ASR Registration Search

Registration 1224765

Map Registration

Exhibit 13.1 - Copy of Existing Antenna Structure Registration

MUNN-REESE, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036
1(517)278-7339

Registration Detail

Reg Number	1224765	Status	Constructed
File Number	A0547330	Constructed	09/10/2001
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type: TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	42-38-09.7 N 084-29-49.6 W	Address	HOLLOWAY DR. E. OF HOLT
City, State	HOLT , MI		
Zip	48842	County	INGHAM
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
265.7	77.4
Overall Height Above Mean Sea Level	**Overall Height Above Ground w/o Appurtenances**
343.1	76.2

Painting and Lighting Specifications

FAA Chapters 4, 8, 12
Paint and Light in Accordance with FAA Circular Number 70/7460-1K

FAA Notification

FAA Study	2007-AGL-3039-OE	FAA Issue Date	04/16/2007

Owner & Contact Information

FRN: 0015709579 — Owner Entity Type

Owner

SBA Towers II LLC
Attention To: Edward G. Roach
5900 Broken Sound Pkwy NW
Boca Raton , FL 33487

P: (561)995-7670
F:
E: ERoach@sbasite.com

Contact

Roach , Edward G
5900 Broken Sound Pkwy NW
Boca Raton , FL 33487

P: (561)995-7670
F:
E: ERoach@sbasite.com

Last Action Status

Status	Constructed	Received	04/20/2007
Purpose	Notification	Entered	04/20/2007
Mode	Interactive		

Related Applications

04/20/2007	A0547324 - Modification (MD)
04/20/2007	A0547330 - Notification (NT)
04/06/2007	A0546240 - Change Owner (OC)

Related applications (6)

Comments

Comments

None

History

Date	Event
04/23/2007	Registration Printed
04/20/2007	ASR Application receipt email sent: Tower email
04/20/2007	Construction Notification Received

All History (13)

Automated Letters

04/23/2007	Authorization, Reference 562362
04/09/2007	Ownership Change, Reference 560565
04/09/2007	Authorization, Reference 560596

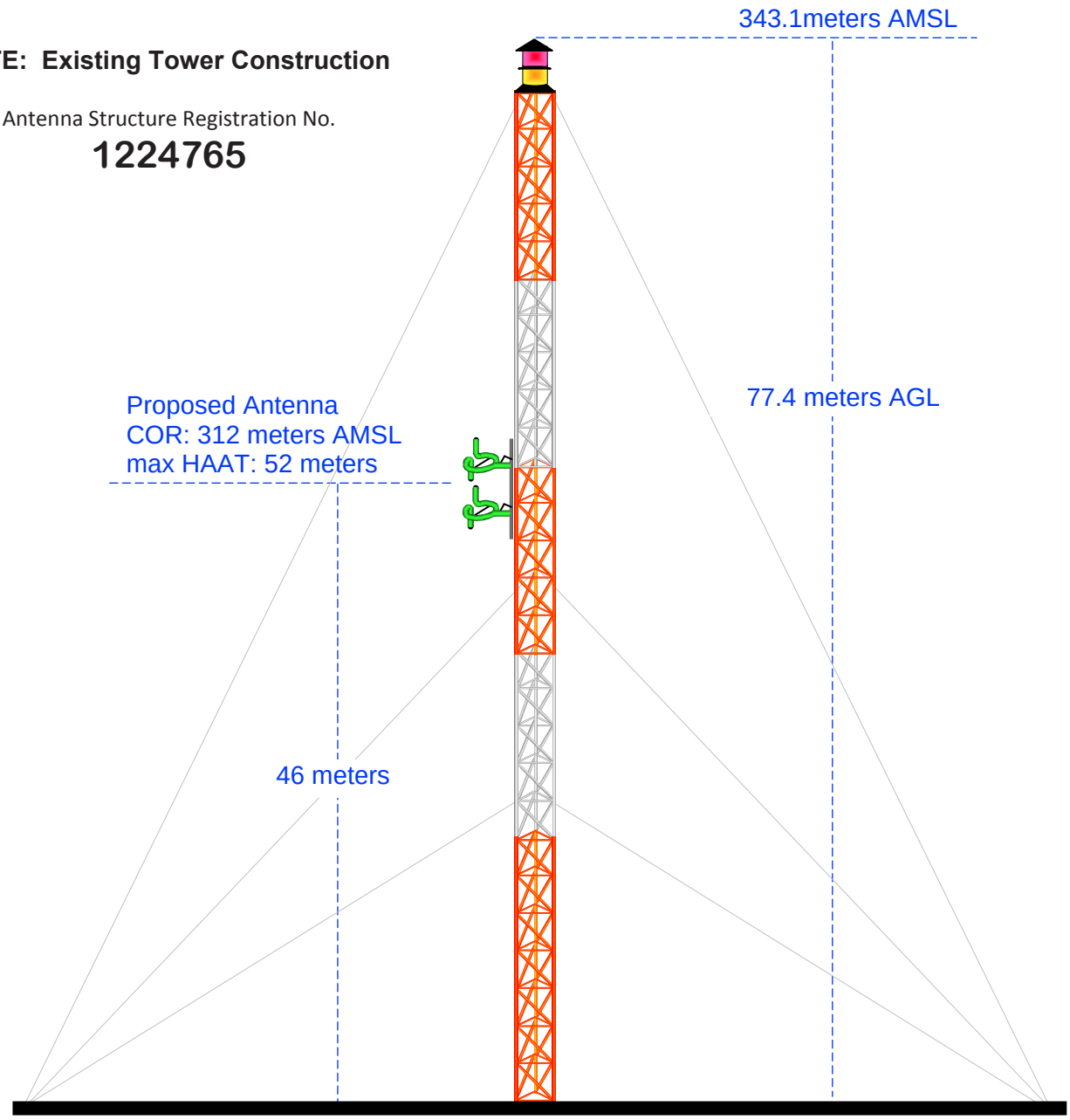
All letters (5)

Exhibit 13.2
Vertical Plan of Antenna System

The site is located on Holloway Drive, east of the city of Holt, Ingham County, Michigan.	Site Location (NAD 27) NL: 42° 38' 10" WL: 84° 29' 50" (42-38-09.7NL; 84-29-49.6WL NAD1983)

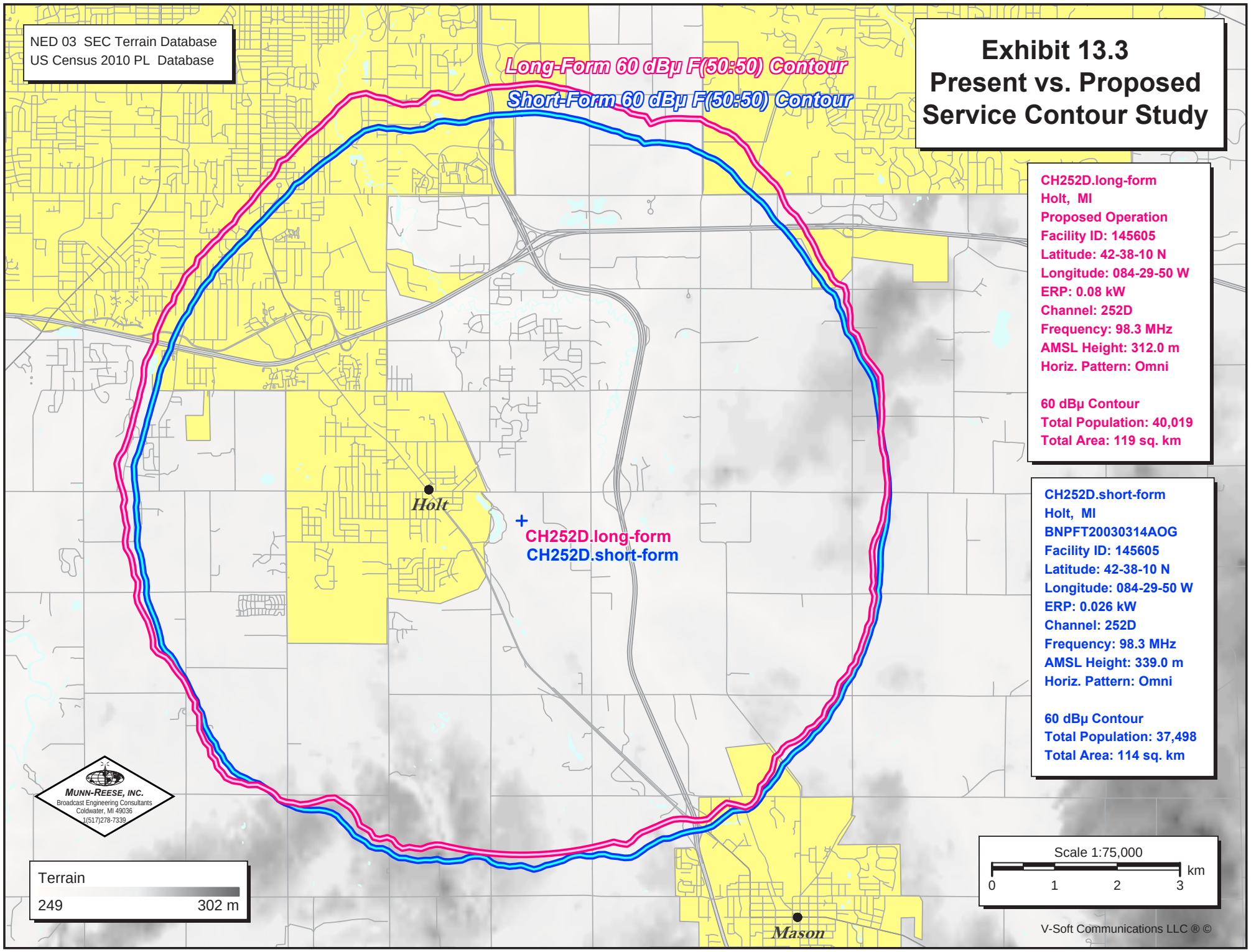
NOTE: Existing Tower Construction

Antenna Structure Registration No.
1224765



Ground Elevation = 265.7 m AMSL
Drawing is not to Scale

MUNN–REESE, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036


NED 03 SEC Terrain Database
US Census 2010 PL Database
Long-Form 60 dBµ F(50:50) Contour
Short-Form 60 dBµ F(50:50) Contour
Exhibit 13.3
Present vs. Proposed
Service Contour Study
CH252D.long-form
Holt, MI
Proposed Operation
Facility ID: 145605
Latitude: 42-38-10 N
Longitude: 084-29-50 W
ERP: 0.08 kW
Channel: 252D
Frequency: 98.3 MHz
AMSL Height: 312.0 m
Horiz. Pattern: Omni
60 dBµ Contour
Total Population: 40,019
Total Area: 119 sq. km
CH252D.short-form
Holt, MI
BNPFT20030314AOG
Facility ID: 145605
Latitude: 42-38-10 N
Longitude: 084-29-50 W
ERP: 0.026 kW
Channel: 252D
Frequency: 98.3 MHz
AMSL Height: 339.0 m
Horiz. Pattern: Omni
60 dBµ Contour
Total Population: 37,498
Total Area: 114 sq. km
Holt
CH252D.long-form
CH252D.short-form
Mason
MUNN-REESE, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036
1(517)278-7339
Terrain
249
302 m
Scale 1:75,000
0
1
2
3
km
V-Soft Communications LLC ® ©

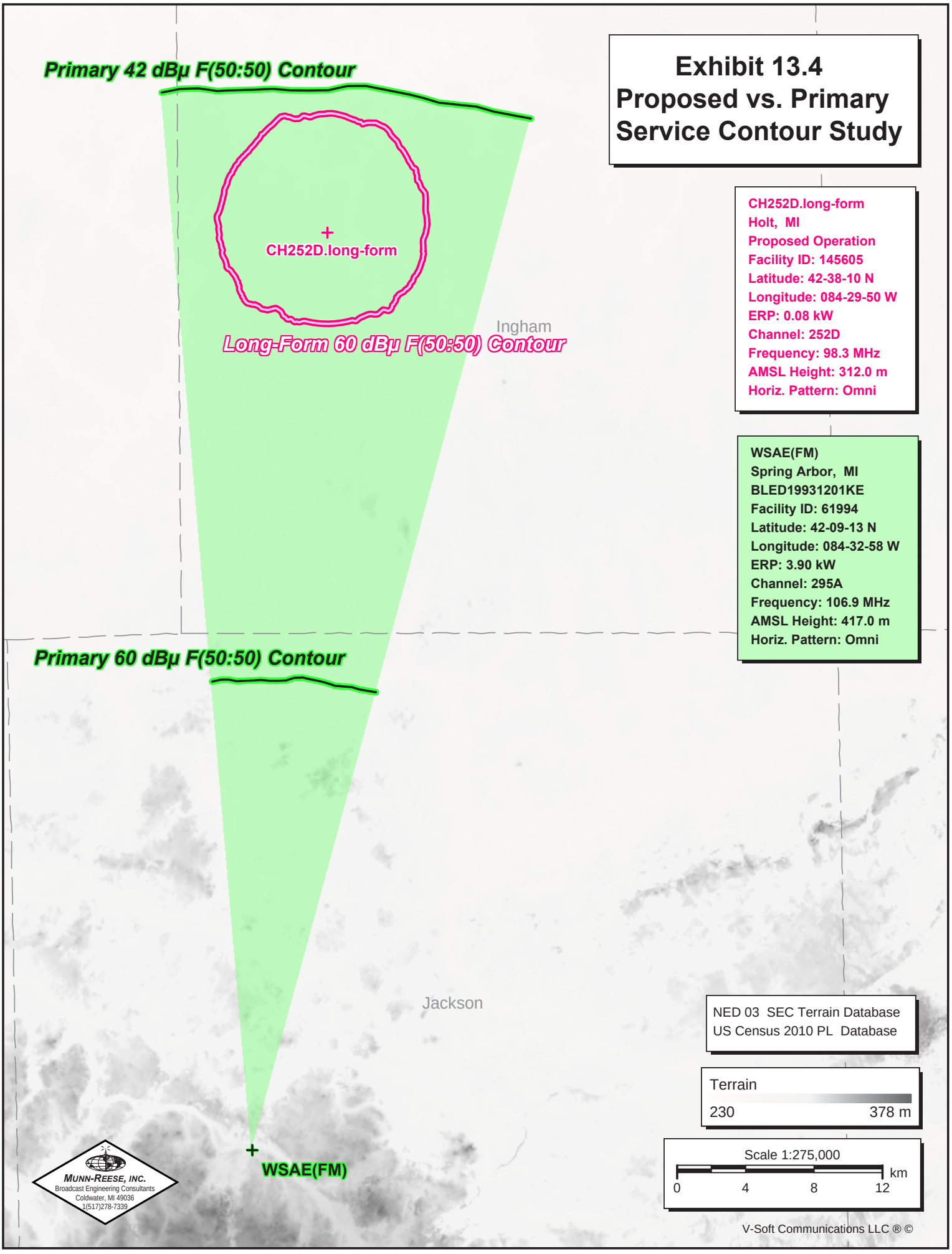

Primary 42 dBµ F(50:50) Contour
CH252D.long-form
Ingham
Long-Form 60 dBµ F(50:50) Contour
Primary 60 dBµ F(50:50) Contour
Jackson
WSAE(FM)
Exhibit 13.4
Proposed vs. Primary
Service Contour Study
CH252D.long-form
Holt, MI
Proposed Operation
Facility ID: 145605
Latitude: 42-38-10 N
Longitude: 084-29-50 W
ERP: 0.08 kW
Channel: 252D
Frequency: 98.3 MHz
AMSL Height: 312.0 m
Horiz. Pattern: Omni
WSAE(FM)
Spring Arbor, MI
BLED19931201KE
Facility ID: 61994
Latitude: 42-09-13 N
Longitude: 084-32-58 W
ERP: 3.90 kW
Channel: 295A
Frequency: 106.9 MHz
AMSL Height: 417.0 m
Horiz. Pattern: Omni
NED 03 SEC Terrain Database
US Census 2010 PL Database
Terrain
230
378 m
Scale 1:275,000
km
0
4
8
12
MUNN-REESE, INC.
Broadcast Engineering Consultants
Coldwater, MI 49036
1(517)278-7339
V-Soft Communications LLC ® ©

Exhibit 13.5
Tabulation of Proposed Commercial Allocation

REFERENCE CH# 252D - 98.3 MHz, Pwr= 0.08 kW, HAAT= 40.3 M, COR= 312 M DISPLAY DATES
42 38 10.0 N. Average Protected F(50-50)= 6.13 km DATA 03-12-13
84 29 50.0 W. Omni-directional SEARCH 03-12-13

CH CITY	CALL STATE	TYPE	ANT	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
252D Holt	638164 MI	APP	_C_	0.0 0.0	0.00 BNPFT20030314AOG	42 38 10.0 84 29 50.0	0.026 70	21.6 339	6.5 Spring Arbor University Co	-28.6*<	-29.8*<
253B Coldwater	WNWN-FM MI	LIC	_CN	212.8 32.4	76.31 BLH19790601AC	42 03 28.0 84 59 51.0	50.000 143	76.9 436	64.0 Midwest Communications, In	-5.9*<	1.6
251B Saginaw	WKCQ MI	LIC	_CX	28.2 208.6	98.82 BMLH20100823ABD	43 25 04.0 83 55 06.0	50.000 150	78.5 332	65.4 The Macdonald Broadcasting	13.3	19.3
252D Chelsea	W252BA MI	LIC	_C_	138.1 318.4	50.59 BLFT20070309ADV	42 17 48.0 84 05 11.0	0.250 17	23.8 309	7.1 Spring Arbor University	21.1	24.7
250B Grand Rapids	WGRD-FM MI	LIC	_CN	281.1 100.3	95.78 BLH19880321KE	42 47 46.0 85 38 58.0	13.000 180	4.2 407	53.9 Townsquare Media Of Grand	85.1	40.6
252A Luna Pier	WMIM MI	LIC	ZCX	141.0 321.7	137.80 BLH20070301ABH	41 40 05.0 83 27 11.0	3.400 135	83.6 316	28.3 Cumulus Licensing Llc	48.4	90.2
4/20/2012: Accepted on Channel 252A by Canada by letter dated March 27, 2003. No limitations and not specially negotiated.											
254B Detroit	WDZH MI	LIC	_CN	103.2 284.1	113.65 BLH19890928KF	42 23 42.0 83 08 58.0	50.000 141	5.7 332	63.3 Cbs Radio East Inc.	102.2	49.1
250B Detroit	WJLB MI	LIC	_CN	102.2 283.2	116.33 BLH19810811AO	42 24 22.0 83 06 44.0	50.000 149	5.8 339	63.8 Amfm Radio Licenses, L.l.c	104.8	51.3
252D Holly	641287 MI	APP	_C_	77.9 258.5	80.32 BNPFT20030317DZA	42 47 02.0 83 32 05.0	0.004 150	18.8 454	5.7 Educational Media Foundati	55.6	55.2
252A Sarnia	AL2988« ON	AL	___	77.0 258.4	175.80	42 58 20.0 82 23 48.0	6.000 100	86.0 288	38.0	111.5R	64.3M
SPECIAL NEGOTIATED SHORT-SPACED ALLOCATION.											
251B Defiance	WDFM OH	LIC	_CN	181.3 1.3	149.57 BLH19850701KJ	41 17 28.0 84 32 17.0	50.000 152	78.5 371	65.4 Citicasters Licenses, Inc.	65.8	73.4
GRANDFATHERED AT 50KW @ 152M HAAT											
252A Hartford	WCXT MI	LIC	_CX	254.9 73.6	156.71 BLH20080211ABT	42 15 14.0 86 20 09.0	3.700 130	81.6 320	27.0 Wsjm Inc	68.9	109.1
253C1 Harrison	WUPS MI	LIC	_CX	353.9 173.8	184.84 BLH20080924AKU	44 17 21.0 84 44 32.0	100.000 299	105.3 648	72.5 Coltrace Communications, I	72.7	102.4
252A North Muskegon	WLCS MI	LIC	_CX	299.8 118.6	154.45 BLH20030210AAM	43 18 50.0 86 09 17.0	1.600 139	73.7 341	24.4 Radio License Holding Cbc,	74.2	107.9
249D Russellville	650379 MI	APP	_V_	53.1 233.7	83.76 BNPFT20030317KCE	43 05 07.0 83 40 19.0	0.055 55	0.5 285	6.5 Michigan Community Radio	76.9	76.6
254A Grand Rapids	WFGR MI	LIC	_CX	294.7 113.9	107.24 BMLH20050714ABA	43 01 57.0 85 41 47.0	2.750 150	2.6 378	29.4 Townsquare Media Of Grand	98.1	77.2

Terrain database is NED 03 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= East Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding
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.
« = Station meets FCC minimum distance spacing for its class.
< = Contour Overlap

Blue Highlighted Text denotes the BNPFT-20030314AOG - Holt, MI, facility to be modified by this Form 349 filing. This facility need not be protected.

Yellow Highlighted Text denotes supplemental contour protection studies toward WNWN-FM - Coldwater, MI (CH253B) as included in ***Exhibit 13.6***.

Exhibit 13.6
Contour Protection Studies Toward WNWN-FM - Coldwater, MI

Spring Arbor University Communications, Inc.

FMCommander Single Allocation Study - 03-12-2013 - NED 03 SEC
CH252D.P's Overlaps (In= -5.93 km, Out= 1.59 km)

CH252D.P CH 252 D
Lat= 42 38 10.0, Lng= 84 29 50.0
0.08 kW 40.3 M HAAT, 312 M COR
Prot.= 60 dBu, Intef.= 48 dBu

WNWN-FM CH 253 B BLH19790601AC
Lat= 42 03 28.0, Lng= 84 59 51.0
50.0 kW 143 M HAAT, 436 M COR
Prot.= 54 dBu, Intef.= 54 dBu

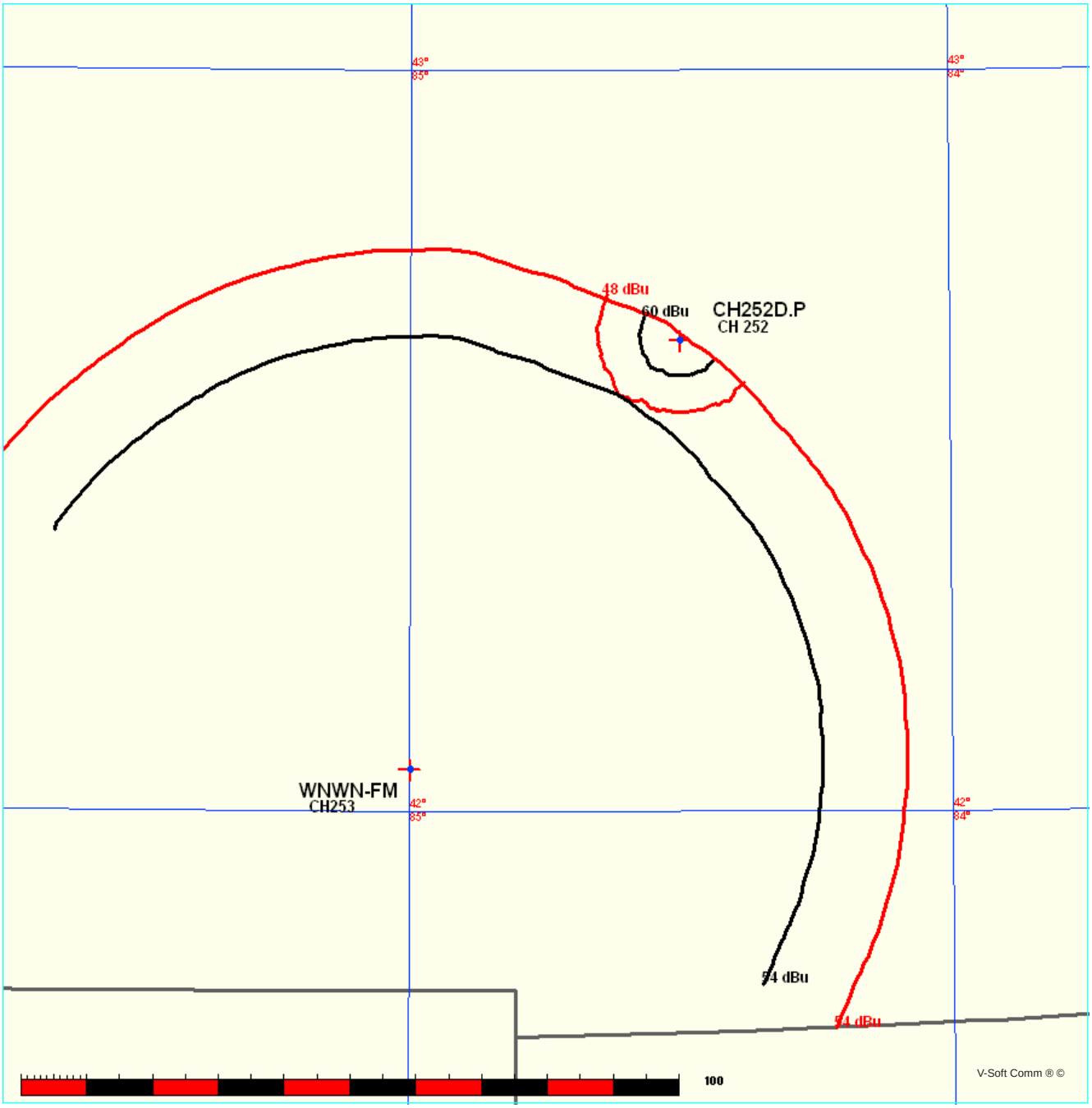


Exhibit 13.6
Contour Protection Studies Toward WNWN-FM - Coldwater, MI

03-12-2013 Terrain Data: NED 03 SEC FMOver Analysis

CH252D.P	WNWN-FM BLH19790601AC
Channel = 252D	Channel = 253B
Max ERP = 0.08 kW	Max ERP = 50 kW
RCAMSL = 312 M	RCAMSL = 436 M
N. Lat. 42 38 10.0	N. Lat. 42 03 28.0
W. Lng. 84 29 50.0	W. Lng. 84 59 51.0
Protected	Interfering
60 dBu	54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
170.0	000.0800	0026.3	005.3	035.3	050.0000	0142.1	072.5	55.37*	4.42
171.0	000.0800	0026.2	005.3	035.2	050.0000	0142.1	072.4	55.39*	4.49
172.0	000.0800	0026.5	005.3	035.2	050.0000	0142.1	072.4	55.41*	4.55
173.0	000.0800	0027.3	005.3	035.1	050.0000	0142.1	072.3	55.43*	4.61
174.0	000.0800	0027.6	005.3	035.1	050.0000	0142.0	072.2	55.45*	4.67
175.0	000.0800	0028.0	005.3	035.0	050.0000	0142.0	072.2	55.47*	4.72
176.0	000.0800	0028.2	005.3	035.0	050.0000	0142.0	072.1	55.48*	4.78
177.0	000.0800	0029.0	005.3	034.9	050.0000	0141.9	072.1	55.50*	4.83
178.0	000.0800	0029.4	005.3	034.8	050.0000	0141.9	072.0	55.52*	4.88
179.0	000.0800	0028.7	005.3	034.8	050.0000	0141.9	071.9	55.53*	4.93
180.0	000.0800	0028.0	005.3	034.7	050.0000	0141.8	071.9	55.55*	4.98
181.0	000.0800	0028.2	005.3	034.7	050.0000	0141.8	071.8	55.56*	5.03
182.0	000.0800	0028.5	005.3	034.6	050.0000	0141.8	071.8	55.58*	5.07
183.0	000.0800	0028.1	005.3	034.5	050.0000	0141.7	071.7	55.59*	5.12
184.0	000.0800	0028.1	005.3	034.5	050.0000	0141.7	071.7	55.60*	5.16
185.0	000.0800	0027.5	005.3	034.4	050.0000	0141.7	071.6	55.62*	5.21
186.0	000.0800	0026.2	005.3	034.3	050.0000	0141.7	071.6	55.63*	5.25
187.0	000.0800	0026.0	005.3	034.3	050.0000	0141.6	071.6	55.64*	5.29
188.0	000.0800	0026.1	005.3	034.2	050.0000	0141.6	071.5	55.66*	5.33
189.0	000.0800	0026.8	005.3	034.2	050.0000	0141.6	071.5	55.67*	5.37
190.0	000.0800	0028.0	005.3	034.1	050.0000	0141.6	071.4	55.68*	5.41
191.0	000.0800	0028.6	005.3	034.0	050.0000	0141.6	071.4	55.69*	5.44
192.0	000.0800	0029.3	005.3	033.9	050.0000	0141.6	071.4	55.70*	5.48
193.0	000.0800	0029.6	005.3	033.9	050.0000	0141.6	071.3	55.71*	5.51
194.0	000.0800	0029.3	005.3	033.8	050.0000	0141.6	071.3	55.72*	5.55
195.0	000.0800	0030.3	005.3	033.7	050.0000	0141.6	071.2	55.74*	5.60
196.0	000.0800	0030.9	005.4	033.7	050.0000	0141.6	071.2	55.76*	5.67
197.0	000.0800	0031.8	005.5	033.6	050.0000	0141.6	071.1	55.80*	5.77
198.0	000.0800	0032.0	005.5	033.6	050.0000	0141.7	071.0	55.81*	5.82
199.0	000.0800	0032.2	005.5	033.5	050.0000	0141.7	071.0	55.82*	5.85
200.0	000.0800	0032.9	005.6	033.4	050.0000	0141.7	070.9	55.85*	5.94
201.0	000.0800	0032.7	005.5	033.3	050.0000	0141.7	070.9	55.85*	5.94
202.0	000.0800	0031.9	005.5	033.3	050.0000	0141.7	070.9	55.84*	5.91
203.0	000.0800	0031.9	005.5	033.2	050.0000	0141.8	070.9	55.85*	5.94

Exhibit 13.6
Contour Protection Studies Toward WNWN-FM - Coldwater, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	
204.0	000.0800	0032.9	005.6	033.1	050.0000	0141.8	070.8	55.88*	6.03
205.0	000.0800	0033.1	005.6	033.0	050.0000	0141.8	070.8	55.89*	6.07
206.0	000.0800	0032.3	005.5	033.0	050.0000	0141.9	070.9	55.88*	6.02
207.0	000.0800	0032.2	005.5	032.9	050.0000	0141.9	070.9	55.88*	6.03
208.0	000.0800	0032.1	005.5	032.8	050.0000	0141.9	070.8	55.88*	6.04
209.0	000.0800	0031.0	005.4	032.7	050.0000	0142.0	070.9	55.86*	5.96
210.0	000.0800	0030.4	005.4	032.6	050.0000	0142.0	071.0	55.84*	5.92
211.0	000.0800	0029.9	005.3	032.6	050.0000	0142.0	071.0	55.84*	5.90
212.0	000.0800	0029.1	005.3	032.5	050.0000	0142.1	071.0	55.84*	5.91
213.0	000.0800	0029.2	005.3	032.4	050.0000	0142.1	071.0	55.84*	5.92
214.0	000.0800	0029.8	005.3	032.3	050.0000	0142.2	071.0	55.85*	5.93
215.0	000.0800	0030.9	005.4	032.3	050.0000	0142.3	070.9	55.87*	6.01
216.0	000.0800	0032.5	005.5	032.2	050.0000	0142.4	070.8	55.92*	6.15
217.0	000.0800	0034.1	005.7	032.1	050.0000	0142.5	070.7	55.96*	6.29
218.0	000.0800	0035.2	005.7	032.0	050.0000	0142.7	070.6	55.99*	6.39
219.0	000.0800	0035.8	005.8	031.9	050.0000	0142.8	070.6	56.01*	6.44
220.0	000.0800	0036.6	005.8	031.8	050.0000	0143.0	070.5	56.04*	6.52
221.0	000.0800	0037.2	005.9	031.8	050.0000	0143.1	070.5	56.05*	6.57
222.0	000.0800	0036.9	005.9	031.7	050.0000	0143.3	070.5	56.05*	6.55
223.0	000.0800	0037.1	005.9	031.6	050.0000	0143.4	070.5	56.05*	6.56
224.0	000.0800	0037.5	005.9	031.5	050.0000	0143.5	070.5	56.06*	6.59
225.0	000.0800	0038.0	005.9	031.4	050.0000	0143.7	070.5	56.07*	6.63
226.0	000.0800	0039.4	006.1	031.3	050.0000	0143.8	070.4	56.10*	6.72
227.0	000.0800	0040.1	006.1	031.2	050.0000	0143.8	070.4	56.11*	6.75
228.0	000.0800	0041.2	006.2	031.1	050.0000	0143.9	070.4	56.13*	6.82
229.0	000.0800	0041.9	006.2	031.0	050.0000	0143.9	070.4	56.14*	6.84
230.0	000.0800	0041.7	006.2	030.9	050.0000	0144.0	070.4	56.13*	6.80
231.0	000.0800	0041.8	006.2	030.9	050.0000	0144.0	070.4	56.12*	6.78
232.0	000.0800	0041.2	006.2	030.8	050.0000	0144.1	070.5	56.10*	6.70
233.0	000.0800	0041.4	006.2	030.7	050.0000	0144.1	070.5	56.09*	6.68
234.0	000.0800	0040.5	006.1	030.6	050.0000	0144.1	070.6	56.06*	6.58
235.0	000.0800	0040.7	006.2	030.6	050.0000	0144.1	070.7	56.05*	6.55
236.0	000.0800	0040.4	006.1	030.5	050.0000	0144.1	070.7	56.03*	6.49
237.0	000.0800	0040.2	006.1	030.4	050.0000	0144.1	070.8	56.01*	6.43
238.0	000.0800	0039.3	006.1	030.4	050.0000	0144.2	070.9	55.97*	6.32
239.0	000.0800	0038.6	006.0	030.3	050.0000	0144.2	071.0	55.94*	6.22
240.0	000.0800	0038.8	006.0	030.2	050.0000	0144.2	071.0	55.93*	6.19
241.0	000.0800	0038.0	005.9	030.2	050.0000	0144.2	071.1	55.90*	6.09
242.0	000.0800	0038.2	006.0	030.1	050.0000	0144.3	071.2	55.89*	6.06
243.0	000.0800	0038.1	006.0	030.0	050.0000	0144.3	071.3	55.87*	6.00
244.0	000.0800	0038.0	006.0	030.0	050.0000	0144.4	071.3	55.86*	5.95
245.0	000.0800	0038.1	006.0	029.9	050.0000	0144.4	071.4	55.84*	5.90
246.0	000.0800	0038.5	006.0	029.8	050.0000	0144.4	071.4	55.83*	5.86
247.0	000.0800	0038.9	006.0	029.7	050.0000	0144.4	071.4	55.82*	5.82
248.0	000.0800	0039.0	006.0	029.7	050.0000	0144.4	071.5	55.80*	5.77
249.0	000.0800	0039.6	006.1	029.6	050.0000	0144.4	071.5	55.79*	5.73
250.0	000.0800	0040.9	006.2	029.5	050.0000	0144.3	071.5	55.79*	5.73

Exhibit 13.6
Contour Protection Studies Toward WNWN-FM - Coldwater, MI

03-12-2013 Terrain Data: NED 03 SEC FMOver Analysis

WNWN-FM BLH19790601AC	CH252D.P
Channel = 253B	Channel = 252D
Max ERP = 50 kW	Max ERP = 0.08 kW
RCAMSL = 436 M	RCAMSL = 312 M
N. Lat. 42 03 28.0	N. Lat. 42 38 10.0
W. Lng. 84 59 51.0	W. Lng. 84 29 50.0
Protected	Interfering
54 dBu	48 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
347.0	050.0000	0146.3	064.6	268.8	000.0800	0042.5	055.4	25.60	
348.0	050.0000	0146.5	064.6	269.1	000.0800	0042.4	054.3	25.86	
349.0	050.0000	0146.4	064.6	269.3	000.0800	0042.6	053.2	26.18	
350.0	050.0000	0146.7	064.6	269.5	000.0800	0042.8	052.1	26.50	
351.0	050.0000	0146.8	064.6	269.7	000.0800	0042.8	051.0	26.80	
352.0	050.0000	0147.3	064.7	270.0	000.0800	0042.8	049.9	27.10	
353.0	050.0000	0147.3	064.7	270.2	000.0800	0042.8	048.8	27.40	
354.0	050.0000	0147.3	064.7	270.3	000.0800	0042.8	047.7	27.69	
355.0	050.0000	0147.4	064.7	270.5	000.0800	0042.9	046.5	28.01	
356.0	050.0000	0147.8	064.8	270.6	000.0800	0042.9	045.4	28.35	
357.0	050.0000	0147.8	064.8	270.7	000.0800	0042.9	044.3	28.69	
358.0	050.0000	0147.2	064.7	270.7	000.0800	0042.9	043.2	29.04	
359.0	050.0000	0147.3	064.7	270.8	000.0800	0043.0	042.0	29.40	
000.0	050.0000	0147.4	064.7	270.8	000.0800	0043.0	040.9	29.78	
001.0	050.0000	0147.7	064.7	270.9	000.0800	0043.0	039.8	30.17	
002.0	050.0000	0148.9	064.9	271.1	000.0800	0043.1	038.7	30.59	
003.0	050.0000	0149.1	064.9	271.1	000.0800	0043.0	037.5	31.00	
004.0	050.0000	0149.5	065.0	271.1	000.0800	0043.0	036.4	31.42	
005.0	050.0000	0149.5	065.0	271.0	000.0800	0043.0	035.3	31.85	
006.0	050.0000	0149.0	064.9	270.7	000.0800	0042.9	034.2	32.28	
007.0	050.0000	0148.2	064.8	270.3	000.0800	0042.8	033.0	32.70	
008.0	050.0000	0146.9	064.6	269.7	000.0800	0042.8	031.9	33.15	
009.0	050.0000	0145.4	064.4	269.0	000.0800	0042.4	030.9	33.56	
010.0	050.0000	0143.9	064.2	268.2	000.0800	0042.7	029.8	34.14	
011.0	050.0000	0142.9	064.1	267.4	000.0800	0043.2	028.8	34.81	
012.0	050.0000	0141.2	063.8	266.4	000.0800	0042.9	027.7	35.34	
013.0	050.0000	0140.5	063.7	265.5	000.0800	0042.5	026.7	35.91	
014.0	050.0000	0140.5	063.7	264.7	000.0800	0041.9	025.7	36.48	
015.0	050.0000	0140.9	063.8	264.0	000.0800	0041.8	024.6	37.18	

Exhibit 13.6
Contour Protection Studies Toward WNWN-FM - Coldwater, MI

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
016.0	050.0000	0140.8	063.8	262.9	000.0800	0041.8	023.6	37.90
017.0	050.0000	0140.8	063.8	261.8	000.0800	0041.7	022.6	38.64
018.0	050.0000	0139.8	063.6	260.1	000.0800	0041.3	021.6	39.27
019.0	050.0000	0138.6	063.5	258.3	000.0800	0042.2	020.8	40.15
020.0	050.0000	0138.8	063.5	256.7	000.0800	0041.4	019.8	40.75
021.0	050.0000	0138.7	063.5	254.8	000.0800	0040.8	018.9	41.36
022.0	050.0000	0138.7	063.5	252.7	000.0800	0040.9	018.0	42.10
023.0	050.0000	0138.8	063.5	250.3	000.0800	0041.1	017.2	42.86
024.0	050.0000	0139.0	063.5	247.8	000.0800	0039.0	016.4	43.06
025.0	050.0000	0139.9	063.6	245.1	000.0800	0038.2	015.6	43.59
026.0	050.0000	0141.1	063.8	242.2	000.0800	0038.2	014.8	44.27
027.0	050.0000	0142.1	064.0	238.8	000.0800	0038.7	014.0	45.27
028.0	050.0000	0142.9	064.1	235.0	000.0800	0040.7	013.4	46.58
029.0	050.0000	0144.2	064.3	230.9	000.0800	0041.8	012.7	47.71
030.0	050.0000	0144.3	064.3	226.1	000.0800	0039.5	012.4	47.74
031.0	050.0000	0144.0	064.2	220.9	000.0800	0037.2	012.2	47.52
032.0	050.0000	0142.7	064.0	215.6	000.0800	0031.7	012.2	46.11
033.0	050.0000	0141.9	063.9	210.4	000.0800	0030.3	012.3	45.60
034.0	050.0000	0141.6	063.9	205.3	000.0800	0032.9	012.5	46.02
035.0	050.0000	0142.0	063.9	200.3	000.0800	0033.0	012.7	45.78
036.0	050.0000	0142.3	064.0	195.4	000.0800	0030.5	012.9	44.77
037.0	050.0000	0142.3	064.0	191.0	000.0800	0028.6	013.4	44.02
038.0	050.0000	0142.0	063.9	187.0	000.0800	0026.0	014.0	43.26
039.0	050.0000	0141.9	063.9	183.3	000.0800	0028.0	014.6	42.50
040.0	050.0000	0141.4	063.9	180.1	000.0800	0027.9	015.3	41.76
041.0	050.0000	0140.7	063.8	177.3	000.0800	0029.3	016.2	41.05
042.0	050.0000	0140.5	063.7	174.7	000.0800	0027.9	017.0	40.37
043.0	050.0000	0140.2	063.7	172.4	000.0800	0026.8	017.8	39.65
044.0	050.0000	0139.0	063.5	170.7	000.0800	0026.2	018.8	38.83
045.0	050.0000	0137.6	063.3	169.3	000.0800	0026.7	019.8	38.01
046.0	050.0000	0136.3	063.1	168.1	000.0800	0027.5	020.9	37.20
047.0	050.0000	0136.0	063.1	166.7	000.0800	0027.4	021.8	36.46
048.0	050.0000	0136.7	063.2	165.1	000.0800	0028.7	022.8	35.77
049.0	050.0000	0137.7	063.3	163.6	000.0800	0029.8	023.7	35.11
050.0	050.0000	0137.1	063.2	162.8	000.0800	0031.1	024.7	34.65
051.0	050.0000	0137.1	063.2	161.8	000.0800	0031.2	025.7	34.00
052.0	050.0000	0137.3	063.3	161.0	000.0800	0030.9	026.8	33.27
053.0	050.0000	0137.8	063.3	160.1	000.0800	0030.4	027.8	32.54
054.0	050.0000	0138.5	063.4	159.3	000.0800	0029.7	028.8	31.87
055.0	050.0000	0138.5	063.4	158.7	000.0800	0029.6	029.9	31.33
056.0	050.0000	0138.4	063.4	158.3	000.0800	0029.5	031.0	30.82
057.0	050.0000	0138.7	063.5	157.8	000.0800	0029.4	032.1	30.37
058.0	050.0000	0138.8	063.5	157.5	000.0800	0029.2	033.2	29.95
059.0	050.0000	0138.9	063.5	157.2	000.0800	0029.1	034.2	29.54
060.0	050.0000	0138.9	063.5	156.9	000.0800	0029.2	035.3	29.14