

TECHNICAL EXHIBIT
APPLICATION FOR
MODIFICATION OF CONSTRUCTION PERMIT
(FCC FILE NO. BPTTL-20001215ABY)
CLASS A STATION WOGC-CA
FACILITY ID 17203
HOLLAND, MICHIGAN
CH 25 30 KW (MAX-DA)

Technical Narrative

The technical exhibit of which this narrative is part was prepared in support of an application to modify the construction permit of Class A station WOGC-CA at Grand Rapids, Michigan (Facility ID: 17203; File No. BPTTL-20001215ABY). Specifically, this modification application proposes to change transmitter site, change city of license from Grand Rapids to Holland, Michigan, decrease the antenna radiation center height above mean sea level (RCAMSL) from 337 meters to 314 meters, increase the effective radiated power (ERP) from 24.6 kW to 30 kW and change the directional antenna system orientation. No other changes are proposed. Furthermore, the proposed 74 dBu contour will encompass a portion of the authorized 74 dBu contour and, therefore, this application is considered a "minor change" in facilities pursuant to Section 73.3572.

The proposal would not be subject to environmental processing in accordance with Section 1.1306. It is proposed to side-mount the directional antenna on an existing 122 meter supporting structure. The tower registration number is 1060573. It is believed that the instant application conforms with all other applicable rules and regulations of the Federal Communications Commission.

Minor Change Application

Figure 1 depicts the licensed, authorized and herein proposed 74 dBu contours for WOGC-CA. As indicated, the proposed 74 dBu contour encompasses portions of the licensed and authorized 74 dBu contours. Therefore, the

proposed modification is considered a "minor" change in facilities pursuant to Section 73.3572.

Response to Paragraph 11 - TV Broadcast Analog Protection

A study has been conducted using the provisions of Section 74.705 which indicates that the WOGC-CA proposal will not create prohibited interference to other existing, authorized or proposed NTSC full-power stations.

Response to Paragraph 11 - DTV Station Protection

Calculations based on OET Bulletin No. 69 indicate that the proposed WOGC-CA operation on channel 25 complies with the FCC's 0.5% "rounding allowance" criteria to all allotted, proposed or actual DTV operating facilities on channels 24, 25 and 26. Figure 2 provides the output of study based on OET-69 Bulletin.

Response to Paragraph 11 - LPTV/TV Translator, Class A and Digital Class A Protection

A study has been conducted which indicates that the WOGC-CA proposal will not create prohibited interference to other existing, authorized or proposed LPTV, TV Translator, Class A and Digital Class A stations.

Response to Paragraph 11 - Land Mobile Station Protection

The proposed WOGC-CA operation does not cause interference to land mobile radio stations (LMRS).

Canadian Coordination

As shown on Figure 3, the proposed 19 dBu, F(50,10), interfering contour will not extend into Canada. Therefore, it is believed that the proposal can be authorized without referral or notification to Canada.

Environmental Considerations

The proposed WOGC-CA facilities were evaluated in terms of potential radiofrequency radiation exposure at ground level in accordance with OST Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radiofrequency Radiation". The calculated power density at the base of the tower was calculated using the appropriate equation on Page 13 of the Bulletin. Using a greater than expected vertical relative field value of 0.25 towards the tower base (-60° to -90° elevation, see Figure 4), a maximum visual effective radiated power of 30 kilowatts and 10 percent aural power, the calculated power density at 2 meters above ground level at the base of the tower is 0.0024 milliwatt per square centimeter (mW/cm^2), or less than 5 percent of the Commission's recommended limit applicable to general population/uncontrolled exposure areas ($0.36 \text{ mW}/\text{cm}^2$ for TV channel 25). Therefore, based on the responsibility threshold of 5%, the proposal will comply with the new 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, an agreement will be in effect in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure 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.

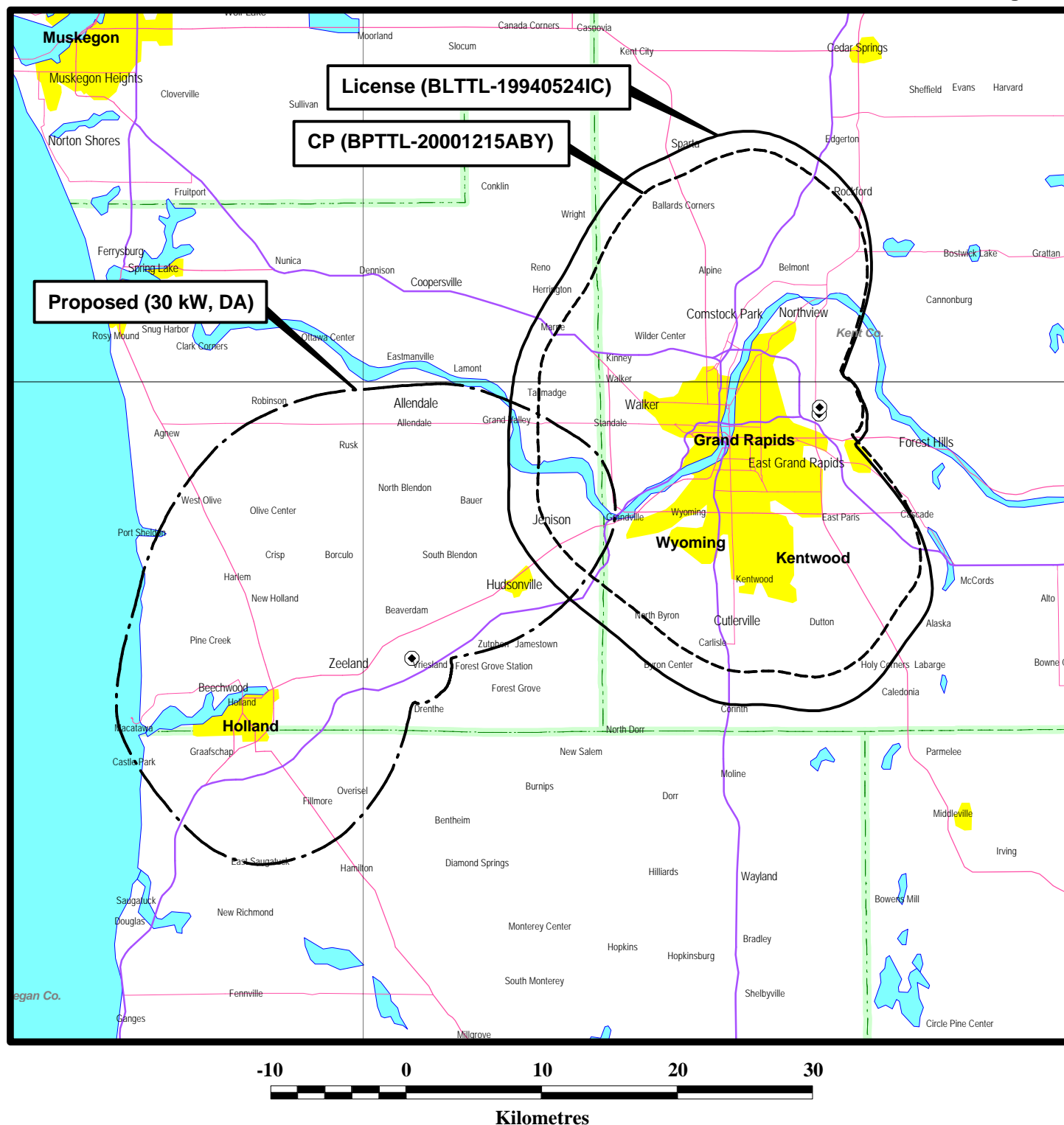
In addition, it appears that the tower is otherwise excluded from environmental processing as it complies with all the criteria for such an exclusion in Section 1.1306.

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March 11, 2002

Figure 1



Predicted 74 dBu Coverage Contours

Class A Station WOGC-CA
Holland, MI
Ch 25 30 kW (MAX-DA)

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

OET-69 DTV INTERFERENCE CAUSED STUDY

CELL SIZE : 2.00
Using offset in determining thresholds
Per 6th Report & Order and FCC OET-69 Bulletin

DWTLJ 42-57-25 085-54-07 24(0) 80.000 kw 500 m DA 90.0 % 39.7 dBu
MUSKEGON MI 13717 1048 DTVSERVICE: 1048000 NTSCSERVICE: 1042000
DTVALT DTV ALLOTMENT

0.49	0.27	0.18	0.17	0.18	0.26	0.49	0.76	0.94	0.98	0.93	0.81
0.63	0.41	0.22	0.14	0.11	0.11	0.14	0.15	0.17	0.18	0.17	0.15
0.14	0.11	0.11	0.15	0.24	0.44	0.64	0.82	0.94	1.00	0.94	0.75

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	13797.55	1051148
not affected by terrain losses	13769.33	1050033

WOGC-P 42-48-59 085-57-20 25(+) 30.000 kw 314 m DA 10.0 % 72.8
GRAND RAPIDS MI

1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97	0.90	0.76	0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91	0.92	0.95	0.98

Ref Az: 315.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

	Area	Pop
Interference	0	0

WTLJ 42-57-25 085-54-07 24(N) 280.000 kw 487 m DA 90.0 % 39.7 dBu
MUSKEGON MI 13717 1048 DTVSERVICE: 1048000 NTSCSERVICE: 1042000
APP BPCDT19990803LG

1.00	0.98	0.94	0.87	0.79	0.71	0.63	0.57	0.54	0.52	0.54	0.57
0.63	0.71	0.79	0.87	0.94	0.98	1.00	0.98	0.94	0.87	0.79	0.71
0.63	0.57	0.54	0.52	0.54	0.57	0.63	0.71	0.79	0.87	0.94	0.98

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	20731.41	1326488
not affected by terrain losses	20711.23	1325898

WOGC-P 42-48-59 085-57-20 25(+) 30.000 kw 314 m DA 10.0 % 72.8
GRAND RAPIDS MI

1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97	0.90	0.76	0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91	0.92	0.95	0.98

Ref Az: 315.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

Interference	Area	Pop
	0	0

WPTA 41-06-07 085-11-04 24(N) 489.000 kw 470.9 m 90.0 % 39.7 dBu
FORT WAYNE IN 12253 651 DTVSERVICE: 651000 NTSCSERVICE: 603000
APP BPCDT19991027ACJ

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	21453.56	1011845
not affected by terrain losses	21453.56	1011845

WOGC-P 42-48-59 085-57-20 25(+) 30.000 kw 314 m DA 10.0 % 72.8
GRAND RAPIDS MI
1.00 0.98 0.95 0.92 0.91 0.95 0.99 1.00 0.97 0.90 0.76 0.59
0.30 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03
0.30 0.59 0.76 0.90 0.97 1.00 0.99 0.95 0.91 0.92 0.95 0.98

Ref Az: 315.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

Interference	Area	Pop
	0	0

DWPTA 41-06-08 085-11-04 24(0) 50.000 kw 475 m DA 90.0 % 39.7 dBu
FORT WAYNE IN 12253 651 DTVSERVICE: 651000 NTSCSERVICE: 603000
DTVALT DTV ALLOTMENT

0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

USING NTSC GRADE B FOR SERVICE AREA

	Area	Pop
within Noise Limited Contour	12340.83	652076
not affected by terrain losses	12340.83	652076

WOGC-P 42-48-59 085-57-20 25(+) 30.000 kw 314 m DA 10.0 % 72.8
GRAND RAPIDS MI
1.00 0.98 0.95 0.92 0.91 0.95 0.99 1.00 0.97 0.90 0.76 0.59
0.30 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03
0.30 0.59 0.76 0.90 0.97 1.00 0.99 0.95 0.91 0.92 0.95 0.98

Ref Az: 315.0

Using DEFAULT vertical antenna pattern

D/U Baseline: -49.00

Interference	Area	Pop
	0	0

DWCGVT 43-05-15 087-54-13 25(0) 111.200 kw 522 m DA 90.0 % 39.8 dBu
MILWAUKEE WI 17125 2087 DTVSERVICE: 2087000 NTSCSERVICE: 2071000

DTVALT DTV ALLOTMENT

0.58	0.46	0.31	0.20	0.11	0.11	0.14	0.24	0.26	0.22	0.12	0.11
0.12	0.19	0.32	0.46	0.59	0.67	0.75	0.84	0.92	0.97	1.00	1.00
0.96	0.90	0.87	0.91	0.95	1.00	1.00	0.97	0.92	0.82	0.75	0.68

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	17245.27	2100741
not affected by terrain losses	17217.07	2100343

WOGC-P 42-48-59 085-57-20 25(+) 30.000 kw 314 m DA 10.0 % 72.8

GRAND RAPIDS

1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97	0.90	0.76	0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91	0.92	0.95	0.98

Ref Az: 315.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	20.14	1726(0.1%)

WCGV-T 43-05-44 087-54-17 25(N) 625.000 kw 537.4 m DA 90.0 % 39.8 dBu

MILWAUKEE WI 17125 2087 DTVSERVICE: 2087000 NTSCSERVICE: 2071000

CP MOD BMPCDT20010920AAK

0.98	0.93	0.84	0.69	0.50	0.29	0.18	0.31	0.45	0.50	0.45	0.31
0.18	0.29	0.50	0.69	0.84	0.93	0.98	0.99	0.96	0.91	0.85	0.83
0.86	0.92	0.98	1.00	0.98	0.92	0.86	0.83	0.85	0.91	0.96	0.99

(59.0 0.18)(121.0 0.18)(269.0 1.00)(271.0 1.00)

Ref Az: 0.0

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	26952.53	2622641
not affected by terrain losses	26835.75	2616702

WOGC-P 42-48-59 085-57-20 25(+) 30.000 kw 314 m DA 10.0 % 72.8

GRAND RAPIDS

1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97	0.90	0.76	0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91	0.92	0.95	0.98

Ref Az: 315.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	44.30	1785(0.1%)

DWRTV 39-53-59 086-12-02 25(0) 1000.000 kw 551 m DA 90.0 % 39.8 dBu

INDIANAPOLIS IN 31298 2348 DTVSERVICE: 2348000 NTSCSERVICE: 2226000

DTVALT DTV ALLOTMENT

1.00	0.99	0.98	0.98	0.97	0.96	0.96	0.95	0.95	0.95	0.95	0.94
0.94	0.94	0.94	0.93	0.93	0.92	0.92	0.93	0.93	0.94	0.95	0.96
0.96	0.97	0.98	0.99	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00

Ref Az: 0.0

Using DEFAULT vertical antenna pattern
USING NTSC GRADE B FOR SERVICE AREA

	Area	Pop
within Noise Limited Contour	33434.47	2426786
not affected by terrain losses	32859.32	2393191

WOGC-P	42-48-59	085-57-20	25(+)	30.000 kw	314	m DA	10.0 %	72.8
GRAND RAPIDS	MI							
1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97 0.90 0.76 0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03 0.03 0.03 0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91 0.92 0.95 0.98

Ref Az: 315.0

Using DEFAULT vertical antenna pattern

D/U Baseline: 2.00

	Area	Pop
Interference	0	0

WRTV 39-53-58 086-12-02 25(N) 898.000 kw 549 m 90.0 % 39.8 dBu
INDIANAPOLIS IN 31298 2348 DTVSERVICE: 2348000 NTSCSERVICE: 2226000
LIC BLCDT19990914AAH

Using DEFAULT vertical antenna pattern

	Area	Pop
within Noise Limited Contour	29855.47	2330663
not affected by terrain losses	29543.90	2317048

WOGC-P	42-48-59	085-57-20	25(+)	30.000 kw	314	m DA	10.0 %	72.8
GRAND RAPIDS	MI							
1.00	0.98	0.95	0.92	0.91	0.95	0.99	1.00	0.97 0.90 0.76 0.59
0.30	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03 0.03 0.03 0.03
0.30	0.59	0.76	0.90	0.97	1.00	0.99	0.95	0.91 0.92 0.95 0.98

Ref Az: 315.0

Using DEFAULT vertical antenna pattern

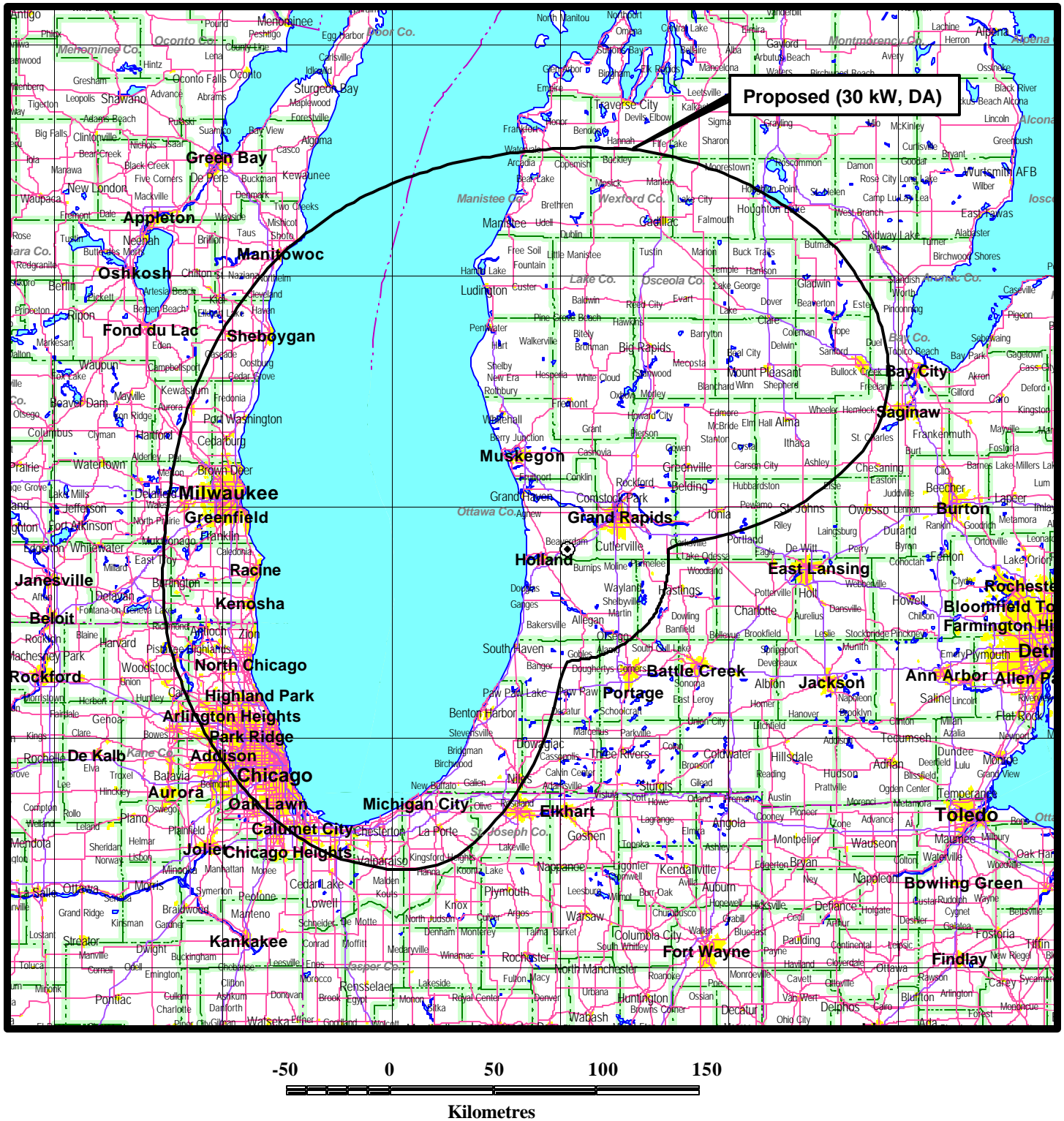
D/U Baseline: 2.00

	Area	Pop
Interference	0	0

Summary of Calculations

Facility	Channel	Type	Baseline	Permissible	IX	%Base
DWTLJ, MUSKEGON, MI	24	DTV	1048000	0.5	0	0.00
WTLJ, MUSKEGON, MI	24	DTV	1048000	0.5	0	0.00
WPTA, FORT WAYNE, IN	24	DTV	651000	0.5	0	0.00
DWPTA, FORT WAYNE, IN	24	DTV	651000	0.5	0	0.00
DWCGVT, MILWAUKEE, WI	25	DTV	2087000	0.5	1726	0.10
WCGV-T, MILWAUKEE, WI	25	DTV	2087000	0.5	1785	0.10
DWRTV, INDIANAPOLIS, IN	25	DTV	2348000	0.5	0	0.00
WRTV, INDIANAPOLIS, IN	25	DTV	2348000	0.5	0	0.00

Figure 3



Predicted 19 dBu, F(50,10) Interfering Contour

**Class A Station WOGC-CA
Holland, MI
Ch 25 30 kW (MAX-DA)**

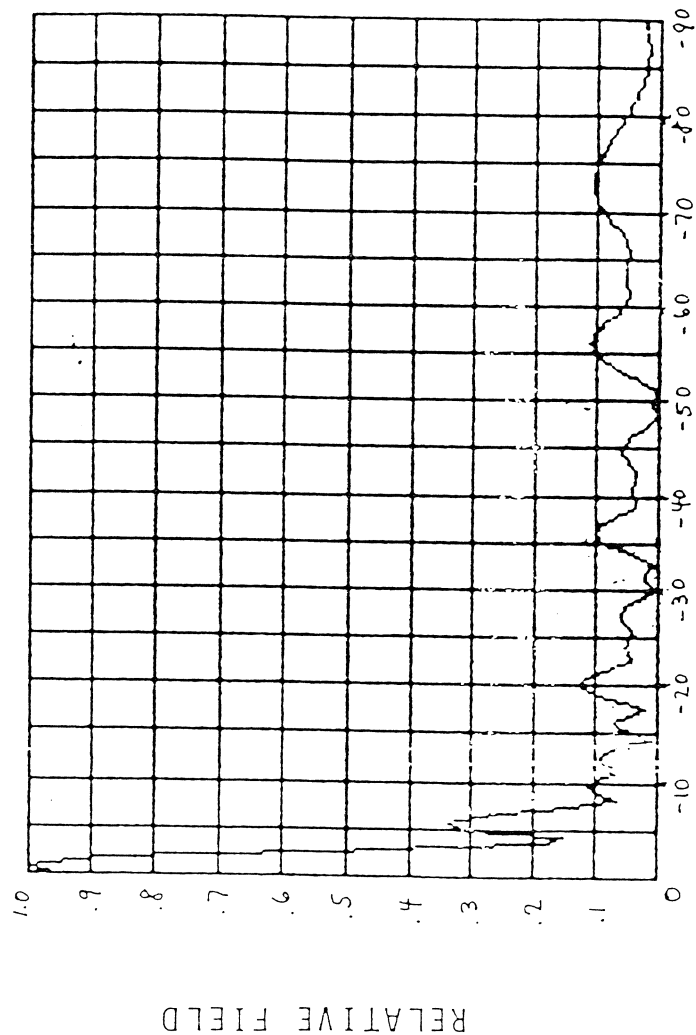
du Treil, Lundin & Rackley, Inc. Sarasota, Florida

BOGNER BROADCAST EQUIPMENT CORP.

603 Central Avenue, Rock Road
WESTBURY, NEW YORK 11590

BOGNER VERTICAL PLANE RADIATION PATTERN B16U()

LOW & MEDIUM POWER



DEGREES BELOW HORIZONTAL

Figure 4