CITY OF NEWARK
DELWARE
CITY COUNCIL
PUBLIC HEARING
NOTICE

September 14, 2020 - 7:00 P.M.

Pursuant to Sections 402.2 of the City Charter and Section 32-79 of the Code of the City of Newark, Delaware, notice is hereby given of a public hearing at a regular meeting of the Council to be held virtually via the GoToMeeting platform, on Monday, September 14, 2020 at 7:00 p.m., at which time the Council will consider for Second Reading and Final Passage the following proposed Ordinances:

✓ Bill 20-24 An Ordinance Amending Chapter 7, Building, and Chapter 32, Zoning, Code of the City of Newark, Delaware, By Updating Green Building Code Requirements

Bill 20-25 An Ordinance Amending the Amended Pension Plan for Employees of the City of Newark, Delaware, By Modifying the Benefits Received by Fraternal Order of Police Employees to More Closely Match Those of The State’s County and Municipal Police and Firefighter’s Pension Plan

Due to the COVID-19 State of Emergency, the City is conducting its public meetings online via the GoToMeeting Platform. Information regarding accessing GoToMeeting for the September 14, 2020 Council meeting will be posted as part of the meeting agenda seven days in advance of the meeting at https://newarkde.gov/meetings.

Renee K. Bensley, CMC
City Secretary

Advertised: Newark Post — August 28, 2020
CITY OF NEWARK
DELAWARE

ORDINANCE NO. 20-__

An Ordinance Amending Chapter 7, Building, and Chapter 32, Zoning, Code of the City of Newark, Delaware, By Updating Green Building Code Requirements

THE COUNCIL OF THE CITY OF NEWARK HEREBY ORDAINS:

That Chapter 7, Building, and Chapter 32, Zoning, Code of the City of Newark, Delaware, be hereby amended in the following respect:

AMENDMENT 1: Amend Sec. 7-8, Amendments made to the 2018 International Energy Conservation Code, by adding the underscored text and deleting the stricken text as follows to subsection (7):

"(7) The following additional energy conservation and efficiency standards shall apply to all major subdivisions which include buildings greater than 5,000 square feet or which include three or more proposed dwelling units, as defined in chapter 27, subdivisions, of this Code:

a. These additional energy conservation and efficiency standards shall be based on the practices and procedures established in this section, most recently issued United States Green Building Council’s (USGBC) Leadership in Energy and Environmental Design (LEED) rating system or equivalent standard approved by the planning and development department.

b. Projects shall be reviewed and evaluated and based on points awarded as established herein through the building permit process.

c. Required energy conservation efficiency standards shall be derived from known best management practices and these guidelines, the specifications in the USGBC’s LEED 2009 for New Construction and Major Renovations and LEED 2008 for Homes, as subsequently revised and reissued, or a planning and development department approved alternative, equivalent. Other LEED publications or adopted specifications may also be used as references or guides by the city as part of the energy conservation and efficiency standards review process.

d. Commercial, institutional, high-rise multi-family residential and industrial projects shall be required to earn a minimum of 50 points as specified herein; LEED 2009 for New Construction and
Major Renovations (page numbers below refer to said text; these numbers may change in future editions):

1. **Energy Conservation**: Projects shall earn a minimum of 24 points in this category.

   a. **Envelope**

   i. **EC-1 - High-Performance Windows & Doors** – 3 or 4 points

      Area-weighted average U-value for fenestration is 15% lower than maximum allowed U-factors permitted by IECC table C402.4 – 3 points

      20% lower than maximum allowed U-factors permitted by IECC table C402.4 – 4 points

   ii. **EC-2 - Exterior Projections** – 2 points

      Provide permanent projections to shade at least 90% of the openings on the South, East, and West faces of the building. Projections must have an area-weighted average projection factor (ratio of the projection width to the projection height above the door threshold or windowsill) of not less than 0.5.

   iii. **EC-3 - Automatic Shades** – 1 or 2 points

      Provide automatic shading devices for a minimum of 90% of the building windows that provide a minimum of 90% coverage of the window in the closed position. A manual override must be available to building occupants that opens the shades for a maximum of four (4) hours.

      Interior shades – 1 point
      Exterior shades – 2 points
iv. **EC-4** Higher Insulation, Roof – 1 or 2 points

U-Value Method: Area-weighted U-value for roof assemblies is 10% lower than the maximum allowed U-factor specified in IECC table C402.1.4 -OR-
R-Value Method: Provide roof insulation with an R-value that is a minimum of 10% higher than required by IECC table C402.1.3 – 1 point

OR

U-Value Method: Area-weighted U-value for roof assemblies is 20% lower than the maximum allowed U-factor specified in IECC table C402.1.4 -OR-
R-Value Method: Provide roof insulation with an R-value that is a minimum of 20% higher than required by IECC table C402.1.3 – 2 points

v. **EC-5** Higher Insulation, Walls – 1 or 2 points

U-Value Method: Area-weighted U-value for wall assemblies is 10% lower than maximum allowed U-factor specified in IECC table C402.1.4 -OR-
R-Value Method: Provide the minimum continuous exterior insulation specified by IECC table C402.1.3 and cavity insulation with an R-value that is a minimum of 5% higher than required by IECC table C402.1.3 – 1 point

OR

U-Value Method: Area-weighted U-value for wall assemblies is 20% lower than maximum allowed U-factor specified in IECC table C402.1.4 -OR-
R-Value Method: Provide continuous
exterior insulation which is 5% higher than the minimum specified by IECC table C402.1.3 and cavity insulation with an R-value that is a minimum of 10% higher than required by IECC table C402.1.3 – 2 points

vi. EC-6 Higher Insulation, Floors & Slabs – 1 or 2 points

U-Value Method: Area-weighted U-value for floor assemblies is 10% lower than maximum allowed U-factor from IECC table C402.1.4 - OR -

R-Value Method: Provide insulation that has an R-value 10% higher than the minimum required by IECC table C402.1.3 – 1 point

OR

U-Value Method: Area-weighted U-value for floor assemblies is 20% lower than maximum allowed U-factor from IECC table C402.1.4 - OR -

R-Value Method: Provide insulation that has an R-value 20% higher than the minimum required by IECC table C402.1.3 – 2 points

vii. EC-7 Calculated Thermal Bridging – 3 points

Provide calculations and modeling that includes the impact of thermal bridging elements on the overall envelope performance requirements for each building component (Roofs, Above-Grade Walls, Floors, etc.) and documents that the adjusted building assemblies comply with the maximum U-factor permitted in IECC table C402.1.4.
All structural elements with cross-sectional area greater than four \(4\) square inches that provide a direct, uninsulated path to the building exterior shall be included as separate elements in the area-weighted average calculations of each envelope component or assembly.

Structural elements and building details to be considered in this calculation include, but aren't limited to: floor-to-wall interfaces, wall-to-corner interfaces, floor and slab edges, especially projecting balconies, structural supports, or railings, awnings, shades and other appurtenances.

viii. \textit{EC-8 Reduced Building Envelope Air Leakage} – 3 points

The Energy Recovery Ventilation credit is required for this credit. Measured air leakage of the building at 75 Pascals is no more than 0.40 cfm/ft² of the building’s exterior thermal envelope area.

b. \textit{Mechanical Systems}

i. \textit{EC-9 Energy Recovery Ventilation} – 3 points

Provide an energy-recovery ventilator or a heat-recovery ventilator within the HVAC system sized to meet the recommended air flow rates.

ii. \textit{EC-10 Commissioning of the HVAC systems} – 3 points

HVAC system is commissioned by a third party.

iii. \textit{EC-11 High-Efficiency HVAC Equipment (not including Boilers)} – 3 points
All installed HVAC equipment meets the minimum efficiency requirements of International Green Construction Code Appendix B - Equipment Efficiency Tables.

iv. **EC-12 High-Efficiency Boilers – 2 points**

Provide boilers with a minimum AFUE of 94.5%.

v. **EC-13 High-Efficiency Cooling Towers – 3 points**

All open-circuit cooling towers serving condenser water loops which total 900 gpm or greater have an efficiency at least 80 gpm/hp.

vi. **EC-14 High-Efficiency HVAC Fans – 1 point**

Provide fans for variable air volume systems that use 0.8 watts or less for each cfm of delivered air.

Provide fans for constant volume systems that use 0.65 watts or less for each cfm of delivered air.

vii. **EC-15 No Continuous Fan Operation – 1 point**

Fans in the HVAC system are controlled based on actual loads, occupancy sensors, or occupancy schedule rather than continuous uncontrolled operation.

viii. **EC-16 Reduced Heating and Cooling of Unoccupied Spaces – 3 points**

Provide occupancy sensors and zoning controls that automatically adjust the temperature set point in unoccupied areas.
ix. **EC-17 Reduced Heating and Cooling of Unoccupied Hotel Rooms – 2 points**

For Group R-1 buildings with 50 or more guestrooms, each guestroom shall be provided with controls complying with the provisions of IECC Sections C403.7.6.1 and C403.7.6.2 to provide temperature setpoint and ventilation controls in guestrooms.

c. **Service Water Heating**

i. **EC-18 High-Efficiency Hot Water Heaters – 2 points**

Provide domestic hot-water heating equipment that meets the minimum efficiency requirements of International Green Construction Code Appendix B - Equipment Efficiency Tables.

ii. **EC-19 Reduced Water Supply Lengths – 1 point**

The maximum piping length to the nearest source of heated water for all fixtures is 25% shorter than the maximum permitted distance in IECC table C404.5.1.

iii. **EC-20 On Demand Domestic Hot Water – 2 points**

Provide either point of use water heating or a recirculation pump and piping which is activated by occupancy sensors or light activation.

iv. **EC-21 Preheat Incoming Cold Water – 2 points**

40% of the domestic hot water heating load is met by a waste heat recovery system.
d. **Lighting and Lighting Controls**

i. **EC-22 Efficient Lighting Fixtures**
   **Interior – 1 point**

   Installed lighting power density (W/ft²) for all interior lighting fixtures is at least 10% lower than the maximum allowed lighting power density required by IECC section C405.3.2.

ii. **EC-23 Daylight Responsive Controls – 2 points**

   A minimum of 35% of the building's conditioned floor area is within a daylight zone (as defined by the IECC). Controls are provided to adjust the lighting output within the daylight area to maintain desired illumination levels.

iii. **EC-24 Efficient Lighting Fixtures**
    **Exterior – 1 point**

   Installed lighting power density (W/ft²) for all exterior lighting fixtures is at least 30% lower than the maximum allowed lighting power density required by IECC section C405.4.2.

e. **Electric Systems**

i. **EC-25 Occupancy Controls for Outlets – 1 point**

   50% of all standard (120-volt, 15- or 20-amp circuits) receptacles in all private offices, conference rooms, print & copy rooms, break rooms, classrooms, and individual workstations are controlled by a time clock or occupancy sensor. Controlled receptacles are clearly labeled and at least one controlled receptacle must be within 6 feet of an uncontrolled receptacle.
ii. **EC-26**  *Energy Star Certified Equipment*  
   - Commercial Kitchens – 2 points

   Provide Energy Star certified commercial fryers, dishwashers, steam cookers, compartment steamers, and hot food holding cabinets.

f. **Renewable Energy**

f. **EC-27**  *Provide Future PV Solar Panel Capability – 1 point*

   Provide conduits from roof/attic to electric panels for future connection of photo-voltaic panels and construct roof structures designed to support the potential additional structural load of PV solar panels (cannot be combined with Provide PV Panels credit).

ii. **EC-28**  *Provide PV Solar Panels – up to 10 points*

   First 15 kW of installed capacity – 4 points

   1 point for each additional five (5) kW of installed capacity (maximum six (6) points)

iii. **EC-29**  *Purchase Green Power – 2 points*

   Sign up for Green Power Plan through the City for a minimum of five (5) years.

g. **Energy Conservation Stretch Performance Option – 30 or 40 points**

   This option allows the applicant to substitute documented energy performance that is 20% better than is required by the 2018 International Energy Conservation Code. Projects which opt to use either Stretch Performance Option EC-30 or EC-31 to satisfy the Energy Conservation
category point requirements are still required to earn a minimum of 50 points in total but they shall only be required to earn a minimum of four (4) points in each of the Resource Conservation and Indoor Environmental Quality categories.

1. **EC-30 Certified Performance 20%**
   **Better Than Code – 30 points**
   Using calculations and modeling acceptable to the building official, or their designee, that documents estimated energy usage which is 20% less than the standard reference design building and has been performed by, or under the supervision of, signed and sealed by a State of Delaware licensed design professional.

2. **EC-31 Certified Performance 40%**
   **Better Than Code – 40 points**
   Using calculations and modeling acceptable to the Building Official, or their designee, that documents estimated energy usage which is 40% less than the standard reference design building and has been performed by, or under the supervision of, signed and sealed by a State of Delaware licensed design professional.

2. **Resource Conservation, Efficiency and Features - Projects shall earn a minimum of eight (8) points in this category, unless using Energy Conservation Stretch Performance Option.**

   a. **Conservation and Efficiency**
      
      i. **RC-1 Divert materials away from landfills – 2 or 3 points**
50% of the construction waste, by weight, has been diverted from landfills; 2 points

75% of the construction waste, by weight, has been diverted; 3 points

ii. **RC-2 Donation of Deconstructed Materials to Reseller – up to 5 points**

Donate materials to an approved charitable organization (one that provides building materials or housing).

First $1,000 in value donated – 1 point

1 point for each additional $5,000 in donated value (maximum four (4) points)

iii. **RC-3 Recycled Content Materials – up to 9 points**

Provide building materials which are derived or produced from recycled materials. A product qualifies as meeting the recycled content criteria if it contains a minimum of 25% postconsumer recycled content or 50% preconsumer recycled content. Provide recycled content materials based on percentage of all materials in each category in accordance with the following schedule:

Minimum of 75% of all installed carpeting and flooring – 1 point

Minimum of 90% of all installed decking – 1 point

All installed sheathing – 1 point

Minimum of 90% of all installed siding – 1 point
Minimum of 90% of all installed roofing — 1 point

All acoustic ceiling tiles and a minimum of 50% of all installed ceilings — 1 point

Minimum of 90% of all metal interior framing — 1 point

All concrete used, excluding pavers, pervious concrete and countertops, contains either 30% fly ash or slag and 50% recycled content or reclaimed aggregate, OR 90% recycled content or reclaimed aggregate — 1 point

All cavity insulation — 1 point

iv. **RC-4 Regional Materials — 1 or 2 points**

10% of materials (calculated as a percentage of total cost of materials) were extracted, processed, or manufactured within 500 miles of the project site — 1 point

20% of materials (calculated as a percentage of total cost of materials) — 2 points

v. **RC-5 Rapidly Renewable Materials / Biobased Materials — 1 point**

2.5% of materials (calculated as a percentage of total cost of materials) comply with ASTM Test Method D6866 and were legally harvested.

vi. **RC-6 Certified Wood — 1 point**

50% of the wood products provided (calculated as a percentage of total cost of wood products) are FSC certified.
vii. **RC-7 Durable Exterior Decking – 1 point**

Framing and decking materials are naturally decay-resistant. Not to be combined with RC-3 Recycled Content Materials.

viii. **RC-8 Optimal Value Engineering**

**Framing Techniques – 2 points**

Framing plans use Optimum Value Engineering techniques as defined by the U.S. Department of Energy.

ix. **RC-9 Prefabricated Components – up to 4 points**

90% of the wall assemblies use precut or preassembled components (such as trusses) or panelized assemblies – 2 points

90% of the floor assemblies use precut or preassembled components (such as trusses) or panelized assemblies – 1 point

90% of the roof assemblies use precut or preassembled components (such as trusses) or panelized assemblies – 1 point

x. **RC-10 Engineered Lumber – 1 point**

All joists, beams, girders, headers and rafters greater than eight (8) inches nominal width are engineered lumber.

xi. **RC-11 Water Efficient Landscaping – 2 points**

Either no irrigation is installed OR the landscaping uses native and drought-tolerant plants (as approved by City
Horticulturist) with a subsequent reduction in installed irrigation.

xii. **RC-12 Irrigation Design – 2 points**

The irrigation system is zoned to provide appropriate amounts of water to the different landscape materials, sprinklers are not located where they will spray water onto the building or paved areas, and the irrigation system is controlled by a smart controller that will shut off the irrigation system based on soil moisture.

xiii. **RC-13 Rainwater or Graywater Reuse System – 2 points**

Provide storage for the capture and controlled reuse of rainwater and/or graywater that provides at least 50% of the irrigation demands (system must be designed by a professional certified by the American Rainwater Catchment Systems Association).

xiv. **RC-14 Efficient HVAC Water Use – 1 point**

Chillers and cooling towers do not use once-through cooling with potable water.

xv. **RC-15 Reduced Water Use – 1 point**

Lavatories, shower heads, water closets, and sinks have a maximum flow rate that is 20% less than maximum flow rate in the IPC.

b. **Site Selection and Facilities**

i. **RC-16 Flood Zones – 1 point**

Applicable only to a site that includes an area classified as floodplain. All site
disturbance and development of undeveloped land must be a minimum of five (5) feet of elevation above the 100-year flood elevation.

ii. **RC-17  Protect or Restore Native Plants – 1 point**

Retain a minimum of 20% of the on-site native plants.

iii. **RC-18  Wildlife Habitat – 3 points**

A minimum of 5% of the site is designed, landscaped, and certified as a wildlife habitat.

iv. **RC-19  Increase Tree Cover – up to 5 points**

Plant more trees than required by Chapter 32, Article XXV of the City of Newark Municipal Code. One (1) point for every two (2) additional trees per acre of site for a maximum of five (5) points.

v. **RC-20  Maximize Open Space – 2 points**

Total open space is 10% greater than the minimum required by Code. A minimum of 25% of the open space must be vegetated and not lawn.

vi. **RC-21  Access to Quality Transit – 2 points**

Each functional entry of the project is within 1/4-mile walking distance of an existing or planned bus stop, or rideshare stop OR within 1/2-mile walking distance of an existing commuter rail station. Transit routes serving the stops must have paired service (outbound and inbound) and
service at all the stops in aggregate must provide a minimum of 72 weekday trips and 40 weekend trips.

vii. **RC-22 Bicycle Storage & Shower**

Rooms: Medical and dental offices; Business, governmental and professional offices; Public and private schools — 2 points

Provide two (2) long-term bicycle storage units. Provide an additional unit for every additional ten (10) regular employees or staff or fraction thereof above 40. Provide at least one (1) on-site shower with changing facility for the first five (5) storage units and one (1) additional shower for every seven (7) additional storage units.

viii. **RC-23 Bicycle Storage & Shower**

Rooms: Dwelling: garden apartment, high-rise apartment, or group housing — 1 point

For buildings without individual garages for each dwelling unit: provide one (1) long-term bicycle storage unit for at least 30% of the residents but no fewer than one (1) storage unit for each dwelling unit.

ix. **RC-24 Bicycle Storage & Shower**

Rooms: Retail — 1 point

Provide two (2) long-term bicycle storage units. Provide an additional unit for every additional ten (10) regular employees or fraction thereof above 40. Provide at least one (1) on-site shower with changing facility for the first five (5) storage units and one (1) additional shower for every seven (7) additional storage units.
x. **RC-25  Bicycle Racks – 1 point**

Provide twice as many City Code required bicycle spaces.

xi. **RC-26  Electric Vehicle Charging Facilities – 3 points**

Provide electrical vehicle charging equipment at 2% of all parking spaces but no fewer than two (2). Reserve these spaces for the sole use of plug-in electric vehicles.

xii. **RC-27  Site Infiltration – 5 points**

Design the site to have 100% site infiltration with no storm water entering the receiving system OR make 50% of the total roof surfaces a vegetated roof AND

Ensure that the downstream conveyance system can adequately handle the anticipated storm water from the site. Perform or provide funding for any necessary repairs as directed to the receiving system.

xiii. **RC-28  Site Filtration – 3 points**

Provide water quality treatment via filtration best practices for the design storm event.

xiv. **RC-29  Heat Island Reduction, Nonroof – 1 or 2 points**

Use either permeable paving units or exterior paving units with a minimum Solar Reflectance Index (SRI) of 29 or concrete with a minimum SRI of 35 for the hardscape areas on the site.

50-75% of all hardscape areas – 1 point
More than 75% of all hardscaped areas — 2 points

xv. **RC-30 Heat Island Reduction, Roof** — 2 points

75% of the roof surfaces have a minimum SRI of 64 (for flat roofs) and 25 (for sloped roofs) OR 75% of the roof surfaces are vegetated.

3. **Indoor Environmental Quality** Projects shall earn a minimum of eight (8) points in this category, unless using Energy Conservation Stetch Performance option.

a. **IQ-1 Ventilation Controls for Densely Populated Spaces** — 1 point

Provide Demand Control Ventilation for spaces with an occupant load greater than 25 people / 100 SF designed in compliance with ASHRAE 62.1.

b. **IQ-2 Increased Ventilation** — 1 point

Ensure that mechanically ventilated spaces are getting the minimum outdoor air intake flow rate based on the Ventilation Rate Procedure from ASHRAE 62.1.

c. **IQ-3 Removal of Contaminants** — 2 points

Provide spot exhaust at sources of air contamination (e.g. kitchen and toilet room exhausts) using Energy Star rated fans.

d. **IQ-4 High-Efficiency Air Filtering** — 1 point

Install air filters with a minimum MERV rating of eight (8) or higher.

e. **IQ-5 UV Air Cleaning** — 1 point

Install duct-mounted germicidal UV lights on both the coil and return air duct. Must be combined with IQ-4 High-Efficiency Air Filtering.
f. **IQ-6  Construction Indoor Air Quality Management Plan – 3 points**

During construction perform all of the following:

Meet or exceed the recommended Design Approaches of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction.

Protect absorptive materials stored on site from moisture damage.

Don't operate permanently installed air-handler equipment during construction unless filtration media is in place.

Replace all filtration media immediately prior to occupancy.

Prohibit the use of tobacco products inside the building.

OR

Before Occupancy: Flush the building with at least 14,000 CF of outside air for each square foot of gross floor area.

g. **IQ-7  Low-Emitting Materials – 5 points**

100% of products used within the waterproofing envelope comply with International Green Construction Code section 801.4.2. Applies to all adhesives and sealants; paints and coatings; flooring systems; composite wood; and insulation in ceilings and walls.

h. **IQ-8  Low-Emitting Materials, Furniture – 1 point**

A minimum of 90% of furniture products, by cost, comply with International Green Construction Code section 801.4.2.5.
i. IQ-9  Prefinished Materials – 1 point

A minimum of 90% materials used for trim, millwork and exterior finishes are prefinished.

j. IQ-10  Composite Wood Materials – 1 point

All composite wood products are certified low formaldehyde.

k. IQ-11  Controllability of Systems, Lighting – 1 point

For individual occupant spaces provide lighting controls with a minimum of three lighting levels. Controls must be installed in at least 90% of the individual occupant spaces.

For multi-occupant spaces provide lighting controls with a minimum of three lighting levels. Lighting for any presentation or projection wall must be separately controlled, and controls must have a direct line of sight to the controlled fixtures.

l. IQ-12  Controllability of Systems, Thermal Comfort – 1 point

For non-residential projects: provide individual thermal controls for at least 50% of individual occupant spaces. Provide group thermal controls for all shared multi-occupant spaces.

m. IQ-13  Thermal Comfort, Design – 1 point

Design heating, ventilating, and air-conditioning systems and the building envelope to meet the requirements of ASHRAE Standard 55-2010, Thermal Comfort Conditions for Human Occupancy.

n. IQ-14  Daylight and Views, Daylight – 1 or 2 points

Provide daylight-only illuminance levels within 75% of the regularly occupied floor area.
between 300 lux and 3,000 lux at 9:00 a.m. and 3:00 p.m. on a clear-sky day at the equinox – 1 point

For 90% of the regularly occupied floor area – 2 points

o. IQ-15  Daylight and Views, Views – 1 point

Provide direct line of sight to the outdoors for 75% of all regularly occupied floor area.

4. Alternative Compliance Path

a. AP-1  Established Rating System – 50 points

Projects which meet this requirement shall not be required to comply with subsections 1-3 of this section.

Minimize the environmental impact of the building by incorporating additional sustainable design and construction measures that have tangible and demonstrable benefits beyond Code by submitting certification as LEED Gold or higher LEED designation; Passive House Certified; International Green Building Code Compliant, or designed and built to be a Zero Energy Building as defined by the U.S. Department of Energy.

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e. Residential (non-high-rise) single-family dwelling subdivision projects which include three or more dwelling units shall be required to earn a minimum of 50 points as specified herein: LEED (2008) for Homes, (page numbers below refer to this text; these numbers may change in the future editions):

1. **Energy Conservation** - Projects shall earn a minimum of 24 points in this category.

a. **Envelope**

i. **EC-1 High Performance Windows & Doors** — 2 or 3 points

   Area-weighted average U-value for fenestration is 15% lower than maximum allowed U-factors permitted by IECC table R402.1.4 — 2 points

   20% lower than maximum allowed U-factors permitted by IECC table R402.1.4 — 3 points

ii. **EC-2 High Performance Skylights** — 2 or 3 points

23
Area-weighted average U-value for skylights and tubular daylighting devices is 15% lower than the maximum allowed U-factors permitted by IECC table R402.1.4 – 2 points

20% lower than the maximum allowed U-factors permitted by IECC table R402.1.4 – 3 points

iii. **EC-3  Exterior Projections – 2 points**

Provide permanent projections to shade at least 90% of the openings on the South, East, and West faces of the building. Projections must have an area-weighted average projection factor (ratio of the projection width to the projection height above the door threshold or windowsill) of not less than 0.5.

iv. **EC-4  Higher Insulation, Ceilings – 1 or 2 points**

**U-Value Method:** Area-weighted U-value for ceiling assemblies is 10% lower than the maximum allowed U-factor specified in IECC table R402.1.4 -OR-

**R-Value Method:** Provide ceiling insulation with an R-value that is a minimum of 10% higher than required by IECC table R402.1.2 – 1 point

**OR**

**U-Value Method:** Area-weighted U-value for ceiling assemblies is 20% lower than the maximum allowed U-factor specified in IECC table R402.1.4 -OR-

**R-Value Method:** Provide ceiling insulation with an R-value that is a minimum of 20% higher than required by IECC table R402.1.2 – 2 points
v. **EC-5 Higher Insulation, Walls – 1 or 2 points**

U-Value Method: Area-weighted U-value for wall assemblies is 10% lower than the maximum allowed U-factors specified in IECC table R402.1.4 -OR-

R-Value Method: Provide minimum continuous exterior insulation specified by IECC table R402.1.2 and cavity insulation with an R-value that is a minimum of 5% higher than required by IECC table R402.1.2 – 1 points

OR

U-Value Method: Area-weighted U-value for wall assemblies is 20% lower than maximum allowed U-value specified in IECC table R402.1.4 -OR-

R-Value Method: Provide continuous exterior insulation which is 5% higher than the minimum specified by IECC table R402.1.2 and cavity insulation with an R-value that is a minimum of 10% higher than required by IECC table C402.1.2 – 2 points

vi. **EC-6 Higher Insulation, Floors & Slabs – 1 or 2 points**

U Value method: Area-weighted U-value for floor assemblies is 10% lower than maximum allowed U-value from IECC Table R402.1.4, -OR-

R-Value Method: Provide insulation that has an R-value 10% higher than the minimum required by IECC table R402.1.2 – 1 point

OR

U Value method: Area-weighted U-value for floor assemblies is 20% lower than
maximum allowed U-value from IECC Table R402.1.4. -OR- R-Value Method:
Provide insulation that has an R-value 20% higher than the minimum required by IECC table R402.1.2 – 2 points

vii. **EC-7 Above Grade Mass Wall Systems**
- 2 points

A minimum of 50% of the above grade exterior walls are constructed as mass walls, as defined by the International Residential Code.

viii. **EC-8 Reduced Building Envelope Air Leakage** – 3, 5 or 7 points

When tested in accordance with IECC section R402.4 points shall be awarded as follows based on the documented air leakage testing report. Must be combined with EC-11 Energy Recovery Ventilation.

Measured air changes per hour (ACH) of the building at 50 pascals is 1 or less – 7 points

Measured ACH at 50 pascals is more than 1 and less than or equal to 1.5 – 5 points

Measured ACH at 50 pascals is more than 1.5 and less than or equal to 2 – 3 points

b. **Mechanical Systems**

i. **EC-9 Energy Recovery Ventilation** – 5 points

Provide an energy-recovery ventilator or a heat-recovery ventilator within the HVAC system sized to meet the recommended air flow rates.
ii. **EC-10**  No HVAC Ductwork – Heating – 1 point

Space heating provided by system that does not include air ducts.

iii. **EC-11**  No HVAC Ductwork, Cooling – 1 point

Space cooling provided by system that does not include air ducts.

iv. **EC-12**  Effective Ductwork Location – 3 points

All heating and cooling ducts and mechanical equipment are installed entirely within the thermal envelope and air barrier of the building.

v. **EC-13**  HVAC Zoning – 1 to 3 points

HVAC system is a two-stage or variable-capacity system with no bypass ducts, serving at least two zones in the building.

First two zones – 1 point

1 point for each additional zone (up to a total of four zones) (maximum of 2 points)

vi. **EC-14**  High-Efficiency HVAC Equipment, Boilers, Furnaces and Heat Pumps – up to 5 points

Provide boilers or heat pumps with the following minimum efficiencies:

For central AC units or air source heat pumps:

SEER >= 15 – 1 point

SEER >= 17 – 3 points
SEER $\geq 19 - 5$ points

For gas engine-driven heat pump cooling:

COP $\geq 1.2 \text{ @ } 95$ deg F $- 1$ point

For ground-source heat pumps using an open loop:

EER $\geq 17.8 - 1$ point

EER $\geq 19.4 - 2$ points

For ground-source heat pump using a closed loop:

EER $\geq 15.5 - 1$ point

EER $\geq 17 - 2$ points

For a ground-source heat pump using direct expansion:

EER $\geq 16.5 - 1$ point

EER $\geq 18 - 2$ points

For a natural gas, propane or oil boiler:

AFUE $\geq 87 - 1$ point

AFUE $> 90 - 2$ points

For a natural gas or propane furnace:

AFUE $\geq 92 - 1$ point

AFUE $\geq 94 - 2$ points

vii. EC-15 Radiant Floor Heat $- 2$ points

A minimum of 50% of the habitable space of the building is heated with radiant floor heat.

c. Service Water Heating
i. **EC-16 High-Efficiency Hot Water Heaters – 4 points**

For storage gas water heaters with an input rate less than or equal to 30,000 Btu/h:

EF greater than 0.8 – 1 point

For storage gas water heaters with input rate greater than 30,000 Btu/h or instantaneous gas water heaters with input rate greater than 150,000 Btu/h:

Thermal Efficiency >= .90 – 2 points

Thermal Efficiency >= .95 – 3 points

For electric storage water heaters:

Thermal Efficiency >= 0.95 – 1 point

For electric instantaneous water heaters:

Thermal Efficiency >= 0.97 – 2 points

For heat pump storage water heaters:

EF between 1.5 and 2 – 2 points

EF between 2 and 2.2 – 3 points

EF >= 2.2 – 4 points

ii. **EC-17 Hot Water Pipe Insulation – 1 point**

Provide minimum R-4 pipe insulation on all domestic hot water piping, including sub slab pipes. Insulation on all piping elbows and tees must adequately insulate changes in direction.

iii. **EC-18 On Demand Hot Water Recirculation System – 2 points**
Provide either point of use water heating or a recirculation pump and piping, which is activated by occupancy sensors or lighting activation.

d. **Lighting and Lighting Controls**

i. **EC-19 Efficient Lighting Fixtures**
   **Interior – 1 point**

   All permanently installed lighting fixtures shall contain high efficacy lamps. All lamps over 40 watts shall have an efficiency not less than 70 lumens per watt.

e. **Electric Systems**

i. **EC-20 Energy Star qualified appliances – 1 point**

   All installed appliances are Energy Star rated.

ii. **EC-21 Energy Star qualified ceiling fans – 1 point**

   Energy Star rated ceiling fans installed in all sleeping rooms and primary living areas.

f. **Renewable Energy**

i. **EC-22 Provide Future PV Solar Panel Capability – 1 point**

   Provide conduits from roof/attic to electric panels for future connection of photo-voltaic panels and construct roof structures designed to support the potential additional structural load of PV solar panels (cannot be combined with Provide PV Panels credit).
ii. **EC-23 Provide PV Solar Panels – up to 10 points**

Per each dwelling unit:

First two (2) kW of installed capacity – 4 points

1 point for each additional one (1) kW of installed capacity (maximum six (6) points)

iii. **EC-24 Purchase Green Power – 2 points**

Sign up for Green Power Plan through the City for all dwelling units for a minimum of five (5) years.


Design the building using passive solar design principles, which include an exterior wall with a minimum 30% window area within 30° of true south with a thermal mass which has a darkened surface for absorption and a means to distribute the heat by either convection, conduction and/or air circulation. The collection windows shall be provided with permanent means to be shaded or otherwise protected during the summer months.

g. **Energy Conservation Stretch Performance Option – 30 or 40 points**

This option allows the applicant to substitute documented energy performance that is 20% better than is required by the 2018 International Energy Conservation Code. Projects which opt to use either Stretch Performance Option EC-26 or EC-27 to satisfy the Energy Conservation category point requirements are still required to earn a minimum of 50 points total but they shall
only be required to earn a minimum of four (4) points in each of the Resource Conservation and Indoor Environmental Quality categories.

i. **EC-26 Certified Performance 20%**
   **Better Than Code – 30 points**

   Using calculations and modeling acceptable to the Building Official, or their designee, that documents estimated energy usage which is 20% less than the standard reference design building and has been performed by, or under the supervision of, signed, and sealed by a State of Delaware licensed design professional.

ii. **EC-2 Certified Performance 40%**
   **Better Than Code – 40 points**

   Using calculations and modeling acceptable to the Building Official, or their designee that documents estimated energy usage which is 40% less than the standard reference design building and has been performed by, or under the supervision of, signed, and sealed by a State of Delaware licensed design professional.

2. **Resource Conservation - Projects shall earn a minimum of eight (8) points in this category unless using the Energy Conservation Stretch Performance option.**

   a. **Conservation and Efficiency**

   1. **RC-1 Divert Materials Away From Landfills – 2 or 3 points**

   50% of the construction waste, by weight, has been diverted – 2 points

   75% of the construction waste, by weight, has been diverted – 3 points
2. **RC-2 Donation of Deconstructed Materials – up to 5 points**

Donate materials to an approved charitable organization (one that provides building materials or housing).

First $1,000 in value donated – 1 point

1 point for each additional $5,000 in donated value (maximum four (4) points)

3. **RC-3 Reuse of Existing Building Materials – 1 or 2 points**

A minimum of 5% of the building’s materials (by cost) were reused or salvaged from off-site or on-site – such as structural materials, enclosure materials, and permanently installed elements and materials – 1 point

A minimum of 10% reused or salvaged – 2 points

4. **RC-4 Building Reuse – 1 to 6 points**

200 square feet of floor area reused – 1 point

1 point for each additional 200 square feet of building area reused (maximum five (5) points)

5. **RC-5 Recycled Content Materials – 1 to 6 points**

Provide building materials which are derived or produced from recycled materials. A product qualifies as meeting the recycled content criteria if it contains a minimum of 25% postconsumer recycled content or 50% preconsumer recycled content. Provide
recycled content materials based on percentage of all materials in each category in accordance with the following schedule:

Minimum of 75% of all installed flooring – 1 point

Minimum of 90% of all installed decking – 1 point

All installed sheathing – 1 point

Minimum of 90% of all installed siding – 1 point

Minimum of 90% of all installed roofing – 1 point

All cavity insulation – 1 point

6. **RC-6 Regional Materials – 1 or 2 points**

10% of materials (calculated as a percentage of total cost of materials) were extracted, processed, or manufactured within 500 miles of the project site – 1 points

20% of materials (calculated as a percentage of total cost of materials) – 2 points

7. **RC-7 Certified Wood – 1 point**

50% of the wood products provided (calculated as a percentage of total cost of wood products) are FSC certified.

8. **RC-8 Durable Exterior Decking – 1 point**

Framing and decking materials are naturally decay-resistant. Not to be
combined with RC-5 Recycled Content Materials.

9. **RC-9  Optimal Value Engineering Framing Techniques – 2 points**

   Framing plans use Optimum Value Engineering techniques as defined by the U.S. Department of Energy.

10. **RC-10  Prefabricated Components – 1 to 4 points**

    90% of the wall assemblies use precut or preassembled components (such as trusses) or panelized assemblies – 2 points

    90% of the floor assemblies use precut or preassembled components (such as trusses) or panelized assemblies – 1 point

    90% of the roof assemblies use precut or preassembled components (such as trusses) or panelized assemblies – 1 point

11. **RC-11  Engineered Lumber – 1 point**

    All joists, beams, girders, headers and rafters greater than eight (8) inches nominal are engineered lumber.

12. **RC-12  Improved Moisture Management – 3 points**

    Exterior of building has a rain screen wall system designed with a minimum 1/4" air space outside of the water resistive barrier, vented at the top and bottom of the wall, and integrated with wall flashing.

13. **RC-13  Improved Flashing – 3 points**
Install the following building flashing:

Pan flashing at sills of all exterior windows and doors.

All window and door head and jamb flashing is liquid applied flashing.

Through-wall flashing is installed at all transitions between wall cladding materials or wall construction types.

Seamless, preformed kick out flashing or prefabricated metal with soldered seams is provided at all roof-to-wall intersections.

14. RC-14 Covered Exterior Doors – 1 point

Provide either a storm door or a covering with a minimum projection factor (width to height) of 0.375.

15. RC-15 Roof Water Discharge – 1 point

All roof water is conducted at least five (5) feet from the perimeter of the building and exterior grade is sloped away from building.

16. RC-16 Irrigation Design – 1 or 2 points

Sprinkler nozzles have a max precipitation rate of 1.20 inches per hour and are located where they will not spray water onto the building or paved areas – 1 point

Drip irrigation is installed in all landscape beds – 1 point

17. RC-17 Native Landscaping – 2 points

Provide only approved (per City Horticulturist) native plants.
18. **RC-18 Rainwater or Graywater Reuse System – 1 to 3 points**

Provide storage for the capture and controlled reuse of rainwater and/or graywater.

50% of system demand provided by storage capacity – 1 point

75% of system demand provided by storage capacity – 2 points

100% of system demand provided by storage capacity – 3 points

19. **RC-19 Reduced Water Use – 1 point**

Lavatories, shower heads, toilets, and sinks have a maximum flow rate that is 20% less than the maximum flow rate permitted in the International Residential Code.

**b. Site Selection and Facilities**

1. **RC-20 Flood Zones – 1 point**

Applicable only to a site that includes an area classified as floodplain. All site disturbance and development of undeveloped land must be a minimum of five feet of elevation above the 100-year flood elevation.

2. **RC-21 Reduced Soil Disturbance – 1 point**

Provide an alternative foundation system that reduce site disturbance, such as slab on grade, helical piers, or piers.

3. **RC-22 Minimal Slope Disturbance – 1 point**
No soil disturbance of areas of the site which exceed a 1:10 slope.

4. RC-23 Minimal Soil Disturbance and Erosion – 1 point

Total soil disturbance is less than 125% of the building area.

5. RC-24 Increase Tree Cover – 3 points

Plant twice as many shade trees than required by Chapter 32, Article XXV Landscape Screening and Treatment of the City of Newark Municipal Code.

6. RC-25 Maximize Open Space – 2 points

Total open space is 10% greater than the minimum required by Code. A minimum of 25% of the open space must be vegetated and not lawn.

7. RC-26 Compact Development – 1 to 3 points

Site density (dwelling unit per acre of buildable area) is >= 7 – 1 point

Site density is >= 12 – 2 points

Site density is >= 20 – 3 points

8. RC-27 Compact Homes – 1 to 5 points

One (1) point for every 4% decrease from the Energy Star version 3 reference home size (maximum five (5) points).

9. RC-28 Reduced Parking – 1 point

Provide one (1) dedicated off-street parking space and one (1) shared common off-street parking space per dwelling unit, within 200 feet of the dwelling.
10. **RC-29 Access to Quality Transit – 2 points**

Each functional entry of the project is within 1/4-mile walking distance of an existing or planned bus stop, or rideshare stop OR within 1/2-mile walking distance of an existing commuter rail station. Transit routes serving the stops must have paired service (outbound and inbound) and service at all the stops in aggregate must provide a minimum of 72 weekday trips and 40 weekend trips.

11. **RC-30 Site Infiltration – 3 points**

Design the site to have 100% site infiltration with no storm water entering the receiving system OR make 50% of the total roof surfaces a vegetated roof

AND

Ensure that the downstream conveyance system can adequately handle the anticipated storm water runoff from the site. Perform or provide funding for any necessary repairs as directed to the receiving system.

12. **RC-31 Site Filtration – 3 points**

Provide water quality treatment via filtration best practices for the design storm event.

13. **RC-32 Heat Island Reduction, Nonroof, Shading – 1 or 2 points**

50% - 75% of all hardscape areas are shaded by trees or other plantings, calculated at noon based on 10 years of estimated growth – 1 point
More than 75% of all hardscape areas are shaded by trees or other plantings, calculated at noon based on 10 years of estimated growth – 2 points

14. **RC-33 Heat Island Reduction, Nonroof, Materials – 1 or 2 points**

Use either permeable paving units or exterior paving units with a minimum Solar Reflectance Index (SRI) of 29 or concrete with a minimum SRI of 35 for the hardscape areas on the site.

50-75% of all hardscaped areas – 1 point

More than 75% of all hardscaped areas – 2 points

15. **RC-34 Heat Island Reduction, Roof – 1 or 2 points**

90% of the roof area has a minimum SRI of 78 for roofs flatter than 2:12 or a minimum SRI of 29 for roofs steeper than 2:12 or 90% of roofing products are Energy Star Cool Roof certified products – 1 point

75% of the roof surfaces are vegetated – 2 points

16. **RC-35 Homeowner or Tenant Education – 2 points**

Maintain the performance of the home by providing educational materials for the occupants (i.e., the homeowner or tenant) about the operation and maintenance of the home's efficiency features and equipment with a Handbook which details all features and maintenance requirements.
3. **Indoor Environmental Quality** - Projects shall earn a minimum of eight (8) points in this category unless using the Energy Conservation Stretch Performance option.

   a. **IQ-1  Improved Ventilation – 2 points**
   
   Use EPA Indoor airPLUS standards to design the HVAC system.

   b. **IQ-2  Removal of Contaminants – 2 points**
   
   Provide spot exhaust at sources of contamination using Energy Star rated fans. Provide make up air for hood exhausts greater than 400 CF/min. All exhaust fans in bathrooms with a shower, tub, or spa must be controlled by either an occupancy sensor, an automatic humidistat sensor, a continuously operating exhaust fan, or delay timer that operates the fan for 20 minutes.

   c. **IQ-3  Balanced Heating and Cooling System – 1 point**
   
   Test flow rates within each room using a flow hood per RESNET. Document that flow rates are within 20% +/- of Manual J calculations.

   d. **IQ-4  Combustion Venting for Equipment – 1 point**
   
   Provide a utility space which is sealed smoke-tight from the habitable space of the dwelling for any fuel burning appliances used for heating or water heating.

   e. **IQ-5  Enhanced Garage Pollutant Protection – 1 point**
   
   No ducts are located in garage. Air seal any shared walls between living spaces and garages.

   f. **IQ-6  High-Efficiency Air Filtering – 1 point**
   
   Install air filters with a minimum MERV rating of eight (8) or higher.
g. **IQ-7 UV Air Cleaning – 1 point**

Install duct-mounted germicidal UV lights on both the coil and return air duct. Must be combined with IQ-7 High-Efficiency Air Filtering.

h. **IQ-8 Construction Indoor Air Quality Management Plan – 3 points**

During construction do all of the following:

Meet or exceed the recommended Design Approaches of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction.

Protect absorptive materials stored on site from moisture damage.

Don't operate permanently installed air-handler equipment during construction unless filtration media is in place.

Replace all filtration media immediately prior to occupancy.

Prohibit the use of tobacco products inside the building.

OR

Before Occupancy: Flush the building with at least 14,000 CF of outside air for each square foot of gross floor area.

i. **IQ-9 Low-Emitting Materials – 5 points**

100% of products used within the waterproofing envelope comply with International Green Construction Code section 801.4.2. Applies to all adhesives and sealants; paints and coatings; flooring systems; composite wood; and insulation in ceilings and walls.

j. **IQ-10 Prefinished Materials – 1 point**
A minimum of 90% materials used for trim, millwork and exterior finishes are prefinished.

k. **IQ-11 Composite Wood Materials – 1 point**

All composite wood products are certified low formaldehyde.

l. **IQ-12 Moisture Management – 1 point**

All cold-water pipes located in unconditioned spaces have a minimum of R-4 insulation OR no piping located in unconditioned spaces.

m. **IQ-13 Nontoxic Pest Control – 1 point**

Use features that minimize the need for poisons for control of insects, rodents, and other pests such as physical barriers, treated materials, and inspection zones.

4. **Alternative Compliance Path**

a. **AP-1 Established Rating System – 50 points**

Projects which meet this requirement shall not be required to comply with subsections 1-3 of this section.

Minimize the environmental impact of the home by incorporating additional sustainable design and construction measures that have tangible and demonstrable benefits beyond Code by submitting certification as LEED Residential Gold or higher LEED designation; Passive House Certified; 2015 National Green Building Standard Silver Level, or designed to be a Zero Energy building as defined by the U. S. Department of Energy.

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</table>
f. Unless a waiver is granted for special circumstances of practical difficulties by the planning and development department director through the building permit review process, all interior common area hallways in commercial, institutional and industrial buildings reviewed under LEED these requirements shall be required to include interior lighting occupancy daylight or motion detectors sensors that operate such indoor lighting.

g. Except as otherwise indicated herein, waivers from these requirements shall be approved as per the specifications in Section 112, Board of Building Appeals.

h. This subsection (7) shall not apply to subdivision and/or construction in which building permits have been approved before the adoption of this subsection.”

**AMENDMENT 2:** Amend Sec. 32-97, Purpose, by adding the underscored text and deleting the stricken text as follows to subsection (a)(6):

"(6) Energy conservation by earning an additional 10 points from section 7-8(7) of this code, defined as site and/or construction design that the building department has certified meets or exceeds the 'certified' level as stipulated in the LEED (Leadership in Energy and Environmental Design) United States Green Building Council Program or a comparable building department approved energy conservation program.”

MOTION for Acceptance as First Reading on August 24, 2020

by Council Member Horning.

Second Reading and Final Passage on ______________________, 2020.

VOTE: __ to __.

______________________________
Mayor

Attest:

______________________________
City Secretary

Approved as to Legality & Form:

______________________________
City Solicitor
CITY OF NEWARK
DELWARE

August 17, 2020

TO: Mayor and Members of Council

FROM: Willard F. Hurd, AIA - Planning Commission and Green Building Code Work Group Chair

VIA: Mary Ellen Gray, AICP – Director of Planning and Development
Tom Coleman, PE – City Manager


History

In July and August of 2018, the Planning Commission discussed the limitations of the current amendments to the International Energy Conservation Code (IECC), which were originally enacted in 2008 based on selected credits from the LEED v3 standard. Additionally, projects that were using the conditional Site Plan approval process were proposing LEED v3 Certified compliance, but the Planning Commission was finding that even that level was not pushing the performance of buildings much beyond what was being required by the current edition of the IECC. The Planning Commission opted to form a Work Group to produce updated amendments to the 2018 IECC, which was expected to be adopted soon by the City.

But why adopt amendments to the IECC? Generally, the code is made more stringent each cycle, so just by that we would be improving the general performance of the buildings in Newark every time we adopt the most recent edition. There are several reasons that we are proposing to amend the code to require performance beyond the required minimums. The first and most important reason for us is that we have demonstrated as a City, starting in 2008 when the original amendments were adopted, that we are committed to pushing the requirements for construction to produce gains in energy conservation and to reduce the impact of construction. There is also a state mandate that all new residential construction be zero net energy capable by 2025 and all new commercial construction by 2030. And there is the recently adopted Newark Sustainability Plan that incorporates our work to support the goals related to sustainable design and reduction of energy.

We formed the work group using similar principles to the Parking Subcommittee – selecting
members of groups that are engaged in the process of construction and development in the City.

We wanted to be sure that all of the critical viewpoints were at the table. Therefore, the members are:

- Jeremy Firestone; former Planning Commissioner and member of the Newark Community Sustainability Plan group
- Willard F. Hurd, AIA (chair); Planning Commissioner
- Rob Jadick; Bancroft Construction
- George Irvine; Chair of the Conservation Advisory Commission
- Stacy M. McNatt, PE; Planning Commissioner
- Tim Poole; City Code Enforcement Officer
- Ben Prettyman; Developer and member of the Design Review Committee
- Reid Rowlands; Sustainable Products Supplier and member of the Design Review Committee

Process

Our first meeting was in November 2018. We first laid out our goals and intentions for the process. We knew that the amended code had to be enforceable, clearly written, not require large incremental costs, and encourage an integrated design approach. We met thirteen times over the following year and held one public workshop to which were invited developers and general contractors specifically to get their feedback.

We concluded quickly that our main focus would be on reducing energy use; encouraging use of renewable energy; reducing the use of water and other natural resources; reducing construction waste; and improving indoor environmental quality.

We also started a discussion regarding which projects these revisions should apply to. The current code amendments are currently only applied to commercial projects over 25,000 square feet (SF) and major residential subdivisions of five or more units.

Our next step was to evaluate current green building codes and standards and rating systems to determine if there was something that would suit our needs. We quickly determined that there was not any one standard or system that aligned with our goals - and we were reluctant to require a third-party certification system.

What we did find is that many communities are adopting “stretch” codes that require or encourage performance above the current code. Massachusetts and New York State are two large adopters of stretch codes. The advantage of stretch codes is that as the base code improves, the performance improves too. However, many of these stretch codes require documented performance which adds additional cost to the construction process. We did not want to make it a requirement, so we instead incorporated documented design performance to be an alternate
path to compliance.

We set about developing a new set of credits that would effectively implement the stretch goal of 20% improvement in addition to addressing the areas of focus we had identified initially. We relied on several sources for the concepts that we incorporated into these credits: the International Green Construction Code; LEED v4; ASHRAE 189.1 - Standard for the Design of High Performance Buildings; ASHRAE 700 - the National Green Building Standard for Residential Buildings; as well as concepts from Passive House. Additionally, we started our long discussion around the points—both how many to require and how many to give to each credit—and how to use them to best accomplish our intentions. This also gave us an opportunity to address several issues that we found with the current system by providing opt-out mechanisms, requiring credits from all three of the main categories, expanding the number of available credits, and linking to the conditional Site Plan approval process. We added site credits that we felt were valuable for the City but that typically were not addressed, even by the LEED certified projects, and that also addressed issues we were seeing in redevelopment projects.

While we doubled the required points from 25 to 50, we also expanded the available points from 44 to 162 in the commercial section and from 43 to 173 for the residential. We also lowered the threshold for projects that are required to comply from 25,000 SF to 5,000 SF for commercial and from 5 units to 3 units for residential subdivisions.

The one major question we received from the public workshop regarded how much cost this will add to a project. The State of New York modeled both single family and multi-family buildings and found that the incremental cost was $2,463 for the single family home, with an associated annual energy cost savings of $301; and for multi-family it was $1,488 per unit, with an annual energy cost savings of $167.

Throughout the process of developing the credits we evaluated each one against three filters: effective – will the credit achieve the desired result and can it be evaluated by the Code Enforcement team during permit review or inspection; prudent – is the cost of the credit in line with its effectiveness; and fair – is the credit independent of any one standard and not benefit one group over another.

The credits fall into three main categories:

- **Energy Conservation**
  - Envelope Improvements
  - Equipment Efficiency
  - Lighting and Electrical Efficiency
  - Renewable Energy Generation and Use

- **Resource Conservation**
  - Conservation and Efficiency
• Site Selection and Features

• Indoor Environmental Quality
  • Ventilation
  • Low-Emitting Materials
  • Quality of the Environment

Review Process

The work group presented the proposed amendments to the Conservation Advisory Committee in January and May for their comments. We hosted an invited public workshop in February. In April, the work group presented the amendments to the Planning Commission and received their approval to have them considered by Council. In May, we presented the draft amendments to Council for a preliminary discussion. The work group met in June to review the collected comments. We made some minor revisions and corrections and that revised draft is what we have brought to Council for their approval.

Related Documents

• Proposed Amendments to the 2018 IECC
• Documents and presentation materials from May 4, 2020 City Council presentation
  https://newarkde.gov/DocumentCenter/View/13637/2A

Recommended Motion

I move to approve Bill No. 20-24 as presented.
CITY OF NEWARK
DELAWARE

August 5, 2020

TO: Mayor and Members of Council

FROM: Mary Ellen Gray, Planning and Development Director

RE: ORDINANCE GRANTING THE CITY MANAGER AUTHORITY TO ALLOW OR DENY APPLICATIONS OF FOOD AND DRINK ESTABLISHMENTS TO EXPAND OUTDOOR SEATING AND AMENDING CHAPTER 20A (NOISE) AND CHAPTER 32 (ZONING), CODE OF NEWARK

At their meeting on August 4, 2020, the Planning Commission took the following actions:

MOTION BY WAMPLER, SECONDED BY SILVERMAN THAT THE PLANNING COMMISSION MAKE THE FOLLOWING RECOMMENDATION TO CITY COUNCIL:

THAT CITY COUNCIL APPROVE THE PROPOSED REVISIONS TO CHAPTER 32 AS SHOWN IN THE PLANNING AND DEVELOPMENT DEPARTMENT MEMORANDUM DATED JULY 31, 2020 WHICH INCLUDES FOUR AMENDMENTS AND AS MODIFIED BY THE COMMISSION AT THEIR MEETING ON AUGUST 4, 2020 WITH THE ADDITION OF TWO AMENDMENTS BELOW:

A. THE CODE PROVISIONS INCLUDING THOSE OF CHAPTER 32 SECTION 32-56.4 RESTRICTING EXPANSIONS OF PATIOS INTO ALLEYS AND ONTO NEIGHBORING PROPERTIES TO EXPAND OUTDOOR SEATING FOR SERVING FOOD AND DRINK ARE AMENDED TO ALLOW THE CITY MANAGER TO CONSIDER, GRANT, DENY, OR REVOKE SUCH APPLICATIONS.

B. THE CODE PROVISIONS INCLUDING THOSE OF CHAPTER 22, ARTICLE X, AND CHAPTER 32 SECTIONS 32-56.4 RESTRICTING OPEN CONTAINERS IN PUBLIC SPACES ARE AMENDED TO ALLOW THE CITY MANAGER TO GRANT, DENY, OR REVOKE APPLICATIONS TO EXEMPT EXPANSIONS OF OUTDOOR SEATING FOR SERVING FOOD AND DRINK FOR EMPLOYEES OF THE APPLICANT, THEIR CONTRACTORS, AND PATRONS OF THE APPLICANT.

VOTE: 6-0

AYE: HURD, KADAR, MCNATT, SILVERMAN, STOZEK, WAMPLER
NAY: NONE
VACANT: AT-LARGE
MOTION PASSED

MEG/mv