News Release

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UL Seminar Covers New CSA Standard for High Exposure Fenestration Installation

SCHAUMBURG, IL – Robert Jutras, Principal Engineer at [UL](https://www.ul.com/), led a sponsored session called "The New Canadian High Exposure Fenestration Installation Standard CSA A440.6:20, Explained" during the Fenestration and Glazing Industry Alliance (FGIA) Virtual Annual Conference. This new document from the Canadian Standards Association (CSA) was published in 2020 and encompasses more than 140 pages, mapping out specifications for the installation of fenestration products in buildings of four or more stories in height, and of all occupancies.

In Canada, explained Jutras, codes are not divided by usage like commercial or residential, nor are they specified by occupancy but rather by size. “That means codes pertain to the size of a building,” he said. To this end, Parts 3, 4 and 5 cover large buildings of all type of occupancy. Part 9 covers housing and small buildings. Part 9 is sometimes referred to as “residential,” but it also includes small commercial buildings.

In Canada, there are two published fenestration installation standards:

1. CSA A440.4:19, *Window, Door and Skylight Installation*
2. CSA A440.6:20, *High Exposure Fenestration Installation*

Jutras’s presentation mentioned both, but focused on the latter, which helps installers and manufacturers understand their responsibilities to the National Building Code of Canada (NBC). CSA A440.6:20, *High Exposure Fenestration Installation*, refers to buildings more than three stories tall and more than 600 meters squared. "High exposure" means higher winds, higher wind-driven rain pressures and building movements due to wind. “This standard covers those situations,” said Jutras.

Setting forth the characteristics of effective, durable installation for retrofit and new installation alike, CSA A440.6:20 includes fenestration products within the scope of the North American Fenestration Standard (NAFS) and includes products installed as ribbons, strips or punched windows that are fabricated with components typically used in curtain wall systems. It also includes window walls and storefronts.

The standard does not apply to the installation of storm windows or doors, fire-rated fenestration, garage doors, commercial entrance systems, revolving doors, commercial steel utility doors or bay and bow windows. Also excluded are glazed architectural structures, which are considered glazing assemblies that are supported in a non-traditional manner. “Skylights that are not covered by NAFS are considered glazed architectural structures,” said Jutras.

CSA A440.6:20 discusses general principles and material requirements, such as anchors, flexible and rigid flashing materials, insulating materials, sealants and backer rods, shims, tapes, wood blocking and water resistive barriers.

“Design loads and effects to be considered include wind loads, driving rain wind pressure, guard loads, seismic loads and both dynamic and static building movements,” said Jutras. General principles include laboratory testing for glass fall-out; mock-up testing; field performance testing during construction; installation field review; and sealants. The design loads and effects to be considered in the installation of a fenestration product include wind loads, driving rain wind pressure, guard and human impact loads, the self-weight of the product and more.

Testing of materials to be site-applied should be conducted prior to the first installation of a fenestration product. “The standard spells out what this looks like,” said Jutras, adding that it also includes three sections that discuss the type of field testing one should perform and provides a check list for one’s review.

Finally, there are four normative annexes in CSA A440.6:20, which cover things like procedure for retrofit product replacements, lab mock-up testing sequence, site mock-up testing sequence and field testing during construction sequence.

Visit the [CSA Online Store](http://store.csagroup.org) to purchase a copy of CSA A440.6:20. For more information on FGIA programs and services, visit [FGIAonline.org](https://fgiaonline.org/).

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