

Exhibit 13.1 - Copy of Existing Antenna Structure Registration



Registration Detail

Reg Number	1242922	Status	Constructed
File Number	A0912841	Constructed	06/07/2005
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type	POLE - Any type of Pole		
Location (in NAD83 Coordinates)		Address	MONTAGE MOUNTAIN ROAD
Lat/Long	41-21-06.5 N 075-39-55.3 W		
City, State	SCRANTON , PA	County	LACKAWANNA
Zip	18507	Position of Tower in Array	
Center of AM Array			

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
473.7	60.4
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
534.1	58.2

Painting and Lighting Specifications

None

FAA Notification

FAA Study	2011-AEA-3985-OE	FAA Issue Date	10/18/2011
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Owner & Contact Information

FRN	0023254592	Owner Entity Type	Limited Liability Company
Assignor FRN	0003291192	Assignor ID	L00024153

Owner

CCATT LLC
 Attention To: REGULATORY DEPARTMENT
 2000 CORPORATE DRIVE
 CANONSBURG , PA 15317
 P: (724)416-2000
 F:
 E: REULATORY.DEPARTMENT@CROWNCastle.COM

Contact

MINNEY , LISA
 Attention To: REGULATORY DEPT.
 2000 CORPORATE DRIVE
 CANONSBURG , PA 15317
 P: (724)416-2000
 F:
 E: LISA.MINNEY@CROWNCastle.COM

Last Action Status

Status	Constructed	Received	08/12/2014
Purpose	Change Owner	Entered	08/12/2014
Mode	Interactive		

Related Applications

08/12/2014 A0912841 - Change Owner (OC)
 01/29/2014 A0880170 - Admin Update (AU)
 04/05/2013 A0831646 - Notification (NT)
 Related applications (12)

Comments

Comments

None

History

Date

08/13/2014 Registration Printed
 08/13/2014 Change of Ownership Letter Sent
 08/12/2014 Change of Ownership Received
 All History (32)

Event

Automated Letters

08/13/2014 Authorization, Reference
 08/13/2014 Ownership Change, Reference 814378
 01/30/2014 Authorization, Reference
 All letters (12)

Exhibit 13.2

Vertical Plan of Antenna System

The site is located at the end of Montage Mountain Rd;
the city of Scranton; Lackawanna County, Pennsylvania.

Site Location (NAD 27)

NL: 41° 21' 06"

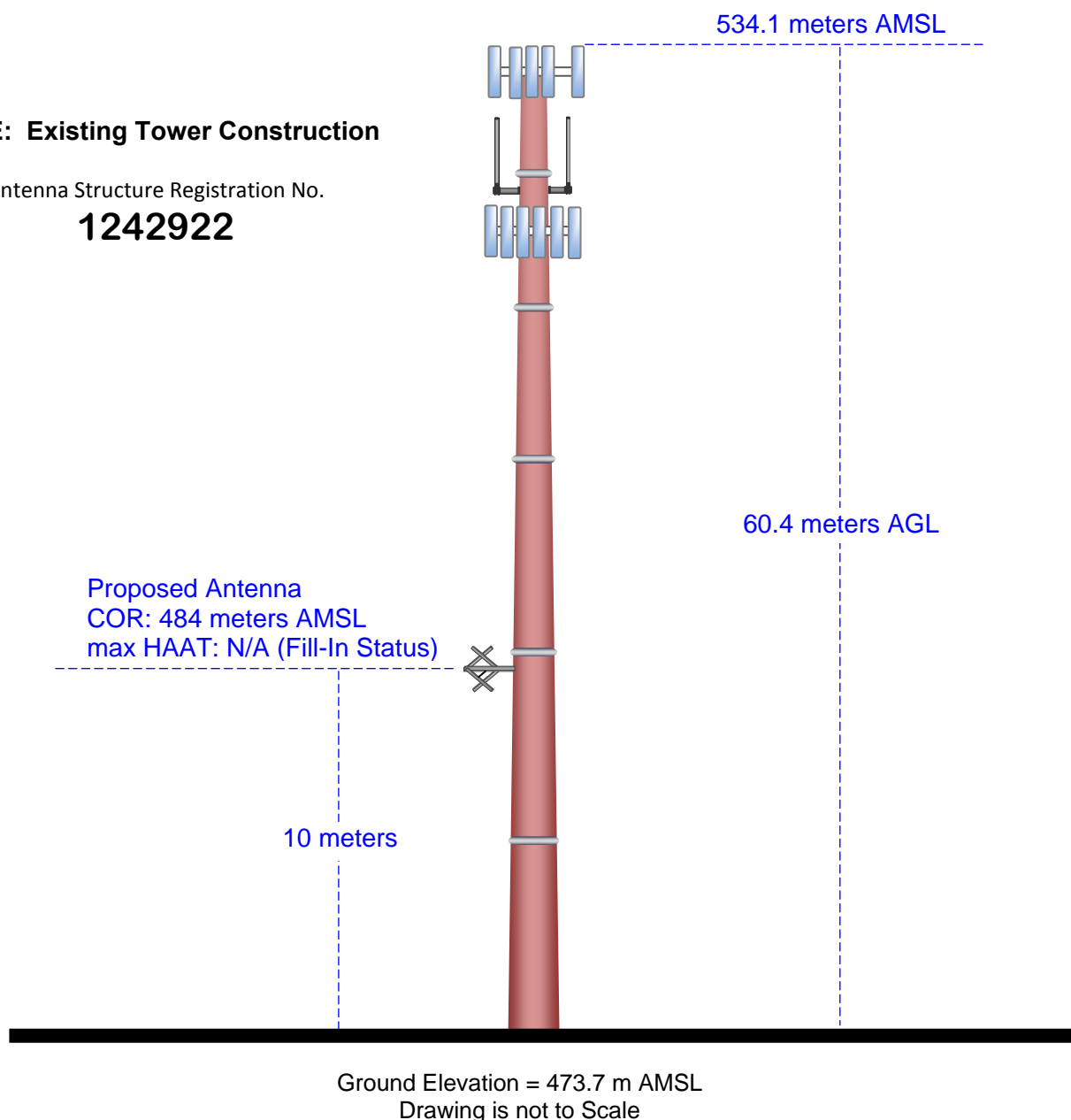
WL: 75° 39' 57"

(41-21-06.5NL; 75-39-55.3WL NAD1983)

NOTE: Existing Tower Construction

Antenna Structure Registration No.

1242922



MUNN-REESE, INC.

Broadcast Engineering Consultants
Coldwater, MI 49036

Terrain

158

702 m

NED 03 SEC Terrain Database
US Census 2010 PL Database

Exhibit 13.3 Present vs. Proposed Service Contour Study

Proposed 60 dBμ F(50:50) Contour

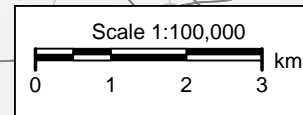
Present 60 dBμ F(50:50) Contour

CH287D.P
Moosic, PA
Proposed Operation
Facility ID: 147323
Latitude: 41-21-06 N
Longitude: 075-39-57 W
ERP: 0.01 kW
Channel: 287D (105.3 MHz)
AMSL Height: 484.0 m
Horiz. Pattern: Omni

60 dBμ F(50:50) Contour
Total Population: 74,539
Total Area: 110 sq. km

W288CL.C
Moosic, PA
BNPFT20130326BDN
Facility ID: 147323
Latitude: 41-20-52 N
Longitude: 075-39-03 W
ERP: 0.004 kW
Channel: 288D (105.5 MHz)
AMSL Height: 621.0 m
Horiz. Pattern: Directional

60 dBμ F(50:50) Contour
Total Population: 500
Total Area: 25 sq. km



NED 03 SEC Terrain Database
US Census 2010 PL Database

25 mile AM Site Radius

Exhibit 13.4 Proposed vs. Primary Service Contour Study

WITK(AM) 2 mV/m Daytime Contour

Proposed 60 dBµ F(50:50) Contour

WITK(AM)

Moosic

CH287D.P

WITK(AM)
PITTSBURGH, PA
Daytime - 1550 kHz
File No: BL-19870427AM
Facility ID No.: 70868
41° 20' 45" N Latitude
75° 47' 80" W Longitude
Power: 10.0 kW
RMS Theo: 982.83 mV/m/km

CH287D.P
Moosic, PA
Proposed Operation
Facility ID: 147323
Latitude: 41-21-06 N
Longitude: 075-39-57 W
ERP: 0.01 kW
Channel: 287D (105.3 MHz)
AMSL Height: 484.0 m
Horiz. Pattern: Omni

Terrain
67 812 m

Scale 1:475,000
0 6 12 18 km



Exhibit 13.5

Tabulation of Proposed Translator Allocation

Steel City Radio, Inc.											
REFERENCE		CH#	287D - 105.3 MHz, Pwr= 0.01 kW, HAAT= 70.9 M, COR= 484 M					DISPLAY DATES			
41 21 06.0 N.		Average Protected F(50-50)= 4.9 km							DATA 01-12-15		
75 39 57.0 W.		Omni-directional							SEARCH 01-16-15		
CH CITY	CALL	TYPE STATE	ANT ---	AZI ---	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT* (in km)
287A Hawley	WYCY	LIC NCN PA		57.9 238.2	47.84 BLH19930908KB	41 34 45.0 75 10 42.0	2.900 146	81.0 517	27.2 Bold Gold Media Group, L.p	-36.3*<	10.5
285A Scranton	WWRR	LIC CX PA		331.4 151.4	10.55 BLH20060623AAT	41 26 06.0 75 43 35.0	0.270 333	1.2 690	24.6 Bold Gold Media Wbs, L.p	3.1	-14.3*<
288D Moosic	W288CL	CP DV_ PA		109.0 289.1	1.32 BNPFT20130326BDN	41 20 52.0 75 39 03.0	0.004 195	5.1 621	3.0 Steel City Radio, Inc.	-6.9*<	-6.1*<
290A Pocono Pines	WPZX	LIC NCX PA		159.5 339.6	25.35 BLH20140326AEG	41 08 17.0 75 33 35.0	5.000 103	2.4 643	24.5 The Scranton Times, L.p.	19.8	0.6
289D Scranton	W289AU	LIC DC_ PA		321.4 141.3	10.87 BLFT20110523AAF	41 25 41.0 75 44 50.0	0.010 356	0.1 692	7.8 Community Radio Collective	4.7	2.9
288D Wilkes-barre	W288BE	LIC _C_ PA		221.4 41.3	24.46 BLFT20020529AAX	41 11 11.0 75 51 33.0	0.008 258	11.7 654	8.3 Luzerne County Community C	7.4	8.8
287B Philadelphia	WDAS-FM	LIC _CN PA		166.0 346.3	150.00 BLH19930208KK	40 02 30.0 75 14 24.0	16.500 266	125.5 334	64.3 Amfm Radio Licenses, L.I.c	21.4	71.6
287D Mount Pocono	W287AY	LIC DC_ PA		134.6 314.8	36.45 BLFT20070912ABK	41 07 16.0 75 21 21.0	0.006 67	7.1 536	2.3 The Scranton Times, L.p.	26.2	24.0
286B Williamsport	WILQ	LIC _CN PA		261.4 80.5	110.49 BLH19890403KA	41 11 43.0 76 58 18.0	9.200 346	72.2 608	61.9 Backyard Broadcasting Pa,	28.8	28.8
289B Endicott	WBNW-FM	LIC _CX NY		342.5 162.3	91.71 BMLH20070215ABR	42 08 17.0 75 59 59.0	35.000 174	4.7 543	55.8 Cc Licenses, LIc	80.7	35.4
288A Tamaqua	WMGH-FM	LIC _CN PA		206.2 26.0	69.89 BLH19960422KD	40 47 14.0 76 01 59.0	1.400 148	28.1 510	19.1 J-systems Franchising Corp	38.7	46.4
287B Hornell	WKPQ	LIC _CN NY		302.8 121.5	196.51 BLH19880614KB	42 17 32.0 77 40 27.0	43.000 162	138.5 694	67.2 Sound Communications, LIc	50.6	94.0
SPECIAL NEGOTIATED SHORT-SPACED ALLOCATION											
286B Ephrata	WIOV-FM	LIC _CN PA		197.8 17.4	137.24 BLH19980603KD	40 10 30.0 76 09 31.0	25.000 214	74.6 360	63.1 Radio License Holding Cbc,	59.5	67.8

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 restricted contour.
 < = Contour Overlap

Green Text denotes the W288CL - Moosic, PA facility to be modified by this Form 349 filing. This facility need not be protected.

Blue Highlighted Text denotes supplemental contour protection studies toward select facilities as included in **Exhibit(s) 13.6 to 13.7**.

Yellow Highlighted Text denotes a §74.1204(d) waiver request for Second Adjacent Channel Given Interference toward WWRR(FM) - Scranton, PA (CH285A) as included in **Exhibit 13.8**. The Protected Contour at the proposed Translator site has been calculated to be no less than than the 114.8 dBμ F(50:10) Interference Contour corresponding to the worst case WWRR(FM) 74.8 dBμ F(50:50) Protected Contour. This represents the proposed interference contour which falls wholly within the 40:1 dBu ratio. As seen in the **Exhibit 13.8** USGS Topographic Photo-Map, there is a lack of population, housing, buildings or major roads within this 114.8 dBμ F(50:10) interference area. The applicant would like to note the existence of a dedicated transmitter building located within this restricted access site fencing. However, structures of this nature have been exempt as a matter of FCC Policy.

Exhibit 13.6

Contour Protection Studies Toward WYCY(FM) - Hawley, PA

Steel City Radio, Inc.

FMCommander Single Allocation Study - 01-16-2015 - NED 03 SEC
CH287D.P's Overlaps (In= -36.27 km, Out= 10.48 km)

CH287D.P CH 287 D
Lat= 41 21 06.0, Lng= 75 39 57.0
0.01 kW 70.9 M HAAT, 484 M COR
Prot.= 60 dBu, Intef.= 40 dBu

WYCY CH 287 A 73.215 N BLH19930908KB
Lat= 41 34 45.0, Lng= 75 10 42.0
2.9 kW 146 M HAAT, 517 M COR
Prot.= 60 dBu, Intef.= 40 dBu

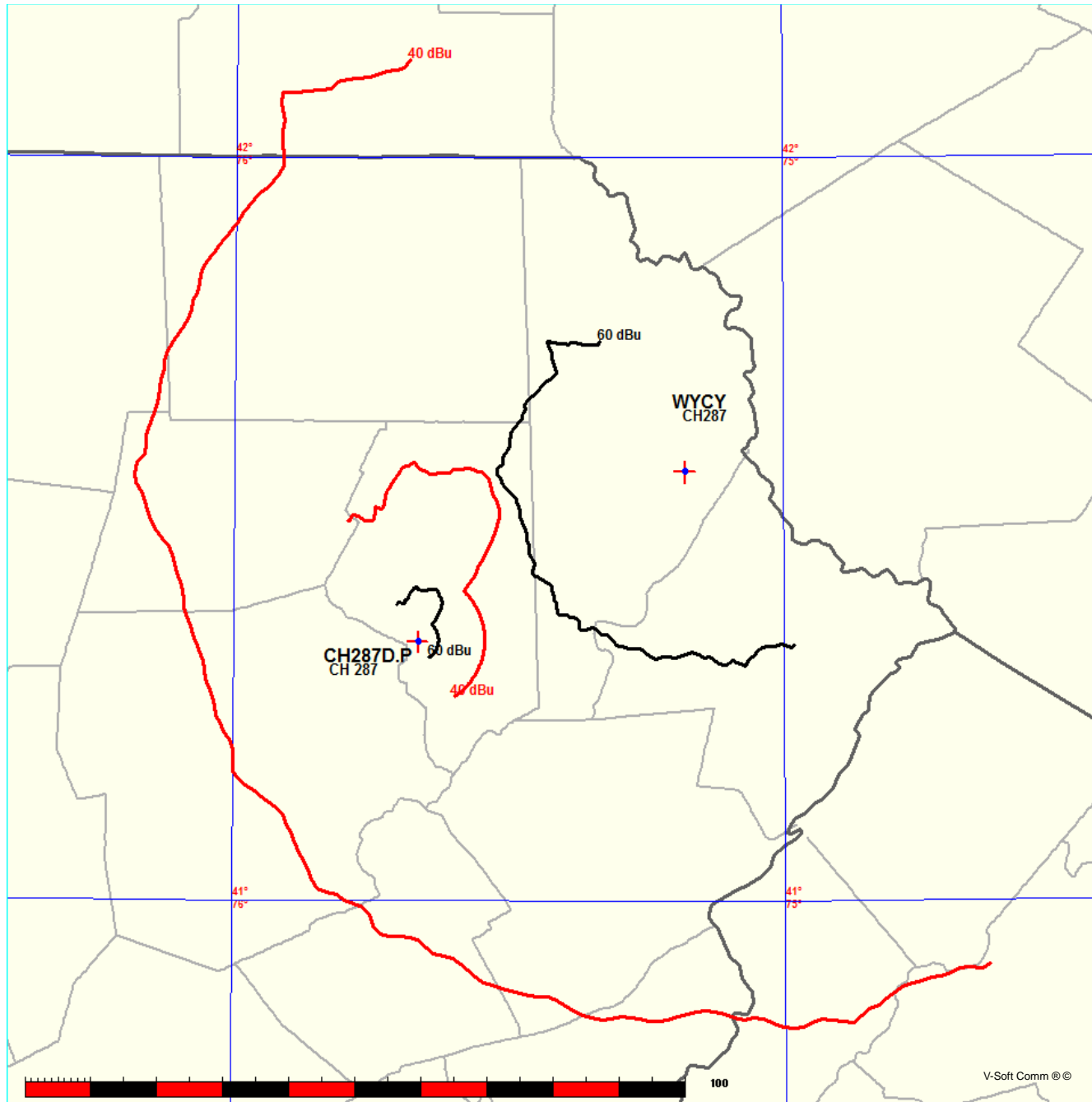


Exhibit 13.6

Contour Protection Studies Toward WYCY(FM) - Hawley, PA

01-16-2015

Terrain Data: NED 03 SEC

FMOver Analysis

CH287D.P

WYCY BLH19930908KB

Channel = 287D

Max ERP = 0.01 kW

RCAMSL = 484 M

N. Lat. 41 21 06.0

W. Lng. 75 39 57.0

Protected

60 dBu

Channel = 287A

Max ERP = 2.9 kW

RCAMSL = 517 M

N. Lat. 41 34 45.0

W. Lng. 75 10 42.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
015.0	000.0100	0183.5	007.9	245.5	002.9000	0122.3	042.4	52.93*	36.82
016.0	000.0100	0186.3	007.9	245.4	002.9000	0122.4	042.3	52.99*	36.96
017.0	000.0100	0189.6	008.0	245.4	002.9000	0122.4	042.1	53.06*	37.12
018.0	000.0100	0189.9	008.0	245.3	002.9000	0122.5	042.0	53.11*	37.24
019.0	000.0100	0188.5	008.0	245.1	002.9000	0122.7	041.9	53.15*	37.35
020.0	000.0100	0189.0	008.0	245.0	002.9000	0122.8	041.8	53.21*	37.48
021.0	000.0100	0191.0	008.0	244.9	002.9000	0123.0	041.7	53.27*	37.63
022.0	000.0100	0188.7	008.0	244.7	002.9000	0123.4	041.7	53.32*	37.76
023.0	000.0100	0185.3	007.9	244.5	002.9000	0123.9	041.6	53.36*	37.88
024.0	000.0100	0179.6	007.8	244.2	002.9000	0124.3	041.6	53.39*	37.95
025.0	000.0100	0172.7	007.6	244.0	002.9000	0125.0	041.7	53.41*	38.03
026.0	000.0100	0165.7	007.5	243.7	002.9000	0125.8	041.7	53.44*	38.11
027.0	000.0100	0160.1	007.3	243.4	002.9000	0126.3	041.7	53.45*	38.15
028.0	000.0100	0156.0	007.2	243.2	002.9000	0126.7	041.7	53.48*	38.21
029.0	000.0100	0153.8	007.2	243.0	002.9000	0126.9	041.7	53.50*	38.28
030.0	000.0100	0149.2	007.1	242.8	002.9000	0127.2	041.7	53.50*	38.29
031.0	000.0100	0145.7	007.0	242.6	002.9000	0127.3	041.7	53.51*	38.31
032.0	000.0100	0142.6	006.9	242.4	002.9000	0127.5	041.7	53.52*	38.33
033.0	000.0100	0136.0	006.8	242.2	002.9000	0127.6	041.8	53.49*	38.27
034.0	000.0100	0128.3	006.6	241.9	002.9000	0127.6	041.9	53.45*	38.18
035.0	000.0100	0117.6	006.3	241.6	002.9000	0127.7	042.1	53.38*	38.02
036.0	000.0100	0104.3	006.0	241.3	002.9000	0127.8	042.4	53.27*	37.76
037.0	000.0100	0093.7	005.7	241.0	002.9000	0127.7	042.6	53.15*	37.50
038.0	000.0100	0080.5	005.2	240.6	002.9000	0127.5	043.0	52.99*	37.10
039.0	000.0100	0069.2	004.8	240.3	002.9000	0127.3	043.3	52.83*	36.74
040.0	000.0100	0059.8	004.5	240.1	002.9000	0127.3	043.6	52.72*	36.46
041.0	000.0100	0054.4	004.3	239.9	002.9000	0127.4	043.7	52.65*	36.31
042.0	000.0100	0049.0	004.1	239.7	002.9000	0127.5	043.9	52.57*	36.12
043.0	000.0100	0036.5	003.5	239.4	002.9000	0127.7	044.5	52.35*	35.60
044.0	000.0100	0022.6	003.2	239.2	002.9000	0128.2	044.8	52.26*	35.38
045.0	000.0100	0011.2	003.2	239.2	002.9000	0128.3	044.8	52.27*	35.42
046.0	000.0100	0001.3	003.2	239.1	002.9000	0128.5	044.8	52.29*	35.47
047.0	000.0100	-0005.3	003.2	239.0	002.9000	0128.8	044.8	52.31*	35.52
048.0	000.0100	-0015.8	003.2	238.9	002.9000	0129.1	044.7	52.33*	35.58

MUNN-REESE, INC.

Broadcast Engineering Consultants
COLDWATER, MI 49036

Exhibit 13.6

Contour Protection Studies Toward WYCY(FM) - Hawley, PA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
049.0	000.0100	-0025.9	003.2	238.9	002.9000	0129.4	044.7	52.35*
050.0	000.0100	-0034.3	003.2	238.8	002.9000	0129.8	044.7	52.37*
051.0	000.0100	-0037.8	003.2	238.7	002.9000	0130.2	044.7	52.40*
052.0	000.0100	-0034.1	003.2	238.7	002.9000	0130.6	044.7	52.42*
053.0	000.0100	-0032.4	003.2	238.6	002.9000	0131.0	044.7	52.44*
054.0	000.0100	-0033.7	003.2	238.5	002.9000	0131.4	044.7	52.47*
055.0	000.0100	-0038.4	003.2	238.5	002.9000	0131.8	044.7	52.49*
056.0	000.0100	-0040.9	003.2	238.4	002.9000	0132.3	044.7	52.52*
057.0	000.0100	-0042.5	003.2	238.3	002.9000	0132.8	044.7	52.55*
058.0	000.0100	-0046.9	003.2	238.2	002.9000	0133.2	044.7	52.57*
059.0	000.0100	-0050.8	003.2	238.2	002.9000	0133.6	044.7	52.59*
060.0	000.0100	-0053.2	003.2	238.1	002.9000	0134.0	044.7	52.61*
061.0	000.0100	-0050.3	003.2	238.0	002.9000	0134.4	044.7	52.63*
062.0	000.0100	-0041.2	003.2	238.0	002.9000	0134.8	044.7	52.65*
063.0	000.0100	-0030.0	003.2	237.9	002.9000	0135.3	044.7	52.68*
064.0	000.0100	-0021.4	003.2	237.8	002.9000	0135.7	044.7	52.70*
065.0	000.0100	-0018.9	003.2	237.8	002.9000	0136.2	044.7	52.72*
066.0	000.0100	-0018.2	003.2	237.7	002.9000	0136.6	044.7	52.74*
067.0	000.0100	-0019.5	003.2	237.6	002.9000	0137.0	044.7	52.76*
068.0	000.0100	-0019.9	003.2	237.5	002.9000	0137.4	044.7	52.77*
069.0	000.0100	-0018.9	003.2	237.5	002.9000	0137.7	044.8	52.79*
070.0	000.0100	-0015.8	003.2	237.4	002.9000	0138.1	044.8	52.80*
071.0	000.0100	-0012.9	003.2	237.3	002.9000	0138.4	044.8	52.81*
072.0	000.0100	-0009.7	003.2	237.3	002.9000	0138.7	044.8	52.82*
073.0	000.0100	-0011.5	003.2	237.2	002.9000	0139.0	044.8	52.83*
074.0	000.0100	-0010.1	003.2	237.1	002.9000	0139.2	044.8	52.84*
075.0	000.0100	-0009.3	003.2	237.1	002.9000	0139.5	044.8	52.85*
076.0	000.0100	-0009.3	003.2	237.0	002.9000	0139.7	044.9	52.85*
077.0	000.0100	-0007.9	003.2	236.9	002.9000	0139.9	044.9	52.85*
078.0	000.0100	-0007.3	003.2	236.9	002.9000	0140.1	044.9	52.85*
079.0	000.0100	-0008.3	003.2	236.8	002.9000	0140.3	044.9	52.85*
080.0	000.0100	-0011.6	003.2	236.7	002.9000	0140.4	044.9	52.85*
081.0	000.0100	-0012.7	003.2	236.7	002.9000	0140.5	045.0	52.85*
082.0	000.0100	-0012.7	003.2	236.6	002.9000	0140.6	045.0	52.85*
083.0	000.0100	-0013.5	003.2	236.5	002.9000	0140.7	045.0	52.84*
084.0	000.0100	-0014.2	003.2	236.5	002.9000	0140.7	045.0	52.83*
085.0	000.0100	-0016.0	003.2	236.4	002.9000	0140.8	045.1	52.82*
086.0	000.0100	-0019.4	003.2	236.4	002.9000	0140.8	045.1	52.81*
087.0	000.0100	-0023.7	003.2	236.3	002.9000	0140.7	045.1	52.80*
088.0	000.0100	-0030.7	003.2	236.2	002.9000	0140.6	045.1	52.78*
089.0	000.0100	-0039.7	003.2	236.2	002.9000	0140.6	045.2	52.76*
090.0	000.0100	-0041.8	003.2	236.1	002.9000	0140.5	045.2	52.75*
091.0	000.0100	-0039.2	003.2	236.1	002.9000	0140.4	045.2	52.73*
092.0	000.0100	-0039.5	003.2	236.0	002.9000	0140.2	045.3	52.71*
093.0	000.0100	-0041.0	003.2	236.0	002.9000	0140.1	045.3	52.69*

Exhibit 13.6

Contour Protection Studies Toward WYCY(FM) - Hawley, PA

01-16-2015

Terrain Data: NED 03 SEC

FMOver Analysis

WYCY BLH19930908KB

CH287D.P

Channel = 287A

Max ERP = 2.9 kW

RCAMSL = 517 M

N. Lat. 41 34 45.0

W. Lng. 75 10 42.0

Protected

60 dBu

Channel = 287D

Max ERP = 0.01 kW

RCAMSL = 484 M

N. Lat. 41 21 06.0

W. Lng. 75 39 57.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
193.0	002.9000	0140.4	027.8	092.9	000.0100	-0040.9	034.5	20.42	
194.0	002.9000	0137.3	027.6	092.3	000.0100	-0040.1	034.1	20.58	
195.0	002.9000	0136.3	027.5	092.0	000.0100	-0039.5	033.6	20.75	
196.0	002.9000	0138.8	027.7	092.2	000.0100	-0039.7	033.1	20.95	
197.0	002.9000	0140.7	027.9	092.2	000.0100	-0039.9	032.6	21.14	
198.0	002.9000	0140.9	027.9	092.0	000.0100	-0039.6	032.1	21.32	
199.0	002.9000	0141.2	027.9	091.9	000.0100	-0039.4	031.6	21.52	
200.0	002.9000	0142.3	028.0	091.8	000.0100	-0039.2	031.1	21.73	
201.0	002.9000	0142.8	028.0	091.5	000.0100	-0038.6	030.7	21.94	
202.0	002.9000	0143.1	028.1	091.3	000.0100	-0038.4	030.2	22.16	
203.0	002.9000	0140.8	027.9	090.6	000.0100	-0040.3	029.8	22.34	
204.0	002.9000	0138.2	027.6	089.8	000.0100	-0041.9	029.4	22.53	
205.0	002.9000	0135.3	027.4	089.0	000.0100	-0039.5	029.1	22.70	
206.0	002.9000	0134.1	027.3	088.4	000.0100	-0034.6	028.7	22.90	
207.0	002.9000	0136.0	027.4	088.2	000.0100	-0032.9	028.2	23.17	
208.0	002.9000	0138.4	027.7	088.1	000.0100	-0031.8	027.7	23.47	
209.0	002.9000	0136.2	027.5	087.2	000.0100	-0025.0	027.4	23.65	
210.0	002.9000	0134.3	027.3	086.4	000.0100	-0021.0	027.1	23.84	
211.0	002.9000	0135.0	027.4	086.0	000.0100	-0019.2	026.6	24.10	
212.0	002.9000	0139.3	027.7	086.0	000.0100	-0019.5	026.0	24.48	
213.0	002.9000	0145.8	028.3	086.4	000.0100	-0020.8	025.3	24.95	
214.0	002.9000	0149.7	028.6	086.3	000.0100	-0020.5	024.7	25.35	
215.0	002.9000	0146.6	028.4	085.1	000.0100	-0016.1	024.5	25.51	
216.0	002.9000	0138.5	027.7	083.1	000.0100	-0013.6	024.6	25.44	
217.0	002.9000	0137.4	027.6	082.2	000.0100	-0012.7	024.3	25.64	
218.0	002.9000	0140.0	027.8	081.8	000.0100	-0012.8	023.8	25.99	
219.0	002.9000	0142.7	028.0	081.3	000.0100	-0012.8	023.3	26.35	
220.0	002.9000	0143.7	028.1	080.5	000.0100	-0012.4	022.9	26.63	
221.0	002.9000	0148.1	028.5	080.2	000.0100	-0012.0	022.3	27.08	

MUNN-REESE, INC.

Broadcast Engineering Consultants

COLDWATER, MI 49036

Exhibit 13.6

Contour Protection Studies Toward WYCY(FM) - Hawley, PA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
222.0	002.9000	0152.8	028.9	079.8	000.0100	-0011.2	021.7	27.56
223.0	002.9000	0149.6	028.6	078.3	000.0100	-0007.3	021.6	27.62
224.0	002.9000	0144.5	028.2	076.6	000.0100	-0008.6	021.7	27.55
225.0	002.9000	0141.5	027.9	075.1	000.0100	-0009.5	021.6	27.58
226.0	002.9000	0139.0	027.7	073.7	000.0100	-0010.6	021.6	27.61
227.0	002.9000	0135.3	027.4	072.2	000.0100	-0009.6	021.7	27.57
228.0	002.9000	0131.8	027.1	070.7	000.0100	-0013.7	021.7	27.50
229.0	002.9000	0129.4	026.9	069.4	000.0100	-0017.9	021.7	27.50
230.0	002.9000	0126.1	026.6	068.0	000.0100	-0019.9	021.9	27.41
231.0	002.9000	0126.2	026.6	066.8	000.0100	-0019.2	021.7	27.52
232.0	002.9000	0129.2	026.9	065.8	000.0100	-0018.3	021.3	27.80
233.0	002.9000	0131.4	027.1	064.7	000.0100	-0019.4	021.1	28.03
234.0	002.9000	0133.8	027.3	063.5	000.0100	-0024.7	020.8	28.25
235.0	002.9000	0137.2	027.5	062.3	000.0100	-0038.0	020.4	28.53
236.0	002.9000	0140.2	027.8	061.0	000.0100	-0049.9	020.1	28.78
237.0	002.9000	0139.7	027.8	059.7	000.0100	-0052.6	020.1	28.77
238.0	002.9000	0134.6	027.3	058.3	000.0100	-0048.0	020.5	28.44
239.0	002.9000	0128.8	026.8	057.0	000.0100	-0042.4	021.0	28.05
240.0	002.9000	0127.3	026.7	055.7	000.0100	-0040.8	021.2	27.94
241.0	002.9000	0127.8	026.7	054.4	000.0100	-0035.6	021.2	27.93
242.0	002.9000	0127.6	026.7	053.2	000.0100	-0032.4	021.2	27.87
243.0	002.9000	0127.0	026.7	052.0	000.0100	-0034.1	021.4	27.78
244.0	002.9000	0124.9	026.5	050.9	000.0100	-0037.7	021.6	27.57
245.0	002.9000	0122.8	026.3	049.8	000.0100	-0033.0	021.9	27.36
246.0	002.9000	0121.9	026.2	048.7	000.0100	-0023.2	022.1	27.21
247.0	002.9000	0121.4	026.2	047.6	000.0100	-0011.5	022.3	27.07
248.0	002.9000	0119.7	026.1	046.7	000.0100	-0002.8	022.6	26.85
249.0	002.9000	0117.9	025.9	045.8	000.0100	0003.1	022.9	26.62
250.0	002.9000	0117.6	025.9	044.8	000.0100	0014.0	023.1	26.47
251.0	002.9000	0117.5	025.9	043.8	000.0100	0025.7	023.3	26.32
252.0	002.9000	0118.2	025.9	042.7	000.0100	0040.5	023.5	28.67
253.0	002.9000	0118.3	025.9	041.8	000.0100	0050.6	023.7	30.54
254.0	002.9000	0119.0	026.0	040.8	000.0100	0055.2	023.9	31.18
255.0	002.9000	0119.2	026.0	039.8	000.0100	0061.0	024.1	31.83
256.0	002.9000	0117.8	025.9	039.1	000.0100	0067.7	024.5	32.42
257.0	002.9000	0116.5	025.8	038.5	000.0100	0074.7	024.9	32.99
258.0	002.9000	0117.3	025.8	037.6	000.0100	0086.1	025.1	34.12
259.0	002.9000	0118.1	025.9	036.7	000.0100	0097.8	025.3	35.15
260.0	002.9000	0119.0	026.0	035.8	000.0100	0106.6	025.6	35.78
261.0	002.9000	0119.2	026.0	035.1	000.0100	0116.6	025.9	36.37
262.0	002.9000	0122.1	026.3	034.0	000.0100	0128.6	026.1	37.08
263.0	002.9000	0127.2	026.7	032.6	000.0100	0138.9	026.1	37.71
264.0	002.9000	0132.7	027.2	031.1	000.0100	0145.4	026.2	38.08
265.0	002.9000	0136.2	027.5	030.0	000.0100	0149.2	026.4	38.18
266.0	002.9000	0139.3	027.7	028.9	000.0100	0154.0	026.6	38.32

Exhibit 13.7

Contour Protection Studies Toward WPZX(FM) - Pocono Pines, PA

Steel City Radio, Inc.

FMCommander Single Allocation Study - 01-16-2015 - NED 03 SEC

CH287D.P's Overlaps (In= 19.8 km, Out= 0.58 km)

CH287D.P CH 287 D

Lat= 41 21 06.0, Lng= 75 39 57.0

0.01 kW 70.9 M HAAT, 484 M COR

Prot.= 60 dBu, Intef.= 100 dBu

WPZX CH 290 A 73.215 N BLH20140326AEG

Lat= 41 08 17.0, Lng= 75 33 35.0

5.0 kW 103 M HAAT, 643 M COR

Prot.= 60 dBu, Intef.= 100 dBu

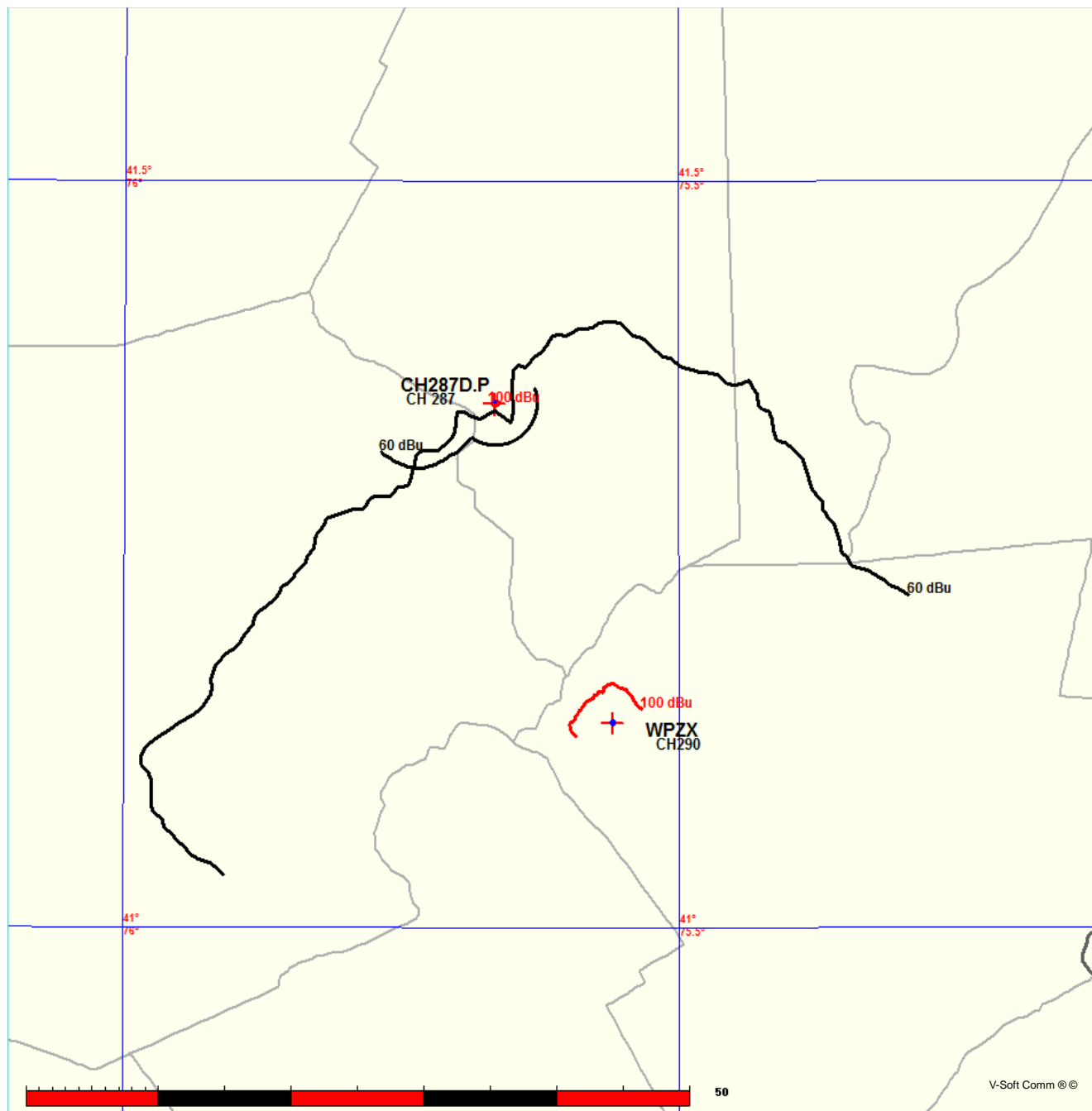


Exhibit 13.7

Contour Protection Studies Toward WPZX(FM) - Pocono Pines, PA

01-16-2015

Terrain Data: NED 03 SEC

FMOver Analysis

CH287D.P

WPZX BLH20140326AEG

Channel = 287D

Max ERP = 0.01 kW

RCAMSL = 484 M

N. Lat. 41 21 06.0

W. Lng. 75 39 57.0

Protected

60 dBu

Channel = 290A

Max ERP = 5 kW

RCAMSL = 643 M

N. Lat. 41 08 17.0

W. Lng. 75 33 35.0

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
116.0	000.0100	-0041.4	003.2	344.9	005.0000	0102.7	023.2	64.16	
117.0	000.0100	-0041.7	003.2	344.8	005.0000	0102.8	023.1	64.20	
118.0	000.0100	-0041.8	003.2	344.7	005.0000	0103.0	023.1	64.25	
119.0	000.0100	-0043.8	003.2	344.6	005.0000	0102.8	023.0	64.27	
120.0	000.0100	-0044.1	003.2	344.6	005.0000	0102.7	023.0	64.28	
121.0	000.0100	-0043.8	003.2	344.5	005.0000	0102.5	023.0	64.30	
122.0	000.0100	-0043.6	003.2	344.4	005.0000	0102.3	022.9	64.30	
123.0	000.0100	-0043.1	003.2	344.2	005.0000	0102.0	022.9	64.30	
124.0	000.0100	-0040.9	003.2	344.1	005.0000	0101.5	022.9	64.28	
125.0	000.0100	-0038.4	003.2	344.0	005.0000	0100.8	022.8	64.25	
126.0	000.0100	-0036.0	003.2	343.9	005.0000	0100.0	022.8	64.20	
127.0	000.0100	-0033.6	003.2	343.8	005.0000	0099.2	022.8	64.14	
128.0	000.0100	-0032.4	003.2	343.7	005.0000	0098.2	022.7	64.08	
129.0	000.0100	-0030.6	003.2	343.6	005.0000	0097.3	022.7	64.01	
130.0	000.0100	-0027.9	003.2	343.5	005.0000	0096.2	022.7	63.93	
131.0	000.0100	-0026.5	003.2	343.4	005.0000	0095.0	022.6	63.83	
132.0	000.0100	-0023.5	003.2	343.2	005.0000	0093.7	022.6	63.72	
133.0	000.0100	-0021.7	003.2	343.1	005.0000	0092.3	022.6	63.61	
134.0	000.0100	-0022.5	003.2	343.0	005.0000	0090.8	022.5	63.48	
135.0	000.0100	-0021.9	003.2	342.9	005.0000	0089.3	022.5	63.34	
136.0	000.0100	-0018.4	003.2	342.8	005.0000	0087.7	022.5	63.19	
137.0	000.0100	-0014.0	003.2	342.6	005.0000	0086.0	022.5	63.03	
138.0	000.0100	-0011.3	003.2	342.5	005.0000	0084.4	022.4	62.88	
139.0	000.0100	-0008.2	003.2	342.4	005.0000	0083.0	022.4	62.74	
140.0	000.0100	-0006.1	003.2	342.2	005.0000	0081.7	022.4	62.61	
141.0	000.0100	-0006.2	003.2	342.1	005.0000	0080.3	022.4	62.47	
142.0	000.0100	-0004.9	003.2	342.0	005.0000	0078.6	022.4	62.30	
143.0	000.0100	-0003.5	003.2	341.8	005.0000	0077.1	022.3	62.13	
144.0	000.0100	-0003.5	003.2	341.7	005.0000	0076.1	022.3	62.03	
145.0	000.0100	-0004.4	003.2	341.6	005.0000	0075.4	022.3	61.96	
146.0	000.0100	-0008.1	003.2	341.4	005.0000	0074.9	022.3	61.92	
147.0	000.0100	-0013.0	003.2	341.3	005.0000	0074.5	022.3	61.88	
148.0	000.0100	-0014.7	003.2	341.2	005.0000	0074.2	022.3	61.86	
149.0	000.0100	-0016.1	003.2	341.0	005.0000	0074.1	022.3	61.85	

MUNN-REESE, INC.

Broadcast Engineering Consultants

COLDWATER, MI 49036

Exhibit 13.7

Contour Protection Studies Toward WPZX(FM) - Pocono Pines, PA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
150.0	000.0100	-0014.9	003.2	340.9	005.0000	0074.1	022.2	61.86
151.0	000.0100	-0010.1	003.2	340.8	005.0000	0074.4	022.2	61.90
152.0	000.0100	-0012.4	003.2	340.6	005.0000	0074.9	022.2	61.97
153.0	000.0100	-0013.4	003.2	340.5	005.0000	0075.6	022.2	62.06
154.0	000.0100	-0015.3	003.2	340.3	005.0000	0076.3	022.2	62.15
155.0	000.0100	-0026.7	003.2	340.2	005.0000	0077.2	022.2	62.25
156.0	000.0100	-0035.1	003.2	340.0	005.0000	0077.9	022.2	62.34
157.0	000.0100	-0041.7	003.2	339.9	005.0000	0078.8	022.2	62.44
158.0	000.0100	-0041.7	003.2	339.8	005.0000	0079.7	022.2	62.54
159.0	000.0100	-0038.8	003.2	339.6	005.0000	0080.4	022.2	62.62
160.0	000.0100	-0039.2	003.2	339.5	005.0000	0081.0	022.2	62.69
161.0	000.0100	-0042.0	003.2	339.3	005.0000	0081.6	022.2	62.76
162.0	000.0100	-0045.3	003.2	339.2	005.0000	0082.0	022.2	62.80
163.0	000.0100	-0048.5	003.2	339.1	005.0000	0082.3	022.2	62.83
164.0	000.0100	-0050.7	003.2	338.9	005.0000	0082.6	022.2	62.86
165.0	000.0100	-0052.9	003.2	338.8	005.0000	0082.8	022.2	62.87
166.0	000.0100	-0059.7	003.2	338.6	005.0000	0082.9	022.2	62.88
167.0	000.0100	-0063.3	003.2	338.5	005.0000	0082.8	022.2	62.87
168.0	000.0100	-0065.6	003.2	338.4	005.0000	0082.9	022.2	62.87
169.0	000.0100	-0072.1	003.2	338.2	005.0000	0082.6	022.2	62.83
170.0	000.0100	-0078.1	003.2	338.1	005.0000	0082.4	022.3	62.80
171.0	000.0100	-0080.9	003.2	337.9	005.0000	0082.2	022.3	62.76
172.0	000.0100	-0082.7	003.2	337.8	005.0000	0082.0	022.3	62.74
173.0	000.0100	-0087.9	003.2	337.7	005.0000	0082.0	022.3	62.72
174.0	000.0100	-0090.9	003.2	337.5	005.0000	0081.9	022.3	62.71
175.0	000.0100	-0091.1	003.2	337.4	005.0000	0081.8	022.3	62.68
176.0	000.0100	-0092.5	003.2	337.3	005.0000	0081.6	022.3	62.65
177.0	000.0100	-0095.3	003.2	337.1	005.0000	0081.5	022.4	62.62
178.0	000.0100	-0095.4	003.2	337.0	005.0000	0081.5	022.4	62.60
179.0	000.0100	-0093.6	003.2	336.9	005.0000	0081.5	022.4	62.59
180.0	000.0100	-0091.2	003.2	336.7	005.0000	0081.5	022.4	62.58
181.0	000.0100	-0090.6	003.2	336.6	005.0000	0081.6	022.4	62.57
182.0	000.0100	-0089.4	003.2	336.5	005.0000	0081.7	022.5	62.55
183.0	000.0100	-0087.7	003.2	336.3	005.0000	0081.7	022.5	62.55
184.0	000.0100	-0085.0	003.2	336.2	005.0000	0081.8	022.5	62.53
185.0	000.0100	-0082.4	003.2	336.1	005.0000	0081.9	022.5	62.52
186.0	000.0100	-0078.9	003.2	336.0	005.0000	0081.8	022.6	62.49
187.0	000.0100	-0071.8	003.2	335.9	005.0000	0081.7	022.6	62.46
188.0	000.0100	-0064.2	003.2	335.7	005.0000	0081.7	022.6	62.43
189.0	000.0100	-0061.2	003.2	335.6	005.0000	0081.7	022.7	62.42
190.0	000.0100	-0060.0	003.2	335.5	005.0000	0082.0	022.7	62.42
191.0	000.0100	-0056.4	003.2	335.4	005.0000	0082.4	022.7	62.45
192.0	000.0100	-0053.0	003.2	335.3	005.0000	0083.0	022.8	62.49
193.0	000.0100	-0053.6	003.2	335.2	005.0000	0083.6	022.8	62.52
194.0	000.0100	-0056.1	003.2	335.1	005.0000	0084.2	022.8	62.57
195.0	000.0100	-0056.1	003.2	335.0	005.0000	0084.8	022.9	62.61

Exhibit 13.7

Contour Protection Studies Toward WPZX(FM) - Pocono Pines, PA

01-16-2015

Terrain Data: NED 03 SEC

FMOVer Analysis

WPZX BLH20140326AEG

CH287D.P

Channel = 290A

Max ERP = 5 kW

RCAMSL = 643 M

N. Lat. 41 08 17.0

W. Lng. 75 33 35.0

Protected

60 dBu

Channel = 287D

Max ERP = 0.01 kW

RCAMSL = 484 M

N. Lat. 41 21 06.0

W. Lng. 75 39 57.0

Interfering

100 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
295.0	005.0000	0094.0	026.4	230.0	000.0100	0171.9	019.6	44.55	
296.0	005.0000	0092.5	026.2	230.0	000.0100	0172.1	019.1	44.96	
297.0	005.0000	0091.3	026.0	230.1	000.0100	0173.0	018.7	45.40	
298.0	005.0000	0092.4	026.2	231.1	000.0100	0177.7	018.3	45.93	
299.0	005.0000	0091.7	026.1	231.4	000.0100	0179.4	017.8	46.39	
300.0	005.0000	0091.3	026.0	231.8	000.0100	0182.5	017.4	46.90	
301.0	005.0000	0092.4	026.2	232.8	000.0100	0188.2	017.0	47.46	
302.0	005.0000	0093.8	026.4	234.0	000.0100	0195.0	016.7	48.07	
303.0	005.0000	0093.0	026.3	234.2	000.0100	0196.8	016.2	48.54	
304.0	005.0000	0093.2	026.3	234.9	000.0100	0201.1	015.8	49.08	
305.0	005.0000	0094.1	026.4	235.9	000.0100	0204.3	015.4	49.55	
306.0	005.0000	0092.1	026.1	235.6	000.0100	0204.0	014.9	49.76	
307.0	005.0000	0089.5	025.8	234.8	000.0100	0200.7	014.3	50.26	
308.0	005.0000	0087.3	025.5	234.2	000.0100	0196.4	013.8	50.73	
309.0	005.0000	0084.7	025.1	233.2	000.0100	0189.6	013.3	51.12	
310.0	005.0000	0081.3	024.6	231.6	000.0100	0180.8	012.8	51.48	
311.0	005.0000	0081.2	024.6	231.9	000.0100	0183.5	012.3	52.21	
312.0	005.0000	0082.0	024.7	232.8	000.0100	0188.2	011.9	53.02	
313.0	005.0000	0080.9	024.6	232.5	000.0100	0187.1	011.5	53.67	
314.0	005.0000	0077.7	024.1	230.5	000.0100	0175.2	011.0	53.89	
315.0	005.0000	0075.1	023.7	228.6	000.0100	0160.1	010.6	53.78	
316.0	005.0000	0075.0	023.7	228.7	000.0100	0160.4	010.1	54.51	
317.0	005.0000	0076.0	023.9	229.6	000.0100	0168.1	009.7	55.68	
318.0	005.0000	0074.0	023.6	228.0	000.0100	0155.4	009.3	55.69	
319.0	005.0000	0073.0	023.4	227.0	000.0100	0146.2	008.9	55.88	
320.0	005.0000	0074.8	023.7	228.7	000.0100	0160.6	008.5	57.58	
321.0	005.0000	0076.8	024.0	230.6	000.0100	0175.6	008.1	59.22	
322.0	005.0000	0079.3	024.3	233.2	000.0100	0189.6	007.6	60.71	
323.0	005.0000	0081.9	024.7	236.2	000.0100	0205.2	007.2	62.26	
324.0	005.0000	0082.9	024.9	237.6	000.0100	0210.4	006.8	63.43	
325.0	005.0000	0081.6	024.7	236.1	000.0100	0204.9	006.4	64.29	
326.0	005.0000	0079.5	024.4	233.3	000.0100	0190.0	005.9	64.85	
327.0	005.0000	0077.7	024.1	230.5	000.0100	0175.4	005.5	65.44	

Exhibit 13.7

Contour Protection Studies Toward WPZX(FM) - Pocono Pines, PA

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
328.0	005.0000	0078.1	024.2	230.5	000.0100	0175.3	005.1	66.67
329.0	005.0000	0078.5	024.2	230.5	000.0100	0175.2	004.7	67.95
330.0	005.0000	0079.1	024.3	230.8	000.0100	0176.3	004.3	69.38
331.0	005.0000	0081.5	024.7	234.7	000.0100	0200.0	003.8	71.67
332.0	005.0000	0085.6	025.2	243.9	000.0100	0240.7	003.3	74.14
333.0	005.0000	0090.4	025.9	256.7	000.0100	0278.9	003.0	75.70
334.0	005.0000	0088.6	025.7	253.7	000.0100	0271.1	002.5	77.69
335.0	005.0000	0084.6	025.1	240.1	000.0100	0226.3	002.0	79.71
336.0	005.0000	0081.8	024.7	225.1	000.0100	0124.2	001.7	80.14
337.0	005.0000	0081.5	024.7	216.4	000.0100	0051.7	001.3	84.56
338.0	005.0000	0082.3	024.8	208.2	000.0100	-0016.1	000.9	87.89
339.0	005.0000	0082.4	024.8	182.7	000.0100	-0088.6	000.6	91.24
340.0	005.0000	0078.2	024.2	150.2	000.0100	-0013.6	001.2	85.57
341.0	005.0000	0074.1	023.6	140.9	000.0100	-0006.2	001.9	69.55
342.0	005.0000	0078.9	024.3	115.8	000.0100	-0041.3	001.5	72.88
343.0	005.0000	0090.8	025.9	050.0	000.0100	-0034.4	001.7	71.45
344.0	005.0000	0100.5	027.2	029.1	000.0100	0153.5	002.8	74.46
345.0	005.0000	0102.5	027.5	032.0	000.0100	0142.5	003.3	71.65
346.0	005.0000	0100.1	027.2	041.0	000.0100	0054.4	003.5	63.72
347.0	005.0000	0103.1	027.6	040.6	000.0100	0055.7	004.1	61.15
348.0	005.0000	0105.8	027.9	040.9	000.0100	0054.7	004.7	58.66
349.0	005.0000	0107.2	028.0	042.8	000.0100	0039.6	005.2	53.91
350.0	005.0000	0111.3	028.5	041.9	000.0100	0049.6	005.8	53.77
351.0	005.0000	0116.7	029.1	040.6	000.0100	0055.9	006.6	52.61
352.0	005.0000	0116.8	029.1	043.2	000.0100	0033.2	007.0	47.01
353.0	005.0000	0114.9	028.9	047.0	000.0100	-0005.7	007.3	45.56
354.0	005.0000	0117.3	029.2	047.7	000.0100	-0012.6	007.8	44.30
355.0	005.0000	0119.1	029.4	048.8	000.0100	-0023.6	008.4	43.27
356.0	005.0000	0118.2	029.3	051.3	000.0100	-0037.4	008.7	42.59
357.0	005.0000	0118.7	029.3	052.8	000.0100	-0032.6	009.2	41.75
358.0	005.0000	0122.7	029.7	052.6	000.0100	-0032.9	009.8	40.58
359.0	005.0000	0123.4	029.8	054.0	000.0100	-0033.7	010.3	39.77
000.0	005.0000	0122.8	029.7	055.9	000.0100	-0040.9	010.7	39.10
001.0	005.0000	0121.9	029.6	057.8	000.0100	-0045.9	011.1	38.47
002.0	005.0000	0117.6	029.2	061.0	000.0100	-0049.8	011.3	38.13
003.0	005.0000	0113.6	028.8	064.2	000.0100	-0020.3	011.5	37.77
004.0	005.0000	0112.8	028.7	065.8	000.0100	-0018.3	011.9	37.15
005.0	005.0000	0111.3	028.5	067.6	000.0100	-0020.1	012.3	36.60
006.0	005.0000	0107.5	028.1	070.4	000.0100	-0014.5	012.5	36.23
007.0	005.0000	0104.0	027.7	073.1	000.0100	-0011.5	012.8	35.85
008.0	005.0000	0102.3	027.5	074.8	000.0100	-0009.1	013.1	35.35
009.0	005.0000	0101.6	027.4	075.9	000.0100	-0009.5	013.5	34.80
010.0	005.0000	0099.8	027.1	077.6	000.0100	-0007.6	013.9	34.34
011.0	005.0000	0098.0	026.9	079.2	000.0100	-0008.9	014.2	33.90
012.0	005.0000	0098.0	026.9	079.9	000.0100	-0011.3	014.7	33.38

The Protected Contour at the proposed Translator site has been calculated to be no less than the 114.8 dBμ F(50:10) Interference Contour corresponding to the worst case WWRR(FM) - Scranton, PA (CH285A) 74.8 dBμ F(50:50) Protected Contour. This represents the proposed interference contour which falls wholly within the 40:1 dBu ratio. As seen in the **Exhibit 13.8** USGS Topographic Photo-Map, there is a lack of population, housing, buildings or major roads within this 114.8 dBμ F(50:10) interference contour (40.5 meter contour per the Free Space Equation). The applicant would like to note the existence of a dedicated transmitter building located within this restricted access site fencing. However, structures of this nature have been exempt as a matter of FCC Policy.

Exhibit 13.8
§74.1204(d) Second Adjacent
Channel Given Interference Waiver
Request with
WWRR(FM) - Scranton, PA (CH285A)

