

TECHNICAL EXHIBIT

2018 DISPLACEMENT/FILING WINDOW FOR LPTV AND TV TRANSLATOR STATIONS

FACILITY: WPBN (DTDRT), FI 21253
TRAVERSE CITY, MI
BARRINGTON TRAVERSE CITY LICENSE LLC
FCC file number NEW - to be assigned

Pursuant to the DTDRT (DIGITAL TV DIGITAL REPLACEMENT TRANSLATOR) filing window of 2018 arising from the incentive auction 600 MHz TV band repack, the within application is filed to replace lost coverage in the vicinity of the within-numbered tower.as follows: We thus use channel 18, FULL SERVICE mask, 15.0 kW ERP. Antenna make and model is DIE TLP-8B - FCC # 44647 which is to be located on tower ASR 1031838 at 125m AGL; orientation 0° T. NIER is less than 5% of the limit for this service; no new tower construction or changes are planned beyond installation of the antenna. The coverage areas and overlap requirements are the same as are specified under the existing license and are *de minimus* modified to the extent imposed by the addition of the within application and the local interference environment. Note that the TV Study OET69 interference analysis shows full compliance with applicable portions of §§ 73.6012-73.6020 and 74.793. OET65 limitations on NIER are met with a human exposure radiation of less than 5% of the limit from this service. In keeping with the original plans at the site, RF hazard warning signage and appropriate fencing are employed.

Using the specified equipment, pattern and ERP, the application is in compliance with all pertinent portions of §74.793 with respect to all existing part 73 and part 74 licenses, permits and applications known as of the time of filing; however, as a station in the LPTV or TX service which is displaced into the core or otherwise required to modify its facilities in accordance with the presence of an incoming repacked full service station assigned to its previous channel, the within applicant agrees, if necessary, to not operate on the channel or with the service proposed in the within application until any potentially mutually interfering repacked full service station or stations have left their channels pursuant to the relevant phase assignment(s).

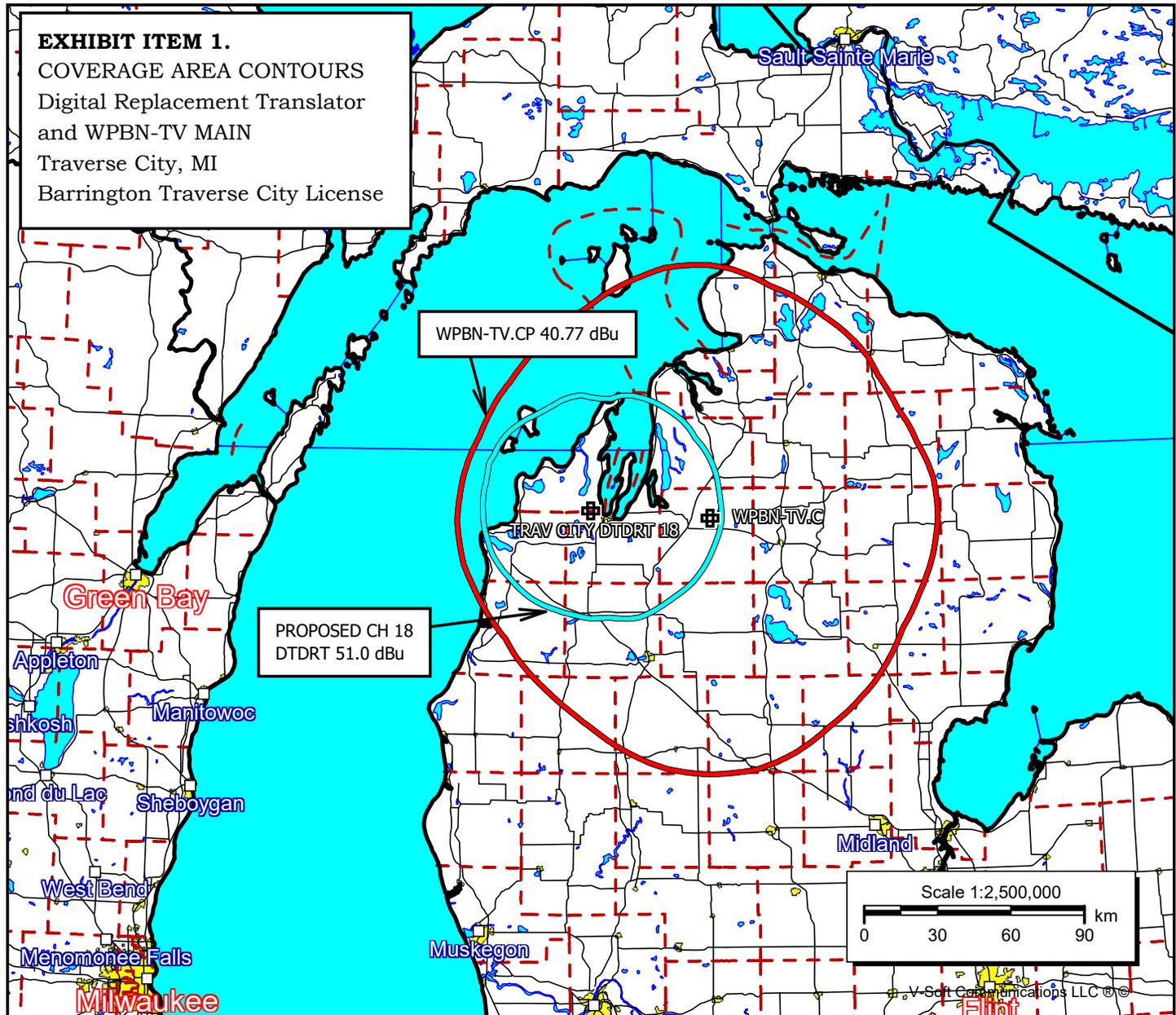
Following exhibit items:

1. Map and plots showing coverage of main station CP 0000034373 and within proposal superimposed. Within 40.77 dBu noise-limited contour of 0000034373 lies the entire 51 dBu contour of the proposed DTDRT, intended to provide improved service to the community of Traverse City.
2. Attached summary of TV Study program demonstrates that the within proposal is in compliance with all pertinent ruleparts identified above and shows also compliance with the overlap requirements with the Canadian border, distances from coordination area, quiet zones and land mobile facilities.
3. Summarized here is the NIER evaluation of the within proposal. The Maximum ERP of the within-proposed facility is 15 kW with it radiation center at 125m above ground level, or 123m above head height. Based on OET65, the worst case power density is less than 8.0 $\mu\text{W}/\text{cm}^2$, which is less than 5% of the upper limit for this service. Warning signs and fencing are employed at this time and will remain at the site. Appropriate turndown procedures will be employed at any time workers anticipate work on the tower or near the transmitting facility.
4. Certification: I, the undersigned, hereby certify that the foregoing application, statement and associated exhibit attachments and studies were prepared by me or under my supervision and the that they are true and correct to the best of my knowledge and belief.

J. R. McDonald

TRAV CITY DTDRT 18
 NEW
 Latitude: 44-46-36 N
 Longitude: 085-41-01.70 W
 ERP: 15.00 kW
 Channel: 18
 Frequency: 497.0 MHz
 AMSL Height: 445.0 m
 Elevation: 320.0 m
 Horiz. Pattern: Directional
 Vert. Pattern: Yes
 Elec Tilt: 1.5
 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

EXHIBIT ITEM 1.
 COVERAGE AREA CONTOURS
 Digital Replacement Translator
 and WPBN-TV MAIN
 Traverse City, MI
 Barrington Traverse City License



V-Sat Communications LLC ©

EXHIBIT ITEM 2.1
 TV Study Summary
 Digital Replacement Translator
 for WPBN-TV MAIN
 Traverse City, MI
 Barrington Traverse City License

Study created: 2018.07.09 17:32:21

Study build station data: LMS TV 2018-07-04

Proposal: NEW D18 LD APP TRAVERSE CITY, MI

File number: TBD

Facility ID: 21253

Station data: User record

Record ID:

Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WOTV	D17	DT	CP	BATTLE CREEK, MI	BLANK0000034787	245.8 km
Yes	WCMV	D17	DT	LIC	CADILLAC, MI	BLEDT20050914AAI	48.6
No	WMNN-LD	D17	LD	APP	LAKE CITY, MI	BLANK0000054262	66.3
No	KSET-LD	D17	LD	APP	MIDLAND, MI	BLANK0000052621	199.9
No	W17DF-D	D17	LD	LIC	MUSKEGON, MI	BLDTL20110215AAG	166.9
No	WGBD-LD	D17	LD	CP	GREEN BAY, WI	BLANK0000048529	187.2
No	W15DJ-D	D17	LD	APP	SISTER BAY, WI	BLANK0000052798	121.9
No	WMEU-CD	D18	DC	CP	CHICAGO, IL	BLANK0000034599	358.7
No	WISE-TV	D18	DT	LIC	FORT WAYNE, IN	BLCDT20091103ACK	410.4
No	WFWA	D18	DT	CP	FORT WAYNE, IN	BLANK0000034724	410.2
No	W18BT	N18-	TX	LIC	ALPENA, MI	BLTTL19981113JB	179.3
No	WDWO-CD	D18	DC	LIC	DETROIT, MI	BLDTA20130108ABZ	318.3
No	WBWM-LD	D18	LD	CP	MT PLEASANT, MI	BDCCDTL20121130BNU	159.8

EXHIBIT ITEM 2.2
 TV Study Summary
 Digital Replacement Translator
 for WPBN-TV MAIN
 Traverse City, MI
 Barrington Traverse City License

No	W17DF-D	D18	LD	APP	MUSKEGON, MI	BLANK0000053433	166.9
Yes	WURO-LD	D18	LD	LIC	ROSCOMMON, MI	BLDTL20141113AFT	105.1
No	WEYI-TV	D18	DT	CP	SAGINAW, MI	BLANK0000034331	233.8
No	W30BU	D18+	LD	APP	GREEN BAY, WI	BLANK0000051747	188.1
No	WMSN-TV	D18	DT	CP	MADISON, WI	BLANK0000034381	362.8
No	WVTV	D18	DT	LIC	MILWAUKEE, WI	BLCDT20101012ADH	257.8
No	NEW	D18	LD	CP	WAUSAU, WI	BNPDTL20090914AAF	309.5
No	WXMI	D19	DT	LIC	GRAND RAPIDS, MI	BLCDT20030117ABD	232.5
No	WZMQ	D19	DT	APP	MARQUETTE, MI	BLANK0000036114	245.1
No	WZMQ	D19	DT	LIC	MARQUETTE, MI	BLCDT20100928AJX	245.1
No	WFKB-LD	D19	LD	APP	MIDLAND, MI	BLANK0000052620	199.9
No	W19EA-D	D19	LD	CP	ROSCOMMON, MI	BNPDTL20100223ACZ	79.6
Yes	W19DQ-D	D19	LD	CP	TRAVERSE CITY, MI	BNPDTL20100301ACZ	2.3
No	WLWK-CD	D19	DC	CP	STURGEON BAY, WI	BLANK0000026768	133.6

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D18

Mask: Full Service

Latitude: 44 46 36.00 N (NAD83)

Longitude: 85 41 2.00 W

Height AMSL: 348.8 m

HAAT: 0.0 m

Peak ERP: 15.0 kW

Antenna: DIE TLP-8B (FCC 44647)

Elev Pattn: Generic

EXHIBIT ITEM 2.3
TV Study Summary
Digital Replacement Translator
for WPBN-TV MAIN
Traverse City, MI
Barrington Traverse City License

49.1 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	7.14 kW	122.2 m	43.2 km
45.0	12.4	170.3	49.3
90.0	15.0	164.5	49.8
135.0	12.8	117.3	45.8
180.0	6.94	76.9	38.0
225.0	6.73	80.6	38.4
270.0	7.78	74.6	38.2
315.0	6.24	137.5	43.6

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 118 m

Proposal 24.15 dBu contour does not cross Canadian border

Distance to Canadian border: 196.0 km

Distance to Mexican border: 2163.2 km

Conditions at FCC monitoring station: Allegan MI

Bearing: 185.3 degrees Distance: 242.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 259.0 degrees Distance: 1677.8 km

No land mobile station failures found

Proposal is not within the Offshore Radio Service protected area

Study cell size: 1.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

EXHIBIT ITEM 2.4
TV Study Summary
Digital Replacement Translator
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--- Below is IX received by proposal BNPDTL20100510AGN ----

**MX with BLANK0000054262 APP scenario 1, 5.31% interference received