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THE COUNCIL

Committee Report of the Infrastructure Division

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COMMITTEE ON HOUSING AND BUILDINGS
Jumaane D. Williams, Chair

June 22, 2016

INT. NO. 1160:	By Council Members Constantinides and Richards (in conjunction with the Mayor)
TITLE:	A Local Law to amend the administrative code of the city of New York, in relation to the installation of sub-meters in certain tenant spaces
ADMINISTRATIVE CODE:	Amends sections 28-311.2, 28-311.3, 28-311.5, and 28-315.3.1
INT. NO. 1163:	By Council Members Garodnick, Richards, Johnson, Constantinides and Chin (in conjunction with the Mayor)
TITLE:	A Local Law to amend the administrative code of the city of New York, in relation to expanding the list of buildings required to be benchmarked for energy and water efficiency
ADMINISTRATIVE CODE:	Amends sections 28-309.2, 28-309.4, 28-309.5.1, 28-309.8, 28-309.9. Adds a new section 28-309.11

INT. NO. 1165: By Council Members Richards, Constantinides and Chin (in conjunction with the Mayor)

TITLE: A Local Law to amend the administrative code of the city of New York, in relation to upgrading lighting systems in certain buildings

ADMINISTRATIVE CODE: Amends sections 28-310.2, 28-310.3 and 28-315.3.1

INT. NO. 1169: By Council Members Williams and Richards (by request of the Mayor)

TITLE: A Local Law to amend the administrative code of the city of New York, in relation to conforming the New York city energy conservation code to the New York state energy code with amendments unique to construction in the city and repealing section 28-1001.2 in relation thereto

ADMINISTRATIVE CODE: Amends sections 28-1001.1. Repeals section 28-1001.2. Adds a new section 28-1001.2.

Introduction

On June 22, 2016, the Committee on Housing and Buildings, chaired by Council Member Jumaane D. Williams, will hold a hearing to consider Int. No. 1160, Int. No. 1163, Int. No. 1165 and Int. No. 1169. The Committee expects to receive testimony from representatives of the Department of Buildings (DOB), members of the real estate industry, energy conservation advocates and other interested members of the public.

Int. No. 1160

Currently, by January 1, 2025, owners of buildings 50,000 gross square feet or larger are required to have installed electrical sub-meters in all tenant spaces which are 10,000 gross square feet or larger (other than dwelling units). Int. No. 1160 would expand the requirements to owners of buildings 25,000 gross square feet or larger and to tenant spaces (other than dwelling units) 5,000 gross square feet or larger.

Section one of Int. No. 1160 would amend section 28-311.2 of the New York City Administrative Code (the Code). Section 28-311.2 contains definitions. Int. No. 1160 would amend the definition of covered building by reducing the size threshold for such buildings from 50,000 gross square feet to 25,000 gross square feet. It would also amend the definition of covered tenant space to reduce the size threshold for such space from 10,000 gross square feet to 5,000 gross square feet.

Section two of Int. No. 1160 would make various technical edits to section 28-311.3 of the code.

Section three of Int. No. 1160 would make various technical edits to section 28-311.5 of the code.

Section four of Int. No. 1160 would make various technical edits to section 28-315.3.1 of the code.

Section five of Int. No. 1160 contains the enactment clause and provides that the law takes effect immediately.

Int. No. 1163

Currently, buildings 50,000 gross square feet or larger are required to benchmark annually. This bill would expand the City's benchmarking requirement to buildings 25,000 gross square feet or larger and require the Department of Buildings to establish a system to assist such buildings in meeting their benchmarking requirements.

Section one of Int. No. 1163 would amend section 28-309.2 of the Code. Section 28.309.2 contains definitions. Int. No. 1163 would amend the definition of "city building" to reduce the size threshold for exclusion from such definition from 50,000 gross square feet to 25,000 gross square feet for buildings which

participate in programs administered by the Department of Housing Preservation and Development. Int. No. 1163 would also amend the definition of covered building by reducing the size threshold for such buildings from 50,000 gross square feet to 25,000 gross square feet.

Section two of Int. No. 1163 would amend section 28-309.4. Section 28-309.4 requires owners of covered buildings to annually benchmark their buildings beginning May 1, 2011. Int. No. 1163 would require the first mandatory benchmark for a covered building, other than a city building, which is less than 50,000 gross square feet to be completed on or before May 1, 2018.

Section two of Int. No. 1163 would also amend section 28-309.4.1 and repeal sections 28-309.4.1.1, 28-309.4.1.2, 28-309.4.1.3 and 28-309.4.1. These sections currently lay out the obligation of owners of covered buildings to request, and include in their benchmarking reports, information from tenants about any separately metered energy use. Int. No. 1163 would instead require owners of covered buildings to obtain such information from the utility. If the utility does not have a program to provide such information, the owner would then be required to make reasonable efforts to obtain such information from tenants.

Section two of Int. No. 1163 would also amend section 28-309.4.2 of the Code. Section 28-309.4.2 requires owners to retain certain documents. The proposed legislation would require that where energy use within separately metered tenant spaces is omitted, records would have to be maintained documenting the owner's efforts to obtain such information.

Section two of Int. No. 1163 would also amend section 28-309.4.3 of the code. Section 28-309.4.3 makes it a lesser violation for owners of covered buildings to fail to benchmark. The proposed legislation would allow DOB to reject a benchmarking report which is substantially inaccurate or incomplete and to hold the owner who submitted such report liable for a violation as if no benchmarking had been performed.

Section three of Int. No. 1163 would make various technical amendments to section 28-309.5.1 of the code.

Section four of the proposed legislation would make various technical amendments to section 28-309.8 of the code.

Section five of the proposed legislation would amend section 28-309.9 of the code. Section 28-309.9 required DOB to issue a report on benchmarking by December 21st of 2011, 2012, and 2013. Int. No. 1163 would require such a report to be issued annually.

Section six of Int. No. 1163 would add a new section 28-309.11, entitled "benchmarking assistance," to article 309 of the code. Article 309 outlines the City's benchmarking requirements. New section 28-309.11 would require DOB to establish a system to receive and respond to requests from owners for assistance with respect to fulfilling their benchmarking requirements.

Section seven of Int. No. 1163 contains the enactment clause and provides that the law take effect immediately.

Int. No. 1165

Currently, by January 1, 2025, owners of building 50,000 gross square feet or larger are required to upgrade the lighting systems in their buildings so that they are in compliance with the standards for new systems set forth in the New York city energy conservation code. This bill would expand the upgrade requirements to owners of buildings 25,000 gross square feet or larger.

Section one of Int. No. 1165 would amend section 28-310.2 of the Code. Section 28.310.2 contains definitions. Int. No. 1165 would amend the definition of covered building by reducing the size threshold for such buildings from 50,000 gross square feet to 25,000 gross square feet. It would also delete the definition of upgrade.

Section two of Int. No. 1165 would make various technical edits to section 28-310.3 of the code.

Section three of Int. No. 1165 would make various technical edits to section 28-315.3.1.

Section four of Int. No. 1165 contains the enactment clause and provides that the law take effect immediately.

New York City Energy Code Background

The Energy Conservation Construction Code of New York State (State Energy Code) sets standards for the energy performance of buildings throughout New York. The State Energy Law permits municipalities to promulgate local energy conservation construction codes, provided that those codes are at least as stringent as the State Energy Code.[1] The State recently amended the State Energy Code and the updated code will go into effect on October 3, 2016. So, for New York City to continue having its own energy code, the City must update the local energy code to match the new State standards. Int. No. 1169 is intended to address this issue, and make several New York City-specific amendments to the updated State Energy Code.

New York City-Specific Amendments

Int. No. 1169 includes various technical and substantive New York City specific-amendments to the State Energy Code and to the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) energy standards.[2] The most significant amendments are as follows:

Air Barrier Testing. Air leakage occurs when outside air enters a space and cooled or heated air leaves such space resulting in increased heating and cooling costs. Under the proposed amendment to the State Energy

[1] *See* New York State Energy Law § 11-109.

[2] Developers and owners of commercial buildings may elect to follow either the State Energy Code (or, in New York City, the City's local energy code) or ASHRAE 90.1 (Energy Standard for Buildings Except Low-Rise Residential Buildings). References to "ASHRAE" in this Committee Report are to ASHRAE 90.1-2013.

Code and ASHRAE, there would need to be either quantitative or qualitative testing of air barrier systems in commercial buildings of a certain size.[3]

PTAC & PTHP. Packaged terminal air conditioners (PTACs) and Packaged Terminal Heat Pumps (PTHPs) are two commonly used types of air conditioners installed through the wall.[4] Through-the-wall air conditioners are associated with air leakage and thermal bridging and thus energy loss.[5] The proposed New York City-specific amendments to the State Energy Code and ASHRAE would increase the building thermal envelope requirements where the total area of through-the-wall equipment exceeds 1% of the opaque above-grade-wall area.

Vestibules. The State Energy Code and ASHRAE require vestibules in front of doors in order to prevent air leakage when doors are opened.[6] There is, however, an exception for doors that open directly from a space less than 3,000 square feet in area. Int. No. 1169 would limit the 3,000 square foot exception to buildings that are less than 75 feet in height and for buildings 75 feet and greater in height make the exception only for doors that open directly from a space less than 1,000 square feet in area.

Occupant Sensors. Under the proposed updates to the State Energy Code, occupant sensors would (1) be required in all classrooms, conference/meeting rooms, copy/print rooms, lounges, employee lunch and break rooms, private offices, restrooms, storage rooms, janitorial closets, locker rooms, and other spaces 300 square feet or less; (2) be required to turn off lights within 30 minutes after all occupants leave the space; and (3) allow lights to be turned on either manually (to full power) or automatically (to not more than 50% power).[7] Int. No. 1169 would include open plan offices in the list of areas required to have occupant sensors. Also, to be consistent with Local Law 48 of 2010, Int. No. 1169 would instead require that classrooms, conference/meeting

[3] For energy code purposes, the term "commercial building" generally includes residential buildings taller than three stories. State Energy Code § 202.
[4] Urban Green Council, There Are Holes In Our Walls 5 (2011) http://urbangreencouncil.org/sites/default/files/there_are_holes_in_our_walls.pdf
[5] *Id.* at 9.
[6] U.S. Department of Energy, Vestibule Requirements in Commercial Buildings, https://www.energycodes.gov/sites/default/files/documents/cn_commercial_vestibules.pdf
[7] International Energy Conservation Code (IECC) § C405.2.1.1 (incorporated as part of the State Energy Code).

rooms, employee lunch and break rooms, and offices smaller than 200 square feet have manually operated devices to turn the lights on, while allowing lights in copy/print rooms, lounges, restrooms, storage rooms, private offices 200 square feet in area or greater, janitorial closets, locker rooms, and other areas 300 square feet in area or less to turn on automatically (to not more than 50% power).

Lighting in dwelling units. ASHRAE currently exempts lighting within dwelling units from its lighting regulations.[8] Int. No. 1169 removes that exemption and replaces it with an exemption that covers only dwelling units within commercial buildings where not less than 75% of the permanently installed lighting fixtures contain only high efficacy lamps.

Solar Ready Zones. The State Energy Code has a provision outlining how to make residential roofs solar ready, but this provision is not mandatory. Int. No. 1169 would require detached one- and two- family dwellings and multiple single-family dwellings to have solar ready roofs unless such buildings have permanently installed on-site renewable energy systems or are shaded for more than 50 percent of daylight hours.

Insulation & Fenestration. Under the State Energy Code rubric, insulation and fenestration requirements are based on climate zones. The State Energy Code sets the insulation and fenestration requirements for residential buildings at climate zone 4. Int. No. 1169 would set such values at climate zone 6. According to DOB, Climate zone 6 requirements are approximately 20 percent more stringent than Climate Zone 4 requirements.

Int. No. 1169

Section one of Int. No. 1169 contains the legislative intent expressing the need for this legislation.

[8] ASHRAE 90.1-2013 § 9.1.1.

Section two of Int. No. 1169 makes technical edits to section 28-1001.1.1 of the Administrative Code of the City of New York (the Code).

Section three of Int. No. 1169 repeals section 28-1001.2 of the Code and adds a new section 28-1001.2 incorporating the New York State Energy Code with the New York City-specific amendments discussed above.

Section four of this legislation makes technical edits to section 28-1001.3 of the Code.

Section five of this legislation contains the enactment clause and provides that this local law take effect on October 3, 2016.

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Int. No. 1160

By Council Members Constantinides and Richards (in conjunction with the Mayor)

A Local Law to amend the administrative code of the city of New York, in relation to the installation of sub-meters in certain tenant spaces

Be it enacted by the Council as follows:

Section 1. The definitions of the terms "covered building" and "covered tenant space" set forth in section 28-311.2 of the administrative code of the city of New York, as added by local law number 88 for the year 2009, are amended to read as follows:

COVERED BUILDING. As it appears in the records of the department of finance: (i) a building that exceeds [50,000] 25,000 gross square feet ([4645] 2323 m^2), (ii) two or more buildings on the same tax lot that together exceed 100,000 gross square feet (9290 m^2), or (iii) two or more buildings held in the condominium form of ownership that are governed by the same board of managers and that together exceed 100,000 gross square feet (9290 m^2).

[Exception] Exceptions: The term "covered building" shall not include:

1. **[**real] Real property classified as class one pursuant to subdivision one of section 1802 of the real property tax law; or

2. Real property, not more than three stories, consisting of a series of attached, detached or semi-detached dwellings, for which ownership and the responsibility for maintenance of the HVAC systems and hot water heating systems is held by each individual dwelling unit owner, and with no HVAC system or hot water heating system in the series serving more than two dwelling units, as certified by a registered design professional to the department.

COVERED TENANT SPACE. (i) A tenant space larger than [10,000] 5,000 gross square feet ([929] 465 m^2) on one or more floors of a covered building let or sublet to the same person, or (ii) a floor, of a covered building, larger than [10,000] 5,000 gross square feet ([929] 465 m^2) consisting of tenant spaces let or sublet to two or more different persons.

Exception: The term "covered tenant space" shall not include dwelling units classified in occupancy group R-2 or R-3.

§ 2. Section 28-311.3 of the administrative code of the city of New York, as added by local law number 88 for the year 2009, is amended to read as follows:

§ 28-311.3 Sub-meters required for covered tenant spaces. On and after January 1, 2025, the electrical consumption of each covered tenant space shall be measured by one or more sub-meters. Sub-meters shall be installed in existing covered tenant spaces by the owner or the lessor of such space on or [prior to] before

January 1, 2025 and thereafter as new covered tenant spaces are created within the building. If the covered tenant space is a floor with multiple tenancies, each tenancy that is [10,000] 5,000 gross square feet ([929] 465 m^2) or less shall (i) have a separate sub-meter, (ii) share a sub-meter with other tenant spaces on the floor, or (iii) share a sub-meter covering the entire floor.

Exception: Covered tenant space for which the electrical consumption within such space is measured by a meter dedicated exclusively to that space.

§ 3. Section 28-311.5 of the administrative code of the city of New York, as added by local law number 88 for the year 2009, is amended to read as follows:

§ 28–311.5 Reports. The owner of each covered building shall file a report [with the department on or prior to January 1, 2025] in accordance with the rules of the department prepared by a registered design professional or a licensed master or special electrician certifying that sub-meters have been installed in all covered tenant spaces in such building as required by this article or that covered tenant spaces are subject to the exception set forth in section 28–311.3. The department may impose a fee for filing and processing such reports.

§ 4. Section 28-315.3.1 of the administrative code of the city of New York, as added by local law number 141 for the year 2013, is amended to read as follows:

§ 28-315.3.1 Electrical sub-meters. [The] By January 1, 2025, the installation of electrical sub-meters in tenant spaces in certain buildings in accordance with article 311 of this chapter shall be completed and the owners of such buildings shall file a report [of such installation filed with the department by January 1, 2025.] in accordance with the rules of the department, prepared by a registered design professional or a licensed master or special electrician, certifying compliance with such section The department may impose a fee for filing and reviewing such reports.

§ 5. This local law takes effect immediately.

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Int. No. 1163

By Council Member Garodnick, Richards, Johnson, Constantinides and Chin (in conjunction with the Mayor)

A Local Law to amend the administrative code of the city of New York, in relation to expanding the list of buildings required to be benchmarked for energy and water efficiency

Be it enacted by the Council as follows:

Section 1. The definitions of "city building" and "covered building" set forth in section 28-309.2 of the administrative code of the city of New York, as added by local law number 84 for the year 2009, are amended to read as follows:

CITY BUILDING. A building that is more than 10,000 gross square feet, as it appears in the records of the department of finance, that is owned by the city or for which the city regularly directly pays all [or part] of the annual energy bills, provided that two or more buildings on the same tax lot shall be deemed to be one building.

Exception: The term "city building" shall not include:

1. [Any building not owned by the city in which the city is a tenant and for which the city does not pay all the energy bills;]

[2.] Any building owned by the city that participates in the tenant interim lease apartment purchase program; or

[3.] 2. Any building owned by the city that (i) is [50,000] 25,000 gross square feet or less, as it appears in the records of the department of finance, and (ii) participates in a program administered by the department of housing preservation and development.

COVERED BUILDING. As it appears in the records of the department of finance (i) a building that exceeds [50,000] 25,000 gross square feet, (ii) two or more buildings on the same tax lot that together exceed 100,000 gross square feet, [or] (iii) two or more buildings held in the condominium form of ownership that are governed by the same board of managers and that together exceed 100,000 gross square feet, or (iv) a city building.

[**Exception:**] **Exceptions:** The term "covered building" shall not include:

1. [Any building that is a city building.

2. Any building that is owned by the city.] Any building owned by the city that participates in the tenant interim lease apartment purchase program.

[3.] 2. Real property classified as class one pursuant to subdivision one of section 1802 of the real property tax law.

3. Real property, not more than three stories, consisting of a series of attached, detached or semi-detached dwellings, for which ownership and the responsibility for maintenance of the HVAC systems and hot water heating systems is held by each individual dwelling unit owner, and with no HVAC system or hot water heating system in the series serving more than two dwelling units, as certified by a registered design professional to the department.

§ 2. Section 28-309.4 of the administrative code of the city of New York, as added by local law number 84 for the year 2009, is amended to read as follows:

§ 28-309.4 Benchmarking required for covered buildings other than city buildings. The owner of a covered building, other than a city building, shall annually benchmark such covered building no later than May 1, 2011, and no later than every May [first] 1 thereafter. Benchmarking of water use shall not be required unless the building was equipped with automatic meter reading equipment by the department of environmental protection for the entirety of the previous calendar year. The owner or the owner's representative performing the benchmarking shall consult with the operating staff of the building, as appropriate. Information submitted to the benchmarking tool must be accurate and complete.

Exception: The first mandatory benchmarking for a covered building, other than a city building, that (i) does not exceed 50,000 gross square feet, (ii) is not one of two or more buildings on the same tax lot that together exceed 100,000 gross square feet and (iii) is not one of two or more buildings held in the condominium form of ownership that are governed by the same board of managers and that together exceed 100,000 gross square feet, shall be completed on or before May 1, 2018.

§ 28-309.4.1 Obligation to [request and to report information] report energy use for all utility accounts and addresses connected to the building. [Where a unit or other space in a covered building, other than a dwelling unit, is occupied by a tenant and such unit or space is separately metered by a utility company, the owner of such building shall request from such tenant information relating to such tenant's separately metered energy use for the previous calendar year and such tenant shall report such information to such owner.] The owner shall submit information to the benchmarking tool for all utility accounts and addresses connected to the building, including those for separately metered tenant spaces. The owner shall obtain information for separately metered tenant spaces from the utility. If the utility does not have a program to provide such information, the owner shall make reasonable efforts to obtain such information from the tenant. Tenants shall have the obligation to provide such information.

[**§ 28-309.4.1.1 Owner solicitation of tenant information.** Such owner shall request information relating to such tenant's separately metered energy use for the previous calendar year no earlier than January first and no later than January thirty-first of any year in which the owner is required to benchmark such building. The office of long-term planning and sustainability may require that such owner provide such tenant with a form designated by the office of long-term planning and sustainability to report such information.]

[§ 28–309.4.1.2 Tenant reporting of information. Such tenant shall report information relating to such tenant's separately metered energy use for the previous calendar year no later than February fifteenth of any year in which the owner is required to benchmark such building. Such information shall be reported in a form and manner determined by the office of long-term planning and sustainability.]

[§ 28–309.4.1.3 Provision of information prior to vacating a unit or other space. Where such owner receives notice that such tenant intends to vacate such unit or other space before reporting information in accordance with sections 28–309.4.1 and 28–309.4.1.2, such owner shall request information relating to such tenant's energy use for any period of occupancy relevant to such owner's obligation to benchmark. Any such tenant shall report such information to the owner of such building prior to vacating such unit or other space or, if such information is not available prior to vacating such unit or other space, as soon as practicable thereafter, regardless of whether such owner has requested information pursuant to this section. Such information shall be reported in a form and manner determined by the office of long-term planning and sustainability.]

[§28–309.4.1.4 Continuing obligation to benchmark. The failure of any or all tenants to report the information required by sections 28–309.4.1, 28–309.4.1.2, and 28–309.4.1.3 to the owner shall not relieve such owner of the obligation to benchmark pursuant to this article, provided that such owner shall not be required to benchmark such information not reported by a tenant unless otherwise available to such owner.]

§ 28-309.4.2 Preservation of documents, inspection, and audit. [Owners] An owner of a covered [buildings] building shall maintain such records as the department determines are necessary for carrying out the purposes of this article, including but not limited to energy and water bills and reports or forms received from utilities and tenants. Where energy use within separately metered tenant spaces is omitted, records shall be maintained documenting the owner's efforts to obtain such information. [Such] All records shall be preserved for a period of three years, provided that the commissioner may consent to their destruction within that period or may require that such records be preserved longer than such period. At the request of the department, such records shall be made available for inspection and audit by the department at the place of business of the owner or at the offices of the department during normal business hours.

§ 28–309.4.3 Violations. It shall be unlawful for the owner of a covered building to fail to benchmark pursuant to section 28–309.4. The commissioner shall classify such violation as a lesser violation. If, upon audit of a benchmarking report, the department finds that information submitted to the benchmarking tool was substantially inaccurate or incomplete, the department may reject the purported benchmarking and the owner shall be liable for a violation of section 28-309.4 as if no benchmarking had been performed.

§ 3. Section 28-309.5.1 of the administrative code of the city of New York, as added by local law number 84 for the year 2009, is amended to read as follows:

§ 28-309.5.1 Direct upload by a utility company or other source. The office of long-term planning and sustainability shall encourage and facilitate any utility company or any other source authorized by the office of long-term planning and sustainability to upload directly to the benchmarking tool, as soon as practicable, information necessary to benchmark a building. [Where information is uploaded directly to the benchmarking tool by a utility company or other authorized source, owners and tenants shall not be obligated to request and report such information pursuant to section 28-309.4.1.]

§ 4. Section 28-309.8 of the administrative code of the city of New York, as added by local law number 84 for the year 2009, is amended to read as follows:

§ 28–309.8 Disclosure. The department of finance shall make information generated by the benchmarking tool available to the public on the internet no later than September 1[, 2011, and no later than every September first thereafter for city buildings, no later than September 1, 2012, and no later than every September first thereafter for covered buildings whose primary use is not residential, as determined by the department of finance, and no later than September 1, 2013, and no later than every September first thereafter for covered buildings whose primary use is residential, as determined by the department of finance] of the year in which the covered buildings are benchmarked. Such information shall include, but need not be limited to: (i) the energy [utilization index] use intensity, (ii) the water use per gross square foot, (iii) where available, a rating or score that compares the energy and water use of the building to that of similar buildings, and (iv) a comparison of data across calendar years for any years such building was benchmarked. Information generated by the benchmarking tool for the 2009 calendar year for city buildings, for the 2010 calendar year for covered buildings, and for the 2011 calendar year for covered buildings whose primary use is residential, as determined by the department of finance, shall not be disclosed.

Exception: Ratings or scores generated by the benchmarking tool for a covered building that contains a data center, television studio, and/or trading floor that together exceed ten percent of the gross square footage of any such building shall not be disclosed until the office of long-term planning and sustainability determines that the benchmarking tool can make adequate adjustments for such facilities. When the office of long-term planning and sustainability determines that the benchmarking tool can make such adjustments, it shall report such determination to the mayor and the speaker of the city council. Until such determination is made, the office of long-term planning and sustainability shall report biennially to the mayor and the speaker of the city council that the benchmarking tool is unable to make such adjustments.

§ 5. Section 28-309.9 of the administrative code of the city of New York, as added by local law number 84 for the year 2009, is amended to read as follows:

§ 28-309.9 Report. No later than December 31 of [2011, 2012 and 2013, respectively] each year, the office of long-term planning and sustainability shall prepare, submit to the mayor and the speaker of the city council, and post on the internet a report reviewing and evaluating the administration and enforcement of this article and analyzing data obtained from the benchmarking tool. Such report shall contain information regarding: (i) the energy and water efficiency of buildings in the city, (ii) the accuracy of benchmarked data and whether there is a need to train and/or certify individuals who benchmark, (iii) compliance with the requirements of this article, (iv) any administrative and legislative recommendations for strengthening the administration and enforcement of this article, (v) the effectiveness of the benchmarking tool in accounting for New York city conditions, including, but not limited to, high density occupancies, use of steam, large building size, and specific high-energy uses such as data centers, television studios, and trading floors, and (vi) such other information and analyses as the office of long-term planning and sustainability deems appropriate.

§ 6. Article 309 of the administrative code of the city of New York is amended by adding a new section 28-309.11 to read as follows:

§ 28-309.11 Benchmarking assistance. The department shall establish a system to receive and respond to requests from owners for assistance with respect to fulfilling the benchmarking requirements of this section.

§ 7. This local law takes effect immediately.

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Int. No. 1165

By Council Members Richards, Constantinides and Chin (in conjunction with the Mayor)

A Local Law to amend the administrative code of the city of New York, in relation to upgrading lighting systems in certain buildings

Be it enacted by the Council as follows:

Section 1. Section 28-310.2 of the administrative code of the city of New York, as added by local law number 88 for the year 2009, is amended to read as follows:

§ 28-310.2 Definitions. As used in this article the following terms shall have the following meanings:

COVERED BUILDING. As it appears in the records of the department of finance: (i) a building that exceeds [50,000] 25,000 gross square feet ([4645] 2323 m^2), (ii) two or more buildings on the same tax lot that together exceed 100,000 gross square feet (9290 m^2), or (iii) two or more buildings held in the condominium form of ownership that are governed by the same board of managers and that together exceed 100,000 gross square feet (9290 m^2).

[Exception] Exceptions: The term "covered building" shall not include:

1. **[**real] Real property classified as class one pursuant to subdivision one of section 1802 of the real property tax law; or

2. Real property, not more than three stories, consisting of a series of attached, detached or semi-detached dwellings, for which ownership and the responsibility for maintenance of the HVAC systems and hot water heating systems is held by each individual dwelling unit owner, and with no HVAC system or hot water heating system in the series serving more than two dwelling units, as certified by a registered design professional to the department.

[UPGRADE. The installation or modification of the lighting system of a covered building to comply with the standards required for new systems, including all of the following elements: lighting controls (interior lighting controls, light reduction controls and automatic lighting shutoff), tandem wiring, exit signs, interior lighting power requirements and exterior lighting.]

§ 2. Section 28-310.3 of the administrative code of the city of New York, as added by local law number 88 for the year 2009, is amended to read as follows:

§ 28–310.3 Upgrade of lighting systems of covered buildings required. [The] No later than January 1, 2025 the lighting systems of covered buildings shall be [upgraded to comply] in compliance with the standards for new systems set forth in [section 805 of] the New York city energy conservation code and/or applicable standards referenced in such energy code [on or prior to January 1, 2025]. The owner of a covered building shall ensure that the upgrade of the lighting system of the entire covered building is completed on or prior to such date and shall file a report with the department, [on or prior to such date] in accordance with the rules of

the department, prepared by a registered design professional or a licensed master or special electrician certifying that such upgrade has been completed and that the work is in compliance with the technical standards of the New York city electrical code. The department may impose a fee for filing and review of such reports.

Exceptions:

1. [No upgrade is required for (i) an] An element of a lighting system that is in compliance with the standards of the New York city energy conservation code and/or applicable standards referenced in such code as in effect for new systems installed on or after July 1, 2010[, or (ii) lighting].

2. Lighting power densities in any space bounded by permanent floor-to-ceiling partitions and/or closable doors that are in compliance with the standards of the *New York city energy conservation code* and/or applicable standards referenced in such code as in effect for new systems installed on or after July 1, 2010.

2. [No upgrade is required for the] The lighting system within dwelling units classified in occupancy group R-2 or R-3 [or spaces serving such dwelling units, including but not limited to, hallways, laundry rooms, or boiler rooms].

3. [No upgrade is required for the] The lighting system within a space classified in occupancy group A-3 that is within a house of worship.

§ 3. Section 28-315.3.1 of the administrative code of the city of New York, as added by local law number 141 for the year 2013, is amended to read as follows:

§ 28-315.3.1 Lighting systems. [The upgrade of] By January 1, 2025, the lighting systems of certain buildings [in accordance] shall be in compliance with article 310 of this chapter [shall be completed] and the owners of such buildings shall file a report [of such upgrade filed with the department by January 1, 2025] in accordance with the rules of the department, prepared by a registered design professional or a licensed master or special electrician, certifying compliance with such section and compliance with the technical standards of the New York city electrical code. The department may impose a fee for filing and reviewing such reports.

§ 4. This local law takes effect immediately.

JW
4/8/16 – 410p

Int. No. 1169

By Council Members Williams and Richards (by request of the Mayor)

A Local Law to amend the administrative code of the city of New York, in relation to conforming the New York city energy conservation code to the New York state energy code with amendments unique to construction in the city and repealing section 28-1001.2 in relation thereto

Be it enacted by the Council as follows:

Section 1. Statement of findings and purpose. The New York State Energy Conservation Construction Code (the "New York State Energy Code") is promulgated by the State Fire Prevention and Building Code Council pursuant to Article 11 of the New York State Energy Law. In accordance with Article 11, the New York City Energy Conservation Code is stricter than the New York State Energy Code. The purpose of this local law is to conform the New York City Energy Conservation Code to recent changes in the New York State Energy Code with local law amendments unique to construction in the City.

§ 2. Section 28-1001.1.1 of the administrative code of the city of New York, as added by local law number 4 for the year 2015, is amended to read as follows:

§28-1001.1.1 Definition. As used in this chapter, the term "New York State Energy Code" means the New York State Energy Conservation Construction Code (the "New York State Energy Code"), constituting part 1240 of title 19 of the New York codes, rules and regulations (19 NYCRR Part 1240), and the publications incorporated by reference in such part, promulgated on [November 18, 2014] April 6, 2016, by the State Fire Prevention and Building Code Council pursuant to Article 11 of the New York State Energy Law.

§ 3. Section 28-1001.2 of the administrative code of the city of New York is REPEALED and a new section 28-1001.2 is added to read as follows:

§28-1001.2 New York city amendments to the New York state energy code. The following New York city amendments to the New York state energy code are hereby adopted as set forth in sections 28-1001.2.1, 28-1001.2.2 and 28-1001.2.3.

§28-1001.2.1 New York city amendments to 19 NYCRR Part 1240.

1240.5 Exceptions.

Delete Exception (b) in its entirety and replace with a new Exception (b) to read as follows:

(b) Certain alterations. The New York State Energy Code shall not apply to the following alterations of existing buildings, provided that the alteration will not increase the energy usage of the building:

1. Storm windows installed over existing fenestration.

2. Glass-only replacements in an existing sash and frame, provided that the U-factor and the solar heat gain coefficient (SHGC) shall be equal to or lower than before the glass replacement.

3. Alterations, renovations or repairs to roof/ceiling, wall or floor cavities, including spaces between furring strips, provided that such cavities are insulated to the full existing cavity depth with insulation having a minimum nominal value of R-3.0/inch (R-2.0/cm).

4. Alterations, renovations or repairs to walls and floors in cases where the existing structure is without framing cavities and no new framing cavities are created.

5. Reroofing where neither the sheathing nor the insulation is exposed. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing.

6. Replacement of existing doors that separate conditioned space from the exterior shall not require the installation of a vestibule or revolving door, provided, however, that an existing vestibule that separates a conditioned space from the exterior shall not be removed.

7. An alteration that replaces less than 20 percent of the luminaires in a space, provided that such alteration does not increase the installed interior lighting power.

8. An alteration that replaces only the bulb and ballast within the existing luminaires in a space, provided that such alteration does not increase the installed interior lighting power.

§28-1001.2.2 New York city amendments to commercial and residential chapters of the New York state energy code.

Chapter 1 [CE] and Chapter 1 [RE]

Delete Chapter R1 and Chapter C1 in their entirety and replace with a new Chapter 1 to read as follows:

CHAPTER 1
ADMINISTRATION

Introductory Statement

The New York City Energy Conservation Code ("NYCECC") is comprised of the New York State Energy Code ("NYSEC") with amendments as enacted into law by the New York City Council.

The NYCECC is divided into provisions relevant to commercial buildings and provisions relevant to residential buildings as follows:

1. The provisions of the NYCECC for commercial buildings are reflected in the state publications incorporated by reference in 19 NYCRR section 1240.4, as amended by sections 28-1001.2.1, 28-1001.2.2 and 28-1001.2.3 of the administrative code of the city of New York. Such state publications include (i) Chapters 1 [CE], 2 [CE], 3 [CE], 4 [CE], 5 [CE] and 6 [CE] of the 2015 edition of the International Energy Conservation Code (the "2015 IECC"), as amended by Part 1 of the publication entitled the 2016 Supplement to the New York State Energy Conservation Construction Code (the "2016 Energy Code Supplement") (ii) the July 2014 edition of Energy Standard for Buildings Except Low-Rise Residential Buildings ("ASHRAE 90.1-2013"), as amended by Part 2 of the 2016 Energy Code Supplement; and (iii) reference standards incorporated by reference in 19 NYCRR section 1240.4(c).

2. The provisions of the NYCECC for residential buildings are reflected in the state publications incorporated by reference in 19 NYCRR section 1240.5, as amended by sections 28-1001.2.1, 28-1001.2.2 and 28-1001.2.3 of the administrative code of the city of New York. Such state publications include (i) Chapters 1 [RE], 2 [RE], 3 [RE], 4 [RE], 5 [RE] and 6 [RE] of the 2015 edition of the International Energy Conservation Code (the "2015 IECC"), as amended by Part 3 of the publication entitled the 2016 Supplement to the New York State Energy Conservation Construction Code (the "2016 Energy Code Supplement"); and (ii) the referenced standards incorporated by reference in 19 NYCRR section 1240.5(b), as amended by Part 3 of the 2016 Energy Code Supplement.

SECTION ECC 101
SCOPE AND GENERAL REQUIREMENTS

101.1 General. These provisions shall be known and cited as the "New York City Energy Conservation Code," "NYCECC" or "ECC," and are referred to herein as "this code." All section numbers in this code shall be deemed to be preceded by the designation "ECC." Administration and enforcement of this code shall be in accordance with Title 28 of the Administrative Code.

101.1.1 Titles.

The 2015 edition of the International Energy Code shall be known as the "2015 IECC."

The 2013 edition of the Energy Standard for Buildings Except Low-Rise Residential Buildings shall be known as "ASHRAE 90.1-2013." All references in this code to ASHRAE 90.1-2013 shall be deemed to be references to ASHRAE 90.1-2013 (AS AMENDED).

The 2016 Energy Code Supplement to the New York State Energy Conservation Construction Code shall be known as the "2016 Supplement."

The New York State Energy Conservation Construction Code along with the New York City amendments to the New York State Energy Conservation Construction Code shall be known collectively as the "New York City Energy Conservation Code."

101.2 Scope. This code applies to commercial buildings and residential buildings, as defined in Chapter C2 and Chapter R2 of this code, and the buildings' sites, associated systems and equipment.

101.2.1 Occupancy classifications. For determination of occupancy classification and use within this code, a comparable occupancy classification shall be made to the New York City Building Code.

101.2.2 Reconciliation with New York State Energy Conservation Construction Code. Whenever any provision of the New York State Energy Conservation Construction Code provides for a more stringent requirement than imposed by this code, the more stringent requirement shall govern.

101.2.3 Other laws. The provisions of this code shall not be deemed to nullify any federal, state or local law, rule or regulation relating to any matter as to which this code does not provide.

101.3 Intent. This code shall regulate the design and construction of buildings for the use and conservation of energy over the life of each building. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this objective. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes. To the fullest extent feasible, use of modern technical methods, devices and improvements that tend to minimize consumption of energy without abridging reasonable requirements for the safety, health and security of the occupants or users of buildings shall be permitted. As far as may be practicable, the improvement of energy conservation construction practices, methods, equipment, materials and techniques shall be encouraged.

101.4 Applicability. The provisions of this code shall apply to the construction of buildings. Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

101.4.1 Mixed occupancy. Where a building includes both commercial and residential occupancies, each occupancy shall be separately considered and shall meet the applicable provisions of Chapters C2, C3, C4 and C5 for commercial, and Chapters R2, R3, R4, and R5 for residential.

101.5 Compliance. Commercial buildings shall comply with the provisions of this code applicable to commercial buildings in Chapters C2, C3, C4, and C5. Residential buildings shall comply with the provisions of this code applicable to residential buildings in Chapters R2, R3, R4, and R5.

101.5.1 Compliance materials. Compliance with the provisions of this code can be demonstrated through the use of computer software deemed acceptable by the New York State Secretary of State, and the commissioner.

101.5.2 Demonstration of compliance. For a building project application or applications required to be submitted to the department, the following documentation, as further described in the rules of the department, shall be required in order to demonstrate compliance with this code:

101.5.2.1 Professional statement. Any registered design professional or lead energy professional filing an application or applications for a new building or alteration project shall provide on a signed and sealed drawing a statement of compliance or exemption in accordance with the rules of the department.

101.5.2.2 Energy analysis. For any application that is not exempt from this code and for which a work permit is required in accordance with Section 28-105 of the Administrative Code, an energy analysis shall be provided on a sheet or sheets within the construction drawing set. The energy analysis shall identify the compliance path followed, demonstrate how the design complies with this code and be in a format as prescribed in the rules of the department. The energy analysis shall meet the requirements of this code for the entire project. Projects that utilize trade-offs among disciplines shall use DOE2-based energy modeling programs or other energy-modeling programs as prescribed in the rules of the department and shall be signed and sealed by a lead energy professional.

101.5.2.3 Supporting documentation. For any application that is not exempt from this code and for which a work permit is required in accordance with Section 28-105 of the Administrative Code, supporting documentation shall be required in the approved construction drawings. See Section 103 for further requirements.

SECTION ECC 102
ALTERNATE MATERIALS, METHOD OF CONSTRUCTION, DESIGN OR INSULATING SYSTEMS

102.1 General. This code is not intended to prevent the use of any material, method of construction, design or insulating system not specifically prescribed herein, provided that such material, method of construction, design or insulating system has been approved by the commissioner as (1) meeting the intent of this code, (2) achieving energy savings that are equivalent to or greater than would be achieved using prescribed materials, methods of construction, designs or insulating systems, and (3) meeting the requirements of Article 113 of Chapter 1 of Title 28 of the Administrative Code and the remaining New York City Construction Codes.

SECTION ECC 103
CONSTRUCTION DOCUMENTS

103.1 General. Construction documents shall be prepared in accordance with the provisions of Chapter 1 of Title 28 of the Administrative Code, the New York City Construction Codes, including this code, and the rules of the department.

103.2 Supporting documentation on construction documents. Supporting documentation shall include those construction documents that demonstrate compliance with this code.

103.2.1 Intent. Supporting documentation shall accomplish the following:

1. Demonstrate conformance of approved drawings to the energy analysis for every element and value of the energy analysis;

2. Demonstrate conformance of approved drawings to other mandatory requirements of this code,

including, but not limited to, sealing against air leakage from the building envelope and from ductwork as applicable, insulation of ducts and piping as applicable, mechanical and lighting controls with devices shown and operational narratives for each, and additional requirements as set forth in this section;

3. Identify required progress inspections in accordance with the scope of work, this code, the Administrative Code, the New York City Building Code and the rules of the department; and

4. Comply with other requirements as may be set forth in the rules of the department.

103.2.2 Detailed requirements. Construction documents shall be drawn to scale upon suitable material. Electronic media documents are permitted to be submitted in accordance with department procedures. Construction documents for a project shall be fully coordinated and of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, building systems and equipment as herein governed. Details shall include, but are not limited to, as applicable, insulation materials and their R-values; fenestration U-factors and SHGCs; area-weighted U-factor and SHGC calculations; mechanical system design criteria; mechanical and service water heating system and equipment, types, sizes and efficiencies; economizer description; equipment and systems controls; fan motor horsepower and controls; duct sealing, duct and pipe insulation and location; lighting fixture schedule with wattages and control narrative; location of daylight zone on floor plans (as applicable), and air sealing details. The building's thermal envelope shall be represented on the construction documents.

103.3 Examination of documents. In accordance with Article 104 of Chapter 1 of Title 28 of the Administrative Code, the department shall examine or cause to be examined the accompanying construction documents and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws, rules and regulations.

103.4 Changes during construction. For changes during construction refer to Section 28-104.3 of the Administrative Code.

SECTION ECC 104
INSPECTIONS

104.1 General. Except as otherwise specifically provided, inspections required by this code or by the department during the progress of work may be performed on behalf of the owner by an approved agency. All inspections shall be performed at the sole cost and expense of the owner. Refer to Article 116 of Chapter 1 of Title 28 of the Administrative Code for additional provisions relating to inspections. In addition to any inspections otherwise required by this code or the rules of the department, the following inspections shall be required:

1. Progress inspections. Progress inspections shall be performed in accordance with the rules of the department.

2. Final inspection. Refer to Article 116 of Chapter 1 of Title 28 of the Administrative Code and the rules of the department.

3. Issuance of Certificate of Compliance. Refer to Section 28-116.4.1 of the Administrative Code.

The requirements of Section 104.1 shall not be read to prohibit the operation of any heating equipment or appliances installed to replace existing heating equipment or appliances serving an occupied portion of a structure provided that a request for inspection of such heating equipment or appliances has been filed with the department not more than 48 hours after such replacement work is completed, and before any portion of such equipment or appliances is concealed by any permanent portion of the structure.

104.1.1 Approved agencies. Refer to Article 114 of Chapter 1 of Title 28 of the Administrative Code and the rules of the department.

104.1.2 Inspection of prefabricated construction assemblies. Prior to the issuance of a work permit for a prefabricated construction assembly having concealed mechanical work, the department shall require the submittal of an evaluation report by the manufacturer or approved agency on each prefabricated construction assembly, indicating the complete details of the mechanical system, including a description of the system and its components, the basis upon which the system is being evaluated for energy use, test results and similar information, and other data as necessary for the commissioner to determine conformance to this code.

104.1.2.1 Test and inspection records. Required test and inspection records shall be made available to the commissioner at all times during the fabrication of the mechanical system and the erection of the building; or such records as the commissioner designates shall be filed.

104.2 Testing. Envelope, heating, ventilating, air conditioning, service water heating, lighting and electrical systems shall be tested as required in this code and in accordance with Sections 104.2.1 through 104.2.3. Except as otherwise required in this code or in the rules of the department, tests shall be made by the permit holder and witnessed by an approved agency.

104.2.1 New, altered, extended, renovated or repaired systems. New envelope, heating, ventilating, air conditioning, service water heating, lighting and electrical installations or systems, and parts of existing systems that have been altered, extended, renovated or repaired, shall be tested as prescribed herein or in the rules of the department to disclose leaks and defects.

104.2.2 Apparatus, instruments, material and labor for tests. Apparatus, instruments, material and labor required for testing an envelope, heating, ventilating, air conditioning, service water heating, lighting and/or electrical installation or system or part thereof shall be furnished by the permit holder.

104.2.3 Reinspection and testing. Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made so as to achieve compliance with the New York City Construction Codes, including this code. The work or installation shall then be reinspected or retested by the approved agency.

104.3 Sign-off of completed work. In addition to the requirements of Article 116 of Chapter 1 of Title 28 of the Administrative Code, Section 103.4 of this code and other requirements for sign-off, the project team shall either certify that construction does not differ from the last approved energy analysis or provide a whole-project as-built energy analysis and supporting documents, signed and sealed, for approval prior to sign-off. The as-

built energy analysis and supporting documents shall reflect the materials, equipment and values actually used in the construction of the project, and shall demonstrate compliance of the constructed project with this code. Such signed and sealed documents may be accepted with less than full examination by the department based on the professional certification of the registered design professional.

104.4 Temporary connection. The commissioner shall have the authority to allow the temporary connection of an installation to the sources of energy for the purpose of testing the installation or for use under a temporary certificate of occupancy.

SECTION ECC 105
REFERENCED STANDARDS

105.1 Referenced standards. The standards referenced in Chapters C2, C3, C4, and C5 of the New York City Energy Conservation Code shall be those that are listed in Chapter C6 of the New York City Energy Conservation Code, and in the rules of the department and such standards shall be considered part of the requirements of the commercial provisions of the New York City Energy Conservation Code to the prescribed extent of each such reference. The standards referenced in Chapters R2, R3, R4, and R5, of the New York City Energy Conservation Code shall be those that are listed in Chapter R6 of the New York City Energy Conservation Code, and in the rules of the department and such standards shall be considered part of the requirements of the residential provisions of the New York City Energy Conservation Code to the prescribed extent of each such reference. Where differences occur between provisions of this code and the referenced standards, the provisions of this code shall apply. Refer to Article 103 of Chapter 1 of Title 28 of the Administrative Code for additional provisions relating to referenced standards.

CHAPTER C2
DEFINITIONS

SECTION C201
GENERAL

Section C201- Revise Section C201.3 to read as follows:

C201.3 Terms defined in other codes. Terms that are not defined in this code but are defined in the *New York City Construction Codes* , *New York City Fire Code*, *or New York City Electrical Code* shall have the meanings ascribed to them in those codes.

SECTION C202
GENERAL DEFINITIONS

Delete the definitions of "2015 International Fire Code (As Amended)," "2015 International Fuel Gas Code (As Amended)," "2015 International Plumbing Code (As Amended)," "2015 International Property Maintenance Code (As Amended)," and "2015 International Residential Code (As Amended)."

Section C202 - Revise the definition of "Approved" after the definition of "Alteration" to read as follows:

APPROVED. See Section 28-101.5 of the Administrative Code.

Section C202 – Revise the definition of "Approved agency" after the definition of "Approved," to read as follows:

APPROVED AGENCY. See Section 28-101.5 of the Administrative Code.

Section C202 - Revise the definition of "ASHRAE 90.1-2013 (AS AMENDED)" to read as follows:

ASHRAE 90.1-2013 (AS AMENDED). ASHRAE 90.1-2013, as amended by Part 2 of the 2016 Energy Code Supplement with revisions as set forth in Appendix CA of this code.

Section C202 - Add a new definition of "Authority having jurisdiction" after the definition of "ASHRAE 90.1-2013, (AS AMENDED)" to read as follows:

AUTHORITY HAVING JURISDICTION. The commissioner or the commissioner's designee.

Section C202 – Revise the definition of "Building site" to read as follows:

BUILDING SITE. A contiguous area of land that is under the ownership or control of one entity.

Section C202 - Revise the definition of "Code official" after the definition of "Climate Zone," to read as follows:

CODE OFFICIAL. The commissioner or the commissioner's designee.

Section C202 - Add a new definition of "Electrical design load" after the definition of "Economizer, water," to read as follows:

ELECTRICAL DESIGN LOAD. The electrical load that feeders and branch circuits are required to support pursuant to the relevant provisions of the New York City Electrical Code for the category of equipment loads being supported.

Section C202 - Delete the definition of "Energy code" after the definition of "Energy Analysis".

Section C202 - Add a new definition of "Grade plane" after the definition of "General purpose electric motor (subtype II)," to read as follows:

GRADE PLANE. For this code, a reference plane representing the average of finished ground level adjoining the building at exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet (1829 mm) from the building, between the building and a point 6 feet (1829 mm) from the building.

Section C202 - Add a new definition of "High-Efficacy Lamps" after the definition of "Heated Slab," to read as follows:

HIGH-EFFICACY LAMPS. Compact fluorescent lamps, T-8 or smaller diameter linear fluorescent lamps, or lamps with a minimum efficacy of:

1. 60 lumens per watt for lamps over 40 watts;
2. 50 lumens per watt for lamps over 15 watts to 40 watts; and
3. 40 lumens per watt for lamps 15 watts or less.

Section C202 - Add a new definition of "Lead energy professional" after the definition of "Labeled," to read as follows:

LEAD ENERGY PROFESSIONAL. The registered design professional who signs and seals the energy analysis for an entire project. Such individual may be the same registered design professional who signs and seals the design drawings for the same project.

Section C202 - Add the definition of "Networked guest room control system" after the definition of "Nameplate Horsepower" to read as follow:

NETWORKED GUEST ROOM CONTROL SYSTEM. A control system, accessible from the hotel/motel front desk or other central location, that is capable of identifying reserved rooms according to a timed schedule, and is capable of controlling HVAC in each hotel/motel guest room separately.

Section C202 - Add new definitions of "Professional certification" and "Project" after the definition of "Powered roof/wall ventilators," to read as follows:

PROFESSIONAL CERTIFICATION. See Section 28-101.5 of the Administrative Code.

PROJECT. A design and construction undertaking comprised of work related to one or more buildings and the site improvements. A project is represented by one or more plan/work applications, including construction documents compiled in accordance with Section 107 of the New York City Building Code, that relate either to the construction of a new building or buildings or to the demolition or alteration of an existing building or buildings. Applications for a project may have different registered design professionals and different job numbers, and may result in the issuance of one or more permits.

Section C202 - Delete the definition of "Uniform Code."

CHAPTER C3
GENERAL REQUIREMENTS

SECTION C301
CLIMATE ZONES

Section C301.1 General.

Section C301.1 - Delete Section C301.1 in its entirety and replace with a new Section C301.1 to read as follows:

C301.1 General. For projects in the City of New York, *Climate Zone 4A* shall be used in determining the applicable requirements from Chapter C4.

Section C301.2 Warm humid counties.

Section C301.2 - Delete Section C301.2 in its entirety.

Section C301.3 International climate zones.

Section C301.3 - Delete Section C301.3 in its entirety.

Section C301.4 Tropical climate zone.

Section C301.4 - Delete Section C301.4 in its entirety.

Table C301.1

Delete Table C301.1 in its entirety.

Table C301.3(1)

Delete Table C301.3(1) in its entirety.

Table C301.3(2)

Delete Table C301.3(2) in its entirety.

SECTION C303
MATERIALS, SYSTEMS AND EQUIPMENT

Section C303.2 Installation.

Section C303.2 - Revise Section C303.2 to read as follows:

C303.2 Installation. Materials, systems and equipment shall be installed in accordance with (i) the manufacturer's installation instructions and (ii) the applicable provisions of the New York City Construction Codes.

CHAPTER C4
COMMERCIAL ENERGY EFFICIENCY

SECTION C401
GENERAL

Section C401.2 Application.

Section C401.2 - Delete Item 1 and replace with a new Item 1 to read as follows:

1. ASHRAE Compliance Path: The requirements of ASHRAE 90.1-2013.

Section C401.2 - Delete Item 3 and replace with a new Item 3 to read as follows:

3. Performance Compliance Path: The requirements of Section C407.

Section C401.2.1 Application to replacement fenestration products.

Section C401.2.1 - Revise Section C401.2.1 to read as follows:

C401.2.1 Application to replacement fenestration products. Where some portion or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the replacement fenestration unit shall meet the applicable requirements for U-factor and SHGC in Table C402.4.

Exception: An area-weighted average of the U-factor of replacement fenestration products being installed in the building for each fenestration product category listed in Table C402.4 shall be permitted to satisfy the U-factor requirements for each fenestration product category listed in Table C402.4. Individual fenestration products from different product categories listed in Table C402.4 shall not be combined in calculating the area-weighted average U-factor.

SECTION C402
BUILDING ENVELOPE REQUIREMENTS

Section C402.1 General (Prescriptive).

Section C402.1 - Revise Item 1 to read as follows:

1. The opaque portions of the building thermal envelope shall comply with the specific insulation requirements of Section C402.2 and the thermal requirements of either the *R*-value-based method of Section C402.1.3; the *U*-, *C*-and *F*-factor-based method of Section C402.1.4; or the component performance alternative of Section C402.1.5. When the total area of penetrations from through-the-wall mechanical equipment or equipment listed in Table C403.2.3(3) exceeds 1% of the opaque above-grade wall area, the building thermal envelope shall comply with the *U*-, *C*-and *F*-factor-based method of Section C402.1.4.

Section C402.1.3 Insulation component R-value-based method.

Section C402.1.3 – Revise the first sentence of Section C402.1.3 to read as follows:

Building thermal envelope opaque assemblies shall meet the requirements of Sections C402.2 and C402.4 based on the climate zone specified in Chapter C3.

Section C402.1.4.2 Thermal resistance of mechanical equipment penetrations.

Section C402.1.4.2 - Add a new Section C402.1.4.2 to read as follows:

C402.1.4.2 Thermal resistance of mechanical equipment penetrations. When the total area of penetrations from through-the-wall mechanical equipment or mechanical equipment listed in Table C403.2.3(3) exceeds 1% of the opaque above-grade wall area, the mechanical equipment penetration area shall be calculated as a separate wall assembly with a default *U*-factor of 0.5.

Section C402.2.4 Floors.

Section C402.2.4 – Revise Item 1 under Exceptions to read as follows:

1. The floor framing cavity insulation or structural slab insulation shall be permitted to be in contact with the top side of sheathing or continuous insulation installed on the bottom side of floor assemblies where combined with insulation that meets or exceeds the minimum R-value in Table C402.1.3 for "Metal framed" or "Wood framed and other" values for "Walls, Above Grade" and extends from the bottom to the top of all perimeter floor framing or floor assembly members.

Section C402.2.6 Fireplaces.

Section C402.2.6 – Delete the Section number and replace to read as follows:

Section C402.2.7

Section C402.2.7 - Revise the second paragraph of Section C402.2.7 to read as follows:

New wood-burning fireplaces that are designed to allow an open burn and new wood-burning fireplace units that are designed to allow an open burn shall be provided with a source of outdoor combustion air as required by the fireplace construction provisions of the New York City Construction Codes, as applicable.

Section C402.4.2 Minimum skylight fenestration area.

Section C402.4.2 - Revise Item 5 under Exception to read as follows:

5. Spaces where the total area minus the area of daylight zones adjacent to vertical fenestration is less than 2,500 square feet (232 m^2), and where the lighting is controlled according to Section C405.2.3.

Section C402.5 Air Leakage-thermal envelope (Mandatory)

Section C402.5.1.3 - Add a new Section C402.5.1.3 to read as follows:

C402.5.1.3 Air barrier testing. New buildings of a certain size must comply with the following requirements:

1. New buildings 25,000 square feet (2,322.6 m^2) and greater, but less than 50,000 square feet (4 645.2 m^2), and less than or equal to 75 feet (22.86 m) in height must show compliance through testing in accordance with ASTM E 779 and department rules.
2. New buildings 50,000 square feet (4 645.2 m^2) and greater, shall test or inspect each type of unique air barrier joint or seam in the building envelope for continuity and defects, as per an Air Barrier Continuity Plan developed by a registered design professional and department rules.
3. Rules governing air barrier testing promulgated by the department.

Section C402.5.3 Rooms containing fuel-burning appliances.

Section C402.5.3 - Revise Item 2 under the Exceptions to read as follows:

2. Fireplaces and stoves complying with Sections 901 through 905 of the New York City Mechanical Code and Section 2111.13 of the New York City Building Code.

Section C402.5.4 Doors and access opening to shafts, chutes, stairways, and elevator lobbies.

Section C402.5.4 - Revise Item 1 and Item 2 under the Exceptions to read as follows:

Exceptions:

1. Door openings required to comply with Section 716 or 716.4 of the *New York City Building Code.*

2. Doors and door openings required to comply with UL 1784 by the *New York City Building Code*.

Section C402.5.7 Vestibules.

Section C402.5.7 - Revise Item 4 under the Exceptions to read as follows:

4. Doors that open directly from a space less than 3,000 square feet (298 m^2) in area, in buildings less than 75 feet (22.86 m) in height, and doors that open directly from a space less than 1,000 square feet (92.9 m^2) in area, in buildings 75 feet (22.86 m) and greater in height.

Section C402.5.7 - Renumber Item 6 under the Exceptions as Item 7 and add a new Item 6 to read as follows:

6. Doors used primarily to facilitate vehicular movement or material handling and adjacent personnel doors.

7. Doors that have an air curtain with a velocity of not less than 6.56 feet per second (2 m/s) at the floor that have been tested in accordance with ANSI/AMCA 220 and installed in accordance with the manufacturer's instructions. Manual or automatic controls shall be provided that will operate the air curtain with the opening and closing of the door. Air curtains and their controls shall comply with Section C408.2.3.

SECTION C403
BUILDING MECHANICAL SYSTEMS

Section C403.2 Provisions applicable to all mechanical systems (Mandatory).

Section C403.2 - Delete the reference to Section C403.2.16 and replace with the reference to Section C403.2.18.

Section C403.2.1 Calculation of heating and cooling loads.

Section C403.2.1 – Revise the first sentence of Section C403.2.1 to read as follows:

Design loads associated with heating, ventilating and air conditioning of the building shall be determined in accordance with ANSI/ASHRAE/ACCA Standard 183 or by an approved equivalent computational procedure using the design parameters specified in Chapter C3.

Section C403.2.3 HVAC equipment performance requirements.

Section C403.2.3 - Revise the first sentence of Section C403.2.3 to read as follows:

Equipment shall meet the minimum efficiency requirements of Tables C403.2.3(1), C403.2.3(2), C403.2.3(3), C403.2.3(4), C403.2.3(5), C403.2.3(6), C403.2.3(7), C403.2.3(8), C403.2.3(9), C403.2.3(11), and C403.2.3(12) when tested and rated in accordance with the applicable test procedure.

Table C403.2.3(3)

Delete Table C403.2.3(3) in its entirety and replace with a new Table C403.2.3(3) to read as follows:

TABLE C403.2.3(3)
MINIMUM EFFICIENCY REQUIREMENTS: ELECTRICALLY OPERATED PACKAGED TERMINAL AIR CONDITIONERS, PACKAGED TERMINAL HEAT PUMPS, SINGLE-PACKAGE VERTICAL AIR CONDITIONERS, SINGLE-PACKAGE VERTICAL HEAT PUMPS, ROOM AIR CONDITIONERS, AND ROOM AIR-CONDITIONER HEAT PUMPS

Equipment Type	Size Category	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
PTAC (cooling mode) standard size	All capacities	95°F db outdoor air	14.0 – (0.300 × Cap/1000)[c] EER	AHRI 310/380
PTAC (cooling mode) nonstandard size	All capacities	95°F db outdoor air	10.9 – (0.213 × Cap/1000)[c] EER	
PTHP (cooling mode) standard size	All capacities	95°F db outdoor air	14.0 – (0.300 × Cap/1000)[c] EER	
PTHP (cooling mode) nonstandard size	All capacities	95°F db outdoor air	10.8 – (0.213 × Cap/1000)[c] EER	
PTHP (heating mode) standard size	All capacities	_____	3.7 – (0.052 × Cap/1000)[c] COP_H	
PTHP (heating mode) nonstandard size	All capacities	_____	2.9 – (0.026 × Cap/1000)[c] COP_H	

Equipment Type	Size Category	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
SPVAC (cooling mode)	< 65,000 BTU/h	95°F db/75°F wb outdoor air	10.0 EER	AHRI 390
	≥ 65,000 Btu/h and < 135,000 Btu/h	95°F db/75°F wb outdoor air	10.0 EER	
	≥ 135,000 Btu/h and < 245,000 Btu/h	95°F db/75°F wb outdoor air	10.0 EER	
SPVHP (cooling mode)	< 65,000 BTU/h	95°F db/75°F wb outdoor air	10.0 EER	
	≥ 65,000 Btu/h and < 135,000 Btu/h	95°F db/75°F wb outdoor air	10.0 EER	
	≥ 135,000 Btu/h and < 245,000 Btu/h	95°F db/75°F wb outdoor air	10.0 EER	
SPVHP (heating mode)	< 65,000 BTU/h	47°F db/43°F wb outdoor air	3.0 COP_H	
	≥ 65,000 Btu/h and < 135,000 Btu/h	47°F db/43°F wb outdoor air	3.0 COP_H	
	≥ 135,000 Btu/h and < 245,000 Btu/h	47°F db/43°F wb outdoor air	3.0 COP_H	
SPVAC (cooling mode), nonweatherized space constrained	< 30,000 BTU/h	95°F db/75°F wb outdoor air	9.2 EER	AHRI 390
	> 30,000 Btu/h and < 36,000 Btu/h	95°F db/75°F wb outdoor air	9.0 EER	
SPVHP (cooling mode) , nonweatherized space constrained	< 30,000 BTU/h	95°F db/75°F wb outdoor air	9.2 EER	
	≥ 30,000 Btu/h and < 36,000 Btu/h	95°F db/75°F wb outdoor air	9.0 EER	
SPVHP (heating mode) , nonweatherized space constrained	< 30,000 BTU/h	47°F db/43°F wb outdoor air	3.0 COP_H	
	≥ 30,000 Btu/h and < 36,000 Btu/h	47°F db/43°F wb outdoor air	3.0 COP_H	
Room air conditioners, with louvered sides	< 6,000 Btu/h	____	11.0 CEER	10 CFR Part 430
	≥ 6,000 Btu/h and < 8,000 Btu/h	____	11.0 CEER	
	≥ 8,000 Btu/h and < 14,000 Btu/h	____	10.9 CEER	
	≥ 14,000 Btu/h and < 20,000 Btu/h	____	10.7 CEER	

Equipment Type	Size Category	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
Room air conditioners, without louvered sides	≥ 20,000 Btu/h and < 24,000 Btu/h	____	9.4 CEER	10 CFR Part 430
	≥ 25,000 Btu/h	____	9.0 CEER	
	< 6,000 Btu/h	____	10.0 CEER	
	≥ 6,000 Btu/h and < 8,000 Btu/h	____	10.0 CEER	
	≥ 8,000 Btu/h and < 11,000 Btu/h	____	9.6 CEER	
	≥ 11,000 Btu/h and < 14,000 Btu/h	____	9.5 CEER	
	≥ 14,000 Btu/h and < 20,000 Btu/h	____	9.3 CEER	
	≥ 20,000 Btu/h	____	9.4 CEER	
Room air conditioner heat pumps, with louvered sides	< 20,000 Btu/h	____	9.8 CEER	10 CFR Part 430
	≥ 20,000 Btu/h	____	9.3 CEER	
Room air conditioner heat pumps, without louvered sides	< 14,000 Btu/h	____	9.3 CEER	10 CFR Part 430
	≥ 14,000 Btu/h	____	8.7 CEER	
Casement-only	All capacities	____	9.5 CEER	10 CFR Part 430
Casement-slider	All capacities	____	10.4 CEER	

Table C403.2.3(11)

Add a new Table C403.2.3(11) to read as follows:

TABLE C403.2.3(11)
MINIMUM EFFICIENCY REQUIREMENTS:
ELECTRICALLY OPERATED VARIABLE-REFRIGERANT-FLOW AIR CONDITIONERS

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure

VRF air conditioners, air cooled	< 65,000 Btu/h	All	VRF multisplit system	13.0 SEER	AHRI 1230
	≥ 65,000 Btu/h and < 135,000 Btu/h	Electric resistance (or none)	VRF multisplit system	11.2 SEER 13.1 IEER (before 1/1/2017) 15.5 IEER (as of 1/1/2017)	
	≥ 135,000 Btu/h and < 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system	11.0 EER 12.9 IEER (before 1/1/2017) 14.9 (as of 1/1/2017)	
	≥ 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system	10.0 EER 11.6 IEER (before 1/1/2017) 13.9 (as of 1/1/2017)	

Table C403.2.3(12)

Add a new Table C403.2.3(12) to read as follows:

TABLE C403.2.3(12)
MINIMUM EFFICIENCY REQUIREMENTS:
ELECTRICALLY OPERATED VARIABLE-REFRIGERANT-FLOW AIR-TO-AIR AND APPLIED HEAT PUMPS

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
VRF air cooled (cooling mode)	< 65,000 Btu/h	All	VRF multisplit system	13.0 SEER	AHRI 1230
	≥ 65,000 Btu/h and < 135,000 Btu/h	Electric resistance (or none)	VRF multisplit system	11.0 EER 12.9 IEER(before 1/1/2017) 14.6 IEER (as of 1/1/2017)	
	≥ 65,000 Btu/h and < 135,000 Btu/h	Electric resistance (or none)	VRF multisplit system with heat recovery	10.8 EER 12.7 IEER (before 1/1/2017) 14.4 IEER (as of 1/1/2017)	
	≥ 135,000 Btu/h and < 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system	10.6 EER 12.3 IEER (before 1/1/2017) 13.9 IEER	

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
				(as of 1/1/2017)	
	≥ 135,000 Btu/h and < 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system with heat recovery	10.4 EER 12.1 IEER (before 1/1/2017) 13.7 IEER (as of 1/1/2017)	
	≥ 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system	9.5 EER 11.0 IEER (before 1/1/2017) 12.7 (as of 1/1/2017)	
	≥ 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system with heat recovery	9.3 EER 10.8 IEER (before 1/1/2017) 12.5 IEER (as of 1/1/2017)	
VRF water source (cooling mode)	< 65,000 Btu/h	All	VRF multisplit systems 86°F entering water	12.0 EER	AHRI 1230
	< 65,000 Btu/h	All	VRF multisplit systems with heat recovery 86°F entering water	11.8 EER	
	≥ 65,000 Btu/h and < 135,000	All	VRF multisplit systems 86°F entering water	12.0 EER	
	≥ 65,000 Btu/h and < 135,000	All	VRF multisplit systems with heat recovery 86°F entering water	11.8 EER	
	≥ 135,000 Btu/h	All	VRF multisplit systems 86°F entering water	10.0 EER	
	≥ 135,000 Btu/h	All	VRF multisplit systems with heat recovery 86°F entering water	9.8 EER	
VRF ground source (cooling mode)	< 135,000 Btu/h	All	VRF multisplit system 59°F entering water	16.2 EER	AHRI 1230
	< 135,000 Btu/h	All	VRF multisplit system with heat recovery 59°F entering water	16.0 EER	
	≥ 135,000 Btu/h	All	VRF multisplit system 59°F entering water	13.8 EER	
	≥ 135,000 Btu/h	All	VRF multisplit system with heat recovery 59°F entering water	13.6 EER	
VRF ground source	< 135,000 Btu/h	All	VRF multisplit system 77°F entering water	13.4 EER	AHRI 1230

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
(cooling mode)	< 135,000 Btu/h	All	VRF multisplit system with heat recovery 77°F entering water	13.2 EER	
	≥ 135,000 Btu/h	All	VRF multisplit system 77°F entering water	11.0 EER	
	≥ 135,000 Btu/h	All	VRF multisplit system with heat recovery 77°F entering water	10.8 EER	
VRF air cooled (heating mode)	< 65,000 Btu/h (cooling capacity)	=	VRF multisplit system	7.7 HSPF	AHRI 1230
	≥ 65,000 Btu/h and < 135,000 Btu/h	=	VRF multisplit system 47°F db/43°F wb outdoor air	3.3 COP_H	
			17°F db/15°F wb outdoor air	2.25 COP_H	
	≥ 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 47°F db/43°F wb outdoor air	3.2 COP_H	
			17°F db/15°F wb outdoor air	2.05 COP_H	
VRF water source (heating mode)	< 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 68°F entering water	4.2 COP_H	AHRI 1230
	≥ 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 68°F entering water	3.9 COP_H	
VRF groundwater source (heating mode)	< 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 50°F entering water	3.6 COP_H	AHRI 1230
	≥ 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 50°F entering water	3.3 COP_H	
VRF ground source (heating mode)	< 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 32°F entering water	3.1 COP_H	AHRI 1230
VRF ground source (heating mode)	≥ 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 32°F entering water	2.8 COP_H	AHRI 1230

Section C403.2.4.3 Shutoff dampers.

Section C403.2.4.3 - Revise the second paragraph of Section C403.2.4.3 to read as follows:

Outdoor air intake and exhaust dampers shall be installed with automatic controls configured to close when the systems or spaces served are not in use or during unoccupied period warm-up and setback operation, unless the systems served require outdoor or exhaust air in accordance with the *New York City Mechanical Code* or the dampers are opened to provide intentional economizer cooling.

Section C403.2.6 Ventilation.

Section C403.2.6 – Revise Section C403.2.6 to read as follows:

C403.2.6 Ventilation. Ventilation, either natural or mechanical, shall be provided in accordance with Chapter 4 of the *New York City Mechanical Code*. Where mechanical ventilation is provided, the system shall provide the capability to reduce the outdoor air supply to the minimum required by Chapter 4 of the *New York City Mechanical Code.*

Section C403.2.6.1 Demand controlled ventilation.

Section C403.2.6.1 - Revise the first paragraph of Section C403.2.6.1 to read as follows:

Demand control ventilation (DCV) shall be provided for spaces larger than 500 square feet (46.5 m^2) and with an average occupant load of 25 people per 1,000 square feet (93 m^2) of floor area (as established in Table 403.3 of the *New York City Mechanical Code*) and served by systems with one or more of the following:

Section C403.2.6.2 Enclosed parking garage ventilation controls.

Section C403.2.6.2 – Revise Section C403.2.6.2 to read as follows:

C403.2.6. Enclosed parking garage ventilation controls. Enclosed parking garages used for storing or handling automobiles operating under their own power shall employ contamination-sensing devices and automatic controls configured to stage fans or modulate fan average airflow rates to 50 percent or less of design capacity, or intermittently operate fans less than 20 percent of the occupied time or as required to maintain acceptable contaminant levels in accordance with *New York City Mechanical Code* provisions. Failure of contamination sensing devices shall cause the exhaust fans to operate continuously at design airflow.

Section C403.2.7 Energy recovery ventilation systems.

Section C403.2.7 – Revise Item 1 under the Exceptions to read as follows:

Exception: An energy recovery ventilation system shall not be required in any of the following conditions:

1. Where energy recovery systems are prohibited by section 514.2 of the *New York City Mechanical Code*.

Section C403.2.7 Energy recovery ventilation systems.

Section C403.2.7 - Revise Item 8 under the Exceptions to read as follows:

8. Where the largest source of air exhausted at a single location at the building exterior is less than 75 percent of the design outdoor air flow rate. Multiple exhaust fans or outlets located within a 30 foot (9.144 m) radius from the outdoor air supply unit shall be considered a single exhaust location.

Section C403.2.9 Duct and plenum insulation and sealing.

Section C403.2.9 - Revise the last sentence of Section C403.2.9 to read as follows:

Joints and seams shall comply with Section 603.9 of the *New York City Mechanical Code*.

Section C403.2.9.1 Duct construction.

Section C403.2.9.1 – Revise Section C403.2.9.1 to read as follows:

C403.2.9.1 Duct construction. Ductwork shall be constructed and erected in accordance with the *New York City Mechanical Code.*

Section C403.2.9.1.1 Low-pressure duct systems.

Section C403.2.9.1.1 - Revise the first paragraph of Section C403.2.9.1.1 to read as follows:

Longitudinal and transverse joints, seams and connections of supply and return ducts operating at a static pressure less than or equal to 2 inches water gauge (w.g.) (498 Pa) shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems or tapes installed in accordance with the manufacturer's instructions. Pressure classifications specific to the duct system shall be clearly indicated on the construction documents in accordance with the *New York City Mechanical Code*.

Section C403.2.9.1.2 Medium-pressure duct systems.

Section C403.2.9.1.2 - Revise Section C403.2.9.1.2 to read as follows:

C403.2.9.1.2 Medium-pressure duct systems. Ducts and plenums designed to operate at a static pressure greater than 2 inches water gauge (w.g.) (498 Pa) but less than 3 inches w.g. (747 Pa) shall be insulated and sealed in accordance with Section C403.2.9. Pressure classifications specific to the duct system shall be clearly indicated on the construction documents in accordance with the *New York City Mechanical Code.*

Section C403.2.18 Automatic Control of HVAC in Hotel/Motel Guest Rooms.

Section C403.2.18 - Add a new Section C403.2.18 to read as follows:

C403.2.18 Automatic Control of HVAC in Hotel/Motel Guest Rooms. In hotels and motels with greater than 50 guest rooms, automatic controls for the HVAC equipment serving each guest room shall be configured according to the requirements in the following subsection. Controls must comply with either C403.2.18.1 or C403.2.18.2.

C403.2.18.1 Guest Room HVAC Setpoint Control. Within 30 minutes of all occupants leaving the guest room, HVAC setpoints shall be automatically raised by at least 4°F (2°C) from the occupant setpoint in the cooling mode and automatically lowered by at least 4°F (2°C) from the occupant setpoint in the heating mode. When the guest room is unrented and unoccupied, HVAC setpoints shall be automatically reset to 80°F (27°C)

or higher in the cooling mode and to 60°F (16°C) or lower in the heating mode. Unrented and unoccupied guest rooms shall be determined by either of the following:

a. The guest room has been continuously unoccupied for up to 16 hours.

b. A networked guest room control system indicates the guest room is unrented and the guest room is unoccupied for more than 30 minutes.

Exceptions:

1. A networked guest room control system shall be permitted to return the thermostat setpoints to their default occupied setpoints 60 minutes prior to the time the room is scheduled to be occupied.

2. Cooling for humidity control shall be permitted during unoccupied periods.

C403.2.18.2 Automatic Control. Captive key card systems shall be permitted to be used to comply with Section C403.2.18.

Section C403.4.1.1 Fan airflow control.

Section C403.4.1.1 - Revise Item 2 under the Exceptions to read as follows:

2. Where the volume of outdoor air required to comply with the *ventilation* requirements of the *New York City Mechanical Code* at low speed exceeds the air that would be delivered at the speed defined in Section C403.4.1, the minimum speed shall be selected to provide the required *ventilation air*.

Section C403.4.4 Requirements for complex mechanical systems serving multiple zones.

Section C403.4.4 - Revise the first sentence to read as follows:

Sections C403.4.4.1 through C403.4.4.6 shall apply to complex mechanical systems serving multiple zones.

Section C403.4.4 Requirements for complex mechanical systems serving multiple zones.

Section C403.4.4 - Revise Item 3 to read as follows:

3. The minimum ventilation requirements of *New York City Mechanical Code*.

Section C403.4.4 Requirements for complex mechanical systems serving multiple zones.

Section C403.4.4 - Revise Item 4 under the Exception to read as follows:

4. *Zones* where the volume of air to be reheated, recooled or mixed is not greater than the volume of outside air required to provide the minimum ventilation requirements of Chapter 4 of the *New York City Mechanical Code*.

Section C403.4.4.4 Fractional hp fan motors.

Section C403.4.4.4 - Revise Item 2 under the Exceptions to read as follows:

2. Motors in space-conditioning equipment that comply with Section C403.2.3 or C403.2.12.

Sections C403.4.4.6 Multiple-zone VAV system ventilation optimization control.

Section C403.4.4.6 - Revise the first paragraph of Section C403.4.4.6 to read as follows:

Multiple-zone VAV systems with direct digital control of individual zone boxes reporting to a central control panel shall have automatic controls configured to reduce outdoor air intake flow below design rates in response to changes in system *ventilation* efficiency (*Ev*) as defined by the *2015 International Mechanical Code (as amended)*.

SECTION C405
ELECTRICAL POWER AND LIGHTING SYSTEMS

Section C405.2 Lighting Controls (Mandatory).

Section C405.2 - Add a new sentence at the end of Section C405.2 to read as follows:

Lighting systems shall be provided with controls as specified in Sections C405.2.1, C405.2.2, C405.2.3, C405.2.4 and C405.2.5. Lighting controls shall be commissioned and completed in accordance with the requirements of C408.3.

Section C405.2.1 Occupant sensor controls.

Section C405.2.1 - Add a new Item 13 to read as follows:

13. Open Plan Offices.

Section C405.2.1.1 Occupant sensor control function.

Section C405.2.1.1 - Delete Section C405.2.1.1 in its entirety and replace with a new Section C405.2.1.1 to read as follows:

C405.2.1.1 Occupant Sensor Control Function. Occupant sensor controls in spaces other than warehouses specified in Section C405.2.1 shall comply with the following:

1. Automatically turn off lights within 20 minutes of all occupants leaving the space.

2. Be manual on or controlled to automatically turn the lighting on to not more than 50 percent power.

Exceptions:

1. Full automatic-on controls shall be permitted to control lighting in public corridors, stairways, restrooms, primary building entrance areas and lobbies, and areas where manual-on operation would endanger the safety or security of the room or building occupants.
2. Manual on controls shall be required for classrooms (not including shop classrooms, laboratory classrooms, and preschool classrooms), conference/meeting rooms, employee lunch and break rooms, and offices smaller than 200 square feet (18.5 m^2) in area. Such sensors and controls shall not have an override switch that converts from manual-on to automatic-on functionality, and may have a grace period of up to 30 seconds to turn on the lighting automatically after the sensor has turned off the lighting if occupancy is detected.

3. Shall incorporate a *manual control* to allow occupants to turn lights off.

Figure C405.2.3.2(1) DAYLIGHT ZONE ADJACENT TO FENESTRATION IN A WALL

Figure C405.2.3.2(1)(b) – Delete Figure C405.2.3.2(1)(b) in its entirety and replace with a new Figure C405.2.3.2(1)(b) to read as follows:

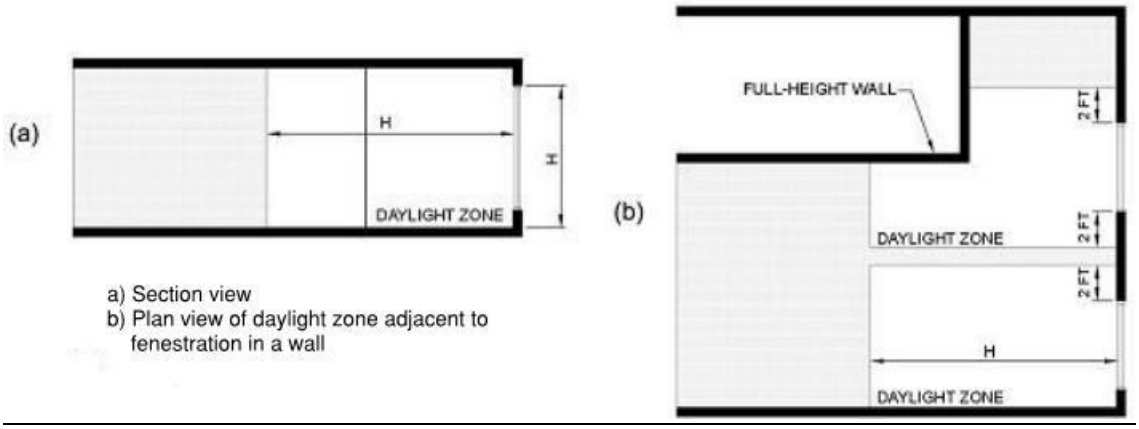
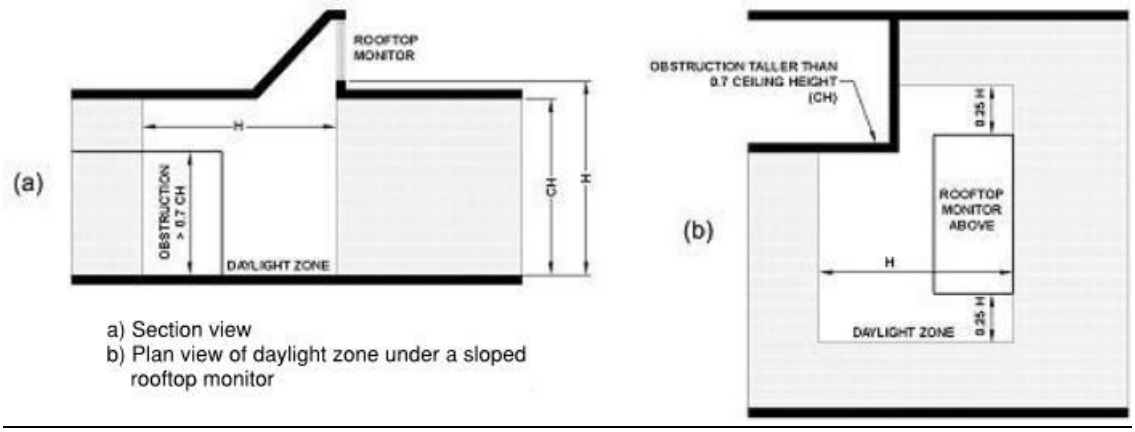


FIGURE C405.2.3.2(1)
DAYLIGHT ZONE ADJACENT TO FENESTRATION IN A WALL

Figure C405.2.3.2(3) DAYLIGHT ZONE UNDER A SLOPED ROOFTOP MONITOR

Figure C405.2.3.2(3)(b) – Delete Figure C405.2.3.2(3)(b) in its entirety and replace with a new Figure C405.2.3.2(3)(b) to read as follows:



a) Section view
b) Plan view of daylight zone under a sloped rooftop monitor

FIGURE C405.2.3.2(3)
DAYLIGHT ZONE UNDER A SLOPED ROOFTOP MONITOR

Table C405.4.2(2)

Revise the maximum lighting power allowance (LPD) in the Common Space Types Section of Table C405.4.2(2) to read as follows:

TABLE C405.4.2(2)
INTERIOR LIGHTING POWER ALLOWANCES:
SPACE-BY-SPACE METHOD

COMMON SPACE TYPES[a]	LPD (watts/sq.ft)
Atrium	
Less than 40 feet in height	0.03 per foot in total height
Greater than 40 feet in height	0.40 + 0.02 per foot in total height
Audience seating area	
In an auditorium	0.63
In a convention center	0.82
In a gymnasium	0.65
In a motion picture theater	1.14
In a penitentiary	0.28
In a performing arts theater	2.43
In a religious building	1.53
In a sports arena	0.43
Otherwise	0.43
Banking activity area	1.01
Breakroom (See Lounge/Breakroom)	
Classroom/lecture hall/training room	
In a penitentiary	1.34
Otherwise	1.24
Conference/meeting/multipurpose room	1.23
Copy/print room	0.72
Corridor	
In a facility for the visually impaired (and not used primarily by the staff)[b]	0.92
In a hospital	0.79

In a manufacturing facility	0.41
Otherwise	0.66
Courtroom	1.72
Computer room	1.71
Dining area	
In a penitentiary	0.96
In a facility for the visually impaired (and not used primarily by the staff)[b]	1.9
In bar/lounge or leisure dining	1.07
In cafeteria or fast food dining	0.65
In family dining	0.89
Otherwise	0.65
Electrical/mechanical room	0.95
Emergency vehicle garage	0.56
Food preparation area	1.21
Guest room	0.47
Laboratory	
In or as a classroom	1.43
Otherwise	1.81
Laundry/washing area	0.6
Loading dock, interior	0.47
Lobby	
In a facility for the visually impaired (and not used primarily by the staff)[b]	1.8
For an elevator	0.64
In a hotel	1.06
In a motion picture theater	0.59
In a performing arts theater	2.0
Otherwise	0.9
Locker room	0.75
Lounge/breakroom	
In a healthcare facility	0.92
Otherwise	0.73
Office	
Enclosed	1.0
Open plan	0.90
Parking area, interior	0.19
Pharmacy area	1.68
Restroom	
In a facility for the visually impaired (and not used primarily by the staff)[b]	1.21
Otherwise	0.98
Sales area	1.30
Seating area, general	0.54
Stairway (See space containing stairway)	
Stairwell	0.69
Storage room	0.63
Vehicular maintenance area	0.67
Workshop	1.59

Section C405.6.1 Electrical sub-metering (Mandatory).

Section C405.6.1 - Add a new Section C405.6.1 to read as follows:

C405.6.1 Measurement of electrical consumption of tenant spaces in covered buildings. The terms meter, submeter, covered building, tenant space and covered tenant space shall be as defined in Section 28-311.2 of the Administrative Code of the city of New York. Each covered tenant space in a new building shall be equipped with a separate meter or sub-meter to measure the electrical consumption of such space when let or sublet. Where the covered tenant space is a floor with multiple tenancies, each tenancy with an area less than that as defined in Section 28-311.2 of the Administrative Code of the city of New York shall (i) be equipped with a separate meter or sub-meter, (ii) share a meter or sub-meter with other tenant spaces on the floor, or (iii) share a meter or sub-meter covering the entire floor. As new covered tenant spaces are created, they shall be equipped with meters or sub-meters as provided in this section.

Exception: Covered tenant space for which the electrical consumption within such space is measured by a meter dedicated exclusively to that space.

SECTION C406
ADDITIONAL EFFICIENCY PACKAGE OPTIONS

Section C406.2 More efficient HVAC equipment performance.

Section C406.2 - Delete Section C406.2 in its entirety and replace with a new section C406.2 to read as follows:

C406.2 More efficient HVAC equipment performance. Equipment shall exceed the minimum efficiency requirements listed in Tables C403.2.3(1) through C403.2.3(7), C403.2.3(11), and C403.2.3(12) by 10 percent, in addition to the requirements of Section C403. Where multiple performance requirements are provided, the equipment shall exceed all requirements by 10 percent. Equipment not listed in Tables C403.2.3(1) through C403.2.3(7), C403.2.3(11), and C403.2.3(12) shall be limited to 10 percent of the total building system capacity.

Section C406.5 On-site renewable energy.

Section C406.5 – Revise Item 2 to read as follows:

2. Provide not less than 3 percent of the energy used within the building for building mechanical and service water heating equipment and lighting regulated in Chapter C4.

Section C406.6 Dedicated outdoor air system.

Section C406.6 – Revise the first sentence of Section C406.6 to read as follows:

Buildings covered by Section C403.4 shall be equipped with an independent ventilation system designed to provide not less than the minimum 100-percent outdoor air to each individual occupied space, as specified by the New York City Mechanical Code.

Section C406.7 Reduced energy use in service water heating.

Section C406.7 - Delete Item 7 of Section C406.7 in its entirety.

SECTION C407
TOTAL BUILDING PERFORMANCE

Section C407 - Delete Section C407 in its entirety and replace with a new section C407 to read as follows:

SECTION C407
TOTAL BUILDING PERFORMANCE

C407.1 Scope. This section establishes criteria for compliance using total building performance. Buildings following the total building performance path must comply with ASHRAE 90.1-2013, demonstrating compliance under Section 11 or Appendix G of such standard.

SECTION C408
SYSTEM COMMISSIONING

Section C408.1 General.

Section C408.1 - Delete Section C408.1 in its entirety and replace with a new Section C408.1 to read as follows:

C408.1 General. This section covers the commissioning of building mechanical systems in Section C403, service water heating systems in Section C404, and electrical power and lighting systems in Section C405.

Section C408.2 Mechanical systems commissioning and completion requirements.

Section C408.2 - Delete Section C408.2 in its entirely and replace with a new Section C408.2 to read as follows:

C408.2 Mechanical, renewable energy, and service water heating systems commissioning and completion requirements. Prior to passing the final mechanical and plumbing inspections, the approved agency shall provide evidence of mechanical systems commissioning and completion in accordance with the provisions of this section.

Construction document notes shall clearly indicate provisions for commissioning and completion requirements in accordance with this section and are permitted to refer to specifications for further requirements. Copies of all documentation shall be given to the owner or owner's authorized agent and made available to the code official upon request in accordance with Sections C408.2.4 and C408.2.5.

Mechanical systems, renewable energy, and service water heating systems shall include but are not limited to, at a minimum, the following heating, ventilating, air conditioning, service water heating, indoor air quality and refrigeration systems (mechanical and/or passive) and associated controls:

1. Heating, cooling, air handling and distribution, ventilation, and exhaust systems, and their related air quality monitoring systems.

2. Air, water, and other energy recovery systems.

3. Manual or automatic controls, whether local or remote, on energy using systems including but not limited to temperature controls, setback sequences, and occupancy based control, including energy management functions of the building management system.

4. Plumbing, including insulation of piping and associated valves, domestic and process water pumping, and mixing systems.

5. Mechanical heating systems and service water heating systems.

6. Refrigeration systems.

7. Renewable energy and energy storage systems.

8. Other systems, equipment and components that are used for heating, cooling or ventilation and that affect energy use.

Exceptions:

1. Mechanical and service hot water systems in buildings where the total mechanical equipment capacity being installed is less than 480,000 Btu/h (140.7 kW) cooling capacity and 600,000 Btu/h (175.8 kW) combined service water-heating and space-heating capacity.

2. Renewable energy systems being installed with a generating capacity of less than 25kW.

Section C408.2.1 Commissioning plan.

Section C408.2.1 – Revise the first sentence of Section C408.2.1 to read as follows:

A commissioning plan shall be developed by an approved agency and shall include the following items:

Section C408.2.1 - Delete Item 2 and replace with a new Item 2 to read as follows:

2. A listing of the specific equipment, appliances or systems to be tested, their full sequences of operation, and a description of the tests to be performed, including prerequisite activities and reference to specific checklists or worksheets which are necessary or required by the department.

Section C408.2.2 Systems adjusting and balancing.

Section C408.2.2 - Delete the first sentence of Section C408.2.2 and replace with a new sentence to read as follows:

HVAC systems shall be balanced in accordance with ASHRAE 111, "Testing, Adjusting, and Balancing of Building HVAC Systems" or other accepted engineering standards as approved by the department.

Section C408.2.2.1 Air systems balancing.

Section C408.2.2.1 - Revise the first sentence of Section C408.2.2.1 to read as follows:

Each supply air outlet and zone terminal device shall be equipped with means for air balancing in accordance with the requirements of Chapter 6 of the *New York City Mechanical Code*.

Section C408.2.3.1 Equipment.

Section C408.2.3.1 - Delete the Exception and replace with a new Exception to read as follows:

Exception: Unitary or packaged HVAC equipment listed in Tables C403.2.3(1) through C403.2.3(3) that do not require supply air economizers shall only be required to demonstrate functioning under full-load and part-load conditions.

Section C408.2.4 Preliminary commissioning report.

Section C408.2.4 – Revise the first sentence of Section C408.2.4 to read as follows:

A preliminary report of commissioning test procedures and results shall be completed and certified by the approved agency and provided to the building owner or owner's authorized agent.

Section C408.2.4.1 Acceptance of report.

Section C408.2.4.1 – Revise the Section C408.2.4.1 to read as follows:

Buildings, or portions thereof shall not be considered acceptable for a final inspection pursuant to Chapter 1 of this code until the code official has received a letter of transmittal from the building owner acknowledging that the building owner or owner's authorized agent has received the Preliminary Commissioning Report.

Section C408.2.5 Documentation requirements.

Section C408.2.5 - Delete the introductory paragraph and replace with a new paragraph to read as follows:

The construction documents shall specify that the documents described in sections C408.2.5.1 through C408.2.5.3 be provided to the building owner or owner's authorized agent within 90 days of the date of receipt of the certificate of occupancy. The construction documents shall also specify that the Final commissioning

report be provided to the building owner or owner's authorized agent in accordance with the requirements of section C408.2.5.4.

Section C408.2.5.4 Final commissioning report.

Section C408.2.5.4 - Delete Section C408.2.5.4 in its entirety and replace with a new Section C408.2.5.4 to read as follows:

Section C408.2.5.4 Final commissioning report. Within 30 months for new buildings 500,000 gross square feet (46 452 m²) or greater, excluding R-2 occupancies, or within 18 months for R-2 occupancies and all other buildings, of the issuance of the certificate of occupancy or letter of completion, an approved agency shall prepare a report of test procedures and results, including test procedures and results performed after occupancy, identified as the "Final Commissioning Report", provide such report to the building owner, and submit a certification to the department with applicable fees in accordance with department rules. The owner of a building 500,000 gross square feet (46 452 m²) or greater may apply for an extension of time to the code official based on good cause, in accordance with department rules. Such report shall include the following:

1. Results of functional performance tests.
2. Disposition of deficiencies found during testing, including details of corrective measures used or proposed.
3. Functional performance test procedures used during the commissioning process including measureable criteria for test acceptance, provided herein for repeatability.

Exception: Deferred tests that cannot be performed at the time of report preparation due to climatic conditions.

Section C408.3.1 Functional testing.

Section C408.3.1 - Revise the first sentence of Section C408.3.1 to read as follows:

Prior to passing final inspection, the approved agency shall provide evidence that the lighting control systems have been tested to ensure that control hardware and software are calibrated, adjusted, programmed and in proper working condition in accordance with the construction documents and manufacturer's instructions.

CHAPTER C5
EXISTING BUILDINGS

SECTION C501
GENERAL

Section C501.4 Compliance.

Section C501.4 – Delete Section C501.4 in its entirety and replace with a new Section C501.4 to read as follows:

C501.4 Compliance. *Alterations*, *repairs*, *additions* and changes of occupancy to, or relocation of, existing buildings and structures shall comply with (i) all applicable provisions of this code, (ii) the provisions for alterations, repairs, additions and changes of occupancy or relocation, respectively, in the *New York City Construction Codes*, (iii) the *New York City Fire Code*, and (iv) the *New York City Electrical Code*.

Section C501.6 Historic Buildings.

Section C501.6 – Revise Section C501.6 to read as follows:

C501.6 Historic Buildings. No provisions of this code relating to the construction, repair, alteration, restoration, and change of occupancy shall be mandatory for historic buildings.

Section C501.7 Compliance alternative.

Section C501.7 – Revise Section C501.7 to read as follows:

C501.7 Compliance alternative. *Additions*, *alterations*, *repairs*, and changes of occupancy are permitted to comply with the requirements of ASHRAE 90.1-2013 in lieu of compliance with the requirements of Sections C502, C503, C504 and C505, as applicable.

Section C503 Alterations.

Section C503.1- Revise Item 7 under Exception to read as follows:

7. Alterations that replace less than 20 percent of the luminaires in a space, provided that such alterations do not increase the installed interior lighting power.

CHAPTER C6
REFERENCED STANDARDS

Chapter C6 – Delete Chapter C6 in its entirety and replace with a new chapter C6 to read as follows:

This chapter lists the standards that are referenced in various sections of the commercial provisions of this code. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section 106. Refer to the rules of the department for any subsequent additions, modifications or deletions that may have been made to the referenced standards set forth herein in accordance with Section 28-103.19 of the *Administrative Code*.

AAMA

American Architectural Manufacturers Association
1827 Walden Office Square
Suite 550
Schaumburg, IL 60173-4268

Standard reference number	Title	Referenced in code section number

AAMA/WDMA/CSA 101/I.S.2/A C440—11	North American Fenestration Standard/ Specifications for Windows, Doors and Unit Skylights	Table C402.5.2

ACCA

Air Conditioning Contractors of America
2800 Shirlington Road #300
Arlington, VA 22206

Standard reference number	Title	Referenced in code section number
ANSI/ASHRAE/ACCA-183-07 (RA2011)	Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings	C403.2.1

AHAM

Association of Home Appliance Manufacturers
1111 19th Street, NW, Suite 402
Washington, DC 20036

Standard reference number	Title	Referenced in code section number
AHAM HRF-1—2007	Energy, Performance and Capacity of Household Refrigerators, Refrigerator-Freezers and Freezers	Table C403.2.14(1)

AHRI

Air-Conditioning, Heating, and Refrigeration Institute
2111 Wilson Blvd, Suite 500
Arlington, VA 22201

Standard reference number	Title	Referenced in code section number
ISO/AHRI/ASHRAE 13256-1 (2011)	Water-to-Air and Brine-to-Air Heat Pumps—Testing and Rating for Performance	Table C403.2.3(2)
ISO/AHRI/ASHRAE 13256-2 (2011)	Water-to-Water and Brine-to-Water Heat Pumps —Testing and Rating for Performance	Table C403.2.3(2)
210/240—08	Unitary Air-Conditioning and Air-Source Heat Pump Equipment	Table C403.2.3(1), Table C403.2.3(2)
310/380—04	Standard for Packaged Terminal Air Conditioners and Heat Pumps	Table C403.2.3(3)
340/360—2007	Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment	Table C403.2.3(1), Table C403.2.3(2)
365(I-P)—09	Commercial and Industrial Unitary Air-Conditioning Condensing Units	Table C403.2.3(1), Table C403.2.3(6)
390—03	Performance Rating of Single Package Vertical Air-Conditioners and Heat Pumps	Table C403.2.3(3)
400—2001	Liquid to Liquid Heat Exchangers with Addendum 1	Table C403.2.3(10)
440—2008	Room Fan Coils	C403.2.10
460—2005	Performance Rating of Remote Mechanical-Draft Air-Cooled Refrigerant Condensers	Table C403.2.3(8)
550/590—2011 With Addendum 1	Performance Rating of Water-Chilling and Heat Pump Water-Heating Packages Using the Vapor Compression Cycle	C403.2.3.1, Table C403.2.3(7)
560—00	Absorption Water Chilling and Water Heating Packages	Table C403.2.3(7)
840-15	Performance Rating of Unit Ventilators	C403.2.10

1160 (I-P) —09	Performance Rating of Heat Pump Pool Heaters	Table C404.2
1200-2010	Performance Rating of Commercial Refrigerated Display Merchandisers and Storage Cabinets	C403.2.14, Table C403.2.14(1), Table C403.2.14(2)
ANSI/AHRI 1230-10 with Addendum 1	Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment	Table C403.2.3(11), Table C403.2.3(12)

AMCA

Air Movement and Control Association International
30 West University Drive
Arlington Heights, IL 60004-1806

Standard reference number	Title	Referenced in code section number
205—12	Energy Efficiency Classification for Fans	C403.2.12.3
220—08 (R2012)	Laboratory Methods of Testing Air Curtain Units for Aerodynamic Performance Rating	C402.5.7
500D—12	Laboratory Methods for Testing Dampers for Rating	C403.2.4.3

ANSI

American National Standards Institute
25 West 43rd Street
Fourth Floor
New York, NY 10036

Standard reference number	Title	Referenced in code section number
ANSI/AHRI 1230-10 with Addendum 1	Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment	Table C403.2.3(11), Table C403.2.3(12)
ANSI/AMCA 220—08 (R2012)	Laboratory Methods of Testing Air Curtain Units for Aerodynamic Performance Rating	C402.5.7
ANSI/ASHRAE 127-2007	Method of Testing for Rating Computer and Data Processing Room Unitary Air Conditioners	Table C403.2.3(9)
ANSI/ASHRAE/ACCA-183-07 (RA2011)	Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings	C403.2.1
ANSI/ASHRAE/IES 90.1-2013 (AS AMENDED) with revisions as set forth in appendix CA of this code	Energy Standard for Buildings Except Low-Rise Residential Buildings	CH1 (Intro. Paragraph), 101.1.1, C202, C401.2, Table C402.1.3, Table C402.1.4, C407, C407.1, C501.7, C502.1, C503.1, C504.1
ANSI/CRRC-1—2012	CRRC-1 Standard	Table C402.3, C402.3.1
ANSI/DASMA 105-92 (R 2004) – 13	Test Method for Thermal Transmittance and Air Infiltration of Garage Doors	C303.1.3, Table C402.5.2
Z21.10.3/CSA 4.3—11	Gas Water Heaters, Volume III—Storage Water Heaters with Input Ratings Above 75,000 Btu per Hour, Circulating Tank and Instantaneous	Table C404.2
Z21.47/CSA 2.3—12	Gas-fired Central Furnaces	Table C403.2.3(4)
Z83.8/CSA 2.6—09	Gas Unit Heaters, Gas Packaged Heaters, Gas Utility Heaters and Gas-fired Duct Furnaces	Table C403.2.3(4)

APSP

The Association of Pool & Spa Professionals
2111 Eisenhower Avenue
Alexandria, VA 22314

Standard reference number	Title	Referenced in code section number
14—11	American National Standard for Portable Electric Spa Efficiency	C404.10

ASHRAE

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
1791 Tullie Circle, NE
Atlanta, GA 30329-2305

Standard reference number	Title	Referenced in code section number
ANSI/ASHRAE 127-2007	Method of Testing for Rating Computer and Data Processing Room Unitary Air Conditioners	Table C403.2.3(9)
ANSI/ASHRAE/ACCA Standard 183—2007 (RA2011)	Peak Cooling and Heating Load Calculations in Buildings, Except Low-rise Residential Buildings	C403.2.1
ASHRAE—2012	ASHRAE HVAC Systems and Equipment Handbook	C403.2.1
ASHRAE 111—08	Measurement, Testing, Adjusting, and Balancing of Building Heating, Ventilation and Air-Conditioning Systems	C408.2.2
ISO/AHRI/ASHRAE 13256-1 (2011)	Water-to-Air and Brine-to-Air Heat Pumps—Testing and Rating for Performance	Table C403.2.3(2)
ISO/AHRI/ASHRAE 13256-2 (2011)	Water-to-Water and Brine-to-Water Heat Pumps—Testing and Rating for Performance	Table C403.2.3(2)
ANSI/ASHRAE/IES 90.1—2013 (AS AMENDED) with revisions as set forth in appendix CA of this code	Energy Standard for Buildings Except Low-rise Residential Buildings	CH1 (Intro. Paragraph), 101.1.1, C202, C401.2, Table C402.1.3, Table C402.1.4, C407, C407.1, C501.7, C502.1, C503.1, C504.1
ASHRAE Appendix G Excerpt-2015 (as amended by Part 2, Section 6 of the 2016 Energy Code Supplement with revisions as set forth in appendix CA of this code)	Standard 90.1 Appendix G 2013 Performance Rating Method Excerpt from ANSI/ASHRAE/IES Standard 90.1-2013 (I-P), publication date 2015	Appendix G
146—2011	Testing and Rating Pool Heaters	Table C404.2

ASME

American Society Mechanical Engineers
Two Park Avenue
New York, NY 10016-5990

Standard reference number	Title	Referenced in code section number

ASME A17.1/ CSA B44—2013	Safety Code for Elevators and Escalators	C405.9.2

ASTM

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2859

Standard reference number	Title	Referenced in code section number
C 90—13	Specification for Load-bearing Concrete Masonry Units	Table C402.1.3
C 1363—11	Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus	C303.1.4.1, Table C402.1.4
C 1371—04	Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers	Table C402.3
C 1549—09	Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using A Portable Solar Reflectometer	Table C402.3
D 1003—11e1	Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics	C402.4.2.2
E 283—04	Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen	C202,C402.5.1.2.2, Table C402.5.2, C402.5.8
E 408—71(2008)	Test Methods for Total Normal Emittance of Surfaces Using Inspection-meter Techniques	Table C402.3
E 779—10	Standard Test Method for Determining Air Leakage Rate by Fan Pressurization	C402.5, C402.5.1.3
E 903—96	Standard Test Method Solar Absorptance, Reflectance and Transmittance of Materials Using Integrating Spheres (Withdrawn 2005)	Table C402.3
E 1677—11	Standard Specification for an Air-retarder (AR) Material or System for Low-rise Framed Building Walls	C402.5.1.2.2
E 1918—06	Standard Test Method for Measuring Solar Reflectance of Horizontal or Low-sloped Surfaces in the Field	Table C402.3
E 1980—11	Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-sloped Opaque Surfaces	Table C402.3
E 2178—13	Standard Test Method for Air Permanence of Building Materials	C202, C402.5.1.2.1
E 2357—11	Standard Test Method for Determining Air Leakage of Air Barriers Assemblies	C402.5.1.2.2

CRRC

Cool Roof Rating Council
449 15th Street, Suite 200
Oakland, CA 94612

Standard reference number	Title	Referenced in code section number
ANSI/CRRC-1—2012	CRRC-1 Standard	Table C402.3, C402.3.1

CSA

CSA Group
8501 East Pleasant Valley
Cleveland, OH 44131-5516

Standard reference number	Title	Referenced in code section number
AAMA/WDMA/CSA 101/I.S.2/A440—11	North American Fenestration Standard/Specification for Windows, Doors and Unit Skylights	Table C402.5.2
ASME A17.1/ CSA B44—2013	Safety Code for Elevators and Escalators	C405.9.2
Z21.10.3/CSA 4.3—11	Gas Water Heaters, Volume III—Storage Water Heaters with Input Ratings Above 75,000 Btu per Hour, Circulating Tank and Instantaneous	Table C404.2
Z21.47/CSA 2.3—12	Gas-fired Central Furnaces	Table C403.2.3(4)
Z83.8/CSA 2.6—09	Gas Unit Heaters, Gas Packaged Heaters, Gas Utility Heaters and Gas-fired Duct Furnaces	Table C403.2.3(4)
CSA B55.1—2012	Test Method for Measuring Efficiency and Pressure Loss of Drain Water Heat Recovery Units	C404.8
CSA B55.2—2012	Drain Water Heat Recover Units	C404.8

CTI

Cooling Technology Institute
P. O. Box 73383
Houston, TX 77273-3383

Standard reference number	Title	Referenced in code section number
ATC 105 (00)	Acceptance Test Code for Water Cooling Tower	Table C403.2.3(8)
ATC 105S—11	Acceptance Test Code for Closed Circuit Cooling Towers	Table C403.2.3(8)
ATC 106—11	Acceptance Test For Mechanical Draft Evaporative Vapor Condensers	Table C403.2.3(8)
STD 201—11	Standard for Certification of Water Cooling Towers Thermal Performances	Table C403.2.3(8)

DASMA

Door and Access Systems Manufacturers Association
1300 Sumner Avenue
Cleveland, OH 44115-2851

Standard reference number	Title	Referenced in code section number
105—92 (R2004)—13	Test Method for Thermal Transmittance and Air Infiltration of Garage Doors	C303.1.3, Table C402.5.2

DOE

U.S. Department of Energy
c/o Superintendent of Documents
1000 Independence Avenue SW
Washington, DC 20585

Standard reference number	Title	Referenced in code section number
10 CFR, Part 430	Energy Conservation Program for Consumer Products: Test Procedures and Certification and Enforcement Requirement	Table C403.2.3(3), Table C403.2.3(4),

	for Plumbing Products; and Certification and Enforcement Requirements for Residential Appliances; Final Rule	Table C403.2.3(5), Table C404.2
10 CFR, Part 430, Subpart B, Appendix N	Uniform Test Method for Measuring the Energy Consumption of Furnaces and Boilers	Table C403.2.3(4), Table C403.2.3(5)
10 CFR, Part 431	Energy Efficiency Program for Certain Commercial and Industrial Equipment: Test Procedures and Efficiency Standards; Final Rules	Table C403.2.3(5), C403.4.4.4, C405.7,Table C405.7, C405.8, Table C405.8(1),Table C405.8 (2), Table C405.8 (3), Table C405.8(4)
10 CFR 431 Subpart B App B	Uniform Test Method for Measuring Nominal Full Load Efficiency of Electric Motors	C403.4.4.4, C405.7, Table C405.7,Table C405.8(1), Table C405.8(2), Table C405.8(3), C405.8(4)
NAECA 87—(88)	National Appliance Energy Conservation Act 1987 [(Public Law 100-12 (with Amendments of 1988-P.L. 100-357)]	Tables C403.2.3(1), C403.2.3(2), C403.2.3(4)

IEEE

The Institute of Electrical and Electronic Engineers Inc.
3 Park Avenue
New York, NY 10016

Standard reference number	Title	Referenced in code section number
IEEE 515.1—2012	IEE Standard for the Testing, Design, Installation, and Maintenance of Electrical Resistance Trace Heating for Commercial Applications	C404.6.2

IES

Illuminating Engineering Society
120 Wall Street, 17th Floor
New York, NY 10005-4001

Standard reference number	Title	Referenced in code section number
ANSI/ASHRAE/IES 90.1-2013 (AS AMENDED) with revisions as set forth in appendix CA of this code	Energy Standard for Buildings, Except Low-rise Residential Buildings	CH1 (Intro. Paragraph), 101.1.1, C202, C401.2, Table C402.1.3, Table C402.1.4, C407, C407.1, C501.7, C502.1, C503.1, C504.1

ISO

International Organization for Standardization
1, rue de Varembe, Case postale 56, CH-1211
Geneva, Switzerland

Standard reference number	Title	Referenced in code section number
ISO/AHRI/ASHRAE 13256-1 (2011)	Water-to-Air and Brine-to-air Heat Pumps -Testing and Rating for Performance	Table C403.2.3(2)
ISO/AHRI/ASHRAE 13256-2(2011)	Water-to-Water and Brine-to-Water Heat Pumps -Testing and Rating for Performance	Table C403.2.3(2)

NEMA

National Electrical Manufacturers Association
1300 North 17th Street, Suite 1752
Rosslyn, VA 22209

Standard reference number	Title	Referenced in code section number
MG1—1993	Motors and Generators	C202

NFRC

National Fenestration Rating Council, Inc.
6305 Ivy Lane, Suite 140
Greenbelt, MD 20770

Standard reference number	Title	Referenced in code section number
100—2009	Procedure for Determining Fenestration Products *U*-factors—Second Edition	C303.1.3, C402.2.2
200—2009	Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence—Second Edition	C303.1.3, C402.4.1.1
400—2009	Procedure for Determining Fenestration Product Air Leakage—Second Edition	Table C402.5.2

NYC

New York City Department of Buildings
280 Broadway
New York, NY 10007

Standard reference number	Title	Referenced in code section number
NYCAC—14	New York City Administrative Code	CH1 (Intro Statement), 101.1, 101.5.2.2, 101.5.2.3 102.1, 103.1, 103.2.1, 103.3, 104.1, 104.1.1, 104.3, 105.1, C202, C405.6.1
NYCBC—14	New York City Building Code	101.2.2, 103.2.1, C402.5.3, C402.5.4
NYCCC—14	New York City Construction Codes	102.1, 103.1, 104.2.3, C201.3, C303.2, C402.2.7, C501.4
NYCEC— 11	New York City Electrical Code	C201.3, C202, C501.4

NYCFC—14	New York City Fire Code	C201.3, C501.4
NYCMC—14	New York City Mechanical Code	C402.5.3, C403.2.4.3, C403.2.6, C403.2.6.1, C403.2.6.2, C403.2.7, C403.2.9, C403.2.9.1, C403.2.9.1.1, C403.2.9.1.2, C403.4.1.1, C403.4.4, C406.6, C408.2.2.1

NYS

New York Department of State
One Commerce Plaza, 99 Washington Ave
Albany, NY 12231-0001

Standard reference number	Title	Referenced in code section number
ECCCNYS- 16	New York State Energy Conservation Construction Code	CH1 (Intro Statement), 101.1.1, 101.2.2, 101.3, C202
IBC—15	International Building Code® (as amended)	C202
IMC—15	International Mechanical Code® (as amended)	C202, C403.4.4.6

SMACNA

Sheet Metal and Air Conditioning Contractors National Association, Inc.
4021 Lafayette Center Drive
Chantilly, VA 20151-1209

Standard reference number	Title	Referenced in code section number
SMACNA—2012	HVAC Air Duct Leakage Test Manual 2nd Edition	C403.2.9.1.3

UL

UL LLC
333 Pfingsten Road
Northbrook, IL 60062-2096

Standard reference number	Title	Referenced in code section number
127—11	Standard for Factory-Built Fireplaces	C402.2.7
710—12	Exhaust Hoods for Commercial Cooking Equipment	C403.2.8
727—06	Oil-fired Central Furnaces—with Revisions through April 2010	Table C403.2.3(4)
731—95	Oil-fired Unit Heaters—with Revisions through August 2012	Table C403.2.3(4)
907—10	Standard for Fireplace Accessories	C402.2.7
1784—01	Air Leakage Tests of Door Assemblies—with Revisions through July 2009	C402.5.4

US-FTC United States-Federal Trade Commission
600 Pennsylvania Avenue NW
Washington, DC 20580

Standard reference number	Title	Referenced in code section number
CFR Title 16 (May 31, 2005)	*R*-value Rule	C303.1.4

WDMA Window and Door Manufacturers Association
2025 M Street, NW, Suite 800
Washington, DC 20036-3309

Standard reference number	Title	Referenced in code section number
AAMA/WDMA/CSA 101/I.S.2/A440—11	North American Fenestration Standard/Specification for Windows, Doors and Unit Skylights	Table C402.5.2

CHAPTER R2
DEFINITIONS

SECTION R201
GENERAL

Section R201.3 Terms defined in other codes.

Section R201.3 - Revise Section R201.3 to read as follows:

R201.3 Terms defined in other codes. Terms that are not defined in this code but are defined in the New York City Construction Codes, New York City Fire Code, or the New York City Electrical Code shall have the meanings ascribed to them in those codes.

SECTION R202
GENERAL DEFINITIONS

Delete the definitions of "2016 Uniform Code Supplement," "2015 International Building Code (As Amended)," "2015 International Fire Code (As Amended)," "2015 International Fuel Gas Code (As Amended)," "2015 International Mechanical Code (As Amended)," "2015 International Plumbing Code (As Amended)," "2015 International Property Maintenance Code (As Amended)," and "2015 International Residential Code (As Amended)."

Revise the definition of "Approved" after the definition of "Alteration," to read as follows:

APPROVED. See Section 28-101.5 of the Administrative Code.

Add a new definition of "Approved agency" after the definition of "Approved," to read as follows:

APPROVED AGENCY. See Section 28-101.5 of the Administrative Code.

Delete the definitions of "ASHRAE 90.1-2013" and "ASHRAE 90.1-2013 (As amended)" after the definition of "Area weighted average."

Add a new definition of "Authority having jurisdiction" after the definition of "Area weighted average" to read as follows:

AUTHORITY HAVING JURISDICTION. The commissioner or the commissioner's designee.

Revise the term "Code official" after the definition of "Climate Zone," to read as follows:

CODE OFFICIAL. The commissioner or the commissioner's designee.

Delete the definition of "Energy code", after the definition of "Energy Analysis."

Add a new definition of "Grade plane" after the definition of "General lighting," to read as follows:

GRADE PLANE. A reference plane representing the average of finished ground level adjoining the building at exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane shall be established by the lowest points within the area between the building and the lot line or, where the lot line is more than 6 feet (1829 mm) from the building, between the building and a point 6 feet (1829 mm) from the building.

Add a new definition of "Lead energy professional" after the definition of "Labeled," to read as follows:

LEAD ENERGY PROFESSIONAL. The registered design professional who signs and seals the energy analysis for an entire project. Such individual may be the same registered design professional who signs and seals the design drawings for the same project.

Add new definitions of "Professional certification" and "Project" after the definition of "Manual," to read as follows:

PROFESSIONAL CERTIFICATION. See Section 28-101.5 of the Administrative Code.

PROJECT. A design and construction undertaking comprised of work related to one or more buildings and the site improvements. A project is represented by one or more plan/work applications, including construction documents compiled in accordance with Section 107 of the New York City Building Code, that relate either to the construction of a new building or buildings or to the demolition or alteration of an existing building or buildings. Applications for a project may have different registered design professionals and different job numbers, and may result in the issuance of one or more permits.

Delete the definition of "Uniform Code."

CHAPTER R3

GENERAL REQUIREMENTS

SECTION R301
CLIMATE ZONES

Section R301.1 General.

Section R301.1 - Revise Section R301.1 to read as follows:

R301.1 General. For projects in the City of New York, *Climate Zone 4A* shall be used in determining the applicable requirements from Chapter R4.

Section R301.2 Warm humid counties.

Section R301.2 - Delete Section R301.2 in its entirety.

Section R301.3 International Climate Zones.

Section R301.3 - Delete Section R301.3 in its entirety.

Section R301.4 Tropical Climate Zone.

Section R301.4 - Delete Section R301.4 in its entirety.

Table R301.1

Delete Table R301.1 in its entirety.

Table R301.3(1)

Delete Table R301.3(1) in its entirety

Table R301.3(2)

Delete Table R301.3(2) in its entirety

SECTION R303
MATERIALS, SYSTEMS, AND EQUIPMENT

Section R303.2 Installation.

Section R303.2 - Delete Section R303.2 in its entirety and replace with a new Section R303.2 to read as follows:

R303.2 Installation. Materials, systems and equipment shall be installed in accordance with the manufacturer's instructions and the applicable provisions of the *New York City Building Code*, as applicable.

CHAPTER R4
RESIDENTIAL ENERGY EFFICIENCY

SECTION R401
GENERAL

Section R401.2.1 Tropical Zone.

Section R401.2.1- Delete Section R401.2.1 in its entirety.

Section R401.4 Solar-ready requirements (Mandatory).

Section R401.4 - Add a new Section R401.4 to read as follows:

R401.4 Solar-ready requirements (Mandatory). Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) shall meet the requirements of Appendix RB of this code.

Section R402.1.1 Vapor retarder.

Section R402.1.1 - Revise Section R402.1.1 to read as follows:

R402.1.1 Vapor retarder. Wall assemblies in the building thermal envelope shall comply with the vapor retarder requirements of Section 1405.3 of the New York City Building Code, as applicable.

Section R402.1.2 Insulation and fenestration criteria.

Section R402.1.2 – Revise Section R402.1.2 to read as follows:

R402.1.2 Insulation and fenestration criteria. The building thermal envelope shall meet the requirements of Table R402.1.2, based on the climate zone specified in Chapter R3.

Table R402.1.2

Revise Table R402.1.2 to read as follows:

TABLE R402.1.2
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT[a]

CLIMATE ZONE	FENESTRATION *U*-FACTOR[b]	SKYLIGHT[b] *U*-FACTOR	GLAZED FENESTRATION SHGC[b,e]	CEILING *R*-VALUE	WOOD FRAME WALL *R*-VALUE	MASS WALL *R*-VALUE[i]	FLOOR *R*-VALUE	BASEMENT[c] WALL *R*-VALUE	SLAB[d] *R*-VALUE & DEPTH	CRAWL SPACE[c] WALL *R*-VALUE
1	NR	0.75	0.25	30	13	3/4	13	0	0	0
2	0.40	0.65	0.25	38	13	4/6	13	0	0	0
3	0.35	0.55	0.25	38	20 or 13+5[h]	8/13	19	5/13[f]	0	5/13

4 except Marine	0.32	0.55	0.40	49	20+5 or 13+10[h]	15/20	30[g]	15 /19	10, 4 ft	15/19
5 and Marine 4	0.32	0.55	NR	49	20 or 13+5[h]	13/17	30[g]	15/19	10, 2 ft	15/19
6	0.32	0.55	NR	49	20+5 or 13+10[h]	15/20	30[g]	15/19	10, 4 ft	15/19
7 and 8	0.32	0.55	NR	49	20+5 or 13+10[h]	19/21	38[g]	15/19	10, 4 ft	15/19

For SI: 1 foot = 304.8 mm.

a. R-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed *R*-value of the insulation shall not be less than the *R*-value specified in the table.

b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration. Exception: Skylights may be excluded from glazed fenestration SHGC requirements in climate zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.

c. "15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.

d. R-5 shall be added to the required slab edge *R*-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Climate Zones 1 through 3 for heated slabs.

e. There are no SHGC requirements in the Marine Zone.

f. Basement wall insulation is not required in warm-humid locations as defined by Figure R301.1 and Table R301.1.

g. Or insulation sufficient to fill the framing cavity, R-19 minimum.

h. The first value is cavity insulation, the second value is continuous insulation, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation.

i. The second *R*-value applies when more than half the insulation is on the interior of the mass wall.

Table R402.1.4

Revise Table R402.1.4 to read as follows:

TABLE R402.1.4
EQUIVALENT U-FACTORS[a]

CLIMATE ZONE	FENESTRATION *U*-FACTOR	SKYLIGHT *U*-FACTOR	CEILING *U*-FACTOR	FRAME WALL *U*-FACTOR	MASS WALL *U*-FACTOR[b]	FLOOR *U*-FACTOR	BASEMENT WALL *U*-FACTOR	CRAWL SPACE WALL *U*-FACTOR
1	0.50	0.75	0.035	0.084	0.197	0.064	0.360	0.477
2	0.40	0.65	0.030	0.084	0.165	0.064	0.360	0.477
3	0.35	0.55	0.030	0.060	0.098	0.047	0.091[c]	0.136
4 except Marine	0.32	0.55	0.026	0.045	0.060	0.033	0.050	0.055
5 and Marine 4	0.32	0.55	0.026	0.060	0.082	0.033	0.050	0.055
6	0.32	0.55	0.026	0.045	0.060	0.033	0.050	0.055
7 and 8	0.32	0.55	0.026	0.045	0.057	0.028	0.050	0.055

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.

b. When more than half the insulation is on the interior, the mass wall U-factors shall be a maximum of 0.17 in Climate Zone 1, 0.14 in Climate Zone 2, 0.12 in Climate Zone 3, 0.087 in Climate Zone 4 except Marine, 0.065 in Climate Zone 5 and Marine 4, and 0.057 in Climate Zones 6 through 8.

c. Basement wall *U*-factor of 0.360 in warm-humid locations as defined by Figure R301.1 and Table R301.1.

Section 402.2.4 Access hatches and doors.

Section R402.2.4 – Revise the Exception to read as follows:

Exception: Vertical doors that provide access from conditioned to unconditioned spaces shall be permitted to meet the fenestration requirements of Table R402.1.2 based on the applicable climate zone specified in Chapter R3.

Section R402.2.8 Floors.

Section R402.2.8 – Revise the Exception to read as follows:

Exception: The floor framing-cavity insulation shall be permitted to be in contact with the topside of sheathing or continuous insulation installed on the bottom side of floor framing where combined with insulation that meets or exceeds the minimum wood frame wall R-value in Table R402.1.2 and that extends from the bottom to the top of all perimeter floor framing members.

Section R402.2.11 Crawl Space Walls.

Section R402.2.11 - Revise the third sentence of Section R402.2.11 to read as follows:

Exposed earth in unvented crawl space foundations shall be covered with a continuous Class I vapor retarder in accordance with the New York City Building Code, as applicable.

Section R402.3 Fenestration (Prescriptive).

Section R402.3 - Revise Section R402.3 to read as follows:

R402.3 Fenestration (Prescriptive). In addition to the requirements of Section R402, fenestration shall comply with Sections R402.3.1 through R402.3.5.

Section R402.4.2 Fireplaces.

Section R402.4.2 - Revise the second paragraph of Section R402.4.2 to read as follows:

New wood-burning fireplaces that are designed to allow an open burn and new wood-burning fireplace units that are designed to allow an open burn shall be provided with a source of outdoor combustion air as required by the fireplace construction provisions of the New York City Building Code, as applicable.

Section R402.4.4 Rooms containing fuel-burning appliances.

Section R402.4.4 - Revise Item 2 under Exceptions to read as follows:

2. Fireplaces and stoves complying with Section R402.4.2 and Chapter 9 of the New York City Mechanical Code.

Section R402.5 Maximum fenestration U-factor and SHGC (Mandatory).

Section R402.5 – Revise Section R402.5 to read as follows:

R402.5 Maximum fenestration U-factor and SHGC (Mandatory). The area-weighted average maximum fenestration *U*-factor permitted using tradeoffs from Section R402.1.5 or R405 shall be 0.40 for vertical fenestration, and 0.75 for skylights.

Section R403.3.2 Sealing (Mandatory).

Section R403.3.2 - Revise the first paragraph of Section R403.3.2 to read as follows:

R403.3.2 Sealing (Mandatory). Ducts, air handlers and filter boxes shall be sealed. Joints and seams shall comply with the *New York City Mechanical Code*, as applicable.

Section R403.6 Mechanical Ventilation (Mandatory).

Section R403.6 - Revise the first sentence of Section R403.6 to read as follows:

The building shall be provided with ventilation that meets the requirements of the *New York City Mechanical Code*, as applicable, or with other approved means of ventilation.

Section R403.8 Systems serving multiple dwelling units (Mandatory).

Section R403.8 - Revise Section R403.8 to read as follows:

R403.8 Systems serving multiple dwelling units (Mandatory). Systems serving multiple dwelling units shall comply with Sections C403 and C404 of this code in lieu of Section R403.

SECTION R404
ELECTRICAL POWER AND LIGHTING SYSTEMS

Section R404.2 Electrical energy consumption.

Section R404.2 - Add a new Section R404.2 to read as follows:

R404.2 Electrical energy consumption (Mandatory). In all buildings having individual dwelling units, provisions shall be made to determine the electrical energy consumed by each unit by separately metering individual dwelling units.

SECTION R406
ENERGY RATING INDEX
COMPLIANCE ALTERNATIVE

Section R406.2 Mandatory requirements.

Section R406.2 Mandatory requirements – Revise the second sentence of Section R406.2 to read as follows:

The building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table 402.1.1 or 402.1.3 of the 2011 New York City Energy Conservation Code.

CHAPTER R5

SECTION R501
GENERAL

Section R501.4 Compliance.

Section R501.4 - Delete Section R501.4 in its entirety and replace with a new Section R501.4 to read as follows:

R501.4 Compliance. Alterations, repairs, additions and changes of occupancy to, or relocation of, existing buildings and structures shall comply with (i) all applicable provisions of this code, (ii) the provisions for alterations, repairs, additions and changes of occupancy or relocation, respectively, in the New York City Construction Codes, (iii) the New York City Fire Code, and (iv) the New York City Electrical Code.

Section R501.6 Historic Buildings.

Section R501.6 - Revise Section R501.6 to read as follows:

R501.6 Historic Buildings. No provisions of this code relating to the construction, repair, alteration, restoration, and change of occupancy shall be mandatory for historic buildings.

SECTION R502
ADDITIONS

Section R502.1.1.1 Building Envelope.

Section R502.1.1.1 – Revise the Exception under Section R502.1.1.1 to read as follows:

Exception: Where nonconditioned space is changed to conditioned space, the building envelope of the addition shall comply where the UA, as determined in Section R402.1.5, of the existing building and the addition, and any alterations that are part of the project, is less than or equal to UA generated for the existing building.

SECTION R503
ALTERATIONS

Section R503.1.1 Building Envelope.

Section R503.1.1 – Delete Section R503.1.1 in its entirety and replace with a new Section R503.1.1 to read as follows:

R503.1.1 Building envelope. Building envelope assemblies that are part of the alteration shall comply with Section R402.1.2 or R402.1.4, Sections R402.2.1 through R402.2.13, R402.3.1, R402.3.2, R402.4.3 and R402.4.5.

Section R503.1.4 Lighting

Section R503.1.4 – Revise the Exception under Section R503.1 to read as follows:

Exception: Alterations that replace less than 20 percent of the luminaires in a space, provided that such alterations do not increase the installed interior lighting power.

CHAPTER R6
REFERENCED STANDARDS

Chapter R6 – Delete Chapter R6 in its entirety and replace with a new chapter R6 to read as follows:

CHAPTER R6

REFERENCED STANDARDS

This chapter lists the standards that are referenced in various sections of the residential provisions of this code. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or sections of this document that reference the standard. The application of the referenced standards shall be as specified in Section 106. Refer to the rules of the department for any subsequent additions, modifications or deletions that may have been made to the referenced standards set forth herein in accordance with Section 28-103.19 of the *Administrative Code*.

AAMA

American Architectural Manufacturers Association
1827 Walden Office Square
Suite 550
Schaumburg, IL 60173-4268

Standard reference number	Title	Referenced in code section number
AAMA/WDMA/CSA 101/I.S.2/A C440—11	North American Fenestration Standard/Specifications for Windows, Doors and Unit Skylights	R402.4.3

ACCA

Air Conditioning Contractors of America
2800 Shirlington Road, Suite 300
Arlington, VA 22206

Standard reference number	Title	Referenced in code section number
Manual J—2011	Residential Load Calculation Eighth Edition	R403.7
Manual S—13	Residential Equipment Selection	R403.7

ANSI

American National Standards Institute
25 West 43rd Street

	Fourth Floor New York, NY 10036	
Standard reference number	Title	Referenced in code section number
Z-65-96	Method for Measuring Floor Area in Office Buildings	R402.4.1.2, R402.4.1.3
ANSI/DASMA 105—92(R2004)—13	Test Method for Thermal Transmittance and Air Infiltration of Garage Doors	R303.1.3

APSP

The Association of Pool and Spa Professionals
2111 Eisenhower Avenue
Alexandria, VA 22314

Standard reference number	Title	Referenced in code section number
APSP 14—11	American National Standard for Portable Electric Spa Energy Efficiency	R403.11
APSP 15a—2013	American National Standard for Residential Swimming Pool and Spa Energy Efficiency	R403.12

ASHRAE

American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
1791 Tullie Circle, NE
Atlanta, GA 30329-2305

Standard reference number	Title	Referenced in code section number
ASHRAE—2001	ASHRAE Handbook of Fundamentals—2001	R402.1.5, Table R405.5.2(1)
ASHRAE—2013	ASHRAE Handbook of Fundamentals—2013	R402.1.5, Table R405.5.2(1)
ASHRAE 193—2010	Method of Test for Determining the Airtightness of HVAC Equipment	R403.3.2.1

ASTM

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2859

Standard reference number	Title	Referenced in code section number
C 1363—11	Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus	R303.1.4.1
E 283—04	Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen	R202, R402.4.5
E 779—10	Standard Test Method for Determining Air Leakage Rate by Fan Pressurization	R402.4.1.2, R402.4.1.3
E 1827—11	Standard Test Methods for Determining Airtightness of Building Using an Orifice Blower Door	R402.4.1.2
E 2178	Standard Test Method for Air Permeance of Building Materials	R202

CSA

CSA Group
8501 East Pleasant Valley
Cleveland, OH 44131-5575

Standard reference number	Title	Referenced in code section number
AAMA/WDMA/CSA 101/I.S.2/A440—11	North American Fenestration Standard/Specification for Windows, Doors and Unit Skylights	R402.4.3
CSA B55.1—2012	Test Method for measuring efficiency and pressure loss of drain water heat recovery units	R403.5.4
CSA B55.2—2012	Drain water heat recover units	R403.5.4

DASMA

Door and Access Systems Manufacturers Association
1300 Sumner Avenue
Cleveland, OH 44115-2851

Standard reference number	Title	Referenced in code section number
105—92(R2004)—13	Test Method for Thermal Transmittance and Air Infiltration of Garage Doors	R303.1.3

DOE

U.S. Department of Energy
c/o Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402-9325

Standard reference number	Title	Referenced in code section number
(Current Edition)	State Energy Price and Expenditure Report	R405.3

ICC

International Code Council, Inc.
500 New Jersey Avenue, NW
6th Floor
Washington, DC 20001

Standard reference number	Title	Referenced in code section number
ICC 400—12	Standard on the Design and Construction of Log Structures®	Table R402.4.1.1
IECC—06	2006 International Energy Conservation Code®	R202, R406.3.1

IEEE

The Institute of Electrical and Electronic Engineers, Inc.
3 Park Avenue
New York, NY 1016-5997

Standard reference number	Title	Referenced in code section number
515.1—2012	IEEE Standard for the Testing, Design, Installation, and Maintenance	R403.5.1.2

	of Electrical Resistance Trace Heating for Commercial Applications	

NFRC

National Fenestration Rating Council, Inc.
6305 Ivy Lane, Suite 140
Greenbelt, MD 20770

Standard reference number	Title	Referenced in code section number
100—2009	Procedure for Determining Fenestration Products *U*-factors—Second Edition	R303.1.3
200—2009	Procedure for Determining Fenestration Product Solar Heat Gain Coefficients and Visible Transmittance at Normal Incidence—Second Edition	R303.1.3
400—2009	Procedure for Determining Fenestration Product Air Leakage—Second Edition	R402.4.3

NYC

New York City Department of Buildings
280 Broadway
New York, NY 10007

Standard reference number	Title	Referenced in code section number
NYCAC-14	New York City Administrative Code	101.1, 101.2.1, 101.5.2.2, 101.5.2.3, 102.1, 103.1, 103.2.1, 103.3, 104.1, 104.1.1, 105.1, R202
NYCBC-14	New York City Building Code	101.2.2, 103.2.1, R202, R303.2, R402.1.1, R402.2.11, R402.4.2
NYCCC-14	New York City Construction Codes	101.2.1, 102.1, 103.1, 104.2.3, R201.3, R501.4
NYCECC-11	New York City Energy Conservation Code	R406.2
NYCEC-09	New York City Electrical Code	101.2.1, R201.3, R501.4
NYCFC-14	New York City Fire Code	101.2.1, R201.3, R501.4, RB103.3
NYCMC-14	New York City Mechanical Code	R402.4.4, R403.3.2, R403.6

NYS

New York Department of State
One Commerce Plaza, 99 Washington Ave
Albany, NY 12231-0001

Standard reference number	Title	Referenced in code section number
BCNYS-10	Building Code of New York State	R202
ECCCNYS- 16	New York State Energy Conservation Construction Code	CH1 (Intro Statement), 101.1.1, 101.2.2, 101.3, C202

UL	UL LLC 333 Pfingsten Road Northbrook, IL 60062	
Standard reference number	Title	Referenced in code section number
127—11	Standard for Factory Built Fireplaces	R402.4.2
515—11	Electrical Resistance Heat Tracing for Commercial and Industrial Applications including revisions through November 30, 2011	R403.5.1.2
907—10	Standard for Fireplace Accessories	R402.4.2

US-FTC	United States-Federal Trade Commission 600 Pennsylvania Avenue NW Washington, DC 20580	
Standard reference number	Title	Referenced in code section number
CFR Title 16 (May 31, 2005)	R-value Rule	R303.1.4

WDMA	Window and Door Manufacturers Association 2025 M Street, NW Suite 800 Washington, DC 20036-3309	
Standard reference number	Title	Referenced in code section number
AAMA/WDMA/CSA 101/I.S.2/A440—11	North American Fenestration Standard/Specification for Windows, Doors and Unit Skylights	R402.4.3

APPENDIX RB
SOLAR-READY PROVISIONS- DETATCHED ONE- AND TWO-FAMILY DWELLINGS, MULTIPLBE SINGLE-FAMILY DWELLINGS (TOWNHOUSES)

Appendix RB - Revise the first sentence in Appendix RB to read as follows:

(The provisions contained in this appendix are mandatory.)

Section RB103.1 General.

Section RB103.1 – Revise Item 2 under the Exceptions to read as follows:

2. A building with a solar-ready zone that is shaded for more than 50 percent of daylight hours annually.

Section RB103.3 Solar-ready zone area.

Section RB103.3 - Revise Section RB103.3 to read as follows:

RB103.3 Solar-ready zone area. The total solar-ready zone area shall be not less than 200 square feet (27.87 m^2) exclusive of mandatory access or set back areas as required by the *New York City Fire Code*. New multiple single-family dwellings (townhouses) three stories or less in height above grade plane and with a total floor area less than or equal to 2,000 square feet (185.8 m^2) per dwelling shall have a solar-ready zone area of not less than 100 square feet (13.94 m^2). The solar-ready zone shall be composed of areas not less than 5 feet (1524 mm) in width and not less than 80 square feet (7.44 m^2) exclusive of access or set back areas as required by the *New York City Fire Code*.

§28-1001.2.3 New York city amendments to the 2013 edition of Energy Standard for Buildings Except Low-Rise Residential Buildings ("ASHRAE 90.1-2013"), as amended by Part 2 of the 2016 Supplement. The New York city amendments to ASHRAE 90.1-2013 are as follows:

For the purpose of applying ASHRAE 90.1-2013 in the NYCECC, modifications to ASHRAE 90.1-2013 pursuant to Part 2 of the 2016 Supplement and New York City amendments of such standard pursuant to this section are deemed to be incorporated in a new Appendix CA to be inserted after chapter C6 of the NYCECC and to read as follows:

APPENDIX CA

MODIFIED ENERGY STANDARD FOR BUILDINGS, EXCEPT FOR LOW-RISE RESIDENTIAL BUILDINGS

SECTION ECC CA101
SCOPE

CA101.1 Scope. This appendix provides the modifications to the nationally recognized standard ASHRAE 90.1-2013, governing commercial energy efficiency. Where a referenced publication has been modified for the City of New York by the New York City Construction Codes including the New York City Energy Conservation Code, every reference to such publication shall be deemed to include all such modifications.

SECTION ECC CA102
ENERGY STANDARD FOR COMMERCIAL BUILDINGS

CA102.1 General. Refer to the rules of the department for any subsequent additions, modifications or deletions that may have been made to this standard in accordance with Section 28-103.19 of the Administrative Code.

CA102.2 New York City amendments. The following New York City amendments to ASHRAE 90.1-2013, as amended by Part 2 of the 2016 Supplement, are hereby adopted as set forth in this section.

CA102.3 Unaffected ASHRAE 90.1-2013 Provisions. The chapters, sections, tables, and other provisions in ASHRAE 90.1-2013 that are not deemed to be amended by the 2016 Supplement or revised in this Appendix CA are referred to as the "Unaffected ASHRAE 90.1-2013 Provisions." Nothing in this Appendix shall be construed as deleting all or part of any Unaffected ASHRAE 90.1-2013 Provision. Each Unaffected ASHRAE

90.1-2013 Provision shall continue in full force and effect, and shall be deemed to be part of "ASHRAE 90.1-2013."

Section 3 - DEFINITIONS, ABBREVIATIONS, AND ACRONYMS

Section 3 – Revise the definition "authority having jurisdiction" after the definition of "attic and other roofs," to read as follow:

authority having jurisdiction: The commissioner or the commissioner's designee.

Section 3 – Revise the definition "building official" after the definition of "building material," to read as follow:

building official: The commissioner or the commissioner's designee.

Section 3 - Add a new definition of "electrical design load" after the definition of "efficiency," to read as follows:

electrical design load: The electrical load that feeders and branch circuits are required to support pursuant to the relevant provisions of the New York City Electrical Code for the category of equipment loads being supported.

Section 3 - Add a new definition of "high-efficacy lamps" after the definition of "heating seasonal performance factor (HSPF)," to read as follows:

high-efficacy lamps: Compact fluorescent lamps, T-8 or smaller diameter linear fluorescent lamps, or lamps with a minimum efficacy of:

1. 60 lumens per watt for lamps over 40 watts;
2. 50 lumens per watt for lamps over 15 watts to 40 watts; and
3. 40 lumens per watt for lamps 15 watts or less.

Section 3 - Add a new definition of "networked guest room control system" after the definition of "nameplate rating" to read as follow:

networked guest room control system: a control system, accessible from the hotel/motel front desk or other central location, that is capable of identifying reserved rooms according to a timed schedule, and is capable of controlling HVAC in each hotel/motel guest room separately.

Section 5 - BUILDING ENVELOPE

5.1.3 Envelope Alterations.

Section 5.1.3 - Delete Item 8 under Exceptions.

5.4.3.4 Vestibules.

Section 5.4.3.4 – Revise Item 7 under Exceptions to read as follows:

7. Doors that open directly from a space less than 3,000 square feet (298 m^2) in area, in buildings less than 75 feet (22.86 m) in height, and doors that open directly from a space less than 1,000 square feet (92.9 m^2) in area, in buildings 75 feet (22.86 m) and greater in height.

5.4.3 Air Leakage

Section 5.4.3 - Add a new Section 5.4.3.5 to read as follows:

5.4.3.5 **Air Barrier Testing**. New buildings of a certain size must comply with the following requirements:

a. New buildings 25,000 square feet and greater, but less than 50,000 square feet, and less than or equal to 75 feet in height must show compliance through testing in accordance with ASTM E 779 and department rules.

b. New buildings 50,000 square feet and greater, shall test or inspect each type of unique air barrier joint or seam in the building envelope for continuity and defects, as per an Air Barrier Continuity Plan developed by a registered design professional. Alternatively, new buildings 50,000 square feet and greater may show compliance through testing in accordance with ASTM E 779 and department rules.

c. Rules governing air barrier testing promulgated by the department.

5.5.3 Opaque Areas.

Section 5.5.3 - Add a new Item 3 under Exceptions to read as follows:

3. When the total area of penetrations from through-the-wall equipment or mechanical equipment listed in Table 6.8.1-4 exceeds 1% of the opaque above-grade wall area, the mechanical equipment penetration area shall be calculated as a separate wall assembly with a default U-factor of 0.5, and compliance shall be shown with method b.

5.6.1.1

Section 5.6.1.1 - Add a new sentence at the end of Section 5.6.1.1 to read as follows:

When the total area of penetrations from through-the-wall equipment or mechanical equipment listed in Table 6.8.1-4 exceeds 1% of the opaque above-grade wall area, the mechanical equipment penetration area shall be calculated as a separate wall assembly with a default U-factor of 0.5

Section 6 - HEATING, VENTILATION, AND AIR-CONDITIONING

6.1.1.3 Alterations to Heating, Ventilating, Air Conditioning, and Refrigeration in Existing Buildings.

Section 6.1.1.3.1 – Revise Section 6.1.1.3.1 to read as follows:

6.1.1.3.1 Alterations to Heating, Ventilating, Air Conditioning, and Refrigeration in Existing Buildings. New HVACR equipment that are part of the alteration or a direct replacement of the existing HVACR shall comply with the applicable provisions in Section 6 to that equipment being installed.

6.1.1.3.2

Section 6.1.1.3.2 – Revise Section 6.1.1.3.2. to read as follows:

6.1.1.3.2 New cooling systems installed to serve previously uncooled spaces and new heating systems installed to serve previously unheated spaces shall comply with this section as described in Section 6.2.

6.3.2 Criteria.

Section 6.3.2 – Delete Items k through r and replace them with new Items k through s to read as follows:

k. Systems serving hotel/motel guest rooms shall comply with Section 6.4.3.3.5.

l. Except for piping within manufacturers' units, HVAC piping shall be insulated in accordance with Tables 6.8.3-1 and 6.8.3-2. Insulation exposed to weather shall be suitable for outdoor service, e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.

m. Ductwork and plenums shall be insulated in accordance with Tables 6.8.2-1 and 6.8.2-2 and shall be sealed in accordance with Section 6.4.4.2.1.

n. Construction documents shall require a ducted system to be air balanced in accordance with industry accepted procedures.

o. Outdoor air intake and exhaust systems shall meet the requirements of Section 6.4.3.4.

p. Where separate heating and cooling equipment serves the same temperature zone, thermostats shall be interlocked to prevent simultaneous heating and cooling.

q. Systems with a design supply air capacity greater than 10,000 cfm shall have optimum start controls.

r. The system shall comply with the demand control ventilation requirements in Section 6.4.3.8.

s. The system complies with the door switch requirements in Section 6.5.10.

6.4.3.3.5 Automatic Control of HVAC in Hotel/Motel Guest Rooms.

Section 6.4.3.3.5 - Add a new Section 6.4.3.3.5 to read as follows:

6.4.3.3.5 Automatic Control of HVAC in Hotel/Motel Guest Rooms. In hotels and motels with greater than 50 guest rooms, automatic controls for the HVAC equipment serving each guest room shall be configured according to the requirements in the following subsection. Controls must comply with either 6.4.3.3.5.1 or 6.4.3.3.5.2.

6.4.3.3.5.1 Guest Room HVAC Setpoint Control. Within 30 minutes of all occupants leaving the guest room, HVAC setpoints shall be automatically raised by at least 4°F (2°C) from the occupant setpoint in the cooling mode and automatically lowered by at least 4°F (2°C) from the occupant setpoint in the heating mode. When the guest room is unrented and unoccupied, HVAC setpoints shall be automatically reset to 80°F (27°C) or higher in the cooling mode and to 60°F (16°C) or lower in the heating mode. Unrented and unoccupied guest rooms shall be determined by either of the following:

a. The guest room has been continuously unoccupied for up to 16 hours.

b. A networked guest room control system indicates the guest room is unrented and the guest room is unoccupied for more than 30 minutes.

Exceptions:

3. A networked guest room control system shall be permitted to return the thermostat setpoints to their default occupied setpoints 60 minutes prior to the time the room is scheduled to be occupied.

4. Cooling for humidity control shall be permitted during unoccupied periods.

6.4.3.3.5.2 Automatic Control. Captive key card systems shall be permitted to be used to comply with Section 6.4.3.3.5.

6.5.6.1 Exhaust Air Energy Recovery.

Section 6.5.6.1 - Revise Item 8 under the Exceptions to read as follows:

8. Where the largest source of air exhausted at a single location at the building exterior is less than 75 percent of the design outdoor air flow rate. Multiple exhaust fans or outlets located within a 30 foot radius from the outdoor air supply unit shall be considered a single exhaust location.

6.7.2.4 System Commissioning.

Section 6.7.2.4 - Delete Section 6.7.2.4 in its entirety and replace with a new Section 6.7.2.4 to read as follows:

6.7.2.4. System Commissioning. Projects complying with this standard shall also comply with Section C408 of the New York City Energy Conservation Code in regards to system commissioning. When demonstrating compliance with Section C408.3, projects following ASHRAE 90.1-2013 must demonstrate compliance with Section 9 of ASHRAE 90.1-2013 as required, in lieu of Section C405 of the New York City Energy Conservation Code.

Table 6.8.1-4

Revise Table 6.8.1-4 to read as follows:

TABLE 6.8.1-4
ELECTRICALLY OPERATED PACKAGED TERMINAL AIR CONDITIONERS, PACKAGED TERMINAL HEAT PUMPS, SINGLE-PACKAGE VERTICAL AIR CONDITIONERS, SINGLE-PACKAGE VERTICAL HEAT PUMPS, ROOM AIR CONDITIONERS, AND ROOM AIR-CONDITIONER HEAT PUMPS—MINIMUM EFFICIENCY REQUIREMENTS

Equipment Type	Size Category	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure

Equipment Type	Size Category	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
PTAC (cooling mode) standard size	All capacities	95°F db outdoor air	14.0 – (0.300 × Cap/1000)[c]	AHRI 310/380
PTAC (cooling mode) nonstandard size	All capacities	95°F db outdoor air	10.9 – (0.213 × Cap/1000)[c] EER	
PTHP (cooling mode) standard size	All capacities	95°F db outdoor air	14.0 – (0.300 × Cap/1000)[c]	
PTHP (cooling mode) nonstandard size	All capacities	95°F db outdoor air	10.8 – (0.213 × Cap/1000)[c]	
PTHP (heating mode) standard size	All capacities	_____	3.7 – (0.052 × Cap/1000)[c] COP_H	
PTHP (heating mode) nonstandard size	All capacities	_____	2.9 – (0.026 × Cap/1000)[c] COP_H	
SPVAC (cooling mode)	< 65,000 BTU/h	95°F db/75°F wb outdoor air	10.0 EER	AHRI 390
	≥ 65,000 Btu/h and < 135,000 Btu/h	95°F db/75°F wb outdoor air	10.0 EER	
	≥ 135,000 Btu/h and < 245,000 Btu/h	95°F db/75°F wb outdoor air	10.0 EER	
SPVHP (cooling mode)	< 65,000 BTU/h	95°F db/75°F wb outdoor air	10.0 EER	
	≥ 65,000 Btu/h and < 135,000 Btu/h	95°F db/75°F wb outdoor air	10.0 EER	
	≥ 135,000 Btu/h and < 245,000 Btu/h	95°F db/75°F wb outdoor air	10.0 EER	
SPVHP (heating mode)	< 65,000 BTU/h	47°F db/43°F wb outdoor air	3.0 COP_H	
	≥ 65,000 Btu/h and < 135,000 Btu/h	47°F db/43°F wb outdoor air	3.0 COP_H	
	≥ 135,000 Btu/h and < 245,000 Btu/h	47°F db/43°F wb outdoor air	3.0 COP_H	
SPVAC (cooling mode), nonweatherized space constrained	< 30,000 BTU/h	95°F db/75°F wb outdoor air	9.2 EER	AHRI 390
	≥ 30,000 Btu/h and < 36,000 Btu/h	95°F db/75°F wb outdoor air	9.0 EER	
SPVHP (cooling mode) , nonweatherized space constrained	< 30,000 BTU/h	95°F db/75°F wb outdoor air	9.2 EER	
	≥ 30,000 Btu/h and < 36,000 Btu/h	95°F db/75°F wb outdoor air	9.0 EER	
SPVHP (heating mode) , nonweatherized space constrained	< 30,000 BTU/h	47°F db/43°F wb outdoor air	3.0 COP_H	
	≥ 30,000 Btu/h and < 36,000 Btu/h	47°F db/43°F wb outdoor air	3.0 COP_H	
Room air	< 6,000 Btu/h	_____	11.0 CEER	10 CFR Part

Equipment Type	Size Category	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
conditioners, with louvered sides	≥ 6,000 Btu/h and < 8,000 Btu/h		11.0 CEER	430
	≥ 8,000 Btu/h and < 14,000 Btu/h		10.9 CEER	
	≥ 14,000 Btu/h and < 20,000 Btu/h		10.7 CEER	
	≥ 20,000 Btu/h and < 24,000 Btu/h		9.4 CEER	
	≥ 25,000 Btu/h		9.0 CEER	
Room air conditioners, without louvered sides	< 6,000 Btu/h		10.0 CEER	10 CFR Part 430
	≥ 6,000 Btu/h and < 8,000 Btu/h		10.0 CEER	
	≥ 8,000 Btu/h and < 11,000 Btu/h		9.6 CEER	
	≥ 11,000 Btu/h and < 14,000 Btu/h		9.5 CEER	
	≥ 14,000 Btu/h and < 20,000 Btu/h		9.3 CEER	
	≥ 20,000 Btu/h		9.4 CEER	
Room air conditioner heat pumps, with louvered sides	< 20,000 Btu/h		9.8 CEER	10 CFR Part 430
	≥ 20,000 Btu/h		9.3 CEER	
Room air conditioner heat pumps, without louvered sides	< 14,000 Btu/h		9.3 CEER	
	≥ 14,000 Btu/h		8.7 CEER	10 CFR Part 430
Casement-only	All capacities		9.5 CEER	10 CFR Part 430
Casement-slider	All capacities		10.4 CEER	

Table 6.8.1-9

Revise Table 6.8.1-9 to read as follows:

TABLE 6.8.1-9

ELECTRICALLY OPERATED VARIABLE-REFRIGERANT-FLOW AIR CONDITIONERS - MINIMUM EFFICIENCY REQUIREMENTS

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
VRF air conditioners, air cooled	< 65,000 Btu/h	All	VRF multisplit system	13.0 SEER	AHRI 1230
	≥ 65,000 Btu/h and < 135,000 Btu/h	Electric resistance (or none)	VRF multisplit system	11.2 SEER 13.1 IEER (before 1/1/2017) 15.5 IEER (as of 1/1/2017)	
	≥ 135,000 Btu/h and < 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system	11.0 EER 12.9 IEER (before 1/1/2017) 14.9 (as of 1/1/2017)	
	≥ 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system	10.0 EER 11.6 IEER (before 1/1/2017) 13.9 (as of 1/1/2017)	

Table 6.8.1-10

Revise Table 6.8.1-10 to read as follows:

TABLE 6.8.1-10

ELECTRICALLY OPERATED VARIABLE-REFRIGERANT-FLOW AIR-TO-AIR AND APPLIED HEAT PUMPS—MINIMUM EFFICIENCY REQUIREMENTS

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
VRF air cooled (cooling mode)	< 65,000 Btu/h	All	VRF multisplit system	13.0 SEER	AHRI 1230

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
	≥ 65,000 Btu/h and < 135,000 Btu/h	Electric resistance (or none)	VRF multisplit system	11.0 EER 12.9 IEER(before 1/1/2017) 14.6 IEER (as of 1/1/2017)	
	≥ 65,000 Btu/h and < 135,000 Btu/h	Electric resistance (or none)	VRF multisplit system with heat recovery	10.8 EER 12.7 IEER (before 1/1/2017) 14.4 IEER (as of 1/1/2017)	
	≥ 135,000 Btu/h and < 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system	10.6 EER 12.3 IEER (before 1/1/2017) 13.9 IEER (as of 1/1/2017)	
	≥ 135,000 Btu/h and < 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system with heat recovery	10.4 EER 12.1 IEER (before 1/1/2017) 13.7 IEER (as of 1/1/2017)	
	≥ 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system	9.5 EER 11.0 IEER (before 1/1/2017) 12.7 (as of 1/1/2017)	
	≥ 240,000 Btu/h	Electric resistance (or none)	VRF multisplit system with heat recovery	9.3 EER 10.8 IEER (before 1/1/2017) 12.5 IEER (as of 1/1/2017)	
VRF water source (cooling mode)	< 65,000 Btu/h	All	VRF multisplit systems 86°F entering water	12.0 EER	AHRI 1230
	< 65,000 Btu/h	All	VRF multisplit systems with heat recovery 86°F entering water	11.8 EER	
	≥ 65,000 Btu/h and < 135,000	All	VRF multisplit systems 86°F entering water	12.0 EER	
	≥ 65,000 Btu/h and < 135,000	All	VRF multisplit systems with heat recovery 86°F entering water	11.8 EER	

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
	≥ 135,000 Btu/h	All	VRF multisplit systems 86°F entering water	10.0 EER	
	≥ 135,000 Btu/h	All	VRF multisplit systems with heat recovery 86°F entering water	9.8 EER	
VRF groundwater source (cooling mode)	< 135,000 Btu/h	All	VRF multisplit system 59°F entering water	16.2 EER	AHRI 1230
	< 135,000 Btu/h	All	VRF multisplit system with heat recovery 59°F entering water	16.0 EER	
	≥ 135,000 Btu/h	All	VRF multisplit system 59°F entering water	13.8 EER	
	≥ 135,000 Btu/h	All	VRF multisplit system with heat recovery 59°F entering water	13.6 EER	
VRF groundwater source (cooling mode)	< 135,000 Btu/h	All	VRF multisplit system 77°F entering water	13.4 EER	AHRI 1230
	< 135,000 Btu/h	All	VRF multisplit system with heat recovery 77°F entering water	13.2 EER	
	≥ 135,000 Btu/h	All	VRF multisplit system 77°F entering water	11.0 EER	
	≥ 135,000 Btu/h	All	VRF multisplit system with heat recovery 77°F entering water	10.8 EER	
VRF air cooled (heating mode)	< 65,000 Btu/h (cooling capacity)	=	VRF multisplit system	7.7 HSPF	AHRI 1230
	≥ 65,000 Btu/h and < 135,000 Btu/h	=	VRF multisplit system 47°F db/43°F wb outdoor air	3.3 COP_H	
			17°F db/15°F wb outdoor air	2.25 COP_H	
	≥ 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 47°F db/43°F wb outdoor air	3.2 COP_H	
			17°F db/15°F wb outdoor air	2.05 COP_H	
VRF water source (heating mode)	< 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 68°F entering water	4.2 COP_H	AHRI 1230
	≥ 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 68°F entering water	3.9 COP_H	
VRF groundwater source (heating mode)	< 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 50°F entering water	3.6 COP_H	AHRI 1230
	≥ 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 50°F entering water	3.3 COP_H	
VRF ground source	< 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 32°F entering water	3.1 COP_H	AHRI 1230

Equipment Type	Size Category	Heating Section Type	Subcategory or Rating Condition	Minimum Efficiency	Test Procedure
(heating mode)	≥ 135,000 Btu/h (cooling capacity)	=	VRF multisplit system 32°F entering water	2.8 COP_H	

Section 8 - POWER

8.4.1 Voltage Drop.

Section 8.4.1 - Delete Section 8.4.1 in its entirety and replace with a new Section 8.4.1 as follows:

8.4.1 Voltage Drop. The conductors for feeders and branch circuits combined shall be sized for a maximum of 5% voltage drop total.

Exception: Feeder conductors and branch circuits that are dedicated to emergency services.

8.4.5 Measurement of electrical consumption of tenant spaces in covered buildings.

Section 8.4.5 - Add a new Section 8.4.5 to read as follows:

8.4.5 Measurement of electrical consumption of tenant spaces in covered buildings. The terms meter, submeter, covered building, tenant space and covered tenant space shall be as defined in Section 28-311.2 of the Administrative Code of the city of New York. Each covered tenant space in a new building shall be equipped with a separate meter or sub-meter to measure the electrical consumption of such space when let or sublet. Where the covered tenant space is a floor with multiple tenancies, each tenancy with an area less than that as defined in Section 28-311.2 of the Administrative Code of the city of New York shall (i) be equipped with a separate meter or sub-meter, (ii) share a meter or sub-meter with other tenant spaces on the floor, or (iii) share a meter or sub-meter covering the entire floor. As new covered tenant spaces are created, they shall be equipped with meters or sub-meters as provided in this section.

Exception: Covered tenant space for which the electrical consumption within such space is measured by a meter dedicated exclusively to that space.

Section 9 - LIGHTING

9.1.1 Scope.

Section 9.1.1 - Delete Item 2 under Exceptions and replace with a new Item 2 under Exceptions to read as follows:

2. dwelling units within commercial buildings shall not be required to comply with this section provided that not less than 75 percent of the permanently installed fixtures, other than low-voltage lighting, shall be fitted for, and contain only, high efficacy lamps.

9.1.2 Lighting Alterations.

Section 9.1.2 - Delete Section 9.1.2 in its entirety and replace with a new Section 9.1.2 as follows:

9.1.2 Lighting Alterations. For the alteration of any lighting system in an interior space, that space shall comply with the lighting power density (LPD) requirements of Section 9.2.2.3 and the control requirements of Sections 9.4.1.1, as applicable to that space.

For the alteration of any lighting system in an exterior building application, that lighting system shall comply with the lighting power density (LPD) requirements of Section 9 applicable to the area illuminated by that lighting system and the applicable control requirements of Sections 9.4.2 and 9.4.1.4.

Exception(s):

1. Alterations that involve 20% or less of the connected lighting load in a space or area need not comply with these requirements, provided that such alterations do not increase the installed LPD.
2. Routine maintenance or repair situations.

9.4.1.1 (h.) Automatic Full OFF

Section 9.4.1.1 (h.) - Revise Item 1 under Exceptions to read as follows:

1. General lighting and task lighting in shop, laboratory, and preschool classrooms.

9.4.1.1 (h.) Automatic Full OFF

Section 9.4.1.1 (h.) - Add a new Item 4 under Exceptions to read as follows:

4. Lighting in offices smaller than 200 square feet (18.5m^2) in area equipped with lighting controls activated by photosensor.

9.4.3 Functional Testing.

Section 9.4.3 - Renumber Section 9.4.3, Functional Testing, as Section 9.4.4 .

9.4.3 Exit signs.

Section 9.4.3 – Add a new Section 9.4.3 to read as follows:

9.4.3 Exit signs. Internally illuminated exit signs shall not exceed 5 W per face.

Table 9.6.1

Revise Table 9.6.1 to read as follows:

TABLE 9.6.1 Lighting Power Density Allowances Using the Space-by-Space Method and Minimum Control Requirements Using Either Method

Informative Note: **This table is divided into two sections; this first section covers space types that can be commonly found in multiple building types. The second part of this table covers space types that are typically found in a single building type.**

The control functions below shall be implemented in accordance with the descriptions found in the referenced paragraphs within Section 9.4.1.1. For each space type:
(1) All REQs shall be implemented.
(2) At least one ADD1 (when present) shall be implemented.
(3) At least one ADD2 (when present) shall be implemented.

Common Space Types[1]	LPD W/ft²	RCR Threshold	a Local Control (See Section 9.4.1.1(a))	b Restricted to Manual ON (See Section 9.4.1.1(b))	c Restricted to Partial Automatic ON (See Section 9.4.1.1(c))	d Bilevel Lighting Control (See Section 9.4.1.1(d))	e Automatic Daylight Responsive Controls for Sidelighting (See Section 9.4.1.1(e)[6])	f Automatic Daylight Responsive Controls for Toplighting (See Section 9.4.1.1(f)[6])	g Automatic Partial OFF (See Section 9.4.1.1(g) (Full Off complies))	H Automatic Full OFF (See Section 9.4.1.1(h))	i Scheduled Shutoff (See Section 9.4.1.1(i))
Atrium											
…that is < 20 ft in height	0.03/ft total height	NA	REQ	ADD1	ADD1	–	REQ	REQ	–	ADD2	ADD2
…that is ≥ 20 ft and ≤ 40 ft in height	0.03/ft total height	NA	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…that is > 40 ft in height	0.40 + 0.02/ft total height	NA	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Audience Seating Area											
…in an auditorium	0.63	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a convention center	0.82	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a gymnasium	0.65	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a motion picture theater	1.14	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a penitentiary	0.28	4	REQ	ADD1	ADD1	–	REQ	REQ	–	ADD2	ADD2
…in a performing arts theater	2.43	8	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a religious building	1.53	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a sports arena	0.43	4	REQ	ADD1	ADD1	–	REQ	REQ	–	ADD2	ADD2
…all other audience seating areas	0.43	4	REQ	ADD1	ADD1	–	REQ	REQ	–	ADD2	ADD2
Banking Activity Area	1.01	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Breakroom (See Lounge/Breakrown)											
Classroom/Lecture hall/Training Room[8,9]											
…in a penitentiary	1.34	4	REQ	REQ	ADD1	REQ	REQ	REQ	–	REQ	–
…all other classrooms/lecture halls/training rooms	1.24	4	REQ	REQ	ADD1	REQ	REQ	REQ	–	REQ	–
Conference/Meeting, Multipurpose Room[8,9]	1.23	6	REQ	REQ	ADD1	REQ	REQ	REQ	–	REQ	–
Confinement Cells	0.81	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Copy/Print Room	0.72	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	REQ	–
Corridor[2]											
…in a facilitiy for the visually impaired (and not used primarily by the staff)[3]	0.92	width < 8 ft	REQ	–	–	–	REQ	REQ	REQ	ADD2	ADD2
…in a hospital	0.99	width < 8 ft	REQ	–	–	–	REQ	REQ	ADD2	ADD2	ADD2
…in a manufacturing facility	0.41	width < 8 ft	REQ	–	–	–	REQ	REQ	–	ADD2	ADD2
…all other corridors	0.66	width < 8 ft	REQ	–	–	–	REQ	REQ	REQ	ADD2	ADD2
Courtoom	1.72	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Computer Room	1.71	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Dining Area											
…in a penitentiary	0.96	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2

Informative Note: **This table is divided into two sections; this first section covers space types that can be commonly found in multiple building types. The second part of this table covers space types that are typically found in a single building type.**

The control functions below shall be implemented in accordance with the descriptions found in the referenced paragraphs within Section 9.4.1.1. For each space type:
(1) All REQs shall be implemented.
(2) At least one ADD1 (when present) shall be implemented.
(3) At least one ADD2 (when present) shall be implemented.

Common Space Types[1]	LPD W/ft^2	RCR Threshold	a Local Control (See Section 9.4.1.1(a))	b Restricted to Manual ON (See Section 9.4.1.1(b))	c Restricted to Partial Automatic ON (See Section 9.4.1.1(c))	d Bilevel Lighting Control (See Section 9.4.1.1(d))	e Automatic Daylight Responsive Controls for Sidelighting (See Section 9.4.1.1(e)[6])	f Automatic Daylight Responsive Controls for Toplighting (See Section 9.4.1.1(f)[6])	g Automatic Partial OFF (See Section 9.4.1.1(g) (Full Off complies))	H Automatic Full OFF (See Section 9.4.1.1(h))	i Scheduled Shutoff (See Section 9.4.1.1(i))
…in a facility for the visually impaired and not used primarily by staff)[3]	2.65	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in bar lounge or leisure dining	1.07	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in cafeteria or fast food dining`	0.65	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in family dining	0.89	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…all other dining areas	0.65	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Electrical/Mechanical Room[7]	0.42	6	REQ	–	–	–	REQ	REQ	–	–	–
Emergency Vehicle Garage	0.56	4	REQ	ADD1	ADD1	–	REQ	REQ	–	ADD2	ADD2
Food Preparation Area	1.21	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Guest Room	0.91	6	See Section 9.4.1.3b.								
Laboratory											
…in or as a classroom	1.43	6	REQ	ADD1	ADD1	REQ	REQ	REQ	REQ	ADD2	ADD2
…all other laboratories	1.81	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Laundry/Washing Area	0.60	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Loading Dock, Interior	0.47	6	REQ	ADD1	ADD1	–	REQ	REQ	–	ADD2	ADD2
Lobby											
…in a facility for the visually impaired and not used primarily by staff)[3]	1.80	4	REQ	–	–	–	REQ	REQ	REQ	ADD2	ADD2
…for an elevator	0.64	6	REQ	–	–	–	REQ	REQ	REQ	ADD2	ADD2
…in a hotel	1.06	4	REQ	–	–	–	REQ	REQ	REQ	ADD2	ADD2
…in a motion picture theater	0.59	4	REQ	–	–	–	REQ	REQ	REQ	ADD2	ADD2
…in a performing arts theater	2.00	6	REQ	–	–	–	REQ	REQ	REQ	ADD2	ADD2
…all other lobbies	0.90	4	REQ	–	–	–	REQ	REQ	REQ	ADD2	ADD2
Locker Room	0.75	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	REQ	–
Lounge/Breakroom[8,9]											
…in a healthcare facility	0.92	6	REQ	REQ	ADD1	REQ	REQ	REQ	–	REQ	–
…all other lounges/breakrooms	0.73	4	REQ	REQ	ADD1	REQ	REQ	REQ	–	REQ	–
Office											
…enclosed and ≤ 250 ft^2[8,9]	1.0	8	REQ	REQ	ADD1	REQ	REQ	REQ	–	REQ	–
…enclosed and > 250 ft^2	1.0	8	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…open plan	0.90	4	REQ	–	REQ	REQ	REQ	REQ	–	ADD1	ADD1
Parking Area, Interior	0.19	4	See Section 9.4.1.2								
Pharmacy Area	1.68	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Restroom											
…in a facility for the visually impaired	1.21	8	REQ	–	–	–			–	REQ	–

Informative Note: **This table is divided into two sections; this first section covers space types that can be commonly found in multiple building types. The second part of this table covers space types that are typically found in a single building type.**

The control functions below shall be implemented in accordance with the descriptions found in the referenced paragraphs within Section 9.4.1.1. For each space type:
(1) All REQs shall be implemented.
(2) At least one ADD1 (when present) shall be implemented.
(3) At least one ADD2 (when present) shall be implemented.

Common Space Types[1]	**LPD W/ft²**	**RCR Threshold**	**Local Control (See Section 9.4.1.1(a))**	**Restricted to Manual ON (See Section 9.4.1.1(b))**	**Restricted to Partial Automatic ON (See Section 9.4.1.1(c))**	**Bilevel Lighting Control (See Section 9.4.1.1(d))**	**Automatic Daylight Responsive Controls for Sidelighting (See Section 9.4.1.1(e)[6])**	**Automatic Daylight Responsive Controls for Toplighting (See Section 9.4.1.1(f)[6])**	**Automatic Partial OFF (See Section 9.4.1.1(g) (Full Off complies))**	**Automatic Full OFF (See Section 9.4.1.1(h))**	**Scheduled Shutoff (See Section 9.4.1.1(i))**
			a	**b**	**c**	**d**	**e**	**f**	**g**	**H**	**i**
…all other restrooms	0.98	8	REQ	–	–	–			–	REQ	–
Sales Area[4]	1.30	6	REQ				–		–	ADD2	ADD2
Seating Area, General	0.54	4	REQ						–	ADD2	ADD2
Stairway			The space containing the stairway shall determine the LPD and control requirements for the stairway.								
Stairwell	0.69	10	REQ							ADD2	ADD2
Storage Room											
…< 50 ft²	1.24	6	REQ	–	–	–	–	–	–	ADD2	ADD2
…≥ 50 ft² and ≤1000 ft²	0.63	6	REQ	ADD1	ADD1	–	REQ	REQ	–	REQ	–
…all other storage rooms	0.63	6	REQ	ADD1	ADD1	–	REQ	REQ	REQ	ADD2	ADD2
Vehicular Maintenance Area	0.67	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Workshop	1.59	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2

TABLE 9.6.1 Lighting Power Density Allowances Using the Space-by-Space Method and Minimum Control Requirements Using Either Method (*Continued*)

Informative Note: **This table is divided into two sections; this first section covers space types that can be commonly found in multiple building types. The second part of this table covers space types that are typically found in a single building type.**

The control functions below shall be implemented in accordance with the descriptions found in the referenced paragraphs within Section 9.4.1.1. For each space type:
(1) All REQs shall be implemented.
(2) At least one ADD1 (when present) shall be implemented.
(3) At least one ADD2 (when present) shall be implemented.

Building Type Specific/Space Types[1]	LPD W/ft^2	RCR Threshold	a Local Control (See Section 9.4.1.1(a))	b Restricted to Manual ON (See Section 9.4.1.1(b))	c Restricted to Partial Automatic ON (See Section 9.4.1.1(c))	d Bilevel Lighting Control (See Section 9.4.1.1(d))	e Automatic Daylight Responsive Controls for Sidelighting (See Section 9.4.1.1(e)[6])	f Automatic Daylight Responsive Controls for Toplighting (See Section 9.4.1.1(f)[6])	g Automatic Partial OFF (See Section 9.4.1.1(g) (Full Off complies))	H Automatic Full OFF (See Section 9.4.1.1(h))	i Scheduled Shutoff (See Section 9.4.1.1(i))
Facility for the Visually Impaired[3]											
…in a chapel (used primarily by residents)	2.21	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a recreation room/common living room (and not used primarily by staff)	2.41	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Automotive (See "Vehicular Maintenance Area")											
Convention Center-Exhibit Space	1.45	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Dormitory-Living Quarters Fire Station-Sleeping Quarters	0.38	8	REQ	–	–	–	–	–	–	–	–
Facility for the Visually Impaired[3]											
…in a recreation room/common living room (and not used primarily by staff)	2.41	6	–	–	–	–	–	–	–	–	–
Gymnasium/Fitness Center											
…in an exercise area	0.72	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a playing area	1.20	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Healthcare Facility											
…in an exam/treatment room	1.66	8	REQ	–	–	–	REQ	REQ	–	ADD2	ADD2
…in an imaging room	1.51	6	REQ	–	–	–	REQ	–	–	ADD2	ADD2
…in a medical supply room	0.74	6	(See "Storage Room" under "Common Space Types" for control requirements)								
…in a nursery	0.88	6	REQ	–	–	–	REQ	REQ	–	ADD2	ADD2
…in a nurse's station	0.71	6	REQ	–	–	REQ	REQ	REQ	–	ADD2	ADD2
…in an operating room	2.48	6	REQ	–	–	REQ	–	–	–	ADD2	ADD2
…in a patient room	0.62	6	REQ	–	–	REQ	REQ	REQ	–	ADD2	ADD2
…in a physical therapy room	0.91	6	REQ	–	–	REQ	REQ	REQ	–	ADD2	ADD2
…in a recovery room	1.15	6	REQ	–	–	REQ	REQ	REQ	–	ADD2	ADD2
Library											
…in a reading area	1.06	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in the stacks	1.71	4	REQ	ADD1	ADD1	REQ	REQ	REQ	REQ	ADD2	ADD2
Manufacturing Facility											

…in a detailed manufacturing area	1.29	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in an equipment room	0.74	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in an extra high bay area (> 50 ft floor-to-ceiling height)	1.05	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a high bay area (25-50 ft floor-to-ceiling height)	1.23	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a low bay area (< 25 ft floor-to-ceiling height)	1.19	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Museum											
…in a general exhibition area	1.05	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a restoration room	1.02	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Performing Arts Theater-Dressing Room	0.61	6	REQ	ADD1	ADD1	REQ	REQ	REQ	–	REQ	–
Post Office-Sorting Area	0.94	4	REQ	ADD1	ADD1	ADD1	REQ	REQ	REQ	ADD2	ADD2
Religious Buildings											
…in a fellowship hall	0.64	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…in a worship/pulpit/choir area	1.53	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Retail Facilities											
…in a dressing/fitting room	0.71	8	REQ	ADD1	ADD1	REQ	–	REQ	–	REQ	–
…in a mall concourse	1.10	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Sports Arena-Playing Area											
…for a Class I facility	3.68	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…for a Class II facility	2.40	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…for a Class III facility	1.80	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
…for a Class IV facility	1.20	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Transportation Facility											
…in a baggage/carousel area	0.53	4	REQ	ADD1	ADD1	–	REQ	REQ	–	ADD2	ADD2
…in an airport concourse	0.36	4	REQ	ADD1	ADD1	–	REQ	REQ	–	ADD2	ADD2
…at a terminal ticket counter	0.80	4	REQ	ADD1	ADD1	REQ	REQ	REQ	–	ADD2	ADD2
Warehouse-Storage Area											
…for medium to bulky, palletized items	0.58	4	REQ	ADD1	ADD1	REQ	REQ	REQ	REQ	ADD2	ADD2
…for smaller, hand-carried items[5]	0.95	6	REQ	ADD1	ADD1	REQ	REQ	REQ	REQ	ADD2	ADD2

1. In cases where both a common space type and a building area specific space type are listed, the building area specific space type shall apply.
2. In corridors, the extra lighting power density allowance is permitted when the width of the corridor is less than 8 ft and is not based on the RCR.
3. A "Facility for the Visually Impaired" is a facility that can be documented as being designed to comply with the light levels in ANSI/IES RP-28 and is licensed or will be licensed by local/state authorities for either senior long-term care, adult daycare, senior support and/or people with special visual needs.
4. For accent lighting, see Section 9.6.2(b).
5. Sometimes referred to as a "Picking Area."
6. Automatic daylight responsive controls are mandatory only if the requirements of the specified sections are present.
7. An additional 0.53w/ft^2 shall be allowed, provided that the additional lighting is controlled separately from the base allowance of 0.42 W/ft^2. The additional 0.53 w/ft^2 allowance shall not be used for any other purpose.
8. Occupant sensor shall not have an override switch that converts from manual-on to automatic-on functionality.
9. The occupant sensor may have a grace period of up to 30 seconds to turn on the lighting automatically after the sensor has turned off the lighting if occupancy is detected.

Section 10.4.4.1 Regenerative drive.

Section 10.4.4 - Add a new Section 10.4.4.1 to read as follows:

10.4.4.1 Regenerative Drive. An escalator designed either for one-way down operation only or for reversible operation shall have a variable frequency regenerative drive that supplies electrical energy to the building electrical system when the escalator is loaded with passengers whose combined weight exceeds 750 pounds (340 kg).

Table 11.5.1 #5 Column A

Revise Item 1 under Exceptions in Table 11.5.1 #5 Column A to read as follows:

3. Any envelope assembly that covers less than 5% of the total area of that assembly type (e.g., exterior walls) need not be separately described. If not separately described, the area of an envelope assembly must be added to the area of the adjacent assembly of that same type. When the total area of penetrations from through-the-wall mechanical equipment or equipment listed in Table 6.8.1-4 exceeds 1% of the opaque above-grade wall area, the mechanical equipment penetration area shall be calculated as a separate wall assembly with a default U-factor of 0.5.

Table G.3.1 #5 Column A

Revise Exception 1 under Table G.3.1 #5 Column A to read as follows:

1. All uninsulated assemblies (e.g., projecting balconies, perimeter edges of intermediate floor stabs, concrete floor beams over parking garages, roof parapet) shall be separately modeled using either of the following techniques:

a. Separate model of each of these assemblies within the energy simulation model.

b. Separate calculation of the U-factor for each of these assemblies. The U-factors of these assemblies are then averaged with larger adjacent surfaces using an area- weighted average method. This average U-factor is modeled within the energy simulation model.

Any other envelope assembly that covers less than 5% of the total area of that assembly type (e.g., exterior walls) need not be separately described, provided that it is similar to an assembly being modeled. If not separately described, the area of an envelope assembly shall be added to the area of an assembly of that same type with the same orientation and thermal properties. When the total area of penetrations from through-the-wall mechanical equipment or equipment listed in Table 6.8.1-4 exceeds 1% of the opaque above-grade wall area, the mechanical equipment penetration area shall be calculated as a separate wall assembly with a default U-factor of 0.5.

§ 4. Section 28-1001.3 of the administrative code of the city of New York, as added by local law number 85 for the year 2009, is amended to read as follows:

§28-1001.3.1 Periodic update. The commissioner shall submit to the city council proposed amendments that he or she determines should be made to this code to bring it up to date with or exceed the latest edition of the energy conservation construction code of New York state. The commissioner shall, at a minimum, submit such proposed amendments (i) following any revision of the energy conservation construction code of New York state that establishes more stringent requirements than those imposed by this code and (ii) no later than the end of the third year after the effective date of this section and every third year thereafter. Prior to such submission, such proposed amendments shall be submitted to an advisory committee established by the commissioner pursuant to section [28-1003.2] <u>28-1001.3.2</u> for review and comment.

§ 5. This local law takes effect October 3, 2016, and applies to applications filed on and after such effective date except that the commissioner of buildings may promulgate rules or take other actions for the implementation of such provisions prior to such effective date.