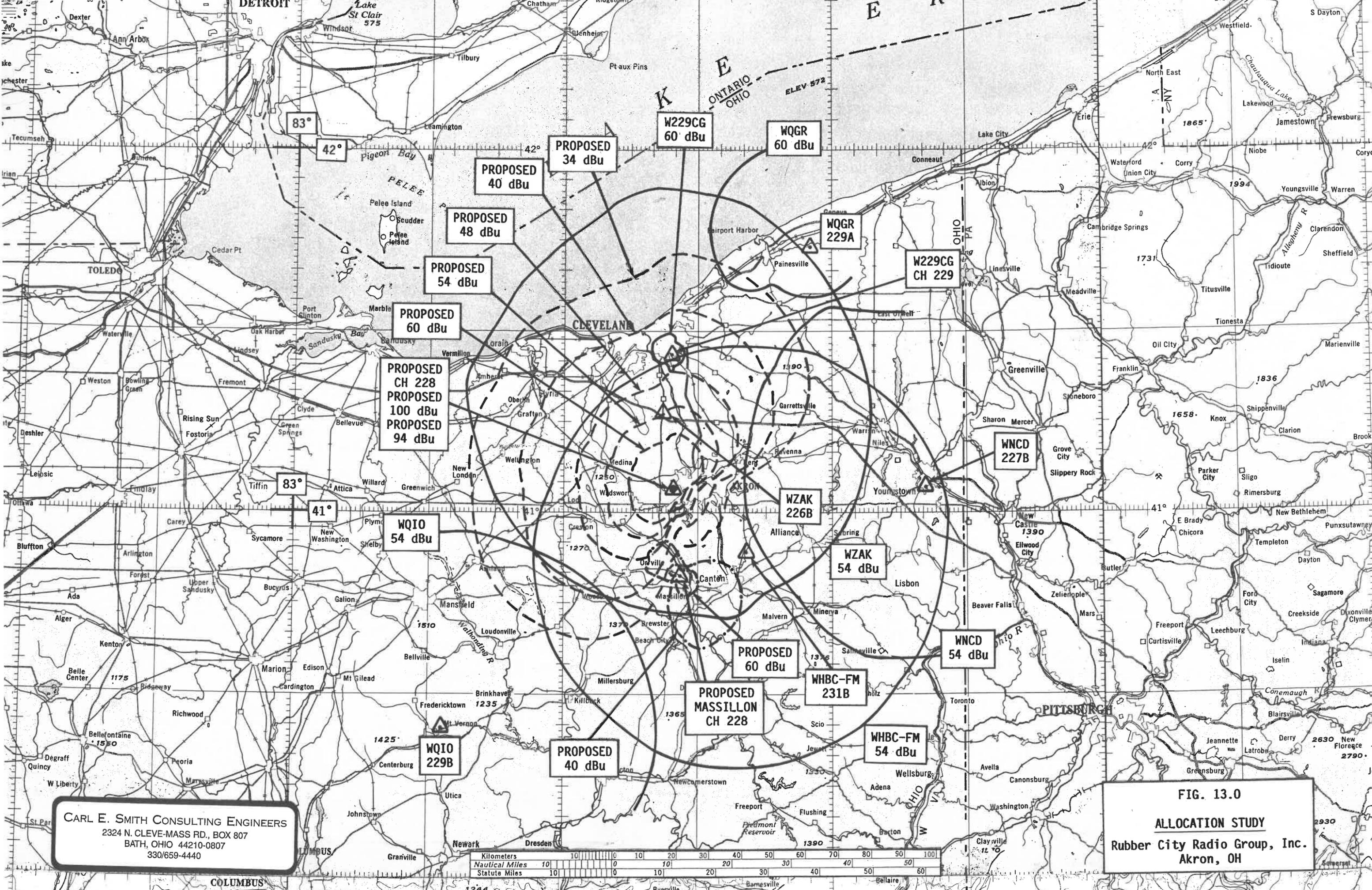
<sup>2</sup>The area where the predicted signal strength exceeds 114.7 dBu will be totally contained within the area where the predicted signal strength exceeds 112 dBu.

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reaches ground level, with its closest approach being 39.5 meters (130 feet) at a depression angle of  $40^{\circ}$ . Since, as shown in Figure 13.1, there are no tall buildings or other publicly accessible tall structures located near the proposed site, it is obvious that there is no population within the area where this overlap would result in interference being predicted to either WZAK or WHBC-FM. Thus, pursuant to Section 74.1204(d) of the FCC Rules, the attached application can be granted in spite of this prohibited contour overlap, due to the total lack of population within the area of predicted interference. If it is deemed to be necessary, a waiver of Section 74.1204(a) of the FCC Rules is respectfully requested with regard to this situation.

Table 13.3 is an FM spacing study which demonstrates that the proposed facilities will comply with the intermediate frequency separation requirements outlined in Section 73.207 of the FCC Rules with regard to all existing or proposed stations operating on FM Channels 281 and 282.

The proposed transmitter site lies within 320 kilometers of the common border between the United States and Canada. At its farthest point, the proposed 34 dBu contour will extend 76.6 kilometers from the proposed site and as can be seen in Figure 13.0, at no point does it cross the Canadian border. Since at no point does it cross the Canadian border, the proposed facilities will fully comply with Section 4.4 of the 1997 amendment to the Working Arrangement for Allotment and Assignment of FM Broadcasting Channels 201-300 Under the Canadian-U.S.A FM Broadcasting Agreement of 1947.



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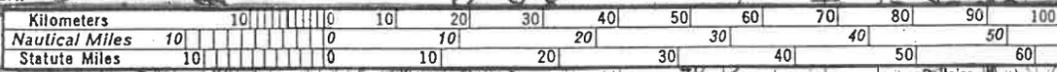
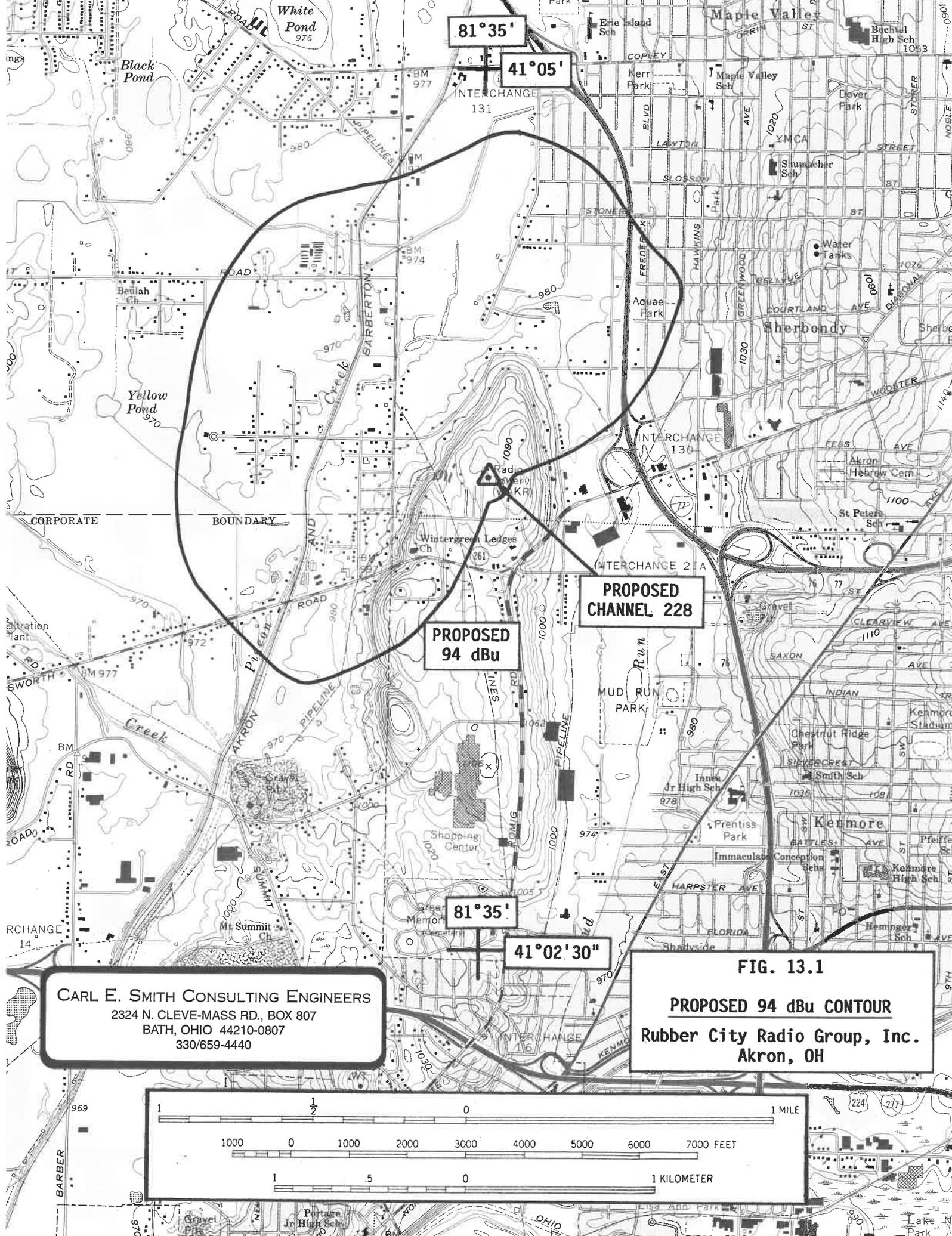


FIG. 13.0  
 ALLOCATION STUDY  
 Rubber City Radio Group, Inc.  
 Akron, OH



81°35'

41°05'

PROPOSED  
94 dBu

PROPOSED  
CHANNEL 228

81°35'

41°02'30"

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**FIG. 13.1**  
**PROPOSED 94 dBu CONTOUR**  
**Rubber City Radio Group, Inc.**  
**Akron, OH**

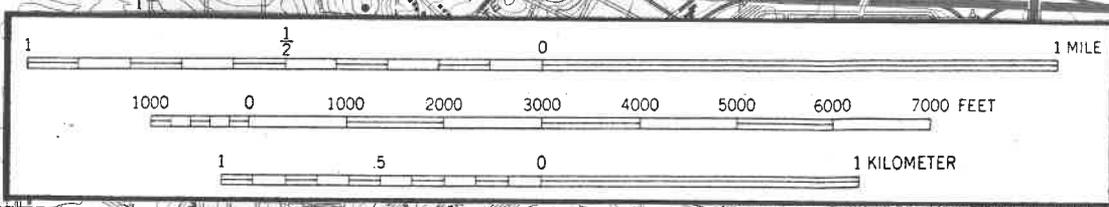


TABLE 13.2

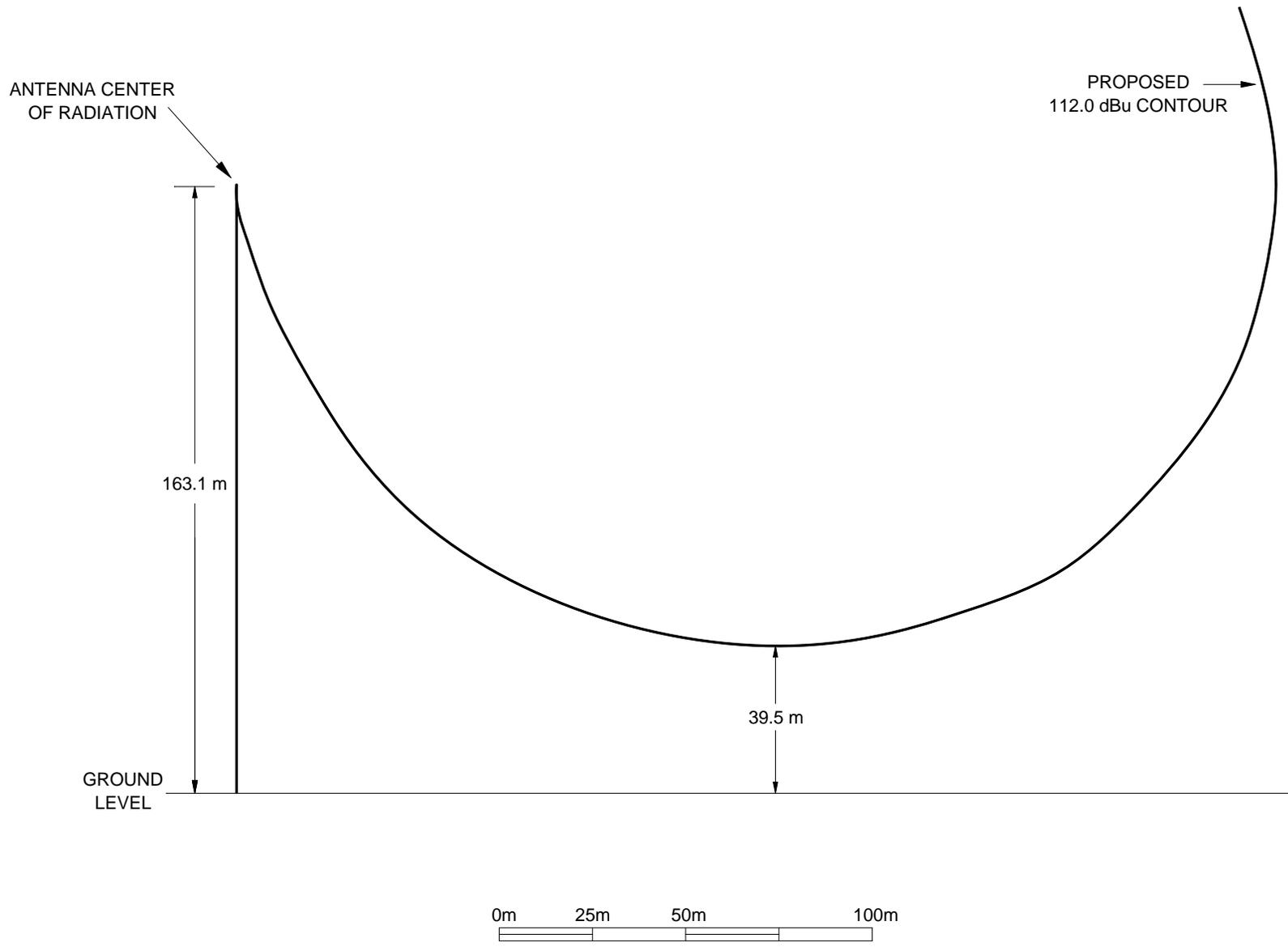
PROPOSED 112 DBU CONTOUR

Rubber City Radio Group, Inc.  
Akron, OH

<u>Depression Angle (Degrees)</u>	<u>Relative Field</u>	<u>ERP (dBk)</u>	<u>112 dBu Contour* (Meters)</u>
0	1.000	-6.02	278.6
5	0.993	-6.08	276.7
10	0.980	-6.20	272.9
15	0.952	-6.45	265.2
20	0.916	-6.78	255.3
25	0.873	-7.20	244.3
30	0.817	-7.78	227.5
35	0.756	-8.45	210.6
40	0.690	-9.24	192.3
45	0.618	-10.20	172.2
50	0.544	-11.31	151.2
55	0.467	-12.63	130.2
60	0.390	-14.20	108.6
65	0.300	-16.48	83.6
70	0.190	-20.45	52.9
75	0.110	-25.19	30.7
80	0.050	-32.04	13.9
85	0.030	-36.48	8.4
90	0.030	-36.48	8.4

Horizontal ERP = 250 Watts = -6.02dBk

\* - Contour distance calculated using free space calculation techniques.



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FIG. 13.2  
 PROPOSED 112.0 dBu CONTOUR  
 RUBBER CITY RADIO GROUP, INC.  
 AKRON, OH

TABLE 13.3

## FM ALLOCATION STUDY - CHANNEL 228A (93.5 MHz) - AKRON, OH

-----  
 RUBBER CITY RADIO GROUP, INC.  
 AKRON, OH

STUDY COORDINATES: 41/03/53 81/34/59

STATION	LOCATION	CHANNEL	CLASS	SPACING (km)	REQUIRED SPACING* (km)	NOTES
WQAL	CLEVELAND, OH	281	B	33.40	15.0	
WOGI	MOON TOWNSHIP, PA	282	B	111.46	15.0	1

\* Required Spacing Per Section 73.207 of The FCC Rules

## Notes:

- |                                      |                                  |
|--------------------------------------|----------------------------------|
| 1 - Applied For Under Section 73.215 | 7 - Pending Application          |
| 2 - Construction Permit              | 8 - Petition For Reconsideration |
| 3 - Channel Deletion Proposed        | 9 - Proposed Rulemaking          |
| 4 - Move From This Channel Ordered   | 10 - Rulemaking Petition         |
| 5 - Move to This Channel Ordered     | 11 - Short-Spaced                |
| 6 - One Step Reference Site          | 12 - Vacant Allotment            |