

TECHNICAL EXHIBIT  
APPLICATION FOR CONSTRUCTION PERMIT  
NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 kW (DA) 200 M

Technical Narrative

The technical exhibit of which this narrative is a part was prepared in support of the long form application of Connoisseur Media of Erie, LLC, winning bidder in Auction 94 for FM channel 240A at Erie, Pennsylvania to implement its winning bid on channel 240A at Mina, New York. This application is filed pursuant to Sections 73.3573(a)(i) and (ii) of the Commission's Rules which permit a winning auction bidder to file a minor change to its proposal to specify a new community of license without affording other parties an opportunity to file a competing expression of interest.

Specifically, the purpose of the instant application is to specify a change in the city of license from Erie, Pennsylvania to Mina, New York on channel 240A. It is proposed to operate on channel 240A at Mina, New York from an existing tower (ASRN 1003200) with a directional antenna maximum effective radiated power (ERP) of 1.55 kilowatts (kW) and an antenna height above average terrain (HAAT) of 200 meters. The proposed reallocation to Mina will comply with the Commission's *Rural Radio* policies.<sup>1</sup> Processing under Section 73.215 is requested with respect to short-spacings with WPIG on channel 239B at Olean, New York and WJYE on channel 241B at Buffalo, New York. In addition, coordination with Canada as a limited allotment is also requested as detailed below.

Response to Paragraph 13 - Allotment

Figure 1 is a separation study for channel 240A operation from the proposed allotment reference site. As shown, the proposed allotment reference site complies with the minimum distance separation requirements of Section 73.207 for Class A operation on channel 240 towards all existing,

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<sup>1</sup> See *Policies to Promote Rural Radio Service to Streamline Allotment and Assignment Procedures*, Second Report and Order, First Order on Reconsideration, and Second Further Notice of Proposed Rule Making, MB Docket No. 09-52 (RM-11528, FCC 11-28, adopted March 3, 2011), and Second Order on Reconsideration, MB Docket 09-52 (RM-11528, FCC 12-127, adopted October 11, 2012) ("Second Order").

authorized and proposed domestic stations with the exceptions of the short-form application (BSFH-20130206AED) site and allotment reference site for current channel 240A at Erie. These short-spacings establish mutual exclusivity pursuant to Section 73.3573(g). Furthermore, as indicated on Figure 1 the allotment reference site is short-spaced to the channel 240C1 assignment for CFPL-FM at London, Ontario. Therefore, coordination as a limited allotment is requested with respect to the Canadian channel 240C1 allotment at London.

Figure 2 is a map which demonstrates that the proposed allotment reference point complies with the FCC's city coverage requirements (Section 73.315) based on maximum Class A facilities (ERP 6 kW/HAAT 100 m).

#### Response to Paragraph 16 - Interference

Figure 3 is a separation study for channel 240A operation from the proposed site (ASRN 1003200). As shown, the proposed site complies with the minimum distance separation requirements of Section 73.207 for Class A operation on channel 240 towards all existing, authorized and proposed stations with the exceptions of the licensed operations of WPIG on channel 239B at Olean, New York and WJYE on channel 241B at Buffalo, New York and two (2) Canadian assignments, namely, CFPL-FM on channel 240C1 at London, Ontario and CJKX-FM on channel 240B at Ajax, Ontario. It is proposed to utilize the contour protection provisions of Section 73.215 with respect to the WPIG and WJYE short-spacings. Figure 4 demonstrates that the proposed operation on channel 240A at Mina complies with the contour protection provisions of Section 73.215 with respect to WPIG and WJYE.<sup>2</sup> All contour locations were based on the use of the U.S. Geological Survey (U.S.G.S.) 30-second terrain database.

With respect to the short-spacings to the Canadian assignments, it is requested that the proposal be coordinated as a limited Class A allotment towards the channel 240C1 assignment for CFPL-FM at London and as an unlimited Class A allotment towards the channel 240B assignment for CJKX-FM at

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<sup>2</sup> The distance between the proposed transmitter site and the WPIG and WJYE transmitter sites complies with the minimum distance separation requirements of Section 73.215(e).

Ajax. Figure 5 demonstrates that the proposal complies with the provisions of the US-Canadian FM agreement towards the London and Ajax assignments.

#### Section 73.316(b) Compliance

The maximum to minimum radiation for the proposed antenna is 17.72 dB which exceeds the 15 dB value contained in Section 73.316(b). It is necessary to exceed the 15 dB value in order to provide protection of the channel 240C1 assignment of CFP-FM at London, Ontario. Furthermore it is noted that paragraph 3.6 of the US-Canadian FM agreement permits a maximum to minimum radiation of up to 20 dB for limited allotments. In addition, based on discussions with FCC's International Branch personnel, the FCC will permit a maximum to minimum radiation of up to 20 dB for limited allotments in order to permit compliance with the US-Canadian FM agreement. If necessary, a waiver of Section 73.316(b) is requested.

#### Response to Paragraph 14 - Community Coverage

Compliance with the community coverage requirements of Section 73.315 has been demonstrated by a supplemental showing using an alternative contour prediction method contained in an Attachment (see Exhibit 28).

#### Response to Paragraph 17 - RFR Hazard Statement

The proposed facilities were evaluated in terms of potential radiofrequency radiation exposure at 2 meters above ground level in accordance with the OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation". This Bulletin provides assistance in determining whether FCC-regulated transmitting facilities, operations or devices comply with limits for human exposure to radiofrequency (RF) electromagnetic fields.

The calculated power density at 2 meters above ground level at the base of the tower was calculated using the appropriate equation contained in the Bulletin. Using a greater than expected vertical relative field value of 0.75 (for angles below 60 degrees downward) for the proposed directional antenna, the total ERP of 3.1 kW (H+V) and an antenna center of radiation

height above ground level of 91 meters, the calculated power density at two meters above ground level at the base of the tower is 7.4 microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ), or 3.7 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas ( $200 \mu\text{W}/\text{cm}^2$  for FM channel 240). Therefore, the proposal will comply with the RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, procedures will be in effect in the event that workers or other authorized personnel enter the restricted area to ensure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

Finally, it is noted that this technical exhibit only addresses the potential for radiofrequency electromagnetic field exposure.

Response to Paragraph 18 - Community of License Change -  
Section 307(b)

*1. Proposal*

It is proposed to specify a change in the city of license from Erie, Pennsylvania to Mina, New York as permitted by the Commission's rules allowing community of license changes by application.

*2. City Populations and Local Service*

Erie is an incorporated city and has a 2010 U.S. Census population of 101,786 persons. Erie will not be deprived of its only aural service as 8 FM and 4 AM stations are assigned to Erie.<sup>3</sup>

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<sup>3</sup> The Erie FM assignments are WEFB (201A), WERG (213A), WMCE-FM (203A), WQHZ (272A), WQLN-FM (217B), WRTS (279B), WXBB (234A) and WXKC (260B) and the Erie AM assignments are WFNN (1330 kHz), WJET (1400 kHz), WPSE (1450 kHz) and WRIE (1260 kHz).

Mina is a town which has a 2010 U.S. Census population of 1,106 persons and has no other FM or AM service. Mina is not located within any Urbanized Area (see below). Therefore, the instant proposal will result in a first local aural transmission service to the community of Mina under FM priority 3.<sup>4</sup>

### *3. 60 dBu Loss Area and Available Aural Services*

Figure 6 is a map showing the FM 60 dBu (1 mV/m) primary service contours for current channel 240A allotment at Erie and for the proposed channel 240A operation at Mina. The 60 dBu contour for the Erie channel 240A allotment was calculated based on operation from the channel 240A site set forth in the short-form application (BSFH-20130206AED) presuming nominal maximum Class A facilities (ERP 6 kW/HAAT 100 meters) and using actual terrain, the NGDC 30-second terrain database and the FCC's standard prediction method as set forth in the *Second Order*.<sup>5</sup> The 60 dBu contour for the proposed channel 240A operation at Mina was calculated based on actual facilities and actual terrain as also set forth in the *Second Order*. The land area that will lose 60 dBu service has also been shown on Figure 6.<sup>6</sup> It has been determined that the loss area contains a 2010 Census population of 190,409 persons within 399 square kilometers.

Figure 6 also shows the other aural services available to the 60 dBu loss area. The determination of available full-time reception services was also based on the criteria set forth in the *Second Order*. Specifically, for FM service (commercial and noncommercial educational) the Class service contour was used based on the authorized (licensed or permitted) facilities using actual terrain, the NGDC 30-second terrain database and the FCC's standard prediction method. For AM fulltime service, the common area within the daytime 2 mV/m contour and nighttime interference-free (NIF) contour was used.

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<sup>4</sup> The FM allotment priorities are (1) first fulltime aural service; (2) second fulltime aural service; (3) first local service; and (4) other public interest matters.

<sup>5</sup> The short-form site coordinates are N35-01-36.9/W96-31-42.2. An antenna radiation center height above mean sea level of 368 meters was utilized along with an ERP of 6 kW.

<sup>6</sup> It is noted that the proposal involves relocation of an unbuilt allotment.

Figure 7 tabulates the AM and FM stations whose contours are shown on Figure 6. The numerals within the 60 dBu loss area indicate the number of available services. As indicated on Figure 6, there are no white or gray areas located within the 60 dBu loss area.

#### *4. Protected FM and AM Services Available to Mina*

It has been determined that there are 5 protected FM and 0 protected AM services available to Mina as shown on Figure 8.<sup>7</sup> Figure 9 tabulates the FM stations whose contours are shown on Figure 8.

#### *5. 70 dBu and 60 dBu Coverage*

The following tabulates the land area and 2010 Census population within the 70 dBu and 60 dBu contours for the proposed channel 240A operation at Mina which are depicted on Figure 10.

Contour	Population (2010 Census)	Area (sq. km)
70 dBu	12,678	307
60 dBu	26,969	835

Contour locations calculated in accordance with the provisions of Section 73.313. Population calculated using a computer program that utilizes the 2010 U.S. Census database of population centroids. Area calculated using a root mean square algorithm.

#### *6. Urbanized Area Considerations*

Figure 11 is a map which depicts the Mina city limits and the Erie Urbanized Area (UA). Also shown is the 70 dBu contour for the proposed channel 240A operation at Mina. As indicated, no portion of Mina is located within the Erie UA. In addition, the proposed 70 dBu contour does not encompass any portion of the Erie UA.

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<sup>7</sup> For FM stations, the pertinent primary service contour has been used. For AM stations, the daytime 2 mV/m contour was considered.

Studies were conducted to determine if any rule-compliant minor modifications could be made on the proposed channel which would provide 70 dBu coverage over 50 percent or more of the Erie UA. The studies considered all existing registered towers in the Commission's Antenna Structure Registration database along with unregistered towers currently used by licensed radio stations. In addition, consideration was also given to use of short-spaced sites and directional antenna systems. On this basis, it was determined that only 8 registered towers could potentially be used for the proposed Mina channel 240A allotment, namely ASRN's 1003200 (proposed site), 1256616, 1231658, 1232103, 1026984, 1231192, 1065351 and 1230683. However, operation from each of these towers with maximum nondirectional Class A facilities (i.e. best case presumption) would not result 70 dBu coverage to 50% or more of the Erie UA. Therefore, it is apparent that a minor change modification could not be made which would provide 70 dBu coverage over 50 percent of the Erie UA.

If there are any questions, or additional information is required, please contact the office of the undersigned.



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July 23, 2013

CDBS FM SEPARATION STUDY - NEW FM, CH 240A, MINA, NY - ALLOTMENT COORDINATES

Channel: 240 Coordinates: 042-08-22 079-48-08 (NAD 27)  
 Class: A Buffer Distance: 10 km

Date: 07/23/2013

Page: 1 of 1

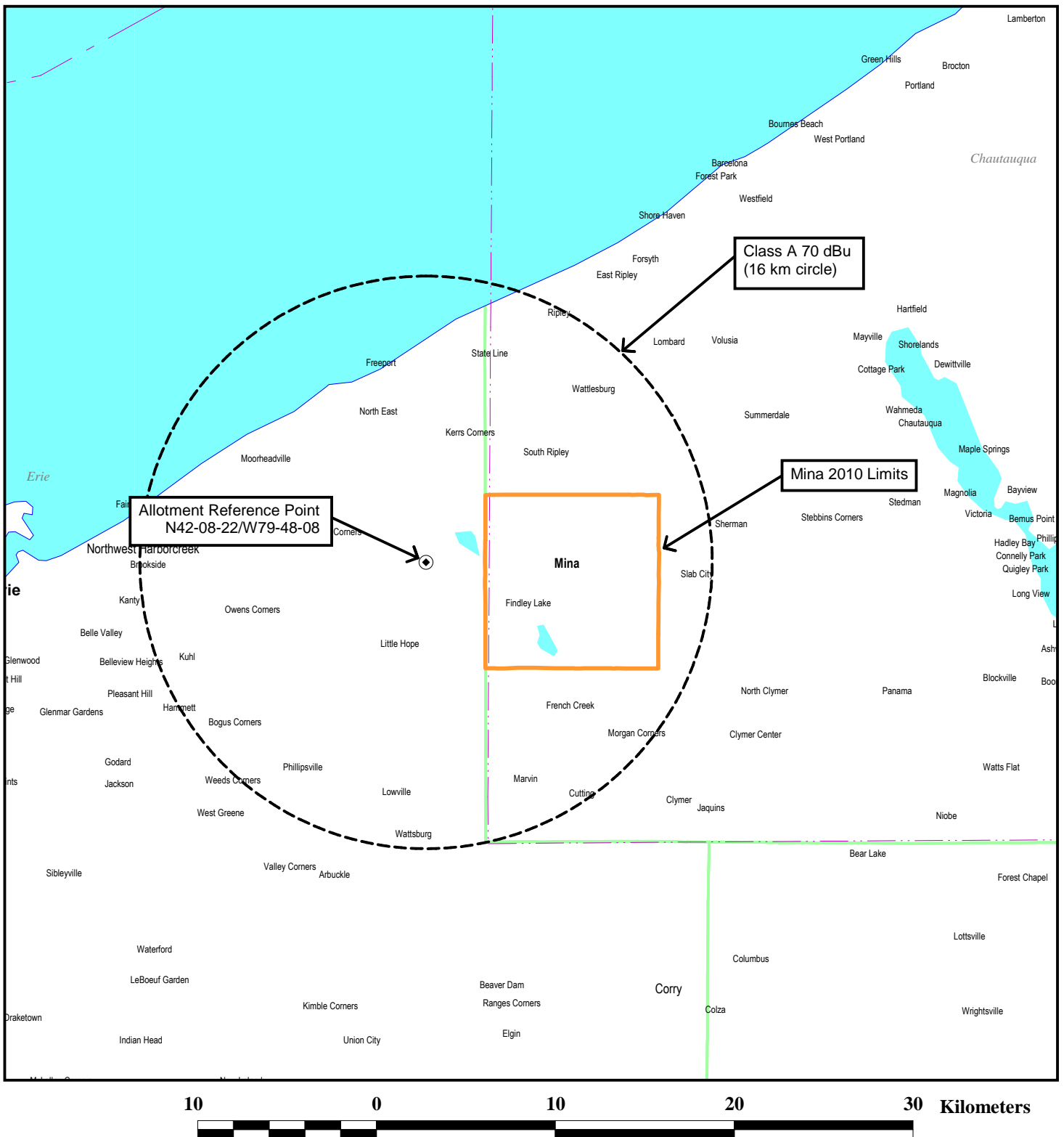
Callsign	Status	Chan.	Serv.	Freq.	City	State	Latitude	Dist.(km)	Sep.(km)	Spacing(km)		
Fac. ID	ARN			Class	DA	Ant. ID	ERP(kW)	HAAT(m)	Longitude	Bear.(deg)	73.215	Comment
<b>WPIG</b>	LIC	239	FM	95.7	OLEAN							
2864	BLH 4110			B			43	226	042-02-08	112.77	113	-0.23
									078-26-47	95.44	<b>96 N</b>	<b>CLOSE</b>
	VAC	240	FA	95.9	ERIE			PA	042-09-54	15.78	115	-99.22
0	RM 10750			A					079-59-24	280.47	<b>92</b>	<b>SHORT<sup>1</sup></b>
<b>NEW</b>	APP	240	FM	95.9	ERIE			PA	042-09-54	15.78	115	-99.22
191524	BSFH 20130206AED			A					079-59-24	280.47	<b>92</b>	<b>SHORT<sup>1</sup></b>
	APP	240	FM	95.9	LONDON			ON	042-56-59	150.08	243	-92.92
-1				C1					081-15-53	307.44		<b>SHORT<sup>2</sup></b>
<b>CFPL-FM</b>		240	FM	95.9	LONDON			ON	042-56-59	150.08	243	-92.92
136526				C1	D		300	273	081-15-53	307.44		<b>SHORT<sup>2</sup></b>
<b>CFPLFM</b>		240	FM	95.9	LONDON			ON	042-57-15	150.46	243	-92.54
94674				C1	D		380	270	081-15-58	307.56		<b>SHORT<sup>2</sup></b>
<b>CJKX-FM</b>		240	FA	95.9	AJAX			ON	043-59-02	214.43	210	4.43
94588				B					079-01-29	16.85		<b>CLOSE</b>
<b>CJKX-FM</b>		240	FM	95.9	AJAX			ON	043-59-02	214.43	210	4.43
94588				B	D		50	96.4	079-01-29	16.85		<b>CLOSE</b>
<b>WAKZ</b>	LIC	240	FM	95.9	SHARPSVILLE			PA	041-13-05	120.31	115	5.31
74468	BLH 20030723AIK			A	N		6	100	080-33-43	211.88	<b>92 N</b>	<b>CLOSE</b>
<b>WJYE</b>	LIC	241	FM	96.1	BUFFALO			NY	042-53-10	112.71	113	-0.29
1915	BLH 19950814KB			B	N		47	154	078-52-25	42.2	<b>96 N</b>	<b>CLOSE</b>

<sup>1</sup> Short-spacing which establishes mutual exclusivity pursuant to Section 73.3573(g).

<sup>2</sup> Canadian short-spacing. Coordination as a limited allotment requested. See Technical Narrative.



**Figure 2**



**COMPLIANCE WITH SECTION 73.315**

NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 KW (DA) 200 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

CDBS FM SEPARATION STUDY - NEW FM, CH 240A, MINA, NY - PROPOSED SITE

Channel: 240 Coordinates: 042-11-51 079-45-11 (NAD 27) Date: 07/23/2013  
 Class: A Buffer Distance: 10 km Page: 1 of 1

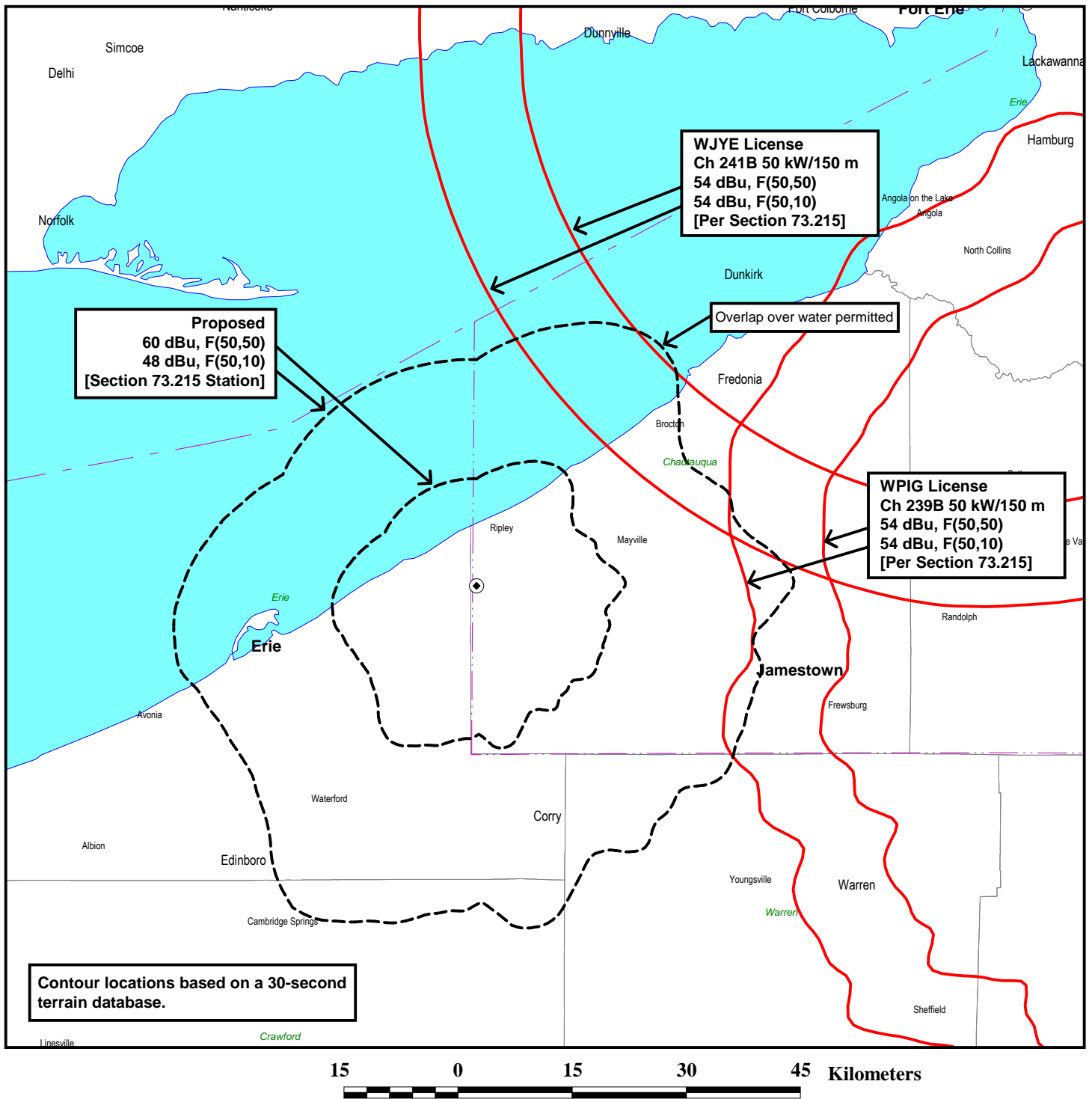
Callsign	Status	Chan.	Serv.	Freq.	City		State	Latitude	Dist.(km)	Sep.(km)	Spacing(km)	
Fac. ID	ARN			Class	DA	Ant. ID	ERP(kW)	HAAT(m)	Longitude	Bear.(deg)	73.215	Comment
<b>WPIG</b>	LIC	239	FM	95.7	OLEAN			NY	042-02-08	109.55	113	-3.45
2864	BLH 4110			B			43	226	078-26-47	99.05	<b>96 N</b>	<b>SHORT<sup>1</sup></b>
0	VAC	240	FA	95.9	ERIE			PA	042-09-54	19.91	115	-95.09
	RM 10750			A					079-59-24	259.59	<b>92</b>	<b>SHORT<sup>2</sup></b>
<b>NEW</b>	APP	240	FM	95.9	ERIE			PA	042-09-54	19.91	115	-95.09
191524	BSFH 20130206AED			A					079-59-24	259.59	<b>92</b>	<b>SHORT<sup>2</sup></b>
-1	APP	240	FM	95.9	LONDON			ON	042-56-59	149.59	243	-93.41
				C1					081-15-53	304.56		<b>SHORT<sup>3</sup></b>
<b>CFPL-FM</b>		240	FM	95.9	LONDON			ON	042-56-59	149.59	243	-93.41
136526				C1	D		300	273	081-15-53	304.56		<b>SHORT<sup>3</sup></b>
<b>CFPLFM</b>		240	FM	95.9	LONDON			ON	042-57-15	149.96	243	-93.04
94674				C1	D		380	270	081-15-58	304.69		<b>SHORT<sup>3</sup></b>
<b>CJKX-FM</b>		240	FA	95.9	AJAX			ON	043-59-02	207.08	210	-2.92
94588				B					079-01-29	16.33		<b>SHORT<sup>3</sup></b>
<b>CJKX-FM</b>		240	FM	95.9	AJAX			ON	043-59-02	207.08	210	-2.92
94588				B	D		50	96.4	079-01-29	16.33		<b>SHORT<sup>3</sup></b>
<b>WJYE</b>	LIC	241	FM	96.1	BUFFALO			NY	042-53-10	105.22	113	-7.78
1915	BLH 19950814KB			B	N		47	154	078-52-25	42.96	<b>96 N</b>	<b>SHORT<sup>1</sup></b>
<b>WBKX</b>	LIC	243	FM	96.5	FREDONIA			NY	042-22-02	35.62	31	4.62
49207	BLH 20050420AAA			A	D	39916	1.4	209	079-23-12	57.83	<b>25 Y</b>	<b>CLOSE</b>

<sup>1</sup> Section 73.215 processing requested with respect to this short-spacing. The proposal complies with the minimum distance separation requirements of Section 73.213(e). See Technical Narrative and Figure 4.

<sup>2</sup> Short-spacing which establishes mutual exclusivity pursuant to Section 73.3573(g).

<sup>3</sup> Proposal complies with the provisions of the US-Canadian FM Agreement with respect to this short-spacing. See Technical Narrative and Figure 5.

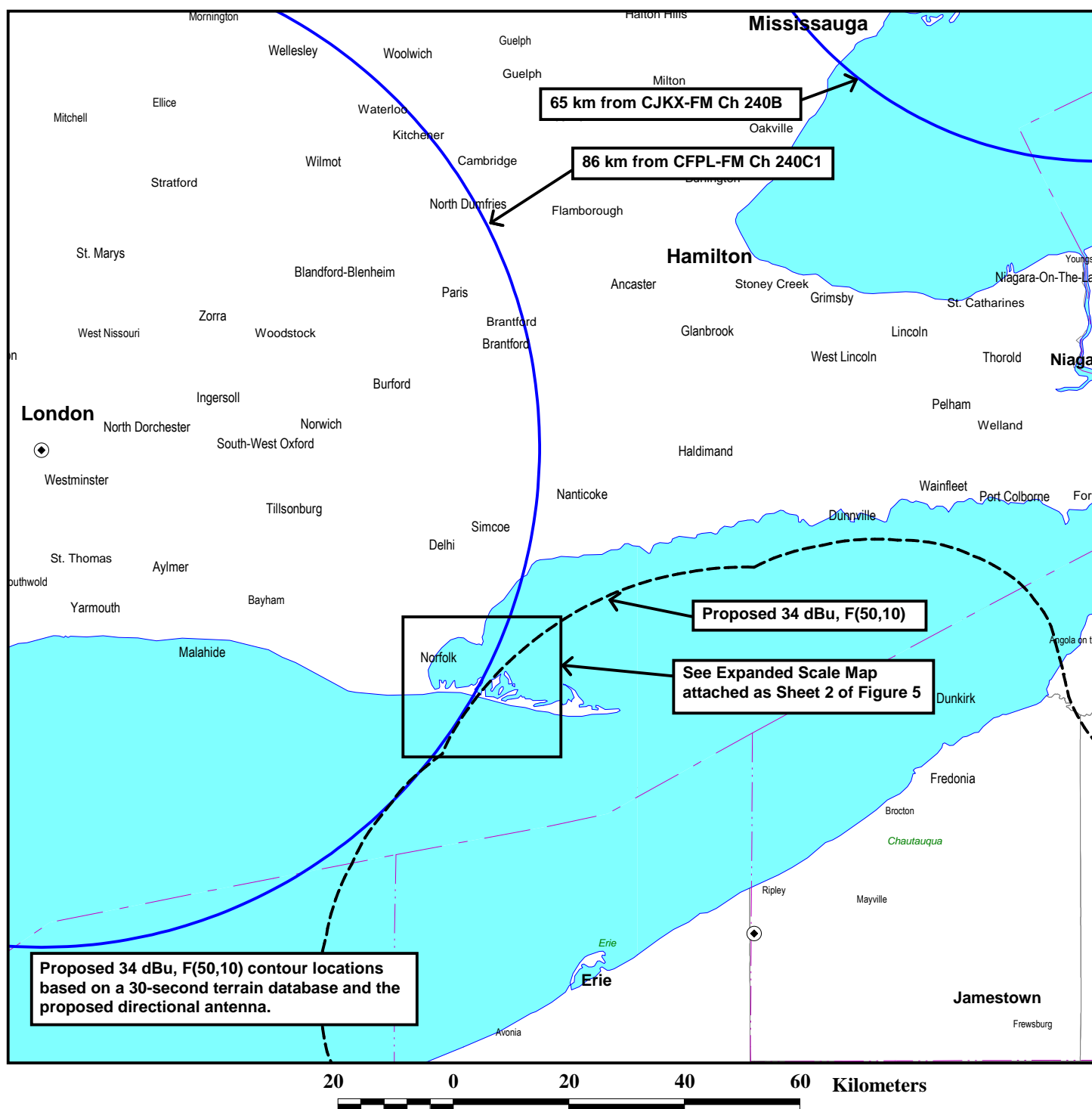
Figure 4



## SECTION 73.215 COMPLIANCE

NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 KW (DA) 200 M

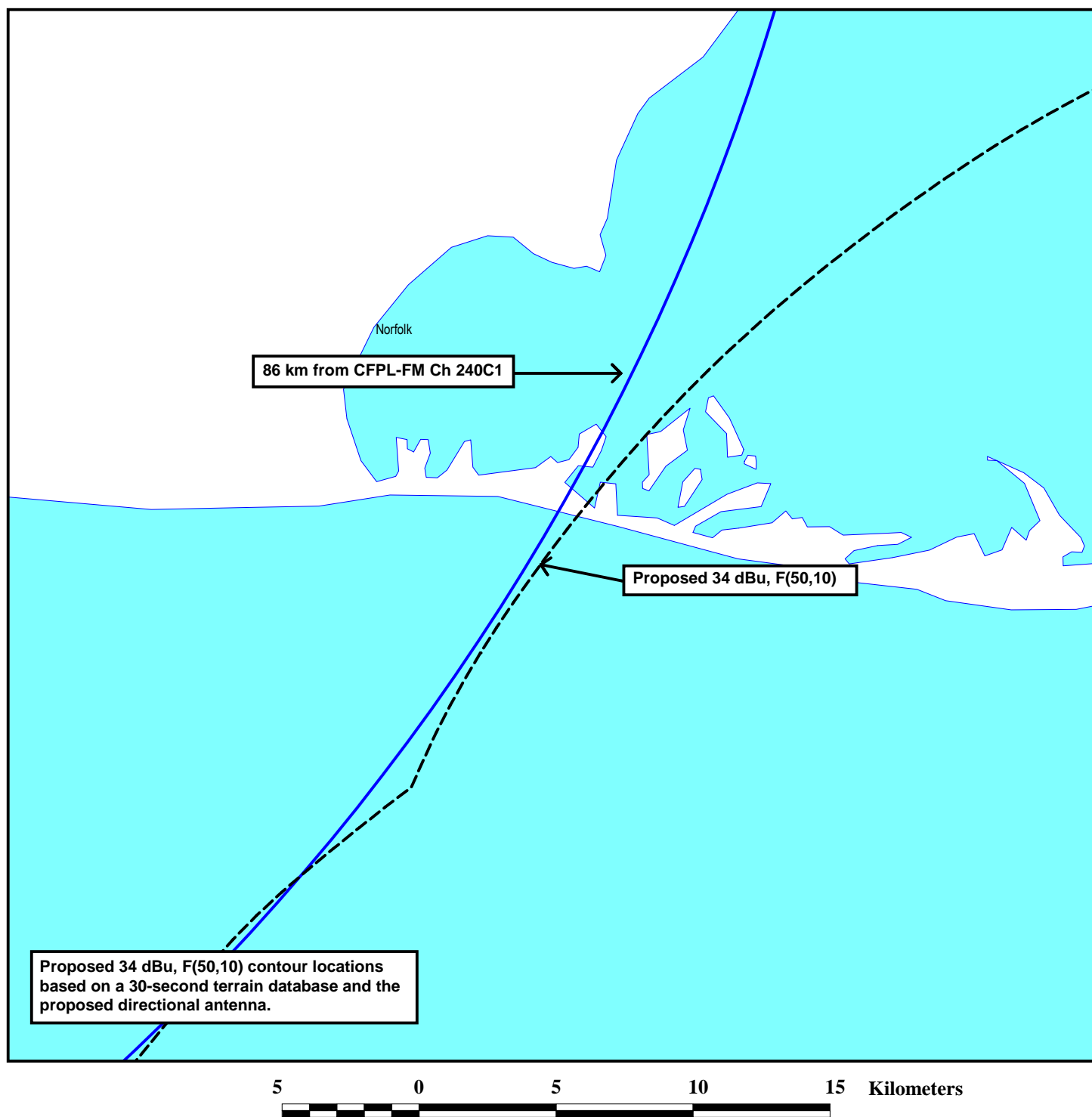
du Treil, Lundin & Rackley, Inc. Sarasota, Florida



## CANADIAN ALLOCATION STUDY

NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 KW (DA) 200 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

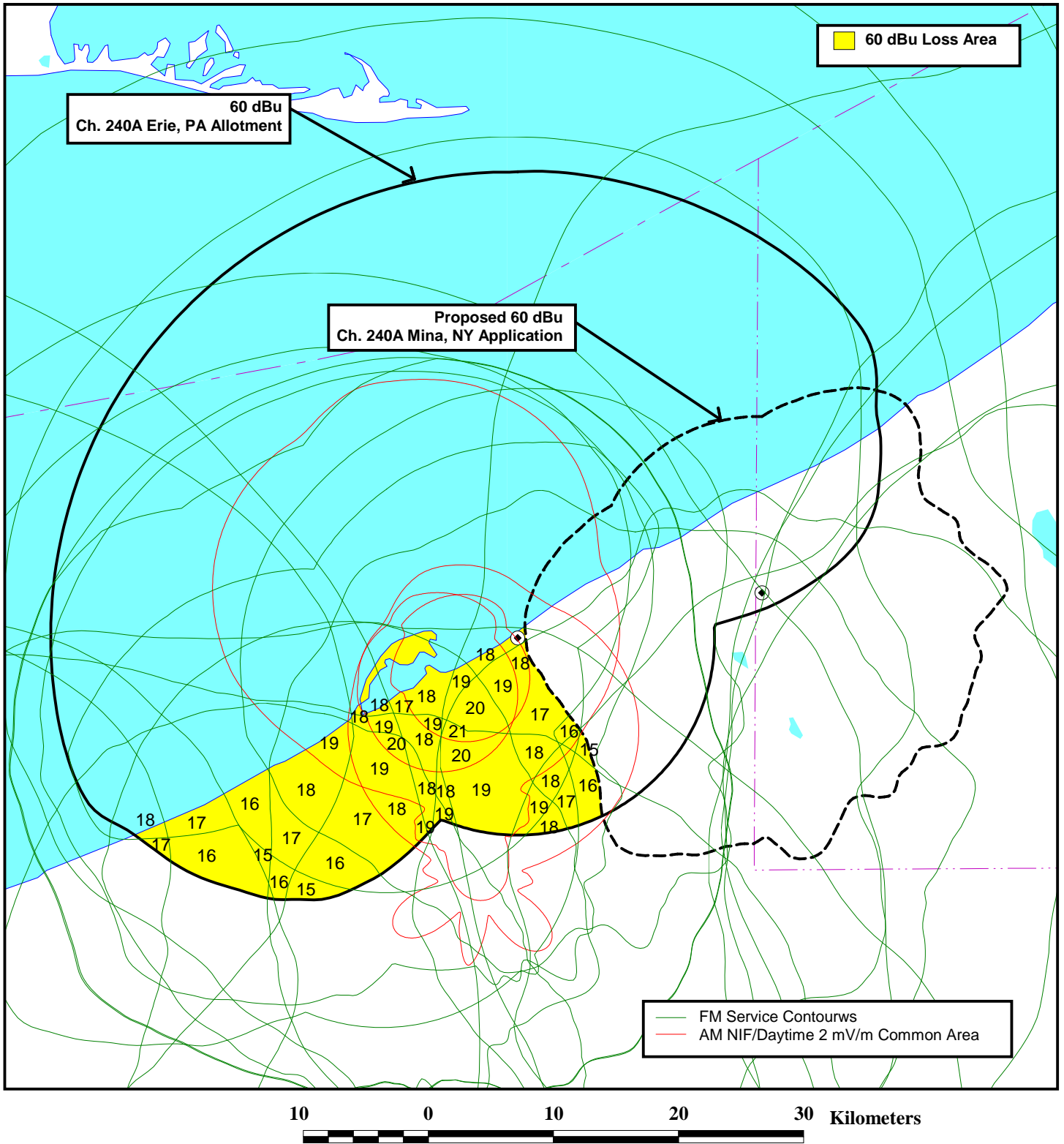


## CANADIAN ALLOCATION STUDY [EXPANDED SCALE]

NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 KW (DA) 200 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 6



### 60 DBU LOSS AREA MAP

NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 KW (DA) 200 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

TECHNICAL EXHIBIT  
NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 KW (DA) 200 M

Tabulation of Other AM/FM Full-Time Services

Available to 60 dBu Loss Area

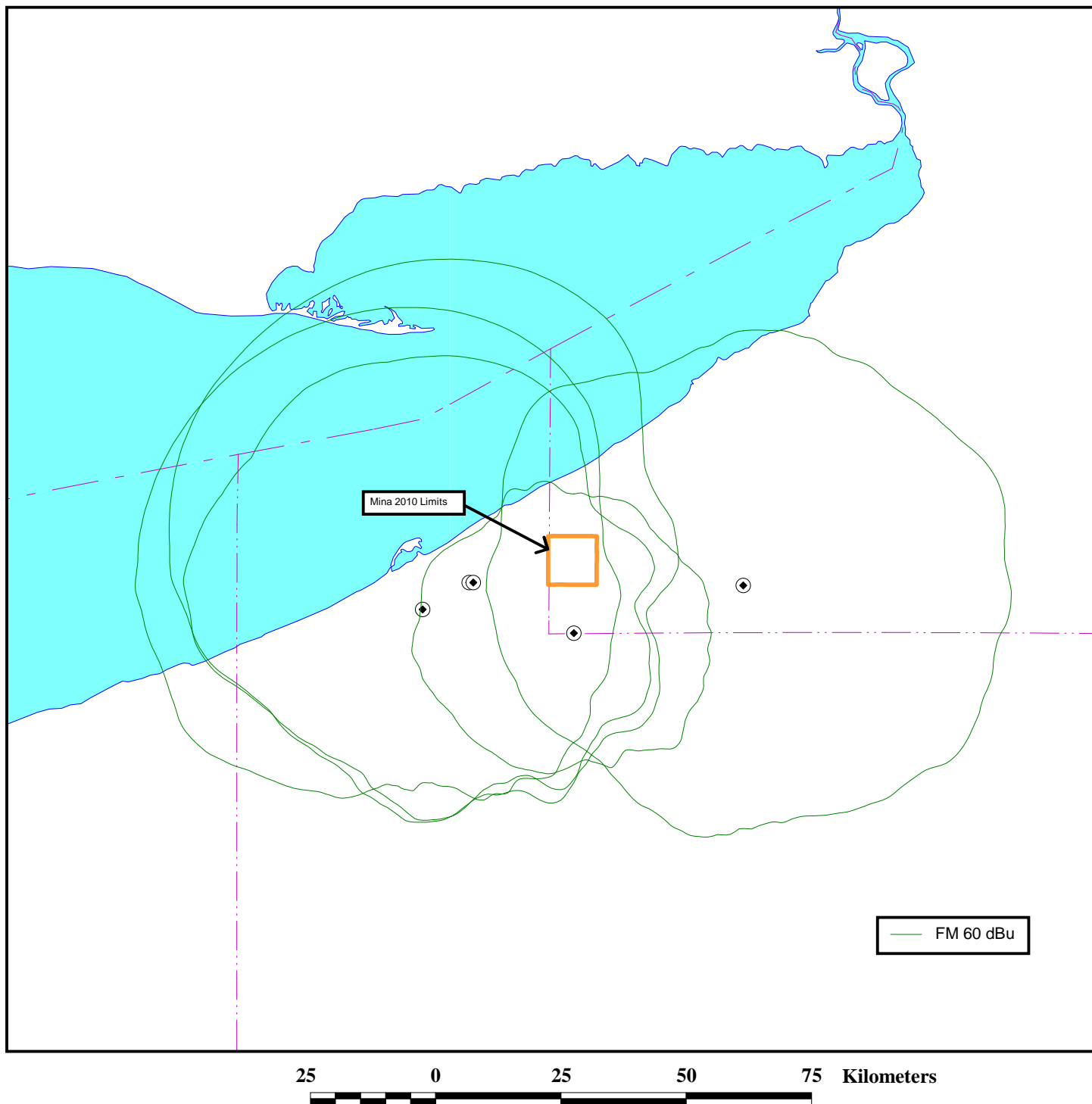
**FM CONTOURS**

<u>Call Sign</u>	<u>Community of License</u>	<u>State</u>	<u>Channel</u>
WGOJ	CONNEAUT	OH	288A
WFSE	EDINBORO	PA	205A
WEFR	ERIE	PA	201A
WERG	ERIE	PA	213A
WCTL	UNION CITY	PA	292A
WMCE-FM	ERIE	PA	203A
WXBB	ERIE	PA	234A
WQHZ	ERIE	PA	272A
WTWF	FAIRVIEW	PA	230A
WFXJ-FM	NORTH KINGSVILLE	OH	298A
WCGM	WATTSBURG	PA	274A
WEHP	LAWRENCE PARK	PA	225A
WKZA	LAKEWOOD	NY	295B1
WRKT	NORTH EAST	PA	285B1
WXTA	EDINBORO	PA	250B1
WMIH	GENEVA	OH	208B1
WCOT	JAMESTOWN	NY	215B
WGY	MEADVILLE	PA	262B
WWSE	JAMESTOWN	NY	227B
WXKC	ERIE	PA	260B
WRRN	WARREN	PA	222B
WQLN-FM	ERIE	PA	217B
WREO-FM	ASHTABULA	OH	246B
WRTS	ERIE	PA	279B
WNJA	JAMESTOWN	NY	209B
WCGF	CAMBRIDGE SPRINGS	PA	210B

**AM CONTOURS**

<u>Call Sign</u>	<u>Community of License</u>	<u>State</u>	<u>Frequency (kHz)</u>
WFNN	ERIE	PA	1330
WPSE	ERIE	PA	1450
WRIE	ERIE	PA	1260
WJET	ERIE	PA	1400

Figure 8



## OTHER FM AND AM PROTECTED SERVICES AVAILABLE TO MINA, NEW YORK

NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 KW (DA) 200 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



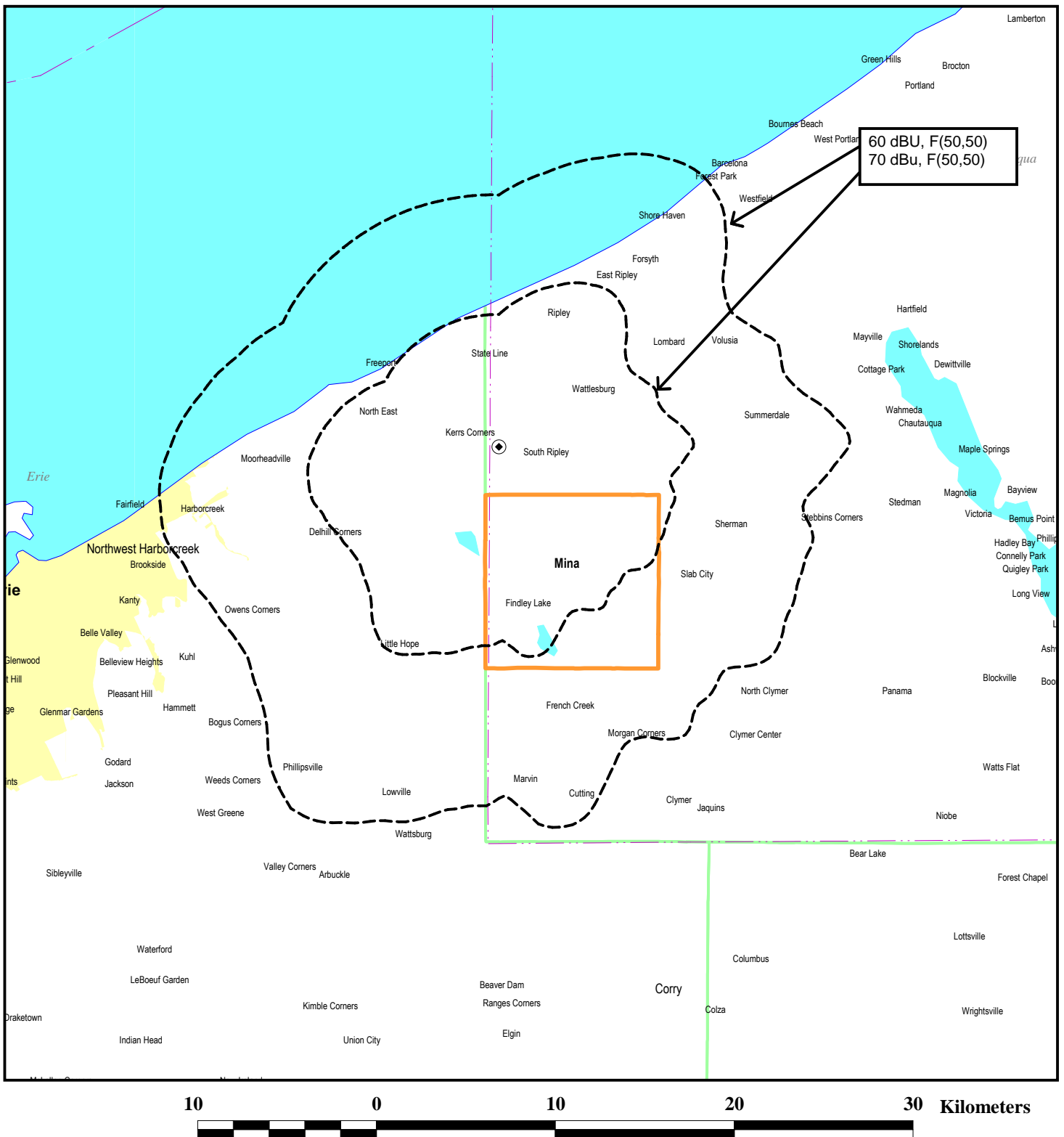
TECHNICAL EXHIBIT  
NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 KW (DA) 200 M

Tabulation of Other AM/FM Protected Services  
Available to Mina, New York

**FM CONTOURS**

<b><u>Call Sign</u></b>	<b><u>Community of License</u></b>	<b><u>State</u></b>	<b><u>Channel</u></b>
WCGM	WATTSBURG	PA	274A
WRTS	ERIE	PA	279B
WXKC	ERIE	PA	260B
WQLN-FM	ERIE	PA	217B
WWSE	JAMESTOWN	NY	227B

Figure 10

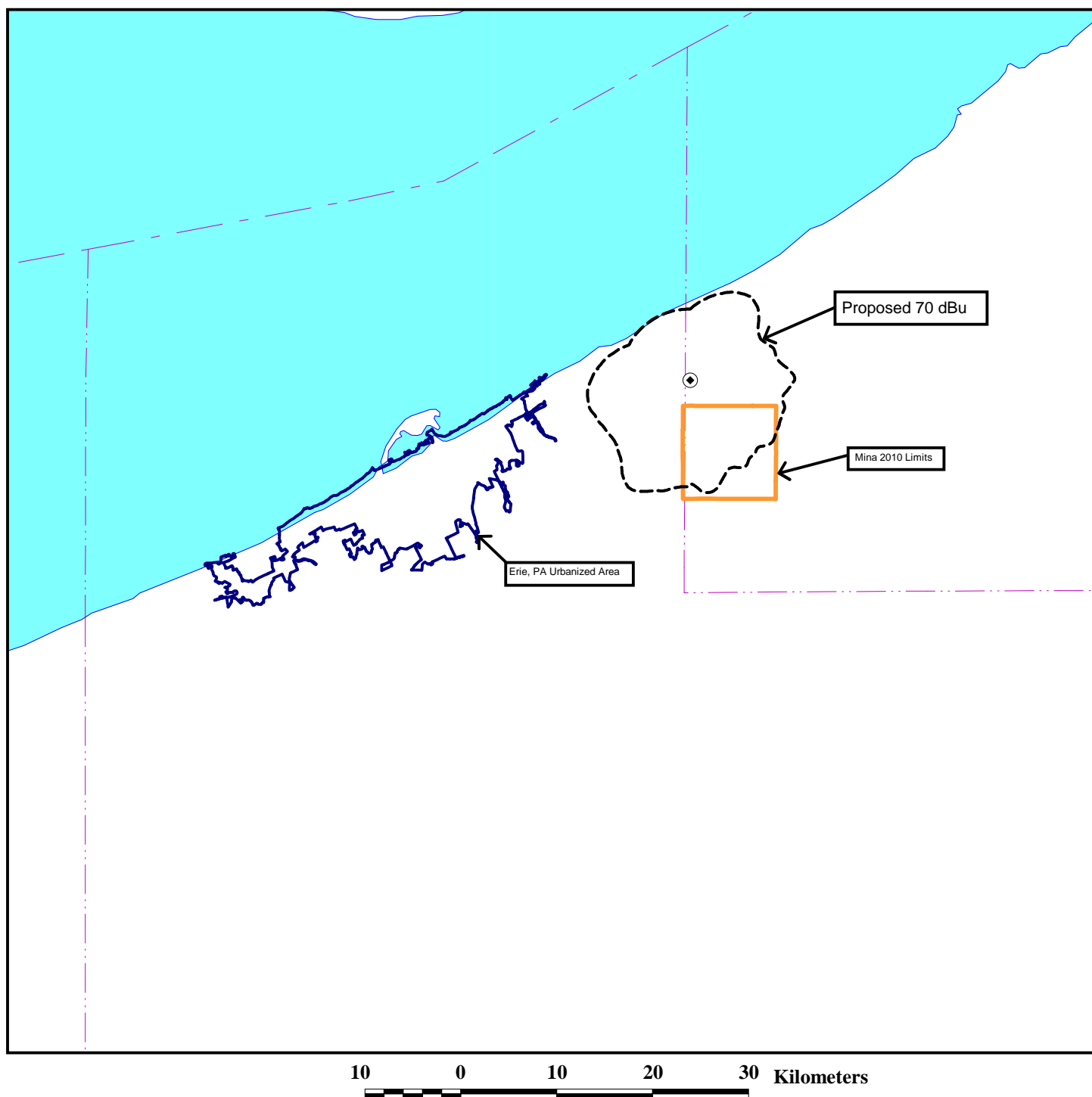


## FCC PREDICTED COVERAGE CONTOURS

NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 KW (DA) 200 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 11



## **URBANIZED AREA COVERAGE**

NEW FM STATION  
MINA, NEW YORK  
CH 240A 1.55 KW (DA) 200 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida