NYCECC ADMINISTRATIVE OVERVIEW

2011 New York City Energy Conservation Code
Effective December 28, 2010
The New York City Department of Buildings wishes to acknowledge the generous grant from the United States Department of Energy under the American Recovery and Reinvestment Act, enacted by President Obama and Congress in 2009. This grant funded the creation of these training modules; without this support, these materials would not have been possible.

We also wish to acknowledge the support of Mayor Bloomberg and the New York City Council who created PlaNYC 2030, with a goal of reducing New York City’s carbon emissions by 30% by 2030, from 2005 levels.
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This training module was developed by:

Viridian Energy & Environmental, LLC
Welcome to the New York City Department of Buildings Energy Code Training Modules!

This ADMINISTRATIVE OVERVIEW Module addresses:

- Current Laws, Rules, and Bulletins related to the 2011 NYCECC;
- Applicability of the 2011 NYCECC;
- Methods of Compliance;
- NYC DOB Energy Code Submission Requirements; and
- NYC DOB Progress Inspection Requirements.

This module provides an overview of the use and applicability of the 2011 NYCECC. Technical issues related to NYCECC compliance, plus additional examples of NYCECC documentation, are included within the Envelope, HVAC (1&2), Lighting, and Residential Energy Code Training Modules in this series.
- The **ADMINISTRATIVE OVERVIEW** Module has been divided into a number of smaller sub-topics. These can be accessed either in-sequence or out-of-sequence through links in the Main Menu slide.

- Each sub-topic begins with a brief overview of the issues to be reviewed, and many end with a set of summary questions.

- Many of the sub-topics are organized in a Q & A format. Code-related questions are posed at the top of a slide, with answers provided below, or in the following sequence of slides.
The **NYC Buildings** logo takes you to the NYCECC 2011 Training Modules home page.

The **Menu** icon takes you to the main menu page within each module.

The **Attention** icon brings up Callouts with key points and additional information.

The **Links** icon takes you to related DOB web pages or other resources.

The **Documentation** icon addresses DOB documentation issues and requirements.

The **Inspection** icon addresses DOB Progress Inspection issues and requirements.

The **Code Reference** icon refers to relevant Code sections.
Introduction

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The slides are enhanced with special icons that will help to focus on key points, or serve as links to external resources. The Attention icon brings up Callouts (like this one) with key points and additional information.
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### 1. What’s New In 2011 NYCECC
- Key Updates • Current Local Laws, Rules & Bulletins

### 2. Code Applicability
- DOB Terminology • Exemptions and Exceptions • ECC Chapters / Building Types

### 3. Methods of Compliance
- Mandatory Provisions • Compliance Paths • ANSI/ASHRAE/IESNA 90.1 - 2007

### 4. Submissions & Inspections
- Professional / Owner Statements • Energy Analysis • Supporting Documentation • Progress Inspections

### 5. Resources
- References and Resources • DOB Assistance

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The main menu slide is interactive; clicking on each line item will take you to the respective sub-module. Use this feature to navigate throughout the presentation. The menu icon at the bottom right corner of each slide will always bring you back to the main menu slide.
NYCECC Administrative Overview

1. What’s New in the 2011 NYCECC

Energy Conservation Construction Code of New York State

David A. Paterson  Governor
Lorraine Cortes-Vázquez  Secretary of State

2010
1. What’s New in the NYCECC

Overview

In this section you will learn about:

- What’s driving the recent changes to the NYCECC;
- Key changes and additions in the 2011 NYCECC;
- Current NYC Local Laws affecting Energy Code compliance; and
City-wide Focus on Energy and Greenhouse Gas (GHG) Reductions

- Mayor Bloomberg’s PlaNYC (2007)
  - Targets 30% Reductions in GHG by 2030
  - Local Laws were enacted, including:
    - LL 84 of 2009 – Benchmarking Energy & Water Use
    - LL 85 of 2009 – Established the 2009 NYCECC
    - LL 87 of 2009 – Audits & Retro-Commissioning
    - LL 88 of 2009 – Lighting Upgrades / Sub-meters

Federal Mandates

- American Recovery & Reinvestment Act (ARRA) Funding
  - Requires States to enact Energy Codes equivalent to IECC 2009 and ANSI/ASHRAE/IESNA 90.1-2007
  - Requires States to achieve 90% Energy Code compliance by 2017
What’s Driving the Recent Changes to the Energy Code?

City-wide Focus on Energy and Greenhouse Gas (GHG) Reductions

- Mayor Bloomberg’s PlaNYC (2007)
  - Targets 30% Reductions in GHG by 2030
  - Local Laws were enacted, including:
    - LL 84 of 2009 – Benchmarking Energy & Water Use
    - LL 85 of 2009 – Established the 2009 NYCECC
    - LL1 of 2011 – Established the current 2011 NYCECC
    - LL 87 of 2009 – Audits & Retro-Commissioning
    - LL 88 of 2009 – Lighting Upgrades / Sub-meters

Federal Mandates

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  - Requires States to enact Energy Codes equivalent to IECC 2009 and ANSI/ASHRAE/IESNA 90.1-2007
  - Requires States to achieve 90% Energy Code compliance by 2017

In receiving ARRA funding, New York State agreed to meet the federal mandate of achieving Energy Code compliance in 90% of new and renovated building space by 2017.
1. What’s New

What are the Major Changes in the New Code?

Simplified, Streamlined & More Comprehensive

- **ALL** new buildings, renovations, alterations & repairs are required to comply

- Climate zone classifications are simplified
  - Single zone for all NYC boroughs, both residential & commercial (Zone 4A)

- Commercial building definition (Group R) expanded
  - Now includes Group R-3 over 3 stories

- Commercial projects can use ASHRAE 90.1-2007 as an alternative path to NYCECC Chapter 5, though it must be used for **ALL** disciplines:
  - Envelope, Mechanical Systems, Service Water Heating, Electric Power & Lighting
  - Chapters 1, 2, 3, & 6 of the NYCECC apply in either approach
1. What’s New

What are the Major Changes in the New Code?

Simplified, Streamlined & More Comprehensive

- Additional topic-specific updates are addressed in the following DOB NYCECC training modules:
Local Law 1 of 2011
- Establishes the 2011 NYCECC based on the 2010 ECCCNYS
- Went into effect December 28, 2010

Local Law 85 of 2009 (superseded in entirety by LL1/2011)
- Established the 2009 NYCECC based on the 2007 ECCCNYS
- Removed exemptions for envelope additions, alterations and repairs that affect less than 50% of a system
- Established NYCECC documentation requirements
- Went into effect July 1, 2010
1. What’s New

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- Went into effect July 1, 2010
Local Law 48 of 2010

- Amends Section 505 of the NYCECC
- Adds Appendix A amending ASHRAE 90.1/2007, Section 9
  - Shutoff-only occupancy sensors now required for:
    » Classrooms (excluding shop, laboratory, or preschool classrooms)
    » Conference/meeting rooms
    » Employee lunch and break rooms
    » Offices smaller than 200 SF (unless the offices have lighting controlled with photo-sensor)
What’s New - What Rules of the City of New York are Associated with the NYCECC?

**1 RCNY §5000-01**
- Defines Energy Code submission procedures
- Defines the requirements for project progress inspections in the construction drawings

**1 RCNY §101-07**
- Requirement that owner retain progress inspector(s)
- Defines general sampling rate of inspections
  - 15% of each relevant construction item in the scope of work, unless otherwise noted in 1 RCNY §5000-01, or required by progress inspector
- Defines authority and responsibilities of the progress inspector
- Addresses additional Energy Code verification issues

These issues include:
- Phased inspection for temporary certificates of occupancy;
- Phased inspection controls; and
- Lighting power densities.
1. What’s New

What DOB Bulletins are Associated with the NYCECC?

**Buildings Bulletin 2010–031**
- Outlines conditions under which an addition, alteration, renovation, or repair to an **HVAC or service hot water system** may *not* be required to comply with the Energy Code.

**Buildings Bulletin 2010–032**
- Outlines conditions under which an addition, alteration, renovation, or repair to a **lighting or electrical power system, or control equipment**, may *not* be required to comply with the Energy Code.

**Buildings Bulletin 2011–015**
- Outlines conditions under which an addition, alteration, renovation, or repair to a **building envelope** may *not* be required to comply with the Energy Code.
NYCECC Administrative Overview

2. Code Applicability
2. Code Applicability

Overview

In this section you will learn about:

- DOB terminology related to NYCECC applicability, including:
  - Differences among Code, Rules, and Bulletins
  - Differences between Exemptions and Exceptions
  - Differences in applicability for New Construction, Additions, Alterations, Renovations, and Repairs

- Applicable Chapters of the NYCECC for different building types
General Terminology - 1

2. Code Applicability

What is the Terminology Used by DOB Related to Code Applicability?

The Code:
- The NYCECC is law.
- It applies to all buildings, new and existing, unless explicitly stated otherwise.

Rules:
- Rules are prepared by the DOB to implement the Code.
- Rules must go through a formal administrative public comment process.
- Rules have the force of law.

Bulletins:
- Bulletins are issued by the DOB, in part to clarify interpretations of the codes.
- They may change more frequently than laws or rules.

The DOB website is always updated to reflect all changes to laws, rules and bulletins. Check the website frequently.
Exemptions:

- Exemptions define specific building types or building elements that are not required to meet the Code, and are addressed in the PW1 form when they constitute the entire application.

- The following are the *only* allowed exemptions to the NYCECC:
  - Historic buildings (per NYCECC 101.4.2, §5000-01)
    - National-or State-designated historic buildings
    - Buildings certified as contributing buildings within a National or State historic district
    - Buildings certified as eligible for the designations above
    - City level certification does not qualify for exemptions
  - The envelopes of low-energy buildings (buildings with peak design rate of energy use <3.4Btu/h/SF, or unconditioned buildings)
  - Temporary buildings under §28-111 and §8C 3203
  - The following work types, which are categorized as not affecting energy use:
    - FA (fire alarm), FP (fire suppression in a range hood), SD (standpipe), SP (sprinklers), FS (fuel storage), EQ (construction equipment), CC (curb cut), OT/BPP (Builder’s Pavement Plan), OT/FPP (Fire Protection Plan)
## Exceptions:

- Exceptions are conditions under which specific provisions of the Code may not be required.
  - Many exceptions are defined under Chapter 4 and Chapter 5 NYCECC. These types of exceptions typically define NYCECC “alternates”; i.e., a system requirement may not be required if other alternative measures are incorporated.

- Exceptions specifically applicable to Alterations are defined in Chapter 1 NYCECC §101.4.3
  - These apply only if they do not result in increased energy use of the building.

- Clarifications of potential exceptions in additions, alterations/renovations, and repairs are provided in Building Bulletins 2010–031, 2010-032, and 2011–015

Exemptions, exceptions and other conditions relieved from compliance by Section NYCECC 101.4.3 must be identified in the submitted Energy Analysis, with citations to Code, 1 RCNY §5000-01 and/or Bulletins provided.
New Buildings

- All must comply via Prescriptive or Performance-Based Approaches (see topic 3 of this module)
- Only exemption is for envelope in low-energy/unconditioned buildings

Additions

- Must comply as a stand-alone addition or with the building as a single entity

Alterations / Renovations

- Only applies to scope of alteration work; unaltered portions are not required to comply
- Some exceptions may apply (per Bulletins)

Repairs

- Technically applies even if a permit is not required (e.g., window or roof replacements or repairs)
### New Buildings
- All must comply via Prescriptive or Performance-Based Approaches (see topic 3 of this module)
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- Must comply as a stand-alone addition or along with the building as a single entity

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### Repairs
- Technically applies even if a permit is not required (e.g., window or roof replacements or repairs)

For example, where an alteration, renovation or repair involves replacement of over 50% of the existing luminaires, the entire scope of work must meet the current NYCECC lighting provisions, as applicable.
2. Code Applicability

Which Chapters of the Code Apply to Different Building Types?

- **Residential**
  - R-3 (detached one-and two-family dwellings, and multiple single-family dwellings)
  - AND
  - R-2 (Multifamily > 2-family)
    - ≤ 3 stories
    - AND
    - Manufactured Homes
    - Factory-Manufactured Homes

- **Group R Buildings**
  - R-1 (Hotels/motels) any height
  - AND
  - R-2 (Multifamily > 2-family)
    - > 3 stories
    - AND
  - R-3 (One & Two Family)
    - > 3 stories

- **All Other Buildings**
  - (Including Group I, H)

Residential
NYCECC Chapter 4

Commercial
NYCECC Chapter 5

**Mixed use: 101.5; Definitions of Residential, Commercial & Group-R: 202**
3. Methods of Compliance
3. Methods of Compliance

Overview

In this section you will learn about:

- Mandatory Provisions of the NYCECC;
- Prescriptive Versus Performance-based Compliance Paths; and
3. Methods of Compliance

**Mandatory Requirements**

May include design features & construction practices

**Not subject to Trade-offs**

**Requirements Common to all Compliance Paths**

**Prescriptive or Performance Targets**

Minimum criteria apply at the component, system, or whole building level

Trade-offs allowed, depending on compliance path

**Compliance Paths:**

Prescriptive / Trade-off / Performance-based
3. Methods of Compliance

**Mandatory Requirements**

- May include design features & construction practices
- **NOT** subject to trade-offs or whole building level

**Prescriptive or Performance Targets**

- Minimum criteria apply at the component, system, or whole building level

It is important to understand the basic structure of the Energy Code.

Mandatory requirements are defined throughout Chapters 4 and 5 of the NYCECC, and are **NOT** subject to any type of Trade-off.

Additional NYCECC provisions can be satisfied through Prescriptive compliance, Trade-offs, or a Performance-based approach.

The following slides describe each type of NYCECC provision in more detail.
3. Methods of Compliance

What are Examples of NYCECC Mandatory Requirements?

Residential (NYCECC Chapter 4)

- **Air Sealing**
  - Air tightness of the envelope shall be verified by either:
    - Building testing (e.g. blower door), or
    - Visual inspections during construction

- **Systems**
  - Programmable thermostats per dwelling unit

- **Lighting and Electrical**
  - At least 50% of lamps in permanently installed fixtures shall be high-efficacy
  - Separately meter individual dwelling units

Envelope (NYCECC Chapter 5)

- **Air Leakage**
  - Includes provisions for:
    - Maximum allowable leakage of window, storefront, curtainwall, and door assemblies
    - Continuous air barriers
    - Outdoor air intakes and exhaust openings
    - Loading dock weatherseals
    - Vestibules
    - Recessed lighting

2011 NYCECC
July 2011
3. Methods of Compliance

? What are Examples of NYCECC Mandatory Requirements?

**Electrical Power / Lighting (NYCECC Chapter 5)**

- **Lighting Controls**
  - Areas enclosed by walls or floor-to-ceiling partitions must have at least one manual control
  - Areas required to have a manual control shall also allow the occupant to reduce the connected lighting load by at least 50%

- **Exit Signs**
  - Internally illuminated exit signs shall not exceed 5 watts per side

- **Electrical Energy Consumption**
  - Residential buildings shall make provisions to separately meter individual dwellings

**HVAC (NYCECC Chapter 5)**

- **Provisions for all systems include:**
  - Minimum Heating & Air Conditioning equipment efficiencies
  - Thermostatic controls, including setback capabilities
  - Pipe insulation and duct insulation/sealing
  - When specific building conditions exist:
    - Demand Control ventilation
    - Energy Recovery ventilation systems
**Options:**

2011 NYCECC offers three compliance methods:

1. **Prescriptive**
   - Through summary tables and other listed provisions

2. **Trade-off**
   - For envelope assemblies through U-Factor approach or REScheck /COMcheck

3. **Performance-based**
   - Through energy modeling

Code also allows use of the ANSI/ASHRAE/IESNA 90.1-2007 standard ("ASHRAE 90.1") as an alternative to NYCECC Chapter 5
   - ASHRAE 90.1 also offers Prescriptive, Trade-off & Performance Paths
Path 1: Prescriptive

3. Methods of Compliance

Prescriptive Path

Pros

- Typically the simplest approach to demonstrate compliance

Cons

- Lack of flexibility - Each space, assembly or piece of equipment must meet or exceed the prescribed criteria
- The level of stringency of some prescriptive criteria may create design challenges
  - Example:
    Prescribed Interior Lighting Power densities (based on Building Area Type) may be challenging for projects with a high percentage of conference rooms or other specialty spaces with higher lighting requirements.

<table>
<thead>
<tr>
<th>Interior Lighting Power Allowances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting Power Density</td>
</tr>
<tr>
<td>Building Area Type</td>
</tr>
<tr>
<td>Convention Center</td>
</tr>
<tr>
<td>Dining: Cafeteria /Fast Food</td>
</tr>
<tr>
<td>Gymnasium</td>
</tr>
<tr>
<td>Office</td>
</tr>
<tr>
<td>Retail</td>
</tr>
<tr>
<td>Parking Garage</td>
</tr>
</tbody>
</table>

Partial Listing of prescriptive interior lighting power allowances
(from NYCECC Table 502.5.2)
Path 2: Trade-Off (Envelope Only)

3. Methods of Compliance

Trade-Off Path

**Pros**

- Level of Effort: Simple to Moderate
- Prerequisites:
  - Window to Wall area Ratio ≤ 40%
  - Skylight to Roof area Ratio ≤ 3%
- Compliance is demonstrated through a U-Factor-based “Total UA” approach
  - Weighted average value per component type is allowed
    - Example: Non-compliance in one roof assembly can be compensated for by using more insulation in another roof assembly
- If REScheck or COMcheck is used, Trade-offs can be performed among different envelope components (roofs, walls, fenestration)

**Cons**

- U-Factor calculations can become complex in some assembly types, such as metal buildings
Path 2: Trade-Off (Envelope Only)

3. Methods of Compliance

**Pros**
- **Level of Effort:** Simple to Moderate
- **Prerequisites:**
  - Window to Wall area Ratio ≤ 40%
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- **If REScheck or COMcheck is used, Trade-offs can be performed among different envelope components (roofs, walls, fenestration)**

**Cons**
- **U-Factor calculations can become complex in certain assembly types, such as metal buildings**

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The “UA” approach involves multiplying the U-Factor of a building assembly (such as a wall or roof type) by the area of that assembly. When multiple assemblies are used in a project, a weighted average of the “UA” of each assembly type can be calculated to demonstrate overall compliance with the NYCECC.

There are some limitations to the Trade-off approach. In residential construction, an applicant cannot exceed maximum allowed U-factors for vertical fenestration (0.48) or skylights (0.75) in Zone 4.
In this non-residential COMcheck example, the roof insulation R-Value is below the prescriptive requirement of R-20; however overall envelope compliance has been achieved through improved performance of the exterior walls, windows, and doors.
Path 3: Total Building Performance

3. Methods of Compliance

**Performance Path**

**Approach:**

- Energy Modeling, per Section NYCECC 506 or the Energy Cost Budget Method from ASHRAE 90.1, is used to demonstrate that:

  **Total Annual Energy Cost of the Proposed Building Design**

  is less than or equal to

  **Total Annual Energy Cost of the Budget Building Design**

- For residential buildings, the Simulated Performance Alternative (Section NYCECC 404) can potentially be used, but must be approved in advance by the DOB Commissioner.
  
  - Home energy software programs must also be approved by both the Secretary of State of New York State and the DOB Commissioner. (DOE2-based software has such approval.)
Path 3: Total Building Performance

3. Methods of Compliance

Pros

- The most flexible approach
  - Aspects of the design which do not meet Prescriptive criteria (other than Mandatory provisions) can be Traded-off against measures that exceed Code criteria

Cons

- Level of effort is high, with associated costs
- The learning curve for energy modeling is steep
  - Modeling is often performed by consulting engineers or specialized consultants
Sample Scenarios

- Fenestration area exceeds 40% of wall or 3% of roof
- Project exceeds prescriptive interior Lighting Power Densities
- Project is making Trade-offs among disciplines (e.g., envelope, lighting, HVAC)
- Project is pursuing a LEED rating, and requires energy modeling
- Project is pursuing energy-efficiency rebates (e.g., NYSERDA, Con Edison), and requires energy modeling for those programs
When Would ASHRAE 90.1 be Used to Demonstrate Compliance?

### Applicability:

- ASHRAE 90.1 is an approved alternative to Chapter 5 of the NYCECC
- If used, **ASHRAE 90.1 must be followed and applied in its entirety**
  - Applicants cannot mix compliance of one discipline in the NYCECC with another discipline in ASHRAE-90.1
- Prescriptive, Trade-off, or Performance-based paths can be used
When Would ASHRAE 90.1 be Used to Demonstrate Compliance?

### Potential Reasons to Use ASHRAE 90.1:

- **A space-by-space lighting approach is allowed**
  - May result in higher lighting power density allowances versus the Building Area method of the NYCECC

- **Skylight requirements are more lenient**
  - Area can be up to 5% to stay in Prescriptive / Trade-off method instead of 3% in NYCECC
  - U-Factor requirements are more lenient for commercial buildings

- **Shading devices in ASHRAE have more options – partial opaque materials and multiple Projection Factors**

- **ASHRAE 90.1 is more commonly used than the NYCECC for performance-based modeling**

- **Programs such as LEED, NYSERDA rebates, and federal tax credits are based on ASHRAE 90.1**
More Extensive Mandatory Provisions:

- Power, Section 8.4, has maximum voltage drop requirements for main feeders (2%) and branch circuits (3%)

ASHRAE 90.1 does include some provisions that are not included in the NYCECC. If an applicant uses ASHRAE 90.1 for compliance, they must meet all provisions of the standard, including mandatory provisions.

One key mandatory provision in 90.1 involves maximum voltage drops for main feeders and branch circuits. These requirements may result in heavier-gauge feeders, which could add significant costs to certain project types.
4. Submissions & Inspections

Overview

In this section you will learn about:

- Requirements for NYCECC Submissions, including:
  - Professional Statement and Owner Statement;
  - Energy Analysis; and
  - Supporting documentation.

- Requirements for NYCECC-related Progress Inspections
Per 1 RCNY §5000-01:

- Professional Statement
- Owner Statement
- Energy Analysis
- Supporting Documentation, including requirement for progress inspections in drawings
4. Submissions & Inspections  

What is Required for the Professional and Owner Statement?

**Professional Statement**
- Completed under **Section 10** of Form **PW1**
  - Declares either compliance with, or exemption from, the NYCECC

**Owner Statement**
- Completed under **Section 26** of Form **PW1**
  - Declares that the Owner does not knowingly authorize work that fails to comply
4. Submissions & Inspections

10 NYCECC Compliance New York City Energy Conservation Code

☐ To the best of my knowledge, belief and professional judgment, all work under this application is in compliance with the NYCECC*

☐ Energy analysis is on another job number: __________________________

Yes ☐ No ☐

☐ This application is, or is part of, a project that utilizes trade-offs among different major systems

☐ This application utilizes trade-offs within a single major system

☐ To the best of my knowledge, belief and professional judgment, all work under this application is exempt from the NYCECC* in accordance with one of the following: Choose one

☐ The work is an alteration of a State or National historic building.

☐ The scope of work is entirely in a “low-energy building” and is limited to the building envelope.

☐ The scope of work does not affect the energy use of the building.

☐ This is a post-approval amendment and exempt under a prior edition of the energy code. See statement of exemption on attached drawings.

* Note: Exceptions to Section ECC 101 4.3 are NOT exemptions. For exceptions, check compliance statement and use the Energy Analysis.
PW1 – Owner Statement

4. Submissions & Inspections

PW1 Plan / Work Application

Must be typewritten

PW1: Property Owner's Statements and Signatures

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both. I understand that if I am found after hearing to have knowingly or negligently made a false statement or to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of a violation required under the provisions of this code or of a rule of any agency, I may be barred from filing further applications or documents with the Department. Furthermore, I understand that I am responsible for insuring that a final inspection be performed when the permitted work is complete, and that a satisfactory report of the final inspection be submitted, along with all required submittal documents, so that the NYC Department of Buildings may issue a letter of completion or certificate of occupancy within the time prescribed by law.

I have authorized the applicant to file this application for the work specified herein and all future amendments. I will not knowingly authorize any work that is not in compliance with the New York City Energy Conservation Code (NYCECC).

Name (please print):
Relationship to Owner:
Business Name/Agency:
Street Address:
City: State: Zip:
Telephone Number: Fax:
E-Mail Address:

2011 NYCECC
July 2011

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Related Applications

- In section 11 of the PW1 form, all applicants must indicate all applications related to the project or, if an application has not yet been filed, the name of the applicant or the applicant’s firm and discipline for any anticipated, related applications.

This is important for projects that file multiple applications, such as:

- A separate foundations package, earlier in the project.
- Later lighting and HVAC packages.

Separate applications can include the part Energy Analysis of just their respective system in their drawings, such as the insulation values associated with foundation work, but only if they are all filed under one application number.
Energy Analysis

4. Submissions & Inspections

What Types of Energy Analysis are Allowed?

Per 1 RCNY §5000-01:

- Tabular Analysis
- REScheck or COMcheck software
- Energy Modeling
- Alternative Formats
Option 1: Tabular Analysis

- The Tabular Analysis compares proposed values of each NYCECC-regulated item in the scope of work with the respective prescriptive values required by the Code.
  - Applicable to New Buildings, Additions, or Alterations
  - Demonstrates Prescriptive Compliance
  - Can be used with either NYCECC or ASHRAE 90.1
### Sample Tabular Analysis - 1

**4. Submissions & Inspections**  
Examples of Tabular Analysis for Commercial Building Alterations

<table>
<thead>
<tr>
<th>ITEM DESCRIPTION</th>
<th>PROPOSED DESIGN VALUE</th>
<th>CODE PRESCRIPTIVE VALUE AND CITATION</th>
<th>SUPPORTING DOCUMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BUILDING ENVELOPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Replace roof membrane and add insulation  
SRR = 2.2% | Roof Type 1:  
4” XPS (R -20) continuous insulation above deck | Minimum R-20 continuous insulation  
NYCECC Table 502.2(1) | Roof Type 1:  
A-106 (Roof Plan)  
A-402 (Wall Sections)  
6-8/A-603 (Roof Details) |
| Replace existing windows w/new aluminum framed windows,  
Floors 2 - 4  
WWR = 32%  
PF = 0 | Window Type A:  
U = 0.46, SHGC = 0.29,  
Air leakage ≤ 0.10 cfm/SF  
Window Types B + C:  
U = 0.41, SHGC = 0.31,  
Air leakage ≤ 0.30 cfm/SF  
Window Type D:  
U = 0.41, SHGC = 0.23,  
Air leakage ≤ 0.30 cfm/SF | Window Types A-D:  
Maximum U-Factor = 0.55  
Maximum SHGC = 0.40  
NYCECC Table 502.3  
Maximum Air Leakage = 0.3 cfm/SF  
NYCECC 502.4.1 | Window Types A-D:  
A-301-302 (Elevations)  
A-501 (Schedules) |
| Renovate interior side of exterior walls around new window openings – repair/replace gwb | N/A - No change proposed to existing  
3 ½” metal stud furring walls which are completely filled with fiberglass batts (estimated R-3.1/inch). | NYCECC 101.4.3 Exception 3 – Alterations, renovations, or repairs to roof/ceiling, wall, or floor cavities which are insulated to full depth with insulation having a minimal nominal value of R-3.0/inch. | A-102-104 (Floor Plans)  
1-2/A-305 (Interior Elevations) |
### Sample Tabular Analysis - 1

#### 4. Submissions & Inspections  
**Examples of Tabular Analysis for Commercial Building Alterations**

<table>
<thead>
<tr>
<th>ITEM DESCRIPTION</th>
<th>PROPOSED DESIGN VALUE</th>
<th>CODE PRESCRIPTIVE VALUE AND CITATION</th>
<th>SUPPORTING DOCUMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BUILDING ENVELOPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Replace roof membrane and add insulation  
SRR = 2.2% | Roof Type 1: 4” XPS (R -20) continuous insulation above deck | | Roof Type 1:  
A-106 (Roof Plan)  
A-402 (Wall Sections)  
6-8/A-603 (Roof Details) |
| Replace existing windows w/new aluminum framed windows,  
Floors 2 - 4  
WWR = 32%  
PF = 0 | Window Type A:  
U = 0.46, SHGC = 0.29,  
Air leakage ≤ 0.10 cfm/SF  
Window Types B + C:  
U = 0.41, SHGC = 0.31,  
Air leakage ≤ 0.30 cfm/SF  
Window Type D:  
U = 0.41, SHGC = 0.23,  
Air leakage ≤ 0.30 cfm/SF | Maximum SHGC = 0.40  
NYCECC Table 502.3  
Maximum Air Leakage = 0.3 cfm/SF  
NYCECC 502.4.1 | Window Types A-D:  
A-301-302 (Elevations)  
A-501 (Schedules) |
| Renovate interior side of exterior walls around new window openings – repair/replace gwb | N/A - No change proposed to existing 3 ½” metal stud furring walls which are completely filled with fiberglass batts (estimated R-3.1/inch). | NYCECC 101.4.3 Exception 3 – Alterations, renovations, or repairs to roof/ceiling, wall, or floor cavities which are insulated to full depth with insulation having a minimal nominal value of R-3.0/inch. | A-102-104 (Floor Plans)  
1-2/A-305 (Interior Elevations) |

---

Applicants must include reference to the applicable Supporting Documentation for EACH item within the Tabular Analysis.
Option 2: REScheck or COMcheck submissions

- REScheck and COMcheck software, available for free from the US Department of Energy, can be used to prepare Energy Code compliance calculations.
  - Demonstrates Prescriptive Compliance
    OR
    - Allows Trade-Offs among different envelope assemblies (roofs, walls, glazings, etc.)
  - Only ECCCNYS-2010 REScheck forms are permitted (not IECC)
  - Only ECCCNYS-2010 or ASHRAE-90.1, 2007 COMcheck forms are permitted (not IECC)
Option 2: REScheck or COMcheck submissions (continued)

- COMcheck is applicable to New Buildings, Additions, or Alterations.
  - Additions can be submitted as stand-alone projects, or within a whole-building assessment.
  - Alterations can only be assessed under the ASHRAE 90.1-2007 compliance path, not under the 2010 ECCCNYS path.
  - Alterations can be submitted using one of two options:
    - As a stand-alone alteration, which applies only to the work being altered. The COMcheck assessment shall be based on the “alteration” option.
    - In a whole-building assessment, using as-built values for the project’s unaltered portions.

- REScheck is applicable to New Buildings or Additions/Alterations.
  - Additions can be submitted as stand-alone projects, or within a whole-building assessment.
  - Alterations cannot be submitted as stand-alone projects in REScheck – they must be part of a whole-building assessment, using as-built values for the unaltered portions of the project.

All Wall Types, Roof Types, Fenestration Types, and Door Types in the COMcheck analysis should use the same nomenclature as those shown in the Supporting Documentation (Drawings & Schedules).
4. Submissions & Inspections

**Sample COMcheck Report**

**COMcheck Software Version 3.8.0**

**Envelope Compliance Certificate**

**2010 New York Energy Conservation Construction Code**

**Section 1: Project Information**

- **Project Type:** New Construction
- **Project Title:**  
- **Construction Site:**  
- **Owner/Agent:**  
- **Design/Contractor:**  

**Section 2: General Information**

- **Building Location (for weather data):** New York, New York
- **Vertical Glazing/Wall Area Ratio:** 28%
- **Skylight Glazing/Roof Area Ratio:** 19%
- **Activity Types:**
  - **Floor Area:**
    - Floor 1 (Office): 5222
    - Floor 2 (Office): 5222
    - Floor 1 (Storage, Commercial/Park Place): 121
    - Floor 1 (Pilothouse): 815

**Section 3: Requirements Checklist**

- **Envelope PASS**: Design 1% better than code

**Climate-Specific Requirements:**

<table>
<thead>
<tr>
<th>Component Name/Description</th>
<th>Grass Area or Footprint</th>
<th>Cost Index</th>
<th>Cost Ratio</th>
<th>Proposed U-Factor</th>
<th>Budget U-Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows 1 - Right 1, Vinyl Frame Double Glazed with LowE, Tinted, SGCC 2040</td>
<td>9775</td>
<td>20.5</td>
<td>0.046</td>
<td>0.046</td>
<td></td>
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<tr>
<td>Windows 1 - Right 2, Vinyl Frame Double Glazed with LowE, Tinted, SGCC 2040</td>
<td>1153</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>Door 1 - Entry Door, ASHRAE 51, Glazed Door, SGCC 2040</td>
<td>871</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door 1 - Exit Door, ASHRAE 51, Glazed Door, SGCC 2040</td>
<td>487</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door 2 - Entry Door, ASHRAE 51, Glazed Door, SGCC 2040</td>
<td>744</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door 2 - Exit Door, ASHRAE 51, Glazed Door, SGCC 2040</td>
<td>744</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door 3 - Entry Door, ASHRAE 51, Glazed Door, SGCC 2040</td>
<td>744</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door 3 - Exit Door, ASHRAE 51, Glazed Door, SGCC 2040</td>
<td>744</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door 4 - Entry Door, ASHRAE 51, Glazed Door, SGCC 2040</td>
<td>744</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door 4 - Exit Door, ASHRAE 51, Glazed Door, SGCC 2040</td>
<td>744</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door 5 - Entry Door, ASHRAE 51, Glazed Door, SGCC 2040</td>
<td>744</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door 5 - Exit Door, ASHRAE 51, Glazed Door, SGCC 2040</td>
<td>744</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Section 4: Compliance Statement**

**Compliance Statement:** The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this same application. The proposed envelope system has been designed to meet the 2010 New York Energy Conservation Construction Code requirements in COMcheck Version 3.8.0 and to comply with the mandatory requirements in the Requirements Checklist.

When a Registered Design Professional has certified and signed this page, they are attesting to the best of their knowledge, belief, and professional judgment, that such plans or specifications are in compliance with this Code.

**Name:**  
**Title:**  
**Signature:**  
**Date:**

**Report Date:** 25/4/11

---

2011 NYCECC  
July 2011
4. Submissions & Inspections

A. Sign and seal the sheet with the Energy Analysis only at the Title Block when:

- A lead professional signs and seals for the entire project.
- All applications related to the project share one application number, include the respective parts of the Energy Analysis in the discipline drawings, and the partial Energy Analysis represents the work of only that discipline.
- All applications related to the project have different application numbers, present all parts of the Energy Analysis in the initial application as required, but each part is located on a separate drawing sheet with only the work of that discipline.

B. Sign and seal each part of the Energy Analysis on the partial Energy Analysis, and do not sign at the Title Block, when:

- All applications related to the project have different application numbers, present all parts of the Energy Analysis in the initial application as required, and all parts on one sheet; and
- No other work may be included on the sheet.
Option 3: Energy Cost Budget Worksheet

- Either NYCECC Section 506 or the Energy Cost Budget Method of ASHRAE 90.1, 2007 can be used to demonstrate compliance.
  - Applicable to New Buildings, Additions, or Alterations
  - Requires computer energy modeling, using software programs approved by the Secretary of State of New York State and the NYC Commissioner of Buildings (e.g., DOE-2.1E, VisualDOE, Energy Plus, eQuest)
  - Compliance is demonstrated using the EN1 form
  - If changes occur during project execution, then energy model must be updated to as-built condition and the results must be submitted in EN2 form and certified by progress inspector
In the case of an NYCECC-related audit, applicants may be asked to submit the calculations used to determine the averaged performance values entered in the EN1.
The overall regulated annual energy use and annual energy cost of the Proposed and Budget building designs are summarized at the end of the EN1 form. As this example illustrates, if the Proposed Design cost is less than the Budget Design cost, the project passes.

### Energy Cost Budget Conformance

<table>
<thead>
<tr>
<th></th>
<th>Proposed Design Output</th>
<th>Budget (Standard Design) Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Regulated Energy Cost ($)</td>
<td>1,458,109</td>
<td>1,477,272</td>
</tr>
<tr>
<td>Annual Regulated Energy Use (BTU/LSF)</td>
<td>44.161</td>
<td>48.006</td>
</tr>
<tr>
<td>Annual Regulated Energy Cost Per Sq. Ft. ($/LSF)</td>
<td>2.31</td>
<td>2.34</td>
</tr>
</tbody>
</table>

### Energy Model Output Breakdown

<table>
<thead>
<tr>
<th>Energy Use Breakdown</th>
<th>Proposed Design Output (% BTU/yr)</th>
<th>Budget (Standard Design) Output (% BTU/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating</td>
<td>24.2%</td>
<td>32.9%</td>
</tr>
<tr>
<td>Cooling</td>
<td>13.9%</td>
<td>7.7%</td>
</tr>
<tr>
<td>Heat rejection</td>
<td>3.9%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Fans</td>
<td>8.9%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Pumps</td>
<td>1.2%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Lighting</td>
<td>19.3%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Unregulated loads (e.g., plug loads, elevators, escalators, kitchen, process equipment, exterior lighting)</td>
<td>28.5%</td>
<td>26.9%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Responsibility by Discipline

- Different registered design professionals may sign and seal their respective parts of the Energy Analysis report.
  
  ▶ Applies **only** if Prescriptive compliance (or Trade-off within Envelope) is used

  ▶ If all systems are filed under the same application number, each registered design professional can include his or her part of the Energy Analysis in their respective CDs

  ▶ If multiple application numbers are filed, all parts of the Energy Analysis must be filed in the **initial application** for the project, except:
    » Foundation and earthwork permits – a Tabular Analysis can be submitted just for this work
Lead Professional

- Where whole-building analysis is used, a Lead Professional must be identified.
  - Applies to all situations where Trade-offs between disciplines (envelope, mechanical/service water heating, lighting/power) are used
  - Lead Professional must sign and stamp the entire Energy Analysis
    » Can be a registered design professional other than the architect/engineer of record
Updates to a previously approved analysis are required when:

- Design changes are made to one or more NYCECC-regulated elements.
  - Applies even if the project still complies overall
  - Energy Analysis & Supporting Documentation resubmitted prior to construction via PAA

- Design changes result in one or more disciplines failing Prescriptive criteria.
  - Requires whole building Energy Analysis from a Lead Professional
  - Construction may be stopped pending a PAA submission with revised Energy Analysis

- Construction-phase changes made to one or more NYCECC-regulated elements.
  - Applies even if the project still complies overall (exception: lower lighting power densities)
  - A signed and sealed as-built Energy Analysis is required prior to sign-off
    - Can be stamped by separate design professionals, if Prescriptive compliance was achieved
  - Needs to be coordinated with EN2 form signed by the Progress Inspectors
Energy Analysis Updates

4. Submissions & Inspections

When are Energy Analysis updates required?

Updates to a previously approved analysis are required when:

- Design changes are made to one or more NYCECC-regulated elements.
  - Applies even if the project still complies overall
  - Energy Analysis & Supporting Documentation resubmitted prior to construction via PAA

- Design changes result in one or more disciplines failing Prescriptive criteria.
  - Requires whole building Energy Analysis from a Lead Professional
  - Construction may be stopped pending a PAA submission with revised Energy Analysis

- Construction-phase changes made to one or more NYCECC-regulated elements.
  - Applies even if the project still complies overall (exception: lower lighting power densities)
  - A signed and sealed Energy Analysis is required prior to sign-off
  - If no other changes are made after the revised EA is submitted, it suffices, and there is a place in the EN2 form to document this condition.

A signed and sealed Energy Analysis (EA) may be submitted during construction via a Post-Approval Amendment (PAA). This would typically be done to demonstrate that the EA is consistent with construction changes encountered during a job, as verified by the Progress Inspections. If no other changes are made after the revised EA is submitted, it suffices, and there is a place in the EN2 form to document this condition.

An as-built EA is performed if, at the end of construction, the construction is inconsistent with the last-approved EA. At that point the revision is professionally certified; i.e. it is not submitted as a PAA and is not approved by the Department. It is simply filed with the EN2. The revision must be signed and sealed by the original preparer of the EA.
Per 1 RCNY §5000-01

- Supporting Documentation is defined for:
  - Envelope
  - Mechanical / Service Water Heating
  - Electrical (including Lighting)
  - Progress Inspections

 Supporting Documentation is required to:

- Verify the values submitted in the Energy Analysis
- Verify that mandatory requirements of the NYCECC are met
- Provide a listing and description of the applicable progress inspections required based on the scope of work of the project
Examples Provided by Discipline

- Sample Supporting Documentation is provided in each of the following DOB NYCECC Training Modules:
  - Residential
  - Envelope
  - Lighting
  - HVAC 1 & 2

- The Sample Supporting Documentation demonstrates the type of information that should be provided via:
  - Plans, Elevations, Sections, Details
  - Schedules
  - Drawing Notes

- Emphasis is placed on comprehensiveness, coordination, and clarity
Per 1 RCNY §5000-01

- Progress Inspections are defined for both Residential & Commercial structures in the following categories:
  - Envelope Inspections
  - Mechanical and Plumbing Inspections (Residential)
  - Mechanical and Service Water Heating Inspections (Commercial)
  - Electric Power and Lighting Systems
  - Other (Maintenance information, Permanent Certificate for Residential)

Progress Inspections are required to:

- Verify the measures submitted in the Energy Analysis & Supporting Documentation are incorporated into the construction.

Verification

- Through DOB TR8 form and EN2 form
Types

- Visual inspections in most instances
  - Timing and frequency of inspections must be coordinated with contractors

- Testing of some systems required
  - Residential Examples:
    - Whole building air sealing & insulation (blower door testing option)
    - Outdoor air intake & exhaust dampers
    - Programmable thermostats
    - Duct leakage (where air handling equipment or ductwork is in unconditioned space)
  - Commercial Examples:
    - HVAC and service hot water system controls
    - Lighting controls
Progress Inspections - 3

4. Submissions & Inspections

How are Progress Inspections Performed?

Extent

- Per 1 RCNY §101-07, at least 15% of each relevant construction item
  - Per §5000-01, items such as ductwork leakage (residential) or HVAC controls (commercial) require a higher inspection rate (typically 20-25%)
- Per §101-07, not less than one of each relevant construction item
Qualifications

- Defined in 1 RCNY §101-07
  - Primary Inspector or Inspection Supervisor
    - Residential & Commercial:
      Registered Design Professional of Record for the work
    - Residential:
      Registered design professional with min. 5 years experience in Energy Code systems for buildings
    - Commercial:
      Registered design professional with min. 5 years experience in Energy Code systems for buildings and min. 3 years experience for the system type to be inspected
  - Supplemental Inspector
    - Residential & Commercial:
      Under direct supervision of the Inspection Supervisor
    - Residential & Commercial:
      Min. 3 years experience in inspection/construction observation of buildings for Energy Code-regulated systems (commercial inspectors must have experience with commercial buildings)
Qualifications

- Defined in 1 RCNY §101-07
  - Primary Inspector or Inspection Supervisor
    - Residential & Commercial:
      - Registered Design Professional of Record for the work
    - Residential:
      - Registered design professional with min. 5 years experience in Energy Code systems for buildings
    - Commercial:
      - Registered design professional with min. 5 years experience in Energy Code systems for buildings and min. 3 years experience for the system type to be inspected
  - Supplemental Inspector
    - Residential & Commercial:
      - Under direct supervision of the Inspection Supervisor
    - Residential & Commercial:
      - Min. 3 years experience in inspection/construction observation of buildings for Energy Code-regulated systems (commercial inspectors must have experience with commercial buildings)
### 4. Submissions & Inspections

#### Sample Supporting Documentation

<table>
<thead>
<tr>
<th>Inspection/Test</th>
<th>Frequency (minimum)</th>
<th>Reference Standard (See NYCECC Chapter 10) or Other Criteria</th>
<th>NYCECC or Other Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IIA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IIA1</strong> Protection of exposed foundation insulation: Insulation shall be visually inspected to verify proper protection where applied to the exterior of basement or cellar walls, crawl-space walls and/or the perimeter of slab-on-grade floors.</td>
<td>As required during foundation work and prior to backfill</td>
<td>Approved construction documents</td>
<td>303.2.1</td>
</tr>
<tr>
<td><strong>IIA2</strong> Insulation placement and R-values: Installed insulation for each component of the conditioned space envelope and at junctions between components shall be visually inspected to ensure that the R-values are marked, that such R-values conform to the R-values identified in the construction documents and that the insulation is properly installed. Certifications for unmarked insulation shall be similarly visually inspected.</td>
<td>As required to verify continuous enclosure while walls, ceilings and floors are open</td>
<td>Approved construction documents</td>
<td>303.1, 303.1.1, 303.1.2, 502.1, 502.2</td>
</tr>
<tr>
<td><strong>IIA3</strong> Fenestration values and product ratings for U-factors and SHGC values: U-factors and SHGC values of installed fenestration shall be visually inspected for conformance with the U-factors and SHGC values identified in the construction drawings by verifying the manufacturer’s NFRC labels or, where not labeled, using the ratings in NYCECC Tables 102.1.3(1), (2) and (3). Where ASHRAE 90.1 is used, visible light transmittance values shall also be verified.</td>
<td>As required during installation</td>
<td>Approved construction documents; NFRC 100, NFRC 200, Tables 102.1.3</td>
<td>303.1, 303.1.3; 502.3</td>
</tr>
<tr>
<td><strong>IIA4</strong> Fenestration and door assembly product ratings for air leakage: Windows, skylights and sliding or swinging door assemblies, except site- built windows, skylights and/or doors, shall be visually inspected to verify that installed assemblies are listed and labeled by the manufacturer to the referenced standard.</td>
<td>As required during installation</td>
<td>NFRC 400, AAMA/WDMA101/I.S.2, AAMA/WDMA101/I.S.2/ NAFS-02; ASTM E283</td>
<td>502.3</td>
</tr>
<tr>
<td><strong>IIA5</strong> Fenestration areas: Dimensions of windows shall be measured to confirm that they are properly sized.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IIA6</strong> Sealing: Openings and penetrations in the envelope shall be visually inspected to verify that they are properly sealed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>IIA7</strong> Projection factors: Where the Energy Analysis is performed and the result indicates the need for permanently attached shading devices shall be inspected</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**A Progress Inspections Table must be included in the Supporting Documentation drawings, noting all applicable inspections to be performed based on the scope of work, plus Reference Standards and NYCECC Citations.**

The design applicant must also include contract language requiring the contractor to identify time in the construction schedule for the progress inspections.
### Energy Code Progress Inspection

Required for applications where Energy Code Compliance Progress Inspection is marked Yes on TR1.

<table>
<thead>
<tr>
<th>3A</th>
<th>Identification of Requirement</th>
<th>3B</th>
<th>Identification of Responsibilities</th>
<th>3C</th>
<th>Certificate of Complete Inspections / Tests</th>
<th>3D</th>
<th>Withdraw Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N Progress Inspections</td>
<td></td>
<td>Table Reference in 1RCNY §bU00-01(h) (1) and (2)</td>
<td></td>
<td>Initial &amp; Date</td>
<td>Initial &amp; Date</td>
<td>Initial &amp; Date</td>
</tr>
<tr>
<td></td>
<td>Protection of foundation insulation</td>
<td>(IA1), (IIA1)</td>
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<tr>
<td></td>
<td>Insulation placement and R values</td>
<td>(IA2), (IIA2)</td>
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<tr>
<td></td>
<td>Fenestration thermal values and ratings</td>
<td>(IA3), (IIA3)</td>
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<td>Fenestration ratings for air leakage</td>
<td>(IA4), (IIA4)</td>
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<td>Fenestration areas</td>
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<td>Air sealing and insulation — visual</td>
<td>(IA6), (IIA6)</td>
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<td></td>
<td>Air sealing and insulation — testing</td>
<td>(IA7)</td>
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<td>Projection factors</td>
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<tr>
<td></td>
<td>Loading deck weather seals</td>
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<tr>
<td></td>
<td>Vestibules</td>
<td>(IIA9)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Fireplaces</td>
<td>(IB1), (IIB1)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

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2011 NYCECC
July 2011
The applicant (R.A. or P.E.) defines the required progress inspections by checking “Y” or “N” in the left-hand column under section 3 of the TR8 form.

Prior to Permit, the designated Progress Inspector must initial and date each inspection they will be responsible for, and sign/seal under section 5 of the TR8 form. If multiple Progress Inspectors are involved in a project, each one must submit a signed/sealed TR8 for their scope of inspection services.
6 Inspection Applicant’s Certification of Completion

☐ I have completed the items specified herein and certify the following (check one only):

☐ All work performed substantially conforms to approved construction documents and has been performed in accordance with applicable provisions of the New York City Energy Conservation Code and other designated rules and regulations.

☐ All work performed substantially conforms to approved construction documents and has been performed in accordance with applicable provisions of the New York City Energy Conservation Code and other designated rules and regulations, except as indicated in the attached report.

I am aware of the additional sanctions imposed on false filings by §28-211.1.2 of the Administrative Code.

☐ Withdrawal of Applicant: I am withdrawing responsibility for the items of progress inspections and/or tests indicated herein and herewith submit the results or status of the work performed to date.

Name (please print)

Signature ___________________________ Date ___________________________

P.E./R.A. Seal (apply seal, then sign and date over seal)
Upon completion of the applicable inspections, the Progress Inspector initials and dates each inspection performed (column 3C). Any inspections assigned to the Progress Inspector that are not performed are addressed through column 3D (withdraw responsibilities). Final signatures and seals are provided in section 6 of the TR8 form.
Per NYC Administrative Code §28-116.2.3

- A record of all inspections shall be kept by the person performing the inspection.
  - The commissioner can require inspection reports to be filed with the department.
  - Records of inspections shall be maintained for a period of six years after sign-off, or for such other period of time as the commissioner may require.
  - Records of inspections shall be made available to the DOB upon request.

EN2 Form

- This DOB form is signed by the progress inspector, certifying that the values in either the last approved Energy Analysis or the as-built Energy Analysis represent values in the constructed building.

While a specific format is not stated, inspection records can include:
- Logs, reports, meeting minutes
- Photographs
- Annotated Drawings
The Progress Inspectors and design applicants will need to coordinate to ensure that the as-built conditions and approved Energy Analysis are consistent. An as-built Energy Analysis update may be required.
### Resources and Links

#### 6. Resources

The resources below have been referenced in this module.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Link</th>
</tr>
</thead>
</table>
Questions on the NYCECC can be submitted to the DOB at:

**EnergyCode@buildings.nyc.gov**
## Company or Individual | Slide Numbers
---|---
Samantha Modell | 70