

BASE Line

The quarterly newsletter of BASE

Fall 2019

B A S E

The Codes They Are a Changin'

Chicago Building Code Updates

Earthquakes in Chicago? With the City of Chicago's upcoming transition to the 2018 International Building Code (IBC), gone will be the days that earthquake design requirements can be ignored in the Windy City. Not to worry, though, many buildings will fall in the lowest seismic design category as earthquakes are still unlikely in Chicago. In this lowest category earthquakes are not explicitly designed for, just as they weren't in the previous code. Major changes related to earthquakes include:

- \$\$ Additional geotechnical testing will be required.
- 😞 More extensive structural calculations and analysis for structures not in the lowest seismic design category.
- 😞 Essential facilities (like hospitals, fire stations, and police stations) on poor soils may require some extra seismic design such as extra detailing for certain structural systems and extra analysis for certain irregular building configurations.
- \$\$ Essential facilities may also start to require special sway bracing for architectural and select mechanical, electrical, and plumbing components.

The new Chicago Building Code is currently scheduled to become optional on December 1, 2019 and mandatory on August 1, 2020.

Other changes to structural requirements include:

- 😊 Design live load for public parking garages will decrease from 50 pounds per square foot (psf) to 40 psf.
- 😞 Roof snow loads for most structures will likely decrease by about 25%.
- 😞 Buildings over 60 feet tall will no longer be permitted to be designed for the standard 20 psf wind pressure. A more in-depth wind calculation must be carried out instead. This change is not anticipated to result in significant changes to final wind loads for most structures but will require much more lengthy calculations.
- \$\$ Buildings taller than 400 feet and certain irregular or wind-sensitive structures will be required to undergo a wind tunnel study.
- \$\$ The addition of structural special inspections, some full-time during construction of the structure, will be required on most projects. Note that special inspection agencies are typically hired by the project owner as it is not permissible to delegate special inspection to the contractor.
- \$\$ Structural observation by a licensed structural engineer will be required for all high risk structures and all buildings taller than 80 feet.

We do lunch & learns!

Contact us to learn about how major code changes impact your firm.

For more information about the code changes coming to Chicago, visit the page in the city's website:

https://www.chicago.gov/city/en/depts/bldgs/provdrs/bldg_code/alerts/2019/march/building-code-modernization-phase-2.html

Honolulu Building Code & UFC Updates



The City & County of Honolulu is expected to adopt a locally amended version of the 2012 IBC in early 2020 that will be mandatory one year after adoption. Major changes currently proposed for adoption include extensive requirements for protection of glazing from wind-borne debris during hurricanes and an updated wind load calculation procedure.

The United Facilities Criteria (UFC) 3-301-01 Structural Engineering was newly released on 01 October 2019. Major changes include adoption of the 2018 IBC along with the structural requirements of ASCE 7-16. Stay tuned for more news.

Project News

Three BASE projects recognized by ASCE

On September 26, ASCE Hawaii Section held its 2019 Outstanding Civil Engineering Achievement Awards banquet and BASE was humbled to have been involved in three award-winning projects:

- ConRAC Kahului Airport - Best Transportation Project (engineer of record)
- Ae'o - Best Large Project (engineer of record)
- Espacio the Jewel of Waikiki - Best Building & Structural Systems Project (contractor assistance)



The Plaza at Kaneohe opens

Congratulations to MW Group, Ltd. on opening its sixth Plaza Assisted Living community, The Plaza at Kaneohe, which opened on October 9. BASE is honored to have designed all six communities, each offering seniors a place to thrive in a supportive and caring environment.



New BEQ at Great Lakes Naval Station tops off

Structure is almost topped out on this new six-story, 166,000 SF bachelor enlisted quarters at Great Lakes Naval Station. BASE completed foundation and superstructure design in only three months for this fast-track design-build project with Clark Construction Group, LLC and Blinderman Construction JV, FGM Architects, and Pepper Construction Group.



BASE News

BASE principals in print

Steve Baldrige and Frank Humay were featured in two publications in September. Steve was profiled in The Zweig Letter (<https://bit.ly/2kFgHFw>) and Frank shared his insight on the increasing work in Guam (<https://bit.ly/2kHNFyp>).



New to BASE

BASE Honolulu



Kevin Galvez, S.E.
Structural Engineer

BASE Chicago



Rafal Walus
Structural Designer

BASE Micronesia



Akashi Rouse
Structural Designer & Special Inspector

BASE India



Divyesh Mistry
Director