



NJ Building Code Requirements for Cannabis Facilities: Architects and Engineers Beware

New Jersey Law Journal

This article explores the potential design pitfalls CREAMMA has raised for architects, engineers and entrepreneurs when designing a cannabis grow facility, dispensary or processing facility.

By **Lawrence P. Powers** | July 08, 2021

The New Jersey Cannabis Regulatory, Enforcement Assistance, and Marketplace Modernization Act (“the Act”), signed into law on Feb. 22, 2021, started New Jersey down the path to legalized personal-use cannabis. This article explores the potential design pitfalls the Act has raised for architects, engineers and entrepreneurs when designing a cannabis grow facility, dispensary or processing facility.

A long time coming, the passage of the Act caught most New Jersey construction attorneys off guard when their clients started calling them for advice. Soon after the Act was passed, I received calls from architects seeking advice as to the potential pitfalls presented by their clients’ requests to design facilities for the growing, processing and selling of cannabis products (“cannabis facilities”). Little did I know of the depth of the rabbit hole those calls would lead me down.

I started my education on the subject by reading the 166-page Act. What struck me was how much of the Act was devoted to regulatory and social issues, and how little of the Act was devoted to any specific requirements for design and construction. The website of the Cannabis Regulatory Commission (CRC) sets forth its mission as “striving to advance justice through collaborative partnerships and targeted initiatives in communities across the state.” Nothing about protecting the public health, safety and welfare in the design, construction and operation of cannabis facilities. Besides some references to requiring consumption “lounges” to meet the air quality standards of cigar lounges and some vague security requirements, nothing in the Act provides any guidance to architects as to any special regulatory requirements for the design and construction of cannabis-related facilities. Although such regulations do not exist yet, potential purveyors of cannabis are moving ahead with designing (and sometimes building) their facilities with little guidance.

Here are some examples of the minimal guidance provided by the Act.

“The Commission shall adopt regulations to ensure adequate security of all facilities 24 hours per day and security of all delivery methods.”

Another portion of the Act restricts the bloom space for a mature cannabis plant grow canopy to under 150,000 square feet. The CRC has yet to issue any other real guidance.

Checking the DCA website and calling it for guidance provided no help, either, so I sought guidance from practitioners in Colorado, which has a five-year head start in dealing with this issue. My legal brethren in Colorado all told me to address the issue by simplifying things, something which had not occurred to me, and directed me to a fellow Coloradan, Steve Thomas, CBO, President of Denver-based Colorado Code Consulting.

Mr. Thomas is the author of an International Code Council (ICC) publication entitled Applying the Codes to Cannabis Facilities, what I consider to be the “gold standard” on ensuring code compliance when designing and constructing cannabis-related facilities. This publication is available for download on the ICC website at this URL: <https://shop.iccsafe.org/applying-the-codes-to-cannabis-facilities.html>.

When I spoke to Mr. Thomas, he advised to tell my clients to simplify their analyses by looking at cannabis-related facilities as just another industrial or commercial use that could be fit into an International Building Code (IBC) use group classification and then design accordingly, since a cannabis facility is just another type of commercial use. The only difference is that, instead of growing tomatoes, cannabis plants are grown. There is already an IBC use group that covers it. If you design to the requirements of that use group classification and address the special fire code and life safety considerations created by the use, the only other concern would be addressing any special requirements that are imposed by the CRC, when it gets around to promulgating the code provisions permitted by the enabling Act.

For example, grow facilities are just facilities for the cultivation of another type of plant—cannabis. Grow facilities can be one of three different types: outdoor, indoor, and greenhouses. Outdoor facilities are not an issue in New Jersey, for two reasons. First, they are not permitted under the Act for security reasons, and, second, New Jersey’s growing season is too short to make outdoor growing practical.

An indoor grow facility where cannabis plants are grown, processed and packaged would most likely be classified as a Group F-1 Moderate Hazard Factory Industrial use. A greenhouse, on the other hand, is a separate, thermally isolated structure that provides a sunlit environment for the propagation of plants. Greenhouses are Group U occupancies, unless they are also used for processing or packaging, in which case they would be classified as Group F-1 occupancies. Once you make this determination, an analysis must be made on how to meet the fire hazard and life safety requirements of the IBC. Additionally, anyone applying to license a cannabis facility must submit a licensing application to the CRC which addresses some obvious design issues (i.e., providing inventory control and tracking software to track the production of cannabis, water management practices, odor mitigation practices, pest and disease management practices, including plans for the use of pesticides, nutrients and additives and waste disposal plans).

Another potential use of a cannabis facility is for the extraction of THC, the psychoactive ingredient of cannabis, or the processing of cannabis for sale as bud. The growth and extraction processes present issues that must be addressed in order to satisfy the code, fire code and life safety requirements for those uses. For example, a grow facility may use CO₂ enrichment to promote cannabis growth. The 2018 edition of the International Fire Code addresses the use of CO₂ enhancement (i.e., for proper ventilation or CO₂ dilution). The use of CO₂ enrichment may require the use of a warning alarm at 5000 ppm, which is an amount in excess of what is required to enhance cannabis growth; at 30,000 ppm, which is the OSHA mandated cutoff; or at 100,000 ppm, which the CDC deems lethal.

Extraction facilities can be treated as Group F-1, Moderate Hazard Industrial occupancies, or, depending upon the extraction method utilized, Group H, High Hazard. An extraction facility that uses flammable liquids or gases as solvents to extract the essential oils of the cannabis plant, such as butane, will generally be classified

as an “H” use, depending upon the quantities of solvent used. This would require the architect to provide the reviewing code official with a proposed chemical inventory and to design for control areas, such as the type utilized in the design of a research laboratory.

Cannabis testing labs must also be designed with many of the same considerations. There are strict state requirements for the growing of the plants and for the THC levels in any cannabis product. Accordingly, purveyors of cannabis products must continually test those products to meet state requirements. A cannabis testing lab would be classified as a Group B, Laboratory occupancy, unless it uses and stores flammable liquids in greater amounts that would push it into the H, High Hazard occupancy.

Due to the increasing popularity of cannabis “edibles” such as gummies and brownies, another type of cannabis facility might be a food manufacturing facility. Such a facility is really no different than any other commercial kitchen, save for the requirements to provide security measures to prevent the theft of cannabis products or to suppress cannabis odors created by the cooking process.

Another type of use is a dispensary or point of sale. A dispensary is just another Group M, Mercantile use, like a butcher shop or a bakery, but with its own special considerations. While butchers need freezers and bakers need ovens, dispensaries need enhanced security for their profits and for the storage and sale of their products. The safe storage of cash is a key issue because, for now, most cannabis sales will be done on a cash basis. Securing both the product and the profits must be considered in the design of any cannabis facility.

Bottom line: any designer of a cannabis facility should first determine the proper IBC use group classification and then tailor their design to meet the specific requirements of that use, just like it would be done for any other use. The primary difference is the need to design to address the fire code, life safety and security considerations that are unique to cannabis-related facilities. In order to do that, it is imperative that design professionals fully understand how the end user is going to use the facility that they are being asked to design. Design charrettes (intense collaborative meetings to develop the design program), followed by plan review meetings with the local code official will be key to this process. Satisfying the life safety and fire hazard concerns of the code official can prevent the issuance of stop work orders or violation notices, after the fact.

Hopefully the CRC, which had its first meeting in April, will be proposing some draft Administrative Regulations in the near future. Design professionals and their counsel will need to be deeply involved in the CRC rulemaking process during the comment period in order to create a workable set of security regulations. I strongly recommend that those who intend to participate in the design process for cannabis facilities involve themselves in that process so that any regulations promulgated are developed and shaped by those who will actually have to work with them. Until then, proceed cautiously and seek guidance from other design professionals who have successfully brought cannabis facilities to market in other states.

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