Comprehensive Technical Exhibit

Application for Construction Permit

WPBN-DT – Traverse City, Michigan

Barrington Traverse City License LLC

March, 2008

General

The following engineering statement and attached exhibits have been prepared for **Barrington Traverse City License LLC**, licensee of digital television station WPBN-DT (Facility ID: 21253) at Traverse City, Michigan, and are in support of their application for construction permit for WPBN-DT post transition facilities.

WPBN-TV currently operates on channel 7 as an NTSC facility with pre-transition DTV operations on channel 50 from a separate site. In the post-transition environment, WPBN-DT will operate on channel 7 pursuant to the Commission's Revised DTV Table of Allotments contained in Appendix B of the *Memorandum Opinion and Order on Reconsideration of the Seventh Report and Order and Eighth Report and Order*.

Discussion of WPBN-DT Allotment

The original post-transition allotment for WPBN-DT specified channel 7 with a maximum effective radiated power 3.2 kW at a center of radiation of 320 meters above average terrain. This allocation also specified the use of Antenna ID 75044, and was assumed to be utilized from the WPBN-DT pre-transition transmitter site located at geographic coordinates of 44-46-36 North Latitude and 85-41-02 West Longitude.

Following the assignment of this allotment, Barrington petitioned the Commission for reconsideration requesting a change in the effective radiated power, allocation location, and deletion of the Antenna ID. A requested change in the allotment was proposed to serve the public interest by not only permitting WPBN-DT to utilize its existing NTSC facility in the post-transition environment, but more importantly to more closely replicate current analog coverage.

The Commission notes in paragraph 51 of the *Memorandum Opinion and Order on Reconsideration of the Seventh Report and Order and Eighth Report and Order* that the revised allocation parameters for WPBN-DT would not result in new interference to any station. The revised allocation parameters indeed specify the geographic coordinates of the current WPBN-TV transmitter and center of radiation currently utilized by that facility.[1] In the revised allotment, however, the Commission continued to list an Antenna ID indicating a directional antenna.[2]

As discussed in the petition for reconsideration, the current WPBN-TV antenna is a non-directional antenna. The continued assignment of an Antenna ID for WPBN-DT in the post-transition environment is, however, not problematic as the assigned pattern was apparently calculated by the Staff to replicate the current WPBN-TV Grade B coverage and is nearly omni-directional in nature. The facilities proposed in this application will, however, specify a non-directional antenna utilizing a slightly reduced effective radiated power in order to maintain the resulting noise-limited service contour within that authorized under the revised WPBN-DT allotment.

Antenna ID 84826 specifies a minimum relative field of 0.898 across an arc from 80 degrees True to 120 degrees True. This relative field value results in a relative power value of 0.8064, which when applied to the allocation maximum effective radiated power of 19.1 kW results in a minimum effective radiated power of 15.4 kW for the allocation parameters. The facility described in this application will therefore specify an effective radiated power of 15.4 kW at the assigned center of radiation of 411 meters above average terrain.

[1] Geographic coordinates of 44-16-33 North Latitude and 85-42-49 West Longitude are specified, which are consistent with the NAD83 coordinates assigned to ASRN 1031841 of 44-16-33.2 North Latitude and 85-42-48.7 West Longitude.
[2] The assigned Antenna ID for WPBN-DT in the post-transition environment is 84826.

This insignificant reduction in the effective radiated power in certain directions will not result in allocation issues for the proposed facility. Rather, the reduction in effective radiated power will result in a predicted noise-limited service contour that very nearly replicates not only the authorized Grade B service contour, but also the allotted noise-limited service contour. Exhibit E-1 is a contour map which illustrates the Grade B service contour for WPBN-TV, the revised allocation noise limited service contour for WPBN-DT, and the proposed noise limited service contour for WPBN-DT. It should be noted that although not visually identifiable, all three contours are plotted on this map. The apparent lack of the WPBN-TV Grade B service contour on the Exhibit E-1 is the result of its near congruence with the allocation noise limited service contour.

As this map demonstrates, the insignificant reduction in the maximum effective radiated power will similarly result in an insignificant reduction in the service area and population. Exhibit E-2 is a tabulation of the distance to each of these three contours at ten degree increments of azimuth. This tabulation demonstrates that the proposed noise limited contour would result in a reduction in coverage of no more than 1.9 kilometers at any azimuth. The allocation noise-limited service contour has an area of 34,852 square kilometers and a resident population by the 2000 US Census of 499,375 persons. Using these values as a baseline, the proposed DTV noise limited service contour represents an insignificant reduction in area served of 1.7 percent at 34,235 square kilometers. In terms of population served, the reduction would be 1.8 percent at 490,314 persons.

The minimal reduction in the proposed noise limited service contour of WPBN-DT will also reduce the interference caused to other stations. An opposition to the previously referenced petition for reconsideration was filed by WOOD License Company, LLC, licensee of WOOD-DT at

Grand Rapids, Michigan. Although the proposed reduction in the service area of WPBN-DT would certainly reduce predicted interference to WOOD-DT, specific studies relative to this station have been included in this application, although logically such studies are in reality not necessary. Interference studies pertinent to other facilities are omitted.

With regard to WOOD-DT, three separate interference studies have been performed and included in this application. These studies address each of the specific conditions relative to the interference that is or would be caused to WOOD-DT. The first of these studies, which is contained in Exhibit E-3, depicts and tabulates the predicted interference from the current WPBN-TV analog facility. This exhibit demonstrates that at present, WOOD-DT is predicted to receive interference over 3941.5 square kilometers of its service area representing 61,786 housing units and 144,751 persons by the 2000 Census or 6.0 percent of the total population.

Under the revised technical parameters for WPBN-DT in Appendix B, the interference to WOOD-DT would be reduced to an area of 1648.5 square kilometers, which is a reduction of 58.2 percent. In terms of housing units the reduction is 63.5 percent to 22,579 units. Finally, the interference population is lowered to 52,243 persons which is a reduction of 63.9 percent. Exhibit E-4 depicts and tabulates the areas of interference resulting from the revised Appendix B allocation parameters for WPBN-DT.

The proposed facility would reduce the interference to WOOD-DT even further. This *additional* reduction is the result of a lower effective radiated power in the direction of WOOD-DT. Specifically the proposed facility would decrease the interference area to 1586.1 square kilometers, which is a reduction of 59.8 percent relative to the current area of interference caused by the analog WPBN-TV facility. The number of housing units predicted to receive interference

would shrink to 21,644, which is a reduction of 65.0 percent. Finally, the population predicted to receive interference would drop to 50,037 persons reducing the interference population by 65.4 percent. The predicted interference from the proposed WPBN-DT facility to WOOD-DT is depicted and tabulated in Exhibit E-5.

It should be noted that the population numbers presented in this application are slightly in variance from those presented in Barrington's response to the WOOD opposition. These variances are the result of the most current studies being performed at a finer resolution than those submitted in December 2007 as part of the Barrington response. Specifically, population and area figures presented at that time were based on a signal resolution of 1.0 km. The studies contained in this application were performed with a signal resolution of 0.5 km.

DTV Checklist – FCC Form 301 Section III-D

The appropriate items on Section III-D of FCC Form 301 have been answered. This application is for the post-transition facilities for WPBN-DT. As a result, items 1(a), 1(d), 1(e), and 2-5 have been answered per the instructions. This section of the comprehensive technical exhibit will, however, provide additional information relative to these responses.

The proposed DTV facilities described in this application will operate on the DTV channel established for the station. Specifically, the proposed facilities would utilize channel 7 in the post-transition environment. A response of "yes" has therefore been provided for this item.

Under item 1(d), a response of "yes" has been provided. As previously discussed, the proposed facility insignificantly reduces the size of the noise limited service contour from the established value indicated in Appendix B. This reduction in the service contour is the result of a

reduction in the effective radiated power from 19.1 kW to 15.4 kW in order to utilize the existing analog antenna system. All other allocation parameters are identical to those proposed in this application.

Item 1(e) has been answered as "yes" since the proposed facility would reduce the population within the noise limited service contour by less than five percent. As previously discussed, the reduction in the population within the noise limited service contour is 1.8 percent of the population within the allocated contour.

The proposed facility will not have a significant environmental impact. The facility, as a result, will not fall under Section 1.1307 of the Commission's Rules. More detailed information concerning this response will be contained in section of this technical exhibit pertinent to the Tech Box portion of FCC Form 301.

The proposed facility will also comply with the provisions of Section 73.625 of the Commission's Rules. Additional information concerning this response will be provided in the subsequent Tech Box section of this exhibit. The proposed facility will utilize a non-directional antenna.

The requirements of Section 73.1030 of the Commission's Rules are applicable in this particular case, however, the applicant would be in compliance with this section of the Rules. The proposed facility would not operate in any of the zones described in Section 73.1030, however, it would be located in the vicinity of the Allegan, Michigan FCC monitoring facility. Utilizing the Commission's distance calculation methodology, the proposed facility would be located at a distance of 186.60 kilometers (115.95 miles) at an azimuth of 5.9 degrees true from this protected

facility. Since the proposed facility would operate with an average effective radiated power of 15.4 kW at a distance in excess of 80 kilometers from this protected facility, it is believed that no further notification is required to be made concerning this facility based on Section 73.1030(c)(3)(iv) of the Commission's Rules.

The structure utilized for the facilities described in this application has been registered with the Commission. Specifically an Antenna Structure Registration Number of 1031841 has been assigned to the tower. The proposed facility would not require any modifications to the structure resulting in a necessary change to the current ASR data.

Tech Box – FCC Form 301 Section III-D

This section of the technical exhibit contains additional information relative to the responses required on the Tech Box section of FCC Form 301. Responses to items numbered 1 through 9 in this section have been answered in the appropriate blanks on the form page.

As previously mentioned, the proposed facility would utilize the antenna currently in operation for the WPBN-TV NTSC facilities. This antenna is an RCA model TW-18A7 traveling wave antenna. This is a non-directional antenna that utilizes 0.7 degrees of electrical beam tilt and has no mechanical beam tilt. Items described under Section 73.625(c)(3) of the Commission's Rules have been omitted from this application since the proposed antenna is a non-directional antenna.

The tower utilized by the proposed DTV facility in the post-transition environment will also be utilized by WIAA(FM) and WOLW(FM).[3] No AM facilities are located in proximity to the tower, and the tower utilized by WPBN-DT would not be part of an AM radiation system. The proposed facility would therefore comply with Section 73.625(c) of the Commission's Rules as it would not be part of an AM radiation system.

As indicated on the form pages and as previously demonstrated in Exhibits E-3 through E-5, the proposed facility would satisfy the post-transition interference protection provisions of Section 73.616 of the Commission's Rules. The interference provisions would be satisfied since the proposed facility would reduce the noise limited service contour relative to the allocation as was discussed in these exhibits. Since no increase in the predicted interference to other facilities would result, detailed interference studies to facilities other than WOOD-DT have been omitted from this application.

The proposed WPBN-DT facilities would satisfy the principal community coverage requirements of Section 73.625 of the Commission's Rules. Exhibit E-6 is a map illustrating the predicted coverage of the proposed facility. As this map demonstrates, the entire community of license, Traverse City, Michigan, would be served with a signal level of greater than 43 dBu. For reference purposes, the 36 dBu service contour has also been included on this map.

The proposed WPBN-DT facility would not constitute a substantial environmental impact as previously discussed. The absence of a significant environmental impact by the proposed facility

[3] WIAA(FM) is licensed to Interlachen, MI (Facility ID: 28887) and WOLW(FM) is licensed to Cadillac, MI (Facility ID: 49537)

is based on two considerations. The first of these considerations is the fact that the proposed facility would utilize the existing WPBN-TV transmission facility. Since no new excavation or construction would result, no additional environmental impact to the area would ensue.

Secondly, the proposed facility would not constitute an RF exposure hazard to persons at the site. In addition to the final WPBN-DT facilities, the tower would also support the transmitting antennas for WIAA(FM) and WOLW(FM).

A value of 0.3 was utilized for the relative field for radiation emanating from each antenna. This value along with other relevant parameters was utilized in the calculations of the predicted power density at ground level pursuant to the equations contained in OET Bulletin 65. The predicted power density for WPBN-DT is determined by the following equation:

$$S = \frac{33.4(E_{Rel})^2 (ERP)}{h^2}$$

For WIAA(FM) and WOLW(FM) the predicted power density at ground level is given by the following equation:

$$S = \frac{33.4(E_{Rel})^2 (ERP_H + ERP_V)}{h^2}$$

The relative field component for all facilities in these three equations is assumed to have 0.3 as a value. The effective radiated power is simply the maximum effective radiated power of the facilities in Watts for WPBN-DT. For WIAA(FM) and WOLW(FM), which operate with circular polarization, the ERP is the sum of the horizontally and vertically polarized components, or twice the authorized effective radiated power. The denominator term in all cases is the height of the

center of radiation minus 2 meters to accommodate the average human height. The contribution from each of the facilities is tabulated as follows:

Callsign	Channel	Relative Field	ERP (kW)	COR AGL (m)	Power Density μw/cm^2
WPBN-DT	7	0.30	15.4	322	0.452
WIAA(FM)	204 (88.1)	0.30	100	225	12.090
WOLW(FM)	216 (91.1)	0.30	50	142	15.337
				Sum of Contributors:	27.88

As this table indicates, the sum of all contributors on the tower is 27.88 $\mu W/cm^2$. Under the applicable safety standard, the most stringent requirement is imposed on frequencies in the range of the two FM stations. In that range, the uncontrolled environment limits the power density to 200 $\mu W/cm^2$ for compliance. Since the predicted worst case power density is considerably less than this value, it is apparent that the proposed facility would not constitute an RF exposure hazard.[4]

In order to protect workers having access to the site from being exposed to levels of non-ionizing radiation which may exceed the applicable safety standards, the applicant certifies that it will coordinate with other present and future users of the site. Such coordination will include, but is not necessarily limited to, a reduction in transmitter power or cessation of operation.

[4] The contribution from WPBN-TV (analog facility) has been ignored in this post-transition study as this facility will not exist in the post-transition environment.

Affidavit

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.

Above signature is digitized copy of actual signature
License Expires November 30, 2009

Jeremy D. Ruck, PE
March 18, 2008

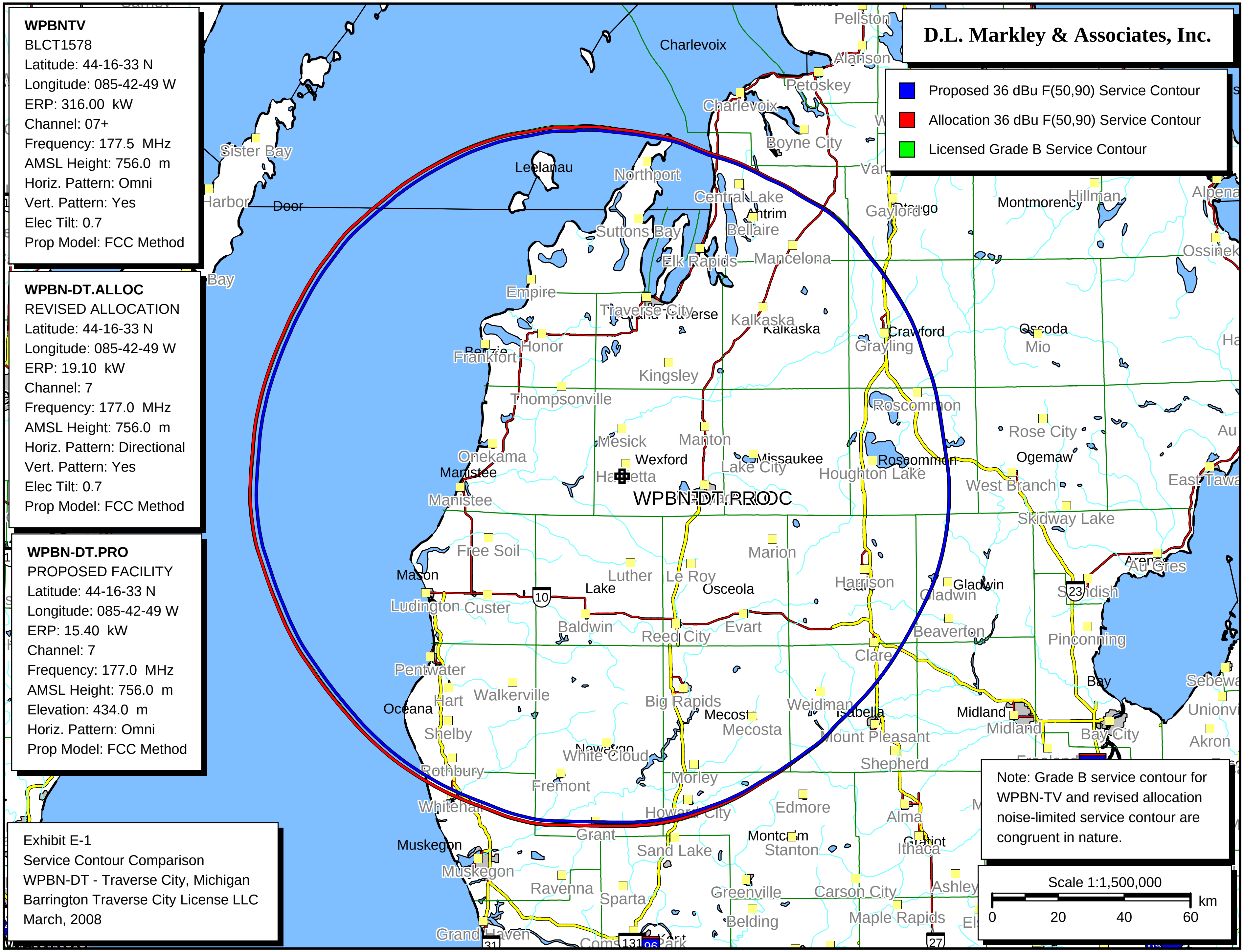

WPBNTV
BLCT1578
Latitude: 44-16-33 N
Longitude: 085-42-49 W
ERP: 316.00 kW
Channel: 07+
Frequency: 177.5 MHz
AMSL Height: 756.0 m
Horiz. Pattern: Omni
Vert. Pattern: Yes
Elec Tilt: 0.7
Prop Model: FCC Method
WPBN-DT.ALLOC
REVISED ALLOCATION
Latitude: 44-16-33 N
Longitude: 085-42-49 W
ERP: 19.10 kW
Channel: 7
Frequency: 177.0 MHz
AMSL Height: 756.0 m
Horiz. Pattern: Directional
Vert. Pattern: Yes
Elec Tilt: 0.7
Prop Model: FCC Method
WPBN-DT.PRO
PROPOSED FACILITY
Latitude: 44-16-33 N
Longitude: 085-42-49 W
ERP: 15.40 kW
Channel: 7
Frequency: 177.0 MHz
AMSL Height: 756.0 m
Elevation: 434.0 m
Horiz. Pattern: Omni
Prop Model: FCC Method
D.L. Markley & Associates, Inc.
Proposed 36 dBu F(50,90) Service Contour
Allocation 36 dBu F(50,90) Service Contour
Licensed Grade B Service Contour
Note: Grade B service contour for WPBN-TV and revised allocation noise-limited service contour are congruent in nature.
Scale 1:1,500,000
0 20 40 60 km
Exhibit E-1
Service Contour Comparison
WPBN-DT - Traverse City, Michigan
Barrington Traverse City License LLC
March, 2008

Exhibit E-2 - Comparison of Proposed,Allocated, and Grade B Service Contours

					Contour Distance Differences			
	HAAT	Contour Distance in kilometers			Proposed to Grade B		Proposed to Allocation	
Azimuth	in meters	Grade B	Allocation	Proposed	kilometers	miles	kilometers	miles
0	408.4	104.7	104.6	103.8	-0.9	-0.56	-0.8	-0.50
10	385.0	102.7	102.8	102.1	-0.6	-0.37	-0.7	-0.43
20	364.8	100.9	101.1	100.6	-0.3	-0.19	-0.5	-0.31
30	632.7	100.7	100.8	100.4	-0.3	-0.19	-0.4	-0.25
40	373.4	101.6	101.4	101.2	-0.4	-0.25	-0.2	-0.12
50	354.9	100.0	100.0	99.8	-0.2	-0.12	-0.2	-0.12
60	348.2	99.4	99.4	99.3	-0.1	-0.06	-0.1	-0.06
70	333.7	98.1	98.2	98.2	0.1	0.06	0.0	0.00
80	329.2	97.7	97.9	97.8	0.1	0.06	-0.1	-0.06
90	340.0	98.7	98.7	98.7	0.0	0.00	0.0	0.00
100	349.4	99.5	99.4	99.4	-0.1	-0.06	0.0	0.00
110	348.7	99.5	99.4	99.4	-0.1	-0.06	0.0	0.00
120	341.4	98.8	98.8	98.8	0.0	0.00	0.0	0.00
130	343.9	99.0	99.0	99	0.0	0.00	0.0	0.00
140	348.9	99.5	99.4	99.4	-0.1	-0.06	0.0	-0.01
150	365.9	101.0	100.9	100.7	-0.3	-0.19	-0.2	-0.12
160	391.2	103.2	103.1	102.5	-0.7	-0.43	-0.6	-0.37
170	414.0	105.2	105.0	104.2	-1.0	-0.62	-0.8	-0.50
180	421.1	105.9	105.8	104.7	-1.2	-0.75	-1.1	-0.68
190	436.2	107.2	107.1	105.9	-1.3	-0.81	-1.2	-0.75
200	452.6	108.7	108.6	107.3	-1.4	-0.87	-1.3	-0.81
210	460.7	109.4	109.4	108	-1.4	-0.87	-1.4	-0.87
220	466.9	110.0	110.0	108.5	-1.5	-0.93	-1.5	-0.93
230	464.6	109.8	110.0	108.3	-1.5	-0.93	-1.7	-1.06
240	472.7	110.5	110.7	108.9	-1.6	-0.99	-1.8	-1.12
250	480.4	111.2	111.3	109.5	-1.7	-1.06	-1.8	-1.12
260	498.5	112.6	112.4	110.6	-2.0	-1.24	-1.8	-1.12
270	491.8	112.1	112.1	110.2	-1.9	-1.18	-1.9	-1.18
280	486.5	111.6	111.8	109.9	-1.7	-1.06	-1.9	-1.18
290	477.8	110.9	111.1	109.3	-1.6	-0.99	-1.8	-1.12
300	476.3	110.8	111.0	109.2	-1.6	-0.99	-1.8	-1.12
310	479.4	111.1	111.1	109.4	-1.7	-1.06	-1.7	-1.06
320	469.2	110.2	110.2	108.7	-1.5	-0.93	-1.5	-0.93
330	464.4	109.8	109.6	108.3	-1.5	-0.93	-1.3	-0.81
340	456.3	109.0	108.8	107.6	-1.4	-0.87	-1.2	-0.73
350	436.7	107.3	107.0	105.9	-1.4	-0.87	-1.1	-0.68

Note: Noise Limited Contour (Proposed and Allocated) is 36 dBu F(50,90),
while Grade B Service Contour is 56 dBu F(50,50).

D.L. Markley & Associates, Inc.
Consulting Engineers
2104 West Moss Avenue
Peoria, Illinois 61604

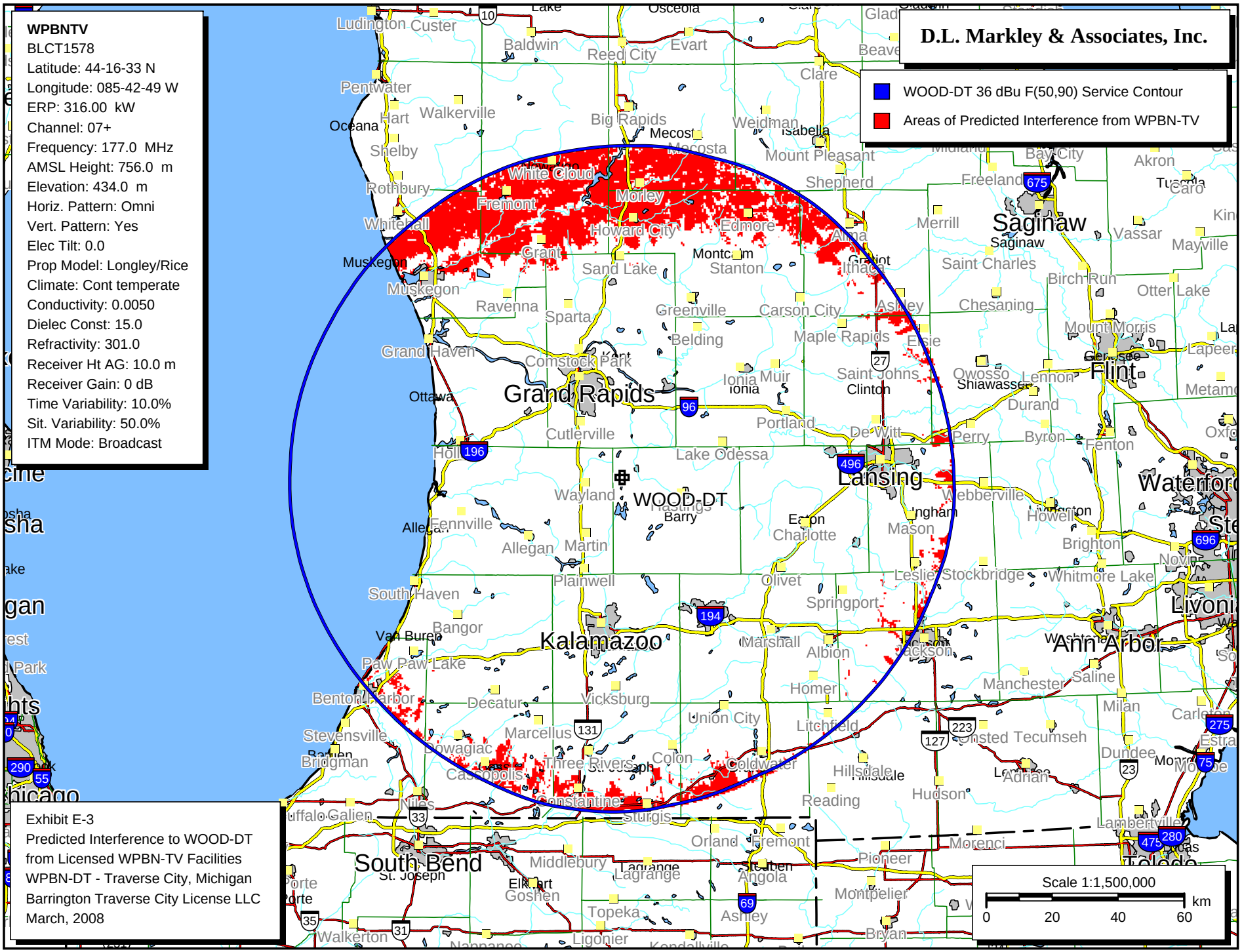

WPBNTV
BLCT1578
Latitude: 44-16-33 N
Longitude: 085-42-49 W
ERP: 316.00 kW
Channel: 07+
Frequency: 177.0 MHz
AMSL Height: 756.0 m
Elevation: 434.0 m
Horiz. Pattern: Omni
Vert. Pattern: Yes
Elec Tilt: 0.0
Prop Model: Longley/Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 301.0
Receiver Ht AG: 10.0 m
Receiver Gain: 0 dB
Time Variability: 10.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast
D.L. Markley & Associates, Inc.
WOOD-DT 36 dBu F(50,90) Service Contour
Areas of Predicted Interference from WPBN-TV
WOOD-DT
Grand Rapids
Kalamazoo
Lansing
Saginaw
Flint
Ann Arbor
South Bend
Toledo
Exhibit E-3
Predicted Interference to WOOD-DT
from Licensed WPBN-TV Facilities
WPBN-DT - Traverse City, Michigan
Barrington Traverse City License LLC
March, 2008
Scale 1:1,500,000
0 20 40 60 km

Exhibit E-3
Outgoing Interference Population Report
Predicted Interference to WOOD-DT from WPBN-TV.

WPBNTV (07+) Traverse City, MI - BLCT1578
Broadcast Type: NTSC Service: V
Lat: 44-16-33 N Lng: 085-42-49 W ERP: 316.0 kW AMSL: 756.0 m
TV Outgoing Interference Study
Signal Resolution: 0.5 km
Consider NTSC Taboo: Yes
KWX error points are considered to
     be interference free coverage.
# of radials computed for contours: 72
Contours calculated using 8 radial HAAT.
LR Profile Spacing Increment: 0.1 km
Masked interference points are being counted
     as interference free.
Pop Centroid DB: 2000 US Census (SF1)

Study Date: 3/18/2008
TV Database Date: 3/18/2008

Primary Terrain: V-Soft 30 Second US Database
Secondary Terrain: V-Soft 3 Second US Terrain

Population Database: 2000 US Census (SF1)

Stations Considered:

Call Letters	City	State	Dist	Bear
WOOD-DT (7)	Grand Rapids	MI	177.3	174.6

Call	Area	HUnits	Contour	Masked Ix	Unmasked Ix	%
WOOD-DT (7)	3941.5	61,786	2,410,967	0	144,751	6.0

	Housing Units	Population
Michigan		
Allegan County		
Total	43,292	105,665
WOOD-DT (7)	0	0
Berrien County		
Total	73,445	162,453
WOOD-DT (7)	3,138	7,253
Branch County		
Total	19,822	45,787
WOOD-DT (7)	1,149	2,885

Cass County		
Total	23,884	51,104
WOOD-DT (7)	3,106	5,479
Clinton County		
Total	24,630	64,753
WOOD-DT (7)	869	2,396
Gratiot County		
Total	15,516	42,285
WOOD-DT (7)	2,010	5,106
Hillsdale County		
Total	20,189	46,527
WOOD-DT (7)	19	46
Ingham County		
Total	115,056	279,320
WOOD-DT (7)	1,406	3,423
Isabella County		
Total	24,528	63,351
WOOD-DT (7)	125	325
Jackson County		
Total	62,906	158,422
WOOD-DT (7)	2,176	5,393
Kent County		
Total	224,000	574,335
WOOD-DT (7)	159	480
Mecosta County		
Total	19,593	40,553
WOOD-DT (7)	2,658	6,081
Montcalm County		
Total	25,900	61,266
WOOD-DT (7)	7,701	18,059
Muskegon County		
Total	68,556	170,200
WOOD-DT (7)	15,792	38,387
Newaygo County		
Total	23,202	47,874
WOOD-DT (7)	14,082	31,913
Oceana County		
Total	15,009	26,873
WOOD-DT (7)	21	69
Ottawa County		
Total	86,856	238,314
WOOD-DT (7)	0	0
Shiawassee County		
Total	29,087	71,687
WOOD-DT (7)	568	1,474
St. Joseph County		
Total	26,503	62,422
WOOD-DT (7)	6,807	15,982

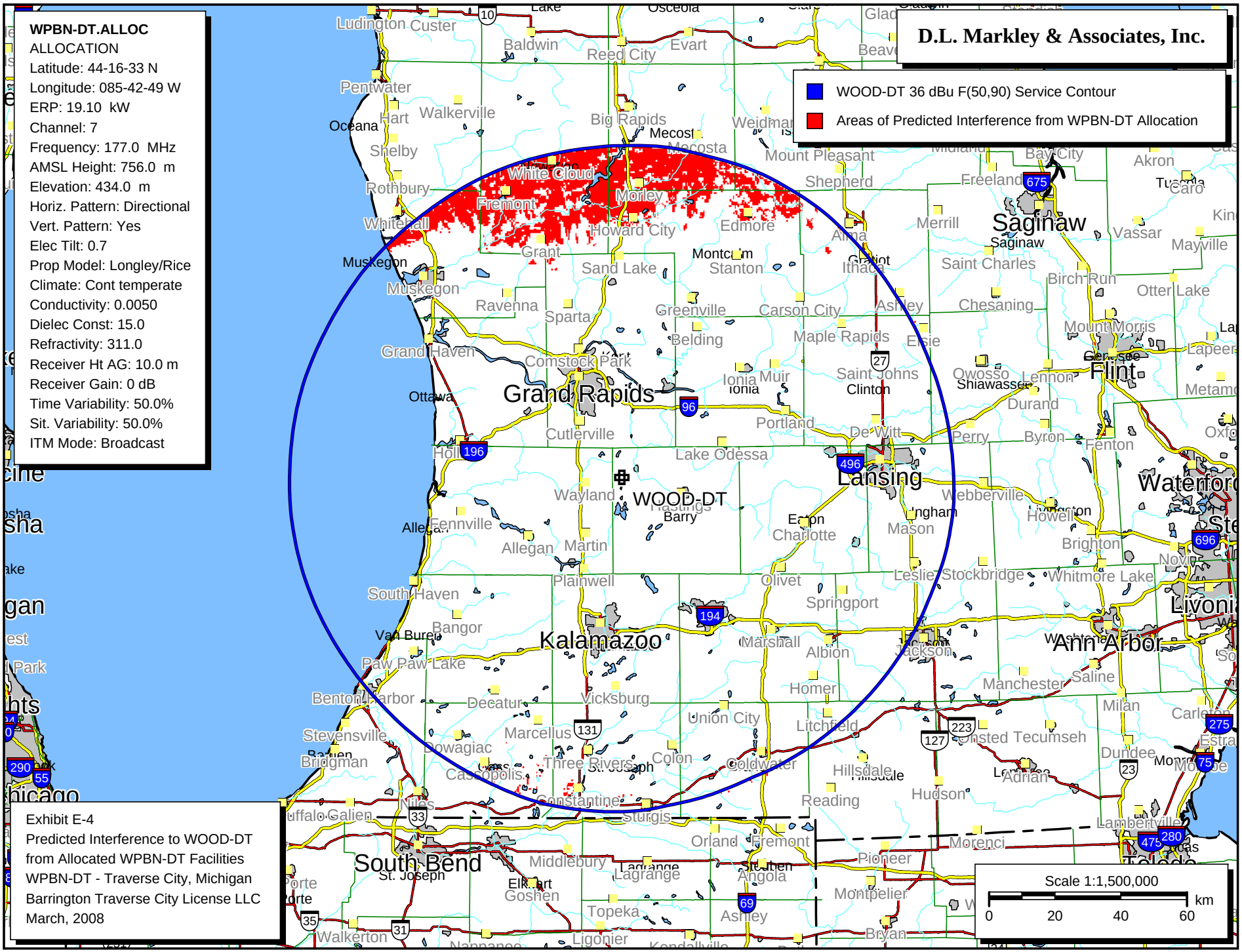

WPBN-DT.ALLOC
ALLOCATION
Latitude: 44-16-33 N
Longitude: 085-42-49 W
ERP: 19.10 kW
Channel: 7
Frequency: 177.0 MHz
AMSL Height: 756.0 m
Elevation: 434.0 m
Horiz. Pattern: Directional
Vert. Pattern: Yes
Elec Tilt: 0.7
Prop Model: Longley/Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 311.0
Receiver Ht AG: 10.0 m
Receiver Gain: 0 dB
Time Variability: 50.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast
D.L. Markley & Associates, Inc.
WOOD-DT 36 dBu F(50,90) Service Contour
Areas of Predicted Interference from WPBN-DT Allocation
WOOD-DT
Grand Rapids
Kalamazoo
Lansing
Saginaw
Flint
Ann Arbor
South Bend
Scale 1:1,500,000
0 20 40 60 km
Exhibit E-4
Predicted Interference to WOOD-DT
from Allocated WPBN-DT Facilities
WPBN-DT - Traverse City, Michigan
Barrington Traverse City License LLC
March, 2008

Exhibit E-4
Outgoing Interference Population Report
Predicted Interference to WOOD-DT from WPBN-DT Allocation.

WPBN-DT.ALLOC (7) Traverse City, MI - ALLOCATION
Broadcast Type: Digital Service: V
Lat: 44-16-33 N Lng: 085-42-49 W ERP: 19.1 kW AMSL: 756.0 m
TV Outgoing Interference Study
Signal Resolution: 0.5 km
Consider NTSC Taboo: Yes
KWX error points are considered to
     be interference free coverage.
# of radials computed for contours: 72
Contours calculated using 8 radial HAAT.
LR Profile Spacing Increment: 0.1 km
Masked interference points are being counted
     as interference free.
Pop Centroid DB: 2000 US Census (SF1)

Study Date: 3/18/2008
TV Database Date: 3/18/2008

Primary Terrain: V-Soft 30 Second US Database
Secondary Terrain: V-Soft 3 Second US Terrain

Population Database: 2000 US Census (SF1)

Stations Considered:

Call Letters	City	State	Dist	Bear
WOOD-DT (7)	Grand Rapids	MI	177.3	174.6

Call	Area	HUnits	Contour	Masked Ix	Unmasked Ix	%
WOOD-DT (7)	1648.5	22,579	2,410,967	0	52,243	2.2

	Housing Units	Population
Michigan		
Branch County		
Total	19,822	45,787
WOOD-DT (7)	30	74
Cass County		
Total	23,884	51,104
WOOD-DT (7)	134	339
Gratiot County		
Total	15,516	42,285
WOOD-DT (7)	115	305

Isabella County		
Total	24,528	63,351
WOOD-DT (7)	117	311
Kent County		
Total	224,000	574,335
WOOD-DT (7)	59	175
Mecosta County		
Total	19,593	40,553
WOOD-DT (7)	2,487	5,647
Montcalm County		
Total	25,900	61,266
WOOD-DT (7)	4,727	11,041
Muskegon County		
Total	68,556	170,200
WOOD-DT (7)	3,120	8,032
Newaygo County		
Total	23,202	47,874
WOOD-DT (7)	11,513	25,827
Oceana County		
Total	15,009	26,873
WOOD-DT (7)	21	69
St. Joseph County		
Total	26,503	62,422
WOOD-DT (7)	256	423

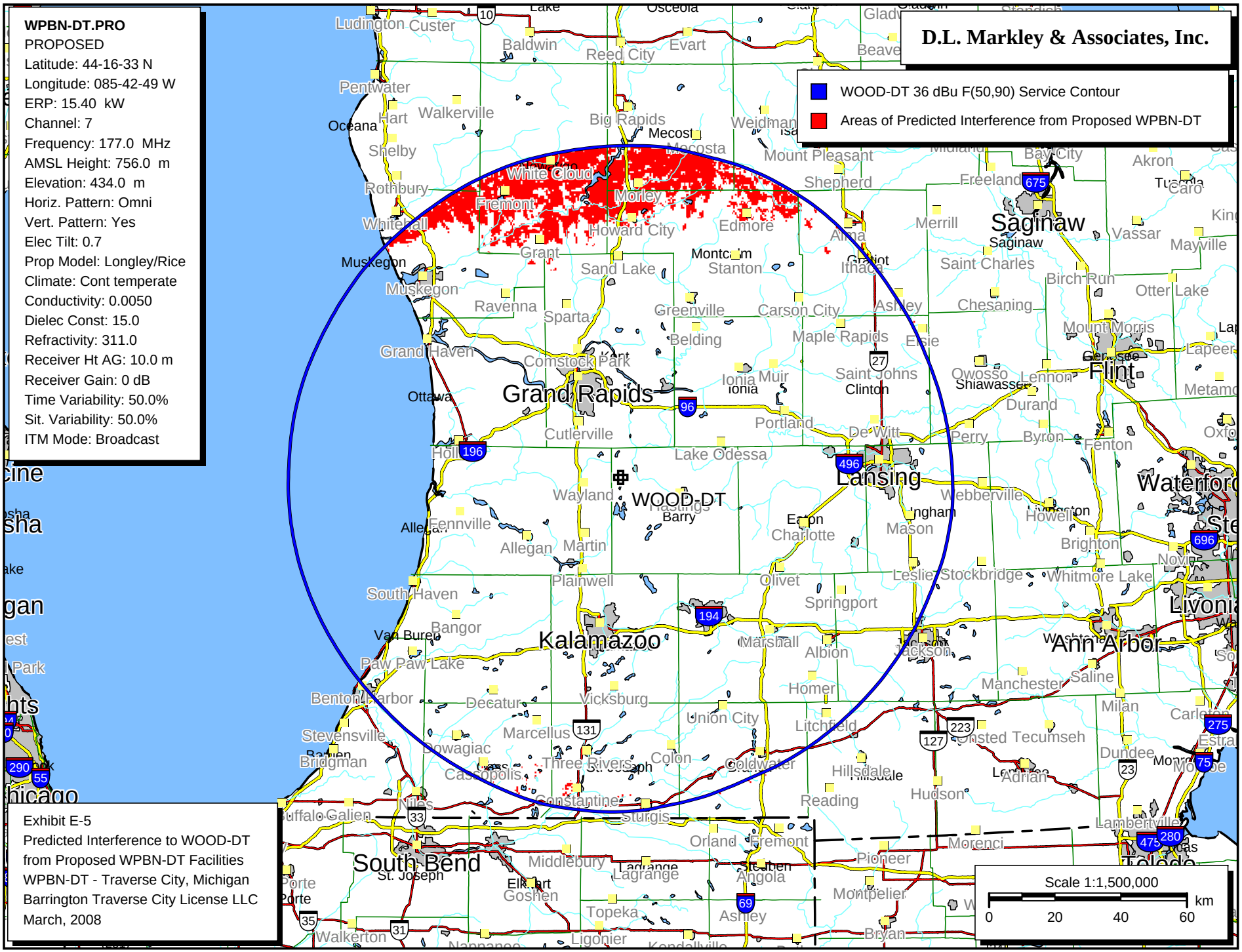

WPBN-DT.PRO
PROPOSED
Latitude: 44-16-33 N
Longitude: 085-42-49 W
ERP: 15.40 kW
Channel: 7
Frequency: 177.0 MHz
AMSL Height: 756.0 m
Elevation: 434.0 m
Horiz. Pattern: Omni
Vert. Pattern: Yes
Elec Tilt: 0.7
Prop Model: Longley/Rice
Climate: Cont temperate
Conductivity: 0.0050
Dielec Const: 15.0
Refractivity: 311.0
Receiver Ht AG: 10.0 m
Receiver Gain: 0 dB
Time Variability: 50.0%
Sit. Variability: 50.0%
ITM Mode: Broadcast
D.L. Markley & Associates, Inc.
WOOD-DT 36 dBu F(50,90) Service Contour
Areas of Predicted Interference from Proposed WPBN-DT
WOOD-DT
Grand Rapids
Kalamazoo
Lansing
Saginaw
Flint
Ann Arbor
South Bend
Scale 1:1,500,000
0 20 40 60 km
Exhibit E-5
Predicted Interference to WOOD-DT
from Proposed WPBN-DT Facilities
WPBN-DT - Traverse City, Michigan
Barrington Traverse City License LLC
March, 2008

Exhibit E-5
Outgoing Interference Population Report
Predicted Interference to WOOD-DT from Proposed WPBN-DT

WPBN-DT.PRO (7) Traverse City, MI - PROPOSED
Broadcast Type: Digital Service: V
Lat: 44-16-33 N Lng: 085-42-49 W ERP: 15.4 kW AMSL: 756.0 m
TV Outgoing Interference Study
Signal Resolution: 0.5 km
Consider NTSC Taboo: Yes
KWX error points are considered to
     be interference free coverage.
# of radials computed for contours: 72
Contours calculated using 8 radial HAAT.
LR Profile Spacing Increment: 0.1 km
Masked interference points are being counted
     as interference free.
Pop Centroid DB: 2000 US Census (SF1)

Study Date: 3/18/2008
TV Database Date: 3/18/2008

Primary Terrain: V-Soft 30 Second US Database
Secondary Terrain: V-Soft 3 Second US Terrain

Population Database: 2000 US Census (SF1)

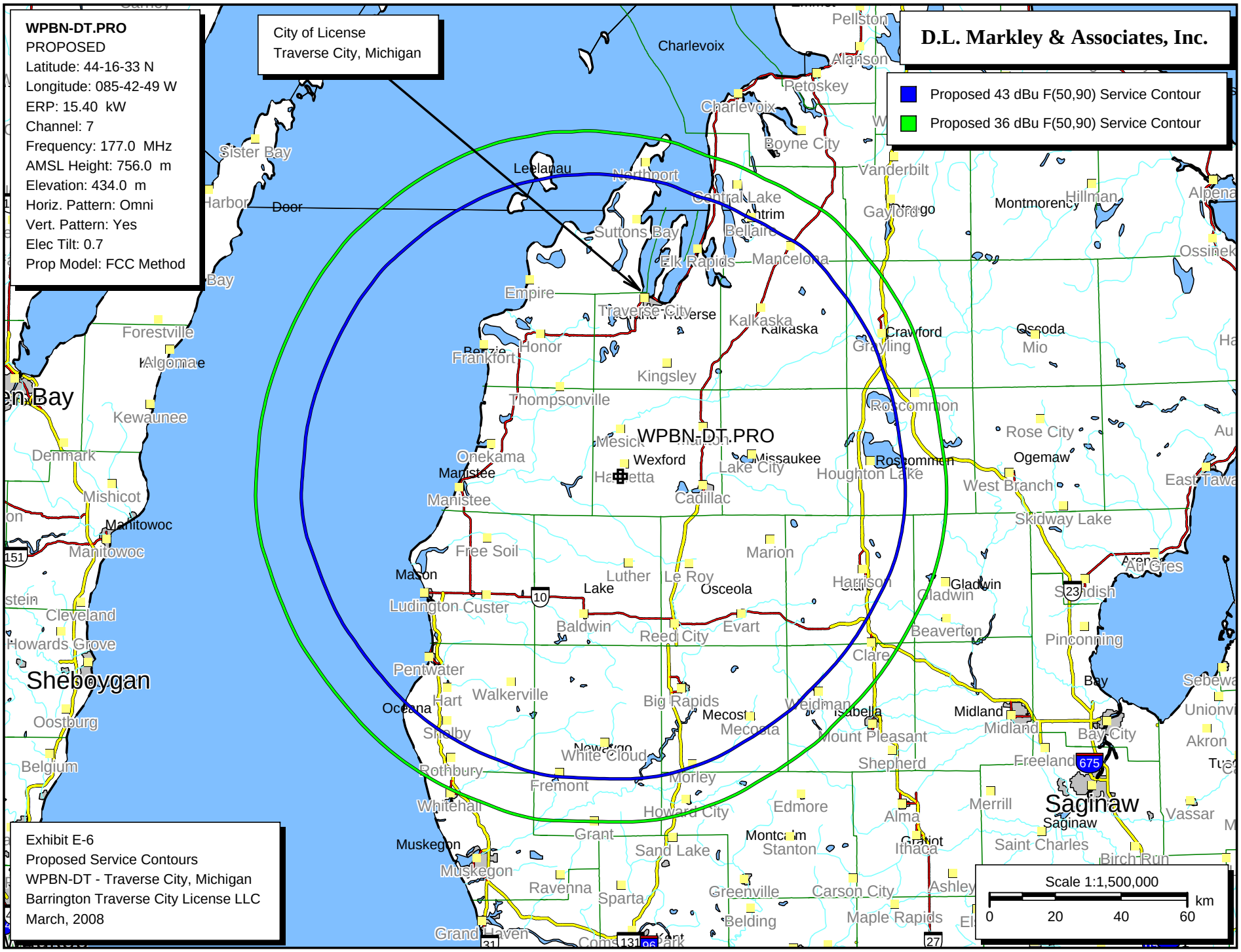
Stations Considered:

Call Letters	City	State	Dist	Bear
WOOD-DT (7)	Grand Rapids	MI	177.3	174.6

Call	Area	HUnits	Contour	Masked Ix	Unmasked Ix	%
WOOD-DT (7)	1586.1	21,644	2,410,967	0	50,037	2.1

	Housing Units	Population
Michigan		
Branch County		
Total	19,822	45,787
WOOD-DT (7)	18	42
Cass County		
Total	23,884	51,104
WOOD-DT (7)	112	285
Gratiot County		
Total	15,516	42,285
WOOD-DT (7)	111	294

Isabella County		
Total	24,528	63,351
WOOD-DT (7)	117	311
Kent County		
Total	224,000	574,335
WOOD-DT (7)	59	175
Mecosta County		
Total	19,593	40,553
WOOD-DT (7)	2,480	5,625
Montcalm County		
Total	25,900	61,266
WOOD-DT (7)	4,352	10,183
Muskegon County		
Total	68,556	170,200
WOOD-DT (7)	2,945	7,566
Newaygo County		
Total	23,202	47,874
WOOD-DT (7)	11,193	25,120
Oceana County		
Total	15,009	26,873
WOOD-DT (7)	21	69
St. Joseph County		
Total	26,503	62,422
WOOD-DT (7)	236	367


WPBN-DT.PRO
PROPOSED
Latitude: 44-16-33 N
Longitude: 085-42-49 W
ERP: 15.40 kW
Channel: 7
Frequency: 177.0 MHz
AMSL Height: 756.0 m
Elevation: 434.0 m
Horiz. Pattern: Omni
Vert. Pattern: Yes
Elec Tilt: 0.7
Prop Model: FCC Method
City of License
Traverse City, Michigan
D.L. Markley & Associates, Inc.
Proposed 43 dBu F(50,90) Service Contour
Proposed 36 dBu F(50,90) Service Contour
WPBN-DT.PRO
Exhibit E-6
Proposed Service Contours
WPBN-DT - Traverse City, Michigan
Barrington Traverse City License LLC
March, 2008
Scale 1:1,500,000
0 20 40 60 km
Charlevoix
Petoskey
Boyne City
Sister Bay
Door
Harbor
Leelanau
Northport
Suttons Bay
Elk Rapids
Traverse City
Kalkaska
Empire
Honor
Frankfort
Kingsley
Thompsonville
Forestville
Algoma
Kewaunee
Denmark
Mishicot
Manitowoc
Cleveland
Howards Grove
Sheboygan
Oostburg
Belgium
Mesick
Wexford
Onekama
Manistee
Cadillac
Lake City
Houghton Lake
Roscommon
Missaukee
Ogemaw
Rose City
West Branch
Skidway Lake
Free Soil
Mason
Ludington
Custer
Luther
Le Roy
Lake
Osceola
Marion
Harrison
Gladwin
Baldwin
Reed City
Evart
Beaverton
Clare
Pinconning
Pentwater
Hart
Oceana
Walkerville
Shelby
Big Rapids
Mecosta
Weidman
Isabella
Midland
Mount Pleasant
Bay City
Saginaw
Shepherd
Freeland
White Cloud
Rothbury
Fremont
Morley
Whitehall
Howard City
Edmore
Alma
Merrill
Grant
Muskegon
Sand Lake
Stanton
Ithaca
Saint Charles
Birch Run
Ravenna
Sparta
Greenville
Carson City
Ashley
Belding
Maple Rapids
Grand Haven
Coms
Park
Vanderbilt
Gaylord
Montmorency
Hillman
Alpena
Ossineke
Crawford
Grayling
Oscoda
Mio
Au Gres
Sebewaing
Akron
Vassar