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TECHNICAL EXHIBIT

ON BEHALF OF

ST. PAUL'S SCHOOL

APPLICATION FOR CONSTRUCTION PERMIT FOR MINOR MOODIFICATION

OF

WSPS(FM) – CONCORD, NH

PURPOSE AND SCOPE

The application, of which this exhibit is a part, requests a Construction Permit for a minor modification of the license for WSPS(FM), Concord, NH (F.C.C. File Number BLED-20170404AAZ). The changes requested are a change in antenna location, change in antenna elevation, change to directional antenna and an increase in effective radiated power.

This exhibit responds to the Broadcast Facility question in the Technical Certification portion of the LMS application.

COMPLIANCE WITH APPLICABLE RULE SECTIONS

47 C.F.R. §73.207 – The WSPS(FM) proposed site is fully spaced as a Class A on channel 213 to all facilities on channels 266 and 267.

47 C.F.R. §73.509 – A search of the CDBS and LMS databases reveals four facilities that warrant detailed analysis of potential contour overlap. The four facilities are:

WVNH(FM) – 216A – Concord, NH- Facility ID 8698

WLMW(FM) – 214A – Manchester, NH – Facility ID 35251

WYDI(FM) – 213A – Derry, NH – Facility ID 175362

WVFA(FM) – 213A - Lebanon, NH - Facility ID 92641

The protected and interfering contours of each of the listed facilities and the proposed operation of WSPS(FM) were calculated using 3-second terrain data at every 5 degrees of azimuth. As shown on the attached Figure 1, no prohibited contour overlap will be created by the proposed operation of WSPS(FM). The proposed site is 199.8 km from the border between the United States and Canada. The proposed WSPS(FM) 34 dBu f(50,10) contour extends a maximum of 80.2 km from the antenna. The contour does not cross the border with Canada, so no consideration of Canadian facilities is required.

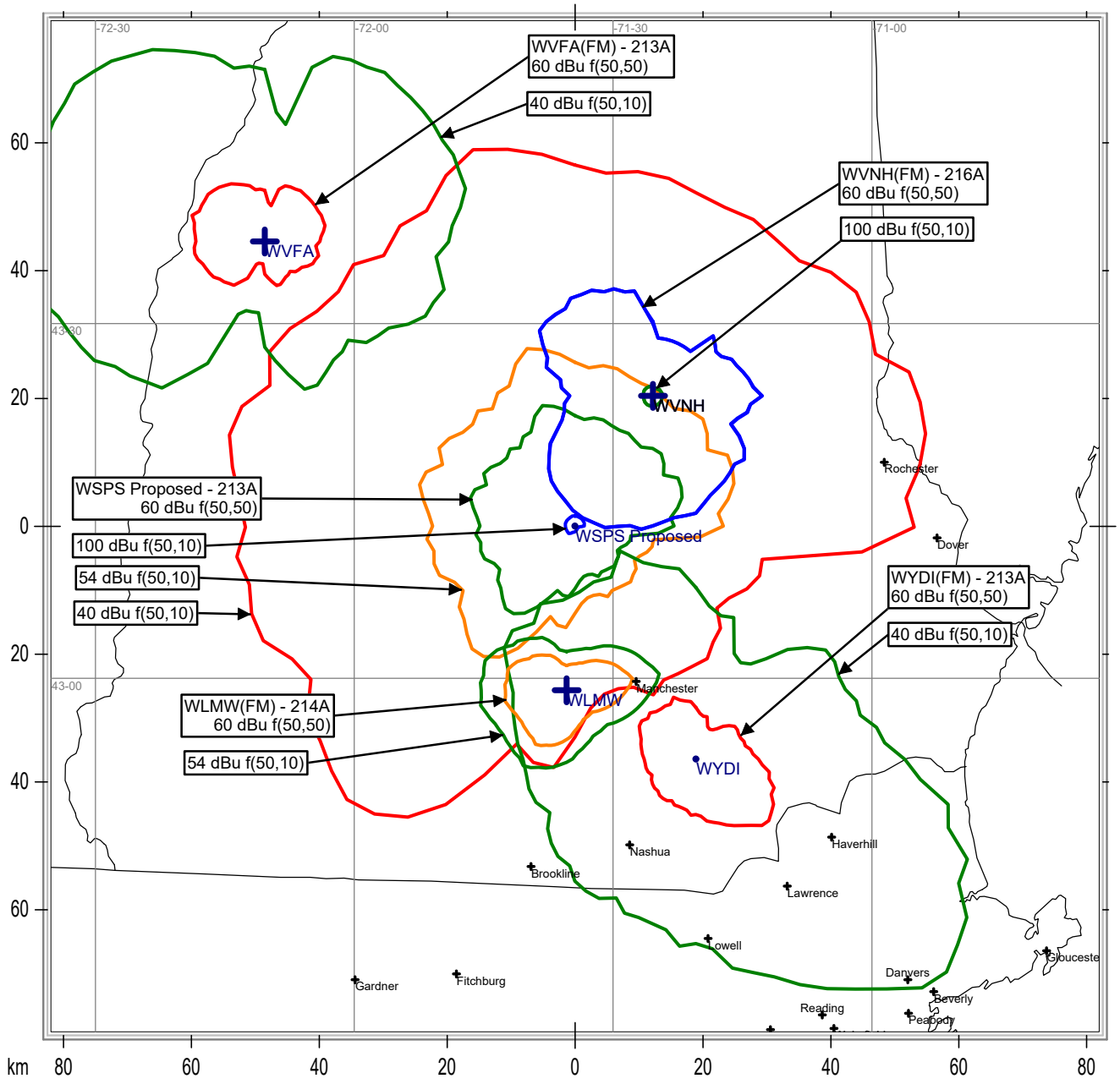
47 C.F.R. §73.515 – The proposed site is within the border of the city of Concord, NH. The proposed 60 dBu f(50,10) contour encompasses well over 50% of the city.

47 C.F.R. §73.1125 – The WSPS(FM) main studio will remain in Concord and thus it is a toll-free call from the community of license to WSPS(FM).

ENVIRONMENTAL CONSIDERATIONS

WSPS(FM) proposes to mount a Shively 6810-1R-DA antenna on an existing communications tower owned by New Hampshire Public Radio. No structural changes to the tower are proposed. No changes to the ground support structures are proposed. The proposed operation of WSPS(FM) was analyzed for ground level RF field intensity. Table 1, of this Exhibit, shows the RF field intensity to be generated by the proposed operation of WSPS(FM). Table 2 shows the RF field intensity generated by co-located WEVO(FM). The maximum intensity from WSPS(FM) is less than 3.4% of the General Population MPE at a distance of 45 meters from the base of the tower. The maximum intensity generated by WEVO(FM) is 50% of the General Population MPE at a distance of 20 meters from the base of the tower. The road to the tower is gated and the site is marked with appropriate RF warning signs. The applicant is aware that RF fields in excess of the Guidelines for worker exposure can occur on the tower in the vicinity of the antenna. The applicant, in cooperation with other users at the site, will limit exposure to workers by cessation of operation or reduction of power when workers are on the tower.

WSPS(FM) - 213A - CONCORD, NH



0.65 KW ERP (DA-MAX) - 100 METERS HAAT

State Borders Lat/Lon Grid

Map Scale: 1:1000000 1 cm = 10.00 km V|H Size: 158.19 x 163.93 km FIGURE 1

WSPS(FM) - MINOR CHANGE TO LICENSED FACILITY
ENGINEERING STATEMENT
TABLE 1
FIELD CONTRIBUTION BY WSPS(FM)

Antenna Make	Shively	
Antenna Model	6810-1R	
ERP (W)	1200	600 Horiz + 600 Vert
Antenna C/R AGL (m)	41	
Height over Head (m)	39	

Horizontal Distance from Antenna (m)	**Downward Angle (o)**	**Distance from C/R (m)**	**Field**	**Power Density uW/cm2**	**General Population MPE %**
0	90.0	39.0	0.000	0.0	0.00
1	88.5	39.0	0.030	0.0	0.01
2	87.1	39.1	0.057	0.1	0.04
3	85.6	39.1	0.082	0.2	0.09
4	84.1	39.2	0.112	0.3	0.16
5	82.7	39.3	0.145	0.5	0.27
6	81.3	39.5	0.163	0.7	0.34
7	79.8	39.6	0.172	0.8	0.38
8	78.4	39.8	0.214	1.2	0.58
9	77.0	40.0	0.239	1.4	0.71
10	75.6	40.3	0.267	1.8	0.88
11	74.2	40.5	0.287	2.0	1.01
12	72.9	40.8	0.305	2.2	1.12
13	71.6	41.1	0.335	2.7	1.33
14	70.3	41.4	0.352	2.9	1.45
15	69.0	41.8	0.373	3.2	1.60
16	67.7	42.2	0.395	3.5	1.76
17	66.4	42.5	0.416	3.8	1.92
18	65.2	43.0	0.434	4.1	2.05
19	64.0	43.4	0.453	4.4	2.19
20	62.9	43.8	0.471	4.6	2.31
25	57.3	46.3	0.554	5.7	2.87
26	56.3	46.9	0.568	5.9	2.94
27	55.3	47.4	0.582	6.0	3.02
28	54.3	48.0	0.596	6.2	3.09
29	53.4	48.6	0.610	6.3	3.16
30	52.4	49.2	0.623	6.4	3.21
35	48.1	52.4	0.679	6.7	3.36
40	44.3	55.9	0.726	6.8	3.38
45	40.9	59.5	0.764	6.6	3.30
50	38.0	63.4	0.796	6.3	3.16
55	35.3	67.4	0.823	6.0	2.99
60	33.0	71.6	0.845	5.6	2.79
65	31.0	75.8	0.862	5.2	2.59
70	29.1	80.1	0.878	4.8	2.41
75	27.5	84.5	0.891	4.5	2.23
80	26.0	89.0	0.903	4.1	2.06
90	23.4	98.1	0.920	3.5	1.76
100	21.3	107.3	0.935	3.0	1.52

WSPS(FM) - MINOR CHANGE TO LICENSED FACILITY
ENGINEERING STATEMENT
TABLE 2
FIELD CONTRIBUTION BY WEVO(FM)

Antenna Make	Shively	
Antenna Model	6810-5R	6810-5R
ERP (W)	100,000	50000 Horiz + 50000 Vert
Antenna C/R AGL (m)	55	
Height over Head (m)	53	

Horizontal Distance from Antenna (m)	**Downward Angle (o)**	**Distance from C/R (m)**	**Field**	**Power Density uW/cm2**	**General Population MPE %**
0	90.0	53.0	0.000	0.0	0.00
1	88.9	53.0	0.023	0.6	0.31
2	87.8	53.0	0.044	2.3	1.15
3	86.8	53.1	0.063	4.7	2.35
4	85.7	53.2	0.087	8.9	4.47
5	84.6	53.2	0.107	13.5	6.75
6	83.5	53.3	0.123	17.8	8.88
7	82.5	53.5	0.141	23.2	11.62
8	81.4	53.6	0.162	30.5	15.25
9	80.4	53.8	0.173	34.6	17.29
10	79.3	53.9	0.197	44.6	22.28
11	78.3	54.1	0.213	51.7	25.86
12	77.2	54.3	0.229	59.3	29.66
13	76.2	54.6	0.244	66.8	33.39
14	75.2	54.8	0.257	73.4	36.71
15	74.2	55.1	0.271	80.8	40.42
16	73.2	55.4	0.282	86.7	43.33
17	72.2	55.7	0.291	91.3	45.65
18	71.2	56.0	0.299	95.3	47.65
19	70.3	56.3	0.306	98.7	49.33
20	69.3	56.6	0.310	100.0	50.01
21	68.4	57.0	0.310	98.8	49.38
22	67.5	57.4	0.311	98.1	49.05
23	66.5	57.8	0.308	94.9	47.46
24	65.6	58.2	0.303	90.6	45.29
25	64.7	58.6	0.295	84.6	42.32
30	60.5	60.9	0.227	46.4	23.20
35	56.6	63.5	0.117	11.3	5.67
40	53.0	66.4	0.006	0.0	0.01
45	49.7	69.5	0.108	8.1	4.03
50	46.7	72.9	0.167	17.5	8.77
55	43.9	76.4	0.176	17.7	8.87
60	41.5	80.1	0.144	10.8	5.40
65	39.2	83.9	0.082	3.2	1.60
70	37.1	87.8	0.007	0.0	0.01
75	35.2	91.8	0.062	1.5	0.76
80	33.5	96.0	0.127	5.8	2.92
90	30.5	104.4	0.171	9.0	4.48
100	27.9	113.2	0.156	6.3	3.17