Using the 7 Principles of Universal Design for Specifying Windows and Glass Doors

Definition of Universal Design

- “Products and environments that can be used effectively by all people, to the greatest extent possible, without the need for adaptation or specialized design” (North Carolina State University, 1997).
- Universal Design can be incorporated into both product and architectural design.

7 Principles of Universal Design

Principle 1 – Equitable Use  Equally usable by everyone.

- Example: Ergonomic door handle that unlocks, opens and closes the door, with one single motion

Principle 2 – Flexibility in Use

- Provide choices in methods of use and be usable in more than one way
- Example: a window that has the traditional look and operation of a sash window, but can also be tilted inward for easy cleaning

Principle 3 – Simple and Intuitive Use

- Easy to understand how to use it
- Example: window lock mechanism that is designed to engage with simple one-touch operation
Principle 4 – Perceptible Information

- Provide information in different forms to communicate effectively with all users regardless of their sensory abilities.
- Example: design of this window lock has an added security feature visible at a glance, e.g. when the handle is down, the window is locked. When the handle is up, the window is unlocked.

Principle 5 – Tolerance for Error

- Eliminate any features that could be dangerous or would provide inconvenience to the user.
- French-style patio door can save interior space and eliminate potential conflict with an in-swinging door.

Principle 6 – Low Physical effort

- Include features that require little or no force to use them.
- Example: Horizontal sliding windows with high impact nylon rollers that glide across a raised monorail track.

Principle 7 – Size and Space for Approach and Use

- Provide a sufficient amount of space arranged to permit anyone to approach and use them.
- Example: windows installed at a lowered height in a one-story home so they are usable from both a standing and seated position.