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LIGHT REFLECTANCE VALUE (LRV)

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Dear Valued Customer,

Following is a brief explanation about Light Reflectance Value [LRV], and it's most common usages. LRV is a reflectance measurement that has 3 primary purposes in the construction market:

- 1. Interior Color Contrast Building Codes:** Project designers often specify a minimum LRV difference to meet code requirements of two adjacent interior spaces to protect those who are visually impaired. For example, a white painted staircase would typically not be allowed to transition onto white tile flooring. Nor would black furniture or end tables be permitted in a commercial space that had dark gray carpeting. The minimum LRV difference requirement would be such that the tables would have to be significantly lighter or comprised of lighter woods such as maple or pine.
- 2. Glare Reduction:** LRV values are also a popular measurement for Condo and Building associations as a means of providing an aesthetically 'glare free' zone. The lighter the color the higher the risk of harsh bright reflection. In these cases, lower LRV readings are desirable. While there are no universally recognized LRV specifications, the most common maximum LRV 'anti-glare' limit is 40. However, it is not uncommon to see LRV limits as low as 25; for example, in airport regions.
- 3. Interior Lighting design:** 21st century lighting systems are designed to provide lighting both directly and indirectly. LRV helps a designer to calculate if a wall or ceiling color can act as a mirror for reflected light.

Ironically, lower LRV requirements often work against building plans looking to capitalize on higher solar reflectivity to qualify for Heat Island codes such California Title 24, Energy Star, or USGBC LEED. LRV specs will eliminate glare but will also inadvertently push design plans toward darker colors. Because darker colors absorb more heat they may not qualify for LEED or Energy Star projects.

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