**Niagara Courthouse Theatre**

**Application: AHU Silencers (Axial Fans)**

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**CHALLENGE**

 Fans in Occupied Space

An historic courthouse building was to be converted to a theater but there was no internal traditional space for the air conditioning ductwork and equipment. Also, fans could not be placed on the roof because of structural limitations.

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**SOLUTION**

**FAN/SILENCER PACKAGES**

V-A proposed fan-silencer packages for both the supply and exhaust be located in the upper stage corners. These units would be within 15 feet of the actors on stage. Budget pricing was submitted for three noise criteria: NC-20, 25 and 30. Packages included fans, silencers, enclosures, coils and filters.

NC-25 was chosen which V-A guaranteed and NC-22 was achieved. (The spotlight dimmer made more noise than the quiet air conditioning units.)

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Vibro-Acoustics retrofit air conditioning units for “Courthouse Theatre” were located in upper stage corners and achieved NC-22. Note how the silencers are recessed into the units due to severe space limitations.