

APPLICATION to MAKE CHANGES
TRANSLATOR W272DO, Bridgeport, CT

July, 2016

TECHNICAL STATEMENT

This engineering Exhibit is prepared on behalf of Best Media, Inc. (Best) in response to a Petition for Reconsideration by Cox Radio, Inc. (Cox), Licensee of FM station WBAB (FM), channel 272A at Babylon, NY for reconsideration of an application for W272DO New Haven, Connecticut (FCC File No. BPFT-20160531ADJ, Facility ID No. 138034).

In its petition, Cox notes that the proposed operation of W272DO would cause interference to an existing listener to WBAB and that the proposed W272DO operation would be in conflict with FCC rule 74.1204(f)¹.

The currently licensed and operating W272DO, which was modified in response to an earlier filing by Cox at the Construction Permit stage, to avoid a different listener, is claiming that the relocation of the Best translator over 19km farther away from WBAB than the existing W272DO licensed facility will cause interference to a different singular listener in Orange Connecticut even though the proposed translator will be over 68km from WBAB. The claimed listener at issue is barely within the 60dBu contour of the proposed W272DO but is within the 54dBu contour of the currently licensed W272DO translator which Cox has agreed to.

¹ Section 74.1204(f) states: "An application for an FM translator station will not be accepted for filing even though the proposed operation would not involve overlap of field strength contours with any other station, as set forth in paragraph (a) of this section, if the predicted 1 mV/m field strength contour of the FM translator station will overlap a populated area already receiving a regularly used, off-the-air signal of any authorized cochannel, first, second or third adjacent channel broadcast station."

Best has no desire to cause interference to any of the WBAB listeners. Therefore, Best is hereby filing this CP Modification application which will relocate the 1mV/m (60dBu) contour of W272DO in such a way as to not overlap the identified listener to WBAB and reduce the proposed signal to less than that which is currently predicted by the existing, licensed facility which was previously agreed to by Cox. This change will bring the application into full compliance with FCC Section 74.1204(f). Additionally, the interfering contour toward WBAB will be reduced such that the W272DO Proposed F(50,10) 40dBu interfering contour intersection with the WBAB 47dBu F(50,50) contour is significantly reduced to that amount similar to the existing licensed W272DO facility. It should be noted that there is no requirement in the rules to meet this 47dBu limit as outlined by Cox, however, in the interest of placating the concerns raised by Cox, Best has significantly improved its interfering contour to WBAB in the areas noted.

W272DO will continue to rebroadcast Facility ID 46968, WPLR (FM), as a fill-in translator in compliance with 47CFR 74.1203. The translator community of license will remain New Haven, CT. The proposed operation is MX to the license(application) for W272DO and the 60dBu contours intersect. Best has received permission from the licensee of WPLR (FM) to rebroadcast that station's programming.

Facilities Proposed

Location (NAD27)	41° 20' 59" N Latitude, 72° 58' 23.2" W Longitude
Channel	272D (102.3MHz)
Tower Overall AGL Height-	79.6m
Tower ASR (Attached Exhibit D)	1045133 (SEE EXHIBIT G)
Proposed Antenna	Kathrein Scala dual 180deg skewed, 2-level CL-FM
Antenna AGL Height-	55m
Site AMSL Height-	136m
COR AMSL Height	191m
ERP	250w DIRECTIONAL (SEE EXHIBIT A)

Interference Study

ComStudy 2.2 search of channel 272 (102.3 MHz Class A) at 41-20-59.0 N, 72-58-23.2 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
W272DO	BRIDGEPORT	CT 272 D	19.45	0.00	246.2	-32.40 dB MX to Existing
WDRC-FM	HARTFORD	CT 275 B	25.93	69.00	24.4	-22.57 dB Exhibit C
W269DB	MILFORD	CT 269 D	6.05	0.00	180.2	-18.53 dB Exhibit B1
WAQY	SPRINGFIELD	MA 271 B	84.49	113.00	15.2	0.08 dB Exhibit B
WBAB	BABYLON	NY 272 A	68.28	115.00	206.5	2.68 dB Exhibit B
W273CN	WESTPORT	CT 273 D	30.78	0.00	236.3	3.83 dB
WKBR-LP	TOWN OF HIGHLANDS	NY 272 LP100	64.08	67.00	268.5	5.18 dB
WMOS	STONINGTON	CT 272 A	95.21	115.00	85.8	6.49 dB
W273CN	WESTPORT	CT 273 D	42.01	0.00	253.5	7.34 dB
WBAZ	BRIDGEHAMPTON	NY 273 A	70.28	72.00	135.3	8.69 dB
WNEW-FM	NEW YORK	NY 274 B	108.23	69.00	232.1	16.62 dB
WFAN-FM	NEW YORK	NY 270 B	108.23	69.00	232.1	16.51 dB
WGRS	GUILFORD	CT 218 A	27.19	10.00	104.4	17.2

CDBS Data as of 5/21/2016

COMPLIANCE, 74.1201(g), 74.1203(d), 74.1233(a)(1), and 74.1204(d)

Exhibit B demonstrates compliance with 74.1204(d). There are no impermissible contour overlaps to any other facilities, moreover, the area claimed by Cox to have a listener inside the proposed W272DO is no longer contained within the W272DO 60dBu contour.

Exhibit B1 shows the relationship between the W272DO CP 50,10 100dBu contour, the W272DO Proposed f50,10 100dBu contour, the W269DB CP and the W269DB APP f50,50 60dBu contour. The W269DB APP contour which was filed after the W272DO application, accepted interference to the 60dBu contour by W272DO. Exhibit B1 shows that the projected

interference to W269DB (APP) from W272DO would be reduced from that which currently would exist and thus should remain compliant with FCC rules.

As demonstrated in Exhibit C, there will be no location where residences exist where the signal of W272DO will be in excess of 40dBu above the WDRC 3rd adjacent signal. The nearest residence is located approximately 400m from the tower. The tower is on a hill approximately 75m higher AMSL than the land where the residences are located. If the AGL height of the antenna is added to the height of the hill above the residences, the antenna will be 130m above the residences. Exhibit C, therefore reflects the height of the antenna above the residences and thus the interfering contour to WDRC at ground level in those locations.

Exhibit D demonstrates compliance with 74.1201(g) governing the use of a translator as a fill-in for an FM station. The 60dBu contour of the proposed W272DO will be completely contained within the 1mV/m contour of WPLR (FM).

Exhibit E demonstrates that the proposed facility is compliant with 74.1233(a)(1). The 60dBu contours overlap and the proposed facility is MX to the original Construction Permit.

Environmental Exhibit

The proposed W272DO facility as proposed will utilize a directional antenna located on an existing tower owned by Westrock, LLC (ASR 1045133). The ASR for the tower is attached as Exhibit G. The RF density near the tower was calculated using a worst-case dipole antenna setting at 250 watts horizontal and vertical.

Using the FCC program “FM Model for Windows”, it was calculated that the proposed antenna contributes approximately 0.015 $\mu\text{W}/\text{cm}^2$ or 0.007% of the total allowable 200 $\mu\text{W}/\text{cm}^2$. The maximum was found to be at the base of the tower.

There are no non-excluded RF sources on the tower.

The proposed W272DO operation is categorically excluded from further environmental review under §1.1306 of the FCC rules and regulations.

Respectfully Submitted

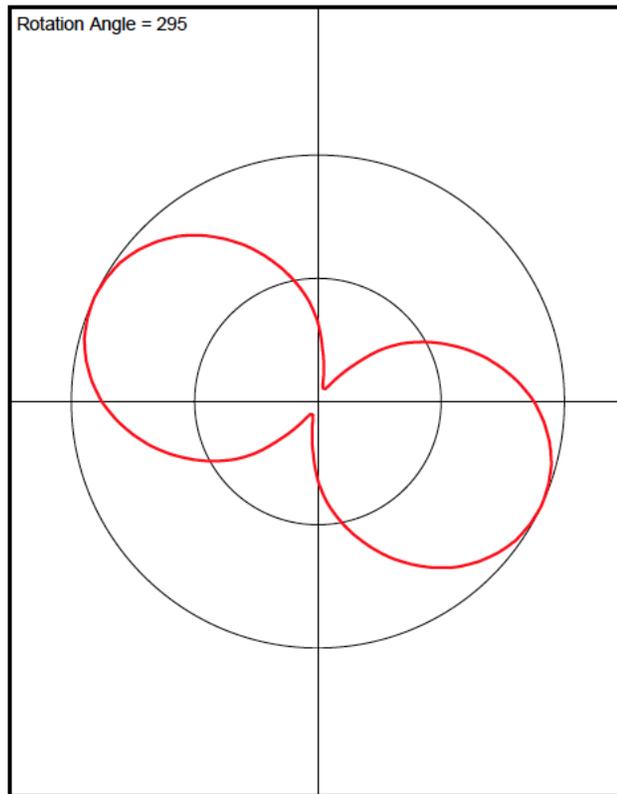
A handwritten signature in cursive script that reads "Bert Goldman".

Bert Goldman
Goldman Engineering Mgmt.
1511 Radcliffe Way
Auburn, CA 95603
(214) 395-5067
bert@bgoldman.net

EXHIBIT A: Kathrein Scala dual 180deg skewed, 2-level CL-FM

W272DO Antenna
Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	1.0
5.0	0.994
10.0	0.981
15.0	0.954
20.0	0.919
25.0	0.876
30.0	0.823
35.0	0.763
40.0	0.699
45.0	0.629
50.0	0.557
55.0	0.483
60.0	0.408
65.0	0.32
70.0	0.214
75.0	0.136
80.0	0.078
85.0	0.058
90.0	0.058
95.0	0.058
100.0	0.078
105.0	0.136
110.0	0.214
115.0	0.32
120.0	0.408
125.0	0.483
130.0	0.557
135.0	0.629
140.0	0.699
145.0	0.763
150.0	0.823
155.0	0.876
160.0	0.919
165.0	0.954
170.0	0.981
175.0	0.994
180.0	1.0
185.0	0.994
190.0	0.981
195.0	0.954
200.0	0.919
205.0	0.876
210.0	0.823
215.0	0.763
220.0	0.699
225.0	0.629
230.0	0.557
235.0	0.483
240.0	0.408
245.0	0.32
250.0	0.214
255.0	0.136
260.0	0.078
265.0	0.058
270.0	0.058
275.0	0.058
280.0	0.078
285.0	0.136
290.0	0.214
295.0	0.32
300.0	0.408
305.0	0.483
310.0	0.557
315.0	0.629



320.0	0.699
325.0	0.763
330.0	0.823
335.0	0.876
340.0	0.919
345.0	0.954
350.0	0.981
355.0	0.994

EXHIBIT B- 74.1204(d) Compliance

W272DO 74.1204(d) Compliance WAQY (FM), WBAB (FM)

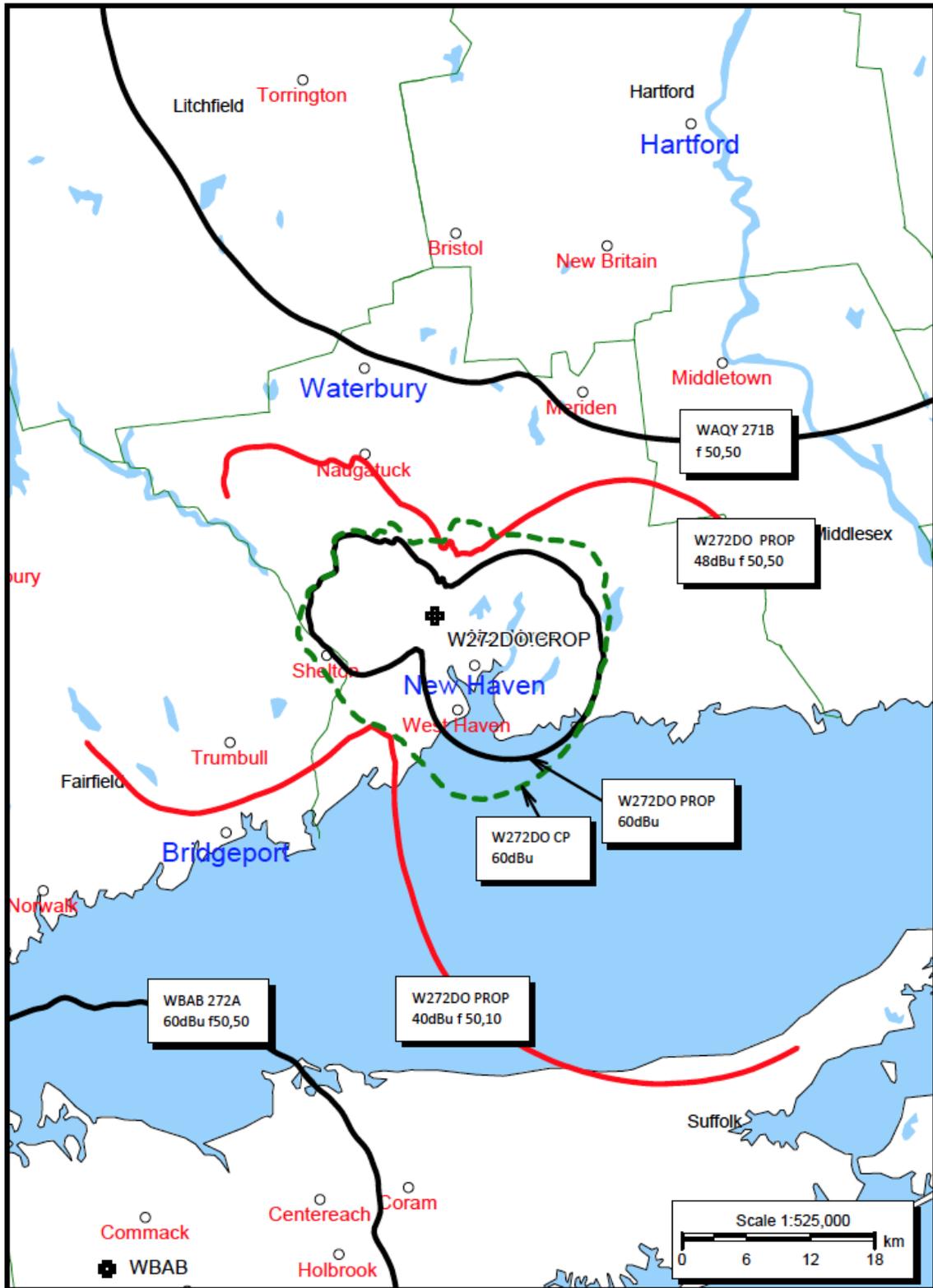


EXHIBIT B1- 3rd Adjacent Interference Compliance W269DB (CP)

3rd Adjacent Association, W269DB to W272DO CP and Proposed

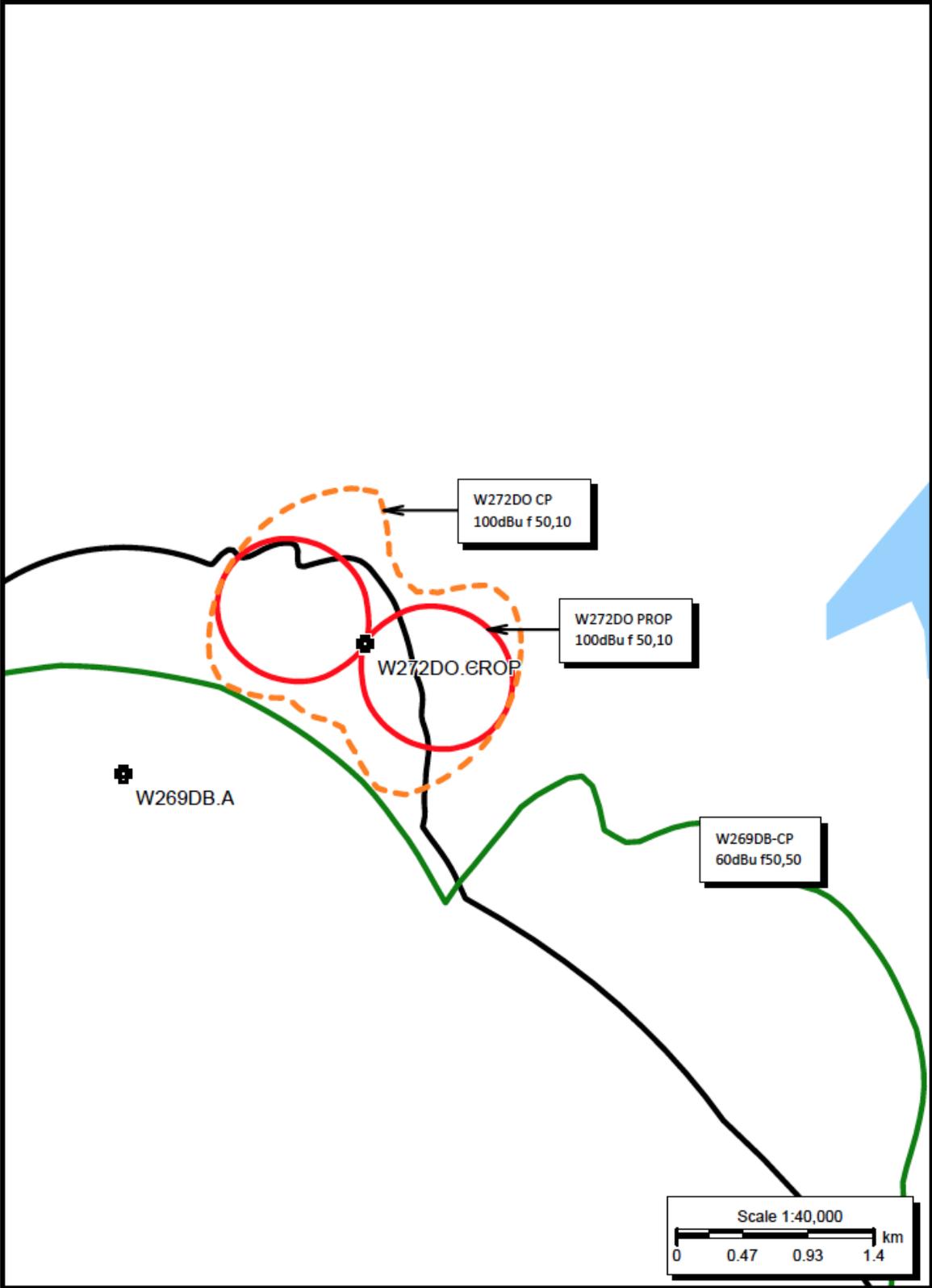


EXHIBIT C 3rd Adjacent Interference Compliance to WDRC-FM
Relationship of AMSL Height, Proposed tower to Nearest Residence



PROP New Haven, CT
 74.1204(d) Showing
 Translator or LPFM Maximum Licensed ERP = 0.25
 Translator or LPFM Antenna Height AG = 130 Meters (55m Tower AGL + 75m Terrain Height)
 PROP Antenna Model = 2-CL-FM V STACK 0PT94 WL SPC

Protected Station's Contour = 66.05492 dBu
 Translator's or LPFM's full Interference contour 106.05492

Review Azimuth = 0 Degrees True
 Relative Field on the horizon at Review Azimuth = 1.000
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.25 kW
 Distance between stations = 25.9 km
 Protected Station= WDRC-F, 19.54 kW, 345 M Meters COR AMSL

Depression IX Angle From Horizon(Deg) (m)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height Above Ground
00.00	1.0	1.0	0.2500	552.3623	552.3623	130.000
01.00	0.983	1.0	0.2415	542.8616	542.7790	120.526
02.00	0.966	1.0	0.2331	533.3610	533.0361	111.386
03.00	0.948	1.0	0.2249	523.8604	523.1425	102.583
04.00	0.931	1.0	0.2168	514.3598	513.1068	094.120
05.00	0.914	1.0	0.2088	504.8591	502.9380	085.999
06.00	0.897	1.0	0.2011	495.3585	492.6448	078.221
07.00	0.88	1.0	0.1934	485.8578	482.2363	070.789
08.00	0.862	1.0	0.1859	476.3572	471.7213	063.704
09.00	0.845	1.0	0.1786	466.8566	461.1088	056.968
10.00	0.828	1.0	0.1714	457.3560	450.4077	050.581
11.00	0.789	1.0	0.1556	435.7034	427.6983	046.864
12.00	0.75	1.0	0.1405	414.0508	405.0028	043.914
13.00	0.71	1.0	0.1262	392.3981	382.3410	041.730
14.00	0.671	1.0	0.1126	370.7455	359.7328	040.309
15.00	0.632	1.0	0.0999	349.0929	337.1979	039.648
16.00	0.593	1.0	0.0879	327.4404	314.7559	039.745
17.00	0.554	1.0	0.0766	305.7878	292.4263	040.596
18.00	0.514	1.0	0.0662	284.1352	270.2286	042.197
19.00	0.475	1.0	0.0565	262.4825	248.1821	044.544
20.00	0.436	1.0	0.0475	240.8299	226.3061	047.631
21.00	0.399	1.0	0.0397	220.1164	205.4963	051.117
22.00	0.361	1.0	0.0326	199.4028	184.8830	055.302
23.00	0.324	1.0	0.0262	178.6892	164.4843	060.181
24.00	0.286	1.0	0.0204	157.9756	144.3179	065.746
25.00	0.249	1.0	0.0154	137.2620	124.4016	071.991
26.00	0.211	1.0	0.0111	116.5484	104.7530	078.909
27.00	0.174	1.0	0.0075	095.8349	085.3895	086.492
28.00	0.136	1.0	0.0046	075.1213	066.3281	094.733
29.00	0.099	1.0	0.0024	054.4077	047.5860	103.623
30.00	0.061	1.0	0.0009	033.6941	029.1799	113.153
31.00	0.036	1.0	0.0003	019.6089	016.8081	119.901
32.00	0.01	1.0	0.0000	005.5236	004.6843	127.073
33.00	0.028	1.0	0.0002	015.1900	012.7394	121.727
34.00	0.045	1.0	0.0005	024.8563	020.6068	116.101
35.00	0.063	1.0	0.0010	034.5226	028.2793	110.199
36.00	0.08	1.0	0.0016	044.1890	035.7496	104.026
37.00	0.098	1.0	0.0024	053.8553	043.0108	097.589
38.00	0.115	1.0	0.0033	063.5217	050.0558	090.892
39.00	0.133	1.0	0.0044	073.1880	056.8778	083.941

40.00	0.15	1.0	0.0056	082.8543	063.4701	076.742
41.00	0.156	1.0	0.0061	085.9476	064.8655	073.613
42.00	0.161	1.0	0.0065	089.0408	066.1702	070.420
43.00	0.167	1.0	0.0070	092.1340	067.3826	067.165
44.00	0.172	1.0	0.0074	095.2273	068.5008	063.850
45.00	0.178	1.0	0.0079	098.3205	069.5231	060.477
46.00	0.174	1.0	0.0076	096.2215	066.8411	060.784
47.00	0.17	1.0	0.0073	094.1225	064.1914	061.163
48.00	0.167	1.0	0.0069	092.0236	061.5758	061.613
49.00	0.163	1.0	0.0066	089.9246	058.9958	062.133
50.00	0.159	1.0	0.0063	087.8256	056.4532	062.722
51.00	0.15	1.0	0.0057	083.0753	052.2810	065.438
52.00	0.142	1.0	0.0050	078.3250	048.2217	068.279
53.00	0.133	1.0	0.0044	073.5746	044.2783	071.241
54.00	0.125	1.0	0.0039	068.8243	040.4539	074.320
55.00	0.116	1.0	0.0034	064.0740	036.7513	077.514
56.00	0.107	1.0	0.0029	059.1028	033.0498	081.002
57.00	0.098	1.0	0.0024	054.1315	029.4821	084.602
58.00	0.089	1.0	0.0020	049.1602	026.0510	088.310
59.00	0.08	1.0	0.0016	044.1890	022.7590	092.123
60.00	0.071	1.0	0.0013	039.2177	019.6089	096.036
61.00	0.066	1.0	0.0011	036.3454	017.6206	098.212
62.00	0.061	1.0	0.0009	033.4732	015.7147	100.445
63.00	0.055	1.0	0.0008	030.6009	013.8925	102.734
64.00	0.05	1.0	0.0006	027.7286	012.1554	105.078
65.00	0.045	1.0	0.0005	024.8563	010.5047	107.473
66.00	0.04	1.0	0.0004	021.9840	008.9417	109.917
67.00	0.035	1.0	0.0003	019.1117	007.4675	112.408
68.00	0.029	1.0	0.0002	016.2395	006.0834	114.943
69.00	0.024	1.0	0.0001	013.3672	004.7904	117.521
70.00	0.019	1.0	0.0001	010.4949	003.5895	120.138
71.00	0.018	1.0	0.0001	009.9978	003.2550	120.547
72.00	0.017	1.0	0.0001	009.5006	002.9359	120.964
73.00	0.016	1.0	0.0001	009.0035	002.6324	121.390
74.00	0.015	1.0	0.0001	008.5064	002.3447	121.823
75.00	0.015	1.0	0.0001	008.0093	002.0729	122.264
76.00	0.014	1.0	0.0000	007.5121	001.8173	122.711
77.00	0.013	1.0	0.0000	007.0150	001.5780	123.165
78.00	0.012	1.0	0.0000	006.5179	001.3551	123.625
79.00	0.011	1.0	0.0000	006.0207	001.1488	124.090
80.00	0.01	1.0	0.0000	005.5236	000.9592	124.560
81.00	0.01	1.0	0.0000	005.5236	000.8641	124.544
82.00	0.01	1.0	0.0000	005.5236	000.7687	124.530
83.00	0.01	1.0	0.0000	005.5236	000.6732	124.518
84.00	0.01	1.0	0.0000	005.5236	000.5774	124.507
85.00	0.01	1.0	0.0000	005.5236	000.4814	124.497
86.00	0.01	1.0	0.0000	005.5236	000.3853	124.490
87.00	0.01	1.0	0.0000	005.5236	000.2891	124.484
88.00	0.01	1.0	0.0000	005.5236	000.1928	124.480
89.00	0.01	1.0	0.0000	005.5236	000.0964	124.477
90.00	0.01	1.0	0.0000	005.5236	000.0000	124.476

EXHIBIT D- 74.1201(g) Compliance to WPLR (FM)

W272DO PROP 74.1201(g) Compliance

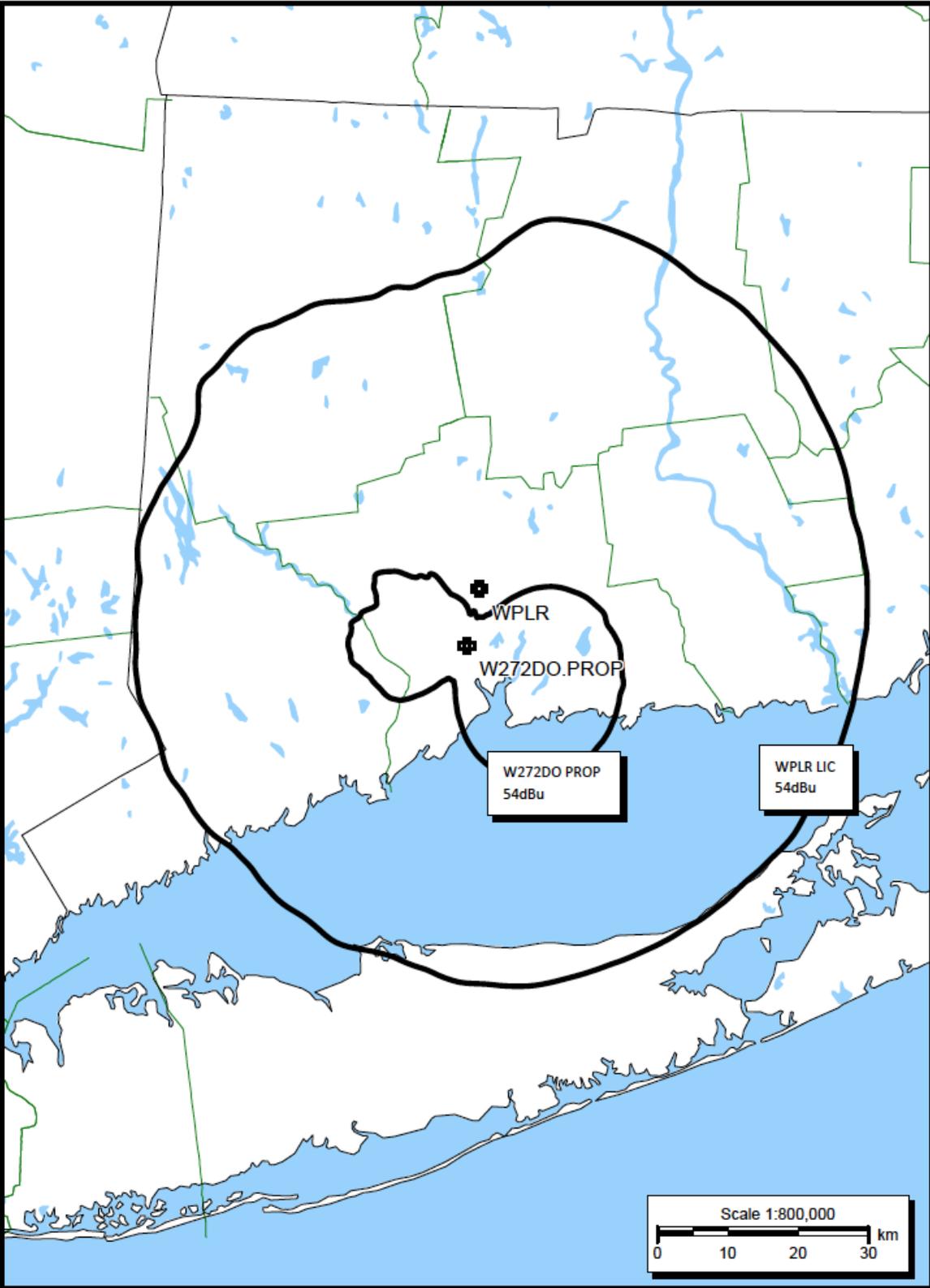


EXHIBIT E- 74.1233(a)(1) Compliance

W272DO Existing vs Proposed 74.1233(a)(1) Compliance



EXHIBIT F- ANTENNA STRUCTURE REGISTRATION

Registration 1045133

[Map Registration](#)

Registration Detail

Reg Number	1045133	Status	Constructed
File Number	A0491786	Constructed	01/01/1979
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

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

Location (in NAD83 Coordinates)

Lat/Long	41-20-59.2 N 072-58-21.6 W	Address	1055 WINTERGREEN AVE
City, State	HAMDEN , CT		
Zip	06514	County	NEW HAVEN
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
135.7	79.6
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
215.3	75.8

Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 13
Paint and Light in Accordance with FAA Circular Number 70/7460-1J

FAA Notification

FAA Study	97-ANE-0492-OE	FAA Issue Date	10/16/1997
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Owner & Contact Information

FRN	0014660641	Owner Entity Type	
Assignor FRN	0003575891	Assignor ID	L00029957

Owner

Westrock, LLC Attention To: Maria A. Scotti 40 Woodland Street Hartford , CT 06105	P: (860)727-5742 F: E: mscotti@mcmgmt.com
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Contact

King , Virginia 40 Woodland Street Hartford , CT 06105	P: (860)727-5790 F: E: vking@mcmgmt.com
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Last Action Status

Status	Constructed	Received	02/10/2006
Purpose	Change Owner	Entered	02/10/2006