



nLight® Quick Reference Guide for New York City 2020 Energy Conservation Code Commercial Lighting and Electrical Control Requirements

ASHRAE 90.1-2016 Path

The chart below is an overview of the Code Requirements for Common Building Spaces. Please use this information as a guide. For specific code requirements please refer to the NYC 2020 ECC code.

About this guide: The scope of this guide includes lighting controls for interior and exterior applications, as required for new construction, additions, and alterations that replace >=10% of the luminaires in a space.
Exceptions: Continuously lit security or emergency areas; interior exit stairways and ramps, and exit passageways; emergency egress lighting that is normally off.

	Control Requirement & Code Provision	Code Summary	Space Type											
			Classroom, Lecture Hall, Training Room	Conference, Meeting, Multipurpose Room	Copy/Print Rooms	Lounges/ Break Rooms	Enclosed Office <= 250sq.ft	Enclosed Office > 250sq.ft	Open Office < 300 sq. ft	Open Office => 300 sq. ft	Restroom	Storage	Locker	Corridor/ Transition Area
Manual Controls	Local Control 9.4.1.1(a)	There shall be one or more readily accessible manual lighting controls in the space that controls all lighting in the space. Note: Remote locations permitted for reasons of safety or security.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Manual On 9.4.1.1(b)	None of the lighting in the space shall be automatically turned on.	✓	✓	✓ ₃	✓	✓	✓ ₃	✓ ₃	✓ ₃	✓ ₃	✓ ₃	✓ ₃	
	Bi-Level Lighting Control 9.4.1.1(d)	Controlled lighting shall have at least one control step between 30% and 70%, or continuous dimming, in addition to full on and full off.	✓	✓	✓	✓	✓	✓	✓	✓			✓	
Time-Switch	Scheduled Shutoff 9.4.1.1(i)	All lighting shall be automatically shut off during periods when the space is scheduled to be unoccupied using a time-of-day operated control. Note: A signal from another automatic control device or alarm/security system complies.						✓ ₄						✓ ₄
Occupant Sensor Controls	Auto-On to <= 50% 9.4.1.1(c)	The general lighting shall be allowed to be turned on automatically to 50% of the lighting power.			✓ ₃			✓ ₃	✓ ₃	✓ ₃	✓ ₃	✓ ₃	✓ ₃	
	Automatic Partial OFF 9.4.1.1(g)	The general lighting power shall be automatically reduced by at least 50% within 15 minutes of all occupants leaving the space. Note: Full Off also complies.								✓				✓
	Automatic Full OFF 9.4.1.1(h)	Fixtures must automatically turn off within 15 minutes of all occupants leaving the space.	✓	✓	✓	✓	✓	✓ ₄	✓		✓	✓	✓	✓ ₄
Additional Controls	Automatic Daylight Responsive Controls for Sidelighting & Toplighting 9.4.1.1(e) & 9.4.1.1(f)	If the general lighting load is 100W or greater in the primary sidelighted or toplighted areas, or 200W or greater in the primary & secondary sidelighted areas, the general lighting in these areas shall be controlled by multi-step or continuous dimming photocontrols.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Automatic Receptacle Control 8.4.2	50% of all receptacles, and 25% of branch circuit feeders installed for modular furniture, shall be automatically turned off by an occupant sensor within 20 minutes of all occupants leaving the space. Note: A time-of-day schedule or a signal from another automatic control device or alarm/security system complies.	✓	✓	✓	✓	✓	✓	✓	✓				

- Notes:
- This summary is for general information purposes only and is provided without any warranty as to accuracy, completeness, or otherwise. The user should read the applicable code sections for more complete and detailed descriptions of code requirements and exceptions and should consult with a professional engineer or other competent advisor before making any decision or taking any action based on this summary.
 - Remote location of this local control device or devices shall be permitted for reasons of safety or security when each remote control device has an indicator pilot light as part of or next to the control device and the light is clearly labeled to identify the controlled lighting.
 - Spaces shall either be manual-on or controlled to automatically turn on the lighting to not more than 50% power.
 - Automatic off via occupant sensor or scheduled shutoff via time-switch.

Other Lighting Control Requirements

9.4.1.2 Parking Garage Lighting Control

Lighting for parking garages shall comply with the following requirements:

- Parking garage lighting shall have automatic lighting shutoff per Section 9.4.1.1(i)
- Lighting power of each luminaire shall be automatically reduced by a minimum of 30% when there is no activity detected within a lighting zone for 15 minutes. Lighting zones for this requirement shall be no larger than 3600 ft2.
- Lighting for covered vehicle entrances and exits from buildings and parking structures shall be separately controlled by a device that automatically reduces the lighting by at least 50% from sunset to sunrise.
- The power to luminaires within 20 ft of any perimeter wall structure that has a net opening-to-wall ratio of at least 40% and no exterior obstructions within 20 ft, shall be automatically reduced in response to daylight by at least 50%.

Exception to 9.4.1.2(d)Lighting in the following areas is exempt:

- Lighting in daylight transitions zones and ramps without parking.

9.4.1.4 Exterior Lighting Control

Lighting for exterior applications not exempted in Section 9.1 shall meet the following requirements:

- Lighting shall be controlled by a device that automatically turns off the lighting when sufficient daylight is available.
- All building façade and landscape lighting shall be automatically shut off between midnight or business closing, whichever is later, and 6 a.m. or business opening, whichever comes first, or between time established by the authority having jurisdiction.
- Lighting not specified in Section 9.4.1.4(b) and lighting for signage shall be controlled by a device that automatically reduces the connected lighting power by at least 50% for at least one of the following conditions:
 - From 12 midnight or within one hour of the end of business operations, whichever is later, until 6 a.m. or business opening, whichever is earlier.
 - During any period when no activity has been detected for a time of no longer than 15 minutes.
- Luminaires serving outdoor parking areas and having a rated input wattage of greater than 78W and a mounting height of 24 ft or less above the ground shall be controlled to automatically reduce the power of each luminaire by a minimum of 50% when no activity has been detected in the area illuminated by the controlled luminaires for a time of no longer than 15 minutes. No more than 1500W of lighting power shall be controlled together. All time switches shall be capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.

8.4.2 Automatic Receptacle Control

The following shall be automatically controlled:

- At least 50% of all 125 V, 15 and 20 amp receptacles in all private offices, conference rooms, rooms used primarily for printing and/or copying functions, break rooms, classrooms, and individual workstations.
- At least 25% of branch circuit feeders installed for modular furniture not shown on the construction documents. This control shall function on a:
 - scheduled basis using a time-of-day operated control device that turns receptacles off at specific programmed times – an independent program schedule shall be provided for controlled areas of no more than 5000 ft2 and not more than one floor (the occupant shall be able to manually override the control device for up to two hours);
 - an occupant sensor that shall turn receptacles off within 20 minutes of all occupants leaving a space; or
 - an automated signal from another controller alarm system that shall turn receptacles off within 20 minutes after determining that the area is unoccupied. All controlled receptacles shall be permanently marked to visually differentiate them from uncontrolled receptacles and are to be uniformly distributed throughout the space. Plug-in devices shall not be used to comply with section 8.4.2