

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of WINCHESTER SCHOOL OF CHINESE CULTURE in support of its Application for Construction Permit to operate a Low Power FM station on Channel 235 in Woburn, Massachusetts.

It is proposed to mount a standard two-bay circularly polarized antenna at the 25-meter level of an existing building. The proposed effective radiated power is 100 watts. Exhibit B is a map upon which the proposed 60 dBu service contour for the proposed facility is plotted. It is important to note that the proposed location meets all of the Commission's spacing requirements to pertinent co-channel and adjacent-channel full-power, FM translator and LPFM stations, except in two instances. The proposed site is short-spaced to second-adjacent-channel stations WJMN(FM) in Boston, Massachusetts and WHRB(FM) in Cambridge, Massachusetts. As a result, we request a waiver of the Commission's Rules with respect to WJMN(FM) and WHRB(FM) and the justification appears in Exhibit C. We have also determined that the proposed facility should not cause objectionable interference to the input signal of any existing translator station, based on the information contained in the FCC's CDBS database.

Employing the methods of OET Bulletin No. 65, and based on the elevation pattern of a standard 2-bay FM antenna, maximum power density two meters above ground of 0.0029 mW/cm^2 is calculated to occur 11 meters from the base of the building. Since this is only 1.5 percent of the 0.2 mW/cm^2 reference for uncontrolled environments (areas with public access)

surrounding a facility operating in the FM band, a grant of this proposal can be considered a minor environmental action with respect to human exposure to non-ionizing electromagnetic radiation. Further the station owner will take whatever precautionary steps are necessary to ensure that workers operating in the vicinity of the antenna are not exposed to RF energy in excess of the Commission's guideline values.

Due to the diminutive height of the existing building and its proximity to the nearest airport runways, the FAA has not been notified of this application. In addition, FCC registration of this structure is not required for the same reasons. This conclusion is supported by the Commission's TOWAIR program.

I declare under penalty of perjury that the foregoing statements and the attached exhibit, which was prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.



KYLE T. FISHER

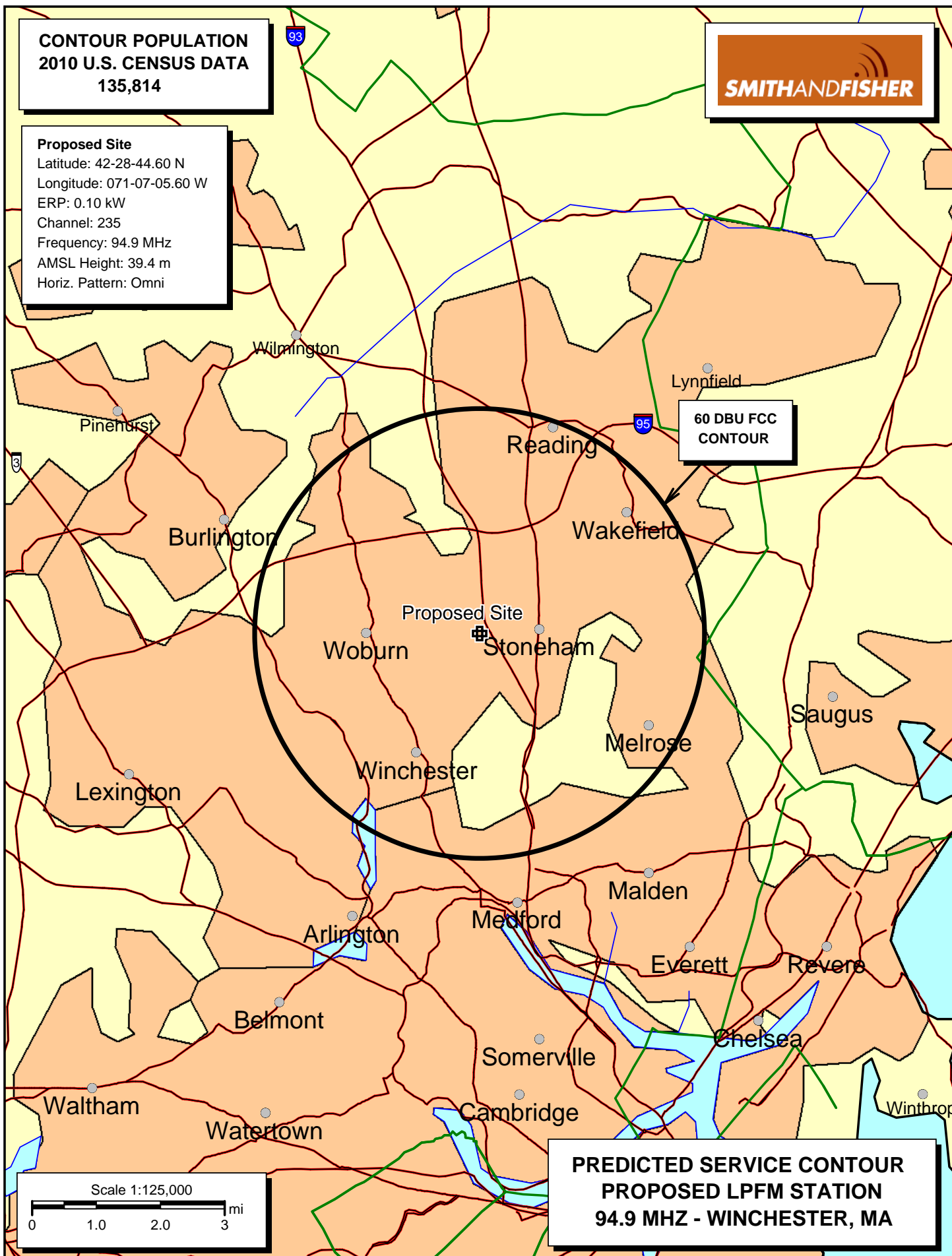
November 13, 2013

CONTOUR POPULATION
2010 U.S. CENSUS DATA
135,814



Proposed Site

Latitude: 42-28-44.60 N
Longitude: 071-07-05.60 W
ERP: 0.10 kW
Channel: 235
Frequency: 94.9 MHz
AMSL Height: 39.4 m
Horiz. Pattern: Omni



**60 DBU FCC
CONTOUR**

PREDICTED SERVICE CONTOUR
PROPOSED LPFM STATION
94.9 MHZ - WINCHESTER, MA

REQUEST FOR WAIVER OF SECOND-ADJACENT-CHANNEL SPACING RULE
PROPOSED LPFM STATION
CHANNEL 235 – WINCHESTER, MASSACHUSETTS

The site proposed herein is located 21.0 kilometers from that of WJMN(FM), which operates on Channel 233B in Boston, Massachusetts, and 15.0 kilometers from the site of WHRB(FM), Channel 237A in Cambridge, Massachusetts. Since the required spacing to these stations is 66.5 and 28.5 kilometers, respectively, a waiver of the Commission's spacing rules with regard to these stations is requested and believed to be justified for the reasons stated below.

We have conducted a Longley-Rice-based interference analysis for each station, the results of which are attached as Exhibits C-2 and C-3. The studies were run with a cell size of 1.0 kilometer and a 0.1- kilometer increment spacing. It calculates predicted interference (based on the 40 dB desired-to-undesired ratio for second-adjacent-channel situations such as this) from the proposed LPFM station in locations where there is a signal of at least 60 dBu available for WHRB and 54 dBu available for WJMN. The study concludes that there is no area or population within the WJMN or WHRB protected contour that would be adversely affected by the operation of the proposed LPFM station.

Accordingly, a waiver of the Commission's Rules with regard to WJMN and WHRB is requested and believed to be justified.

*Smith and Fisher Population Report**WJMN (233) Boston, MA - BLH20031201AWA**Lat: 42-18-27 N Lng: 071-13-27 W ERP: 9.2 kW AMSL: 394.0 m**FM Interference Study**Protected: Circle: R = 100 km**Interference considered within 100 km.**Signal Resolution: 1.0 km**Study Date: 11/13/2013**FM Database Date: 10/25/2013**D/U Ratios Used:**Co: 20.0 dB**First Adj: 6.0 dB**Second Adj: -40.0 dB**Third Adj: -40.0 dB**Threshold for reception: 54.0 dBu.**Primary Terrain: V-Soft 3 Second US Terrain**Secondary Terrain: V-Soft 3 Second Alaska Terrain**Population Database: 2010 US Census (PL)**Percentages calculated using a baseline population of 6,295,842.**Stations considered which do not cause interference:**Proposed Winchester LPFM (235)**Totals for WJMN (233)*

<i>Calculation Area Population:</i>	<i>7,546,569</i>	<i>(31407.2 sq. km)</i>
<i>Not Affected by Terrain Loss:</i>	<i>6,295,842</i>	<i>(21493.7 sq. km)</i>
<i>Interfered Population:</i>	<i>0</i>	<i>(3870.6 sq. km)</i>
<i>Interference Free:</i>	<i>6,295,842</i>	<i>(17623.1 sq. km)</i>
<i>Percent Interference:</i>	<i>0.00</i>	
<i>Terrain Blocked Population:</i>	<i>1,250,727</i>	<i>(9913.5 sq. km)</i>

*Smith and Fisher Population Report**WHRB (237) Cambridge, MA - BLH20111115ABD**Lat: 42-21-08 N Lng: 071-03-25 W ERP: 1.45 kW AMSL: 201.0 m**FM Interference Study**Protected: Circle: R = 100 km**Interference considered within 100 km.**Signal Resolution: 1.0 km**Study Date: 11/13/2013**FM Database Date: 10/25/2013**D/U Ratios Used:**Co: 20.0 dB**First Adj: 6.0 dB**Second Adj: -40.0 dB**Third Adj: -40.0 dB**Threshold for reception: 54.0 dBu.**Primary Terrain: V-Soft 3 Second US Terrain**Secondary Terrain: V-Soft 3 Second Alaska Terrain**Population Database: 2010 US Census (PL)**Percentages calculated using a baseline population of 3,959,888.**Stations considered which do not cause interference:**Proposed Winchester LPFM (235)**Totals for WHRB (237)**Calculation Area Population: 7,470,589 (31411.6 sq. km)**Not Affected by Terrain Loss: 3,959,888 (11934.4 sq. km)**Interfered Population: 0 (4486.3 sq. km)**Interference Free: 3,959,888 (7448.1 sq. km)**Percent Interference: 0.00**Terrain Blocked Population: 3,510,701 (19477.2 sq. km)**Contour Area Population: 7,470,217*