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**Soundscape design methods to acheive net zero environmantal  
noise impacts**

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Soundscape design methods were developed to approach net zero environmental noise impacts for significant building projects in complex settings. Auralization methods for various design alternatives were presented for stake holder review in a large auditorium and in a full size demonstration in the actual environment. Innovative acoustical design and analysis methods were developed to economically reduce source noise levels to the vicinity of the ambient sound level. Methods to determine the nature of the ambient sound level as it varies with time of day, time of year and other natural and community factors included a series of long term average A-weighted sound levels as well as more detailed octave band measurements and calibrated aural recordings of specific acoustic events. Sound walks were conducted at various times of day to understand the dynamics of the acoustical environment and to identify issues. Focus group discussions among stakeholders and team members developed the long term plans for the community and appropriate architectural and acoustical design criteria for the project.