APPENDIX G

POST-BARRIER WALL INSTALLATION ACOUSTICAL STUDY

Firm: St. Francis Hospital

Attn: **Raymond Liotti**

Fax#: email

Date: April 22, 2003

From: Joshua Cushner

Pages: 2
(incl. this page)

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Re: **St. Francis Hospital**
Post-Barrier Wall Installation Acoustical Survey

SM&W# 01335as

Dear Mr. Liotti,

Per your request, during the afternoon of April 16, 2003, we conducted acoustical testing of noise associated with the operation of the two sets of roofmounted cooling towers, after the installation of a sound barrier wall. This letter presents the results of our survey.

Survey Results

Noise measurements were taken with a calibrated sound level meter at 4 locations along the property line at the southwest end of the St. Francis campus. Site measurement locations are shown on the attached map. At each location, we monitored noise while both two-cell cooling towers were operating at 100% design capacity, then again with both units turned off.

For reference, Section 158 of the Flower Hill Noise Code provides criteria for maximum allowable airborne sound levels from a commercial district. The criteria is provided per octave band frequency and as an overall A weighted noise level, as follows:

Flower Hill Noise Code
Maximum Allowable Decibel Levels

Octave Band Center Frequency (Hz)	31.5	63	125	250	500	1000	2000	4000	8000	dB(A)
	78	73	67	60	55	51	46	43	40	55dBA

Considering that the towers could potentially operate 24 hours a day, the more stringent criteria is the 55dBA requirement between 6:00pm and 8:00am. The results of our site measurements is as follows:

Measurement Location	Towers ON	Towers OFF
A	54 dBA	53 dBA
B	50 dBA	49 dBA
C	50 dBA	49 dBA
D	50 dBA	50 dBA

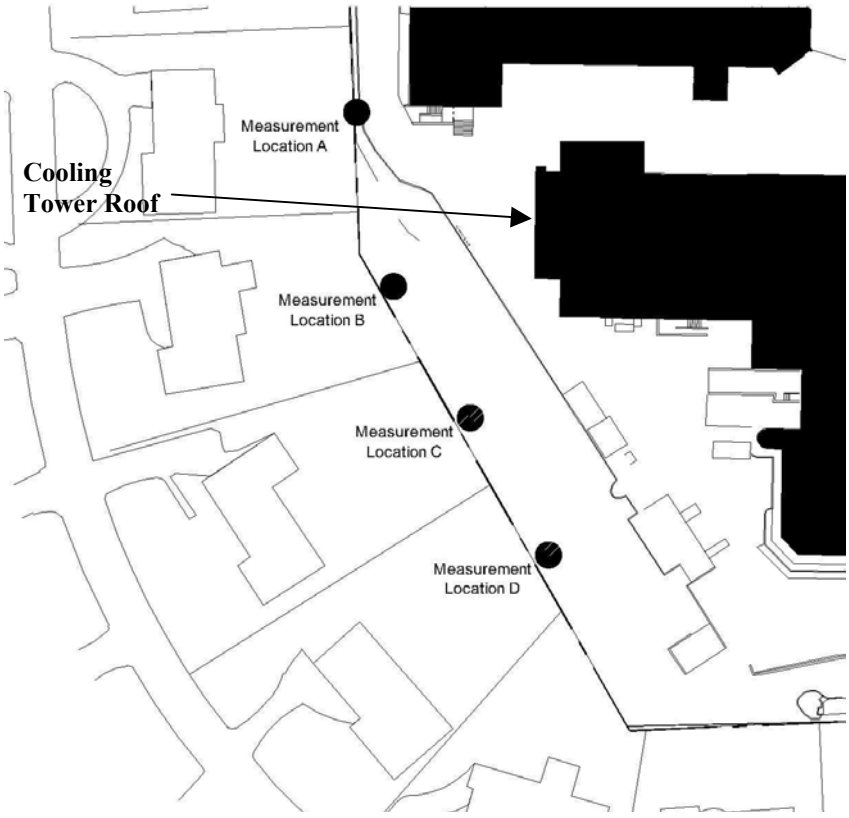

Fig 1 – Site Plan and Measurement Locations

We note that there are no exceedances of the nighttime Noise Code at the property line when both towers are under full 100% operation. We also note that at the time of our visit, the difference at the property line when the cooling towers were turned on or off was virtually inaudible. We believe this to be a successful installation and that the Noise Code has been met.

Should you have any questions, don't hesitate to call.

Very truly yours,

SHEN MILSOM & WILKE, INC.

Joshua M. Cushner
Associate