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XII. LIGHTING CRITERIA FOR AUDIOVISUAL ROOMS

Fixtures should be zoned and controllable in order to provide appropriate lighting scenes for typical conference, presentation and projection modes, as well as video teleconference applications, where applicable.

Zoned, dimmable, incandescent downlighting provides the most flexibility for general usage, presentation and projection applications. The front row(s) of fixtures must be on an independent zone. This way, in projection mode, the lights nearest the projection screens can be turned off independently while having the remaining zones provide low level illumination of the audience to facilitate note taking, etc.

Lighting for video conference/distance learning applications is very critical due to requirements of the cameras. Fluorescent bulbs with a color temperature of 3500°K are recommended since they yield a natural lighting with minimal coloration effects to flesh tones. Directional lenses combined with proper zoning will provide a high illumination level of the conference participants while maintaining lower light levels and reduced glare at the front (monitor/screen) wall. Fluorescent lighting is also used with consideration of HVAC requirements since incandescent has greater demands.

The following illumination levels are recommended

Dedicated Video Conference Rooms:

Table:	80fc at the face (vertical)
Front (monitor) wall:	less than 40fc
Rear & side walls:	45 - 60fc

Multi-Purpose Rooms - Video Conferencing on a portable or limited basis:

Evenly distributed illumination at a minimum level of 80fc will typically yield satisfactory results, however, improvements towards above criteria for dedicated rooms

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will enhance video image quality.

Distance learning or other applications where a presenter must be illuminated:

At a minimum, a key light and a back light should be provided to illuminate the lectern position. A key light provides the main sources of illumination and is typically a fresnel spotlight placed at a 45° angle to the subject and at a 45° angle above the plane of the camera. "Barndoors" are also recommended to further control the light beam shape. A back light is normally located 45° to 60° above the camera plane behind the subject. Illuminating from the back in this manner separates the subject from the background and provides depth to the video image.

Key light: 70fc - measured vertically at the face of a subject at the lectern

Back light: 35fc

The positioning of these fixtures is critical so that the subject is properly illuminated while avoiding light spill onto the projection screens and back towards the camera lens. This concerns light spill from both direct light sources as well as light reflected off surrounding surfaces. For example, care must be taken so that light is not reflected off the lectern and on to the screen (see finish recommendations elsewhere in this report).

The guidelines above are only baseline criteria based on the audiovisual functionality of the room. Lighting fixture types, quantities, exact locations and zoning shall be as specified by the Architect/Lighting Consultant/Electrical Engineer.

The specifications shall be coordinated with Shen Milsom & Wilke, Inc.