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 MANHATTAN (1) BRONX (2) BROOKLYN (3) QUEENS (4) STATEN ISLAND (5)

 280 BROADWAY 3RD FLOOR 1932 ARTHUR AVENUE 210 JORALEMON STREET 120-55 QUEENS BLVD. BORO HALL- ST. GEORGE

 New York, NY 10007 BRONX, NY 10457 BROOKLYN, NY 11201 QUEENS, NY 11424 STATEN ISLAND, NY 10301

 **TR8 Technical Report for Energy Code Progress Inspections**

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| **Owner:**    | **Date Report sent to Department of Buildings:**  |
| **Business Name:** | **Date TR8 Report Requested:** |
| **Business Address:** | **Date of Inspection:** |
| **E-mail:** | **Time of Inspection:** |
| **Business Phone:**  | **Weather:** |
|  |  |
| **Inspection Applicant:**   | **Job Application #:**  **Violation #:** |
| **Professional License #:** | **Premises Address:**  |
| **Approved Agency License #:** | **Borough:**   |
| **Business Name:** | **Zoning District:**   |
| **Business Address:** | **Block**: **Lot:**   |
| **E-mail:** | **Applicable Code:** |
| **Business Phone:** | **Application Type:** (NB/A1/A2) |

**General Instructions-**each report shall include:

* Photos date-stamped, labeled, with scale reference for insulation depths:

building site including surroundings sufficient to identify the location

each item inspected

* Signed and sealed certification that the complete ECC Audit Approved and/or PAA Amended and/or Enforcement Accepted documents were on site. Verify with Design Applicant.
* Signed and sealed copy of the **AI1**(s) used to verify most recent approved documents, with job #
* **TR8: Statement of Responsibility for Energy Code Progress Inspections** with both Design Applicant and Inspection Applicant seal and signature and job #(s)
* Include job # on each report section if there is more than one relevant job # for the address (i.e. mechanicals are a different job number from the NB).
* Description of conditions found- HOW do the conditions comply? Provide supporting documentation for all assertions of compliance.
* Deficiencies identified including but not limited to requirements identified in this document
* Additional information needed from contractor, design applicant, or owner
* Inspection Applicant seal and signature on each section
* Signed and sealed Professional Statement: “To the best of my knowledge, belief, and professional judgement, all as-built work complies with the NYCECC except as noted in the attached report.”

Attach this page to Reports written in the format that follows. Fill in the following forms and attach supporting documentation or follow the same format with supporting documentation in the body of the report.

Address all applicable sections and questions. If not applicable, give a reason.

Delete inspections not relevant to this job per approved TR8 Statement of Responsibility.

Refer to Table II for applicable code sections.

Send completed Reports to: Tinspections2@buildings.nyc.gov

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Per **1 RCNY §5000-01 (h)** “The following progress inspections and/or testing set forth in Tables I and II shall be required when applicable to the scope of work and shall be identified/described in the supporting documentation and included on the drawings submitted to the Department. Energy Code sections cited in Tables I and II of this section shall be understood to include the section, all subsections, all tables and, when ASHRAE 90.1 is used, appendices related to the cited Energy Code section.”

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| **IIA Envelope Inspections** |
| *ID* | *Inspection* | *Verification* | *Code section(s) and/or Table(s) referenced and/or Reference Standard* | *Drawing pages referenced**with Dates* |
| IIA1 | Protection of exposed foundation insulation | Was exterior foundation insulation installed?If so, is any insulation exposed above grade at any point along the building perimeter? Where?If so, is protective covering installed? What is is?Describe what and how compliance was demonstrated.Supporting photo #s: |   |  |
| IIA2 | Insulation placement and R-values | Are R-values marked on all installed insulation products or product certification for unmarked products provided? Indicate all R-values found. Do all R-values conform to the approved construction documents for all envelope conditions including but not limited to:RoofsWallsfoundations slab-on-grade slab edges including at cellar areawaysbalcony thermal breakswalls and ceilings of the gas meter room and/or mechanical equipment rooms that receive outside airIs compliant insulation installed under or behind all radiant heating panels or floors?Is all insulation installed according to manufacturer’s instructions? |  |  |
| IIA3 | Fenestration U-factor and product ratings | Do window and door NFRC labels, including gas meter room and /or equipment room that receives outside air, indicate UNIT U-factor and, if applicable, SHGC, VT, VT/SHGC ratings equal or better than those indicated in the ECC Analysis? Indicate all values found for each unit type. |  |  |
| IIA4 | Fenestration air leakage | Do window and door NFRC labels indicate air infiltration rates in compliance with applicable code sections? Indicate all values found for each unit type.Do curtain wall, storefront glazing, and revolving door testing reports indicate that the installed assembly complies with applicable code sections? Indicate all values found for each unit type. |  |  |
| IIA5 | Fenestration areas | Do dimensions of windows, doors, and skylights conform to the approved schedules and ECC Analysis? |  |  |
| IIA6 | Air sealing and insulation- visual inspection | Is a compliant air barrier installed across the entire building envelope including the walls and ceiling of gas meter room and mechanical room(s) that receive outside air?Are all openings and penetrations sealed so as to form an air-tight enclosure?Do all materials and/or assemblies meet the testing requirements of their respective standards ORhas building and/or assembly testing been observed and verified to be in accordance with the standard cited in the approved construction documents? |  |  |
| IIA7 | Air sealing and insulation testing |  What testing standard and/or method was used?If the building is 50k SF or greater, was testing performed according to the approved Air Barrier Continuity Plan?Name the independent third-party that performed the testing. |  |  |
| IIA8 | Loading dock weatherseals | Are cargo doors and loading dock doors equipped with weatherseals to restrict infiltration when vehicles are parked in the doorway? |  |  |
| IIA9 | Vestibules | What is the building height?Are vestibules provided as indicated on the approved plans at swinging doors (without air curtains ) intended to be used by the public for spaces 3k SF or greater in buildings less than 75’ in height and/or for spaces 1k SF or greater for buildings 75’ in height or greater?Are self-closing devices installed on vestibule doors?Does vestibule layout allow passing through the vestibule without interior and exterior doors being open at the same time? |  |  |
| 1. **Energy Analysis of Constructed Conditions.** In accordance with Section 28-104.3 of the Administrative Code and Section ECC 103.4, if constructed work differs from the last-approved full energy analysis, an as-built energy analysis shall be submitted to the Department, listing the actual values used in the building for all applicable Energy Code-related items and demonstrating that the building complies with the Energy Code. Such energy analysis shall be signed and sealed by a registered design professional. The progress inspector shall certify that to the best of his or her knowledge and belief the building as built complies with such signed and sealed energy analysis and construction drawings for energy code compliance; where no trade-offs have been used among disciplines, more than one registered design professional may sign and seal the elements of the energy analysis. The energy analysis shall be approved or accepted by the Department prior to sign-off.

**ADDITIONAL COMMENTS****Applicant signature/seal:** |
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| **IIB Mechanical and Service Water Heating Inspections** |
| IIB1 | Fireplaces | Do fireplace units have tight-fitting doors with the applicable UL label? |  |  |
| IIB2 | Shutoff dampers | Do stair enclosure and elevator shaft vents have Class I mechanical dampers?Do other air intake and exhaust openings have gravity dampers for 300 CFM or less and Class I mechanical dampers for openings fans/vents greater than 300 CFM as indicated on the approved documents?Does the manufacturer’s literature indicate that the product has been tested to meet the applicable standards? |  |  |
| IIB3 | HVAC-R and service water heating equipment | **HVAC**Do the output capacities and efficiencies of installed heating and cooling equipment match the approved equipment schedules and the Analysis? Provide evidence of verification method (visual or review of manufacturer’s data).Does the quantity and size of installed indoor cooling units match the schedules and floor plans?Is the total installed building indoor cooling capacity of air handling or fan coil units without economizers < 480kBTUh/20% of total capacity (2011 NYCECC) or 300kBTUh/20% of total capacity (2016 NYCECC)?Are economizers installed on all cooling units > 54 kBTUh (2011 and 2014 NYCECC) /or water economizers installed in compliance with Table C403.3.1 (2016 NYCECC)?**SERVICE WATER**Do the output capacities and efficiencies of installed hot water heating equipment match the approved schedules and the Analysis? Provide evidence of verification method (visual or review of manufacturer’s data)Does the maximum hot water supply pipe length from the nearest source of heated water (hot water heater, circulating system piping, or heat trace system) comply with the maximum permitted pipe length as indicated in the Analysis?ORIs the water volume in the piping from the nearest source of heated water to the termination of the fixture supply pipe consistent with the maximum volume as indicated in the Analysis? How was the volume verified?Does a pool or permanent spa have controls as required in the applicable code sections? |  |  |
| IIB4 | HVAC-R and service water heating equipment controls | What % of each type of required controls and economizers has been verified?Was verification performed by visual inspection **and** testing for functionality and proper operation? Describe testing method.List all controls verified or note why not applicable:ThermostatOff-hourZonesFreeze protection/Snow-and-ice-melt systemVentilation system including demand-controlled ventilation and fan controlsEnergy recovery systemCommercial kitchen/Lab exhaust systemFan systems serving single and multiple zonesOutdoor heating systemsHVAC control in hotel/motel guest roomsAir/Water economizers & controlsBoiler turndownHydronic variable flowChiller IsolationBoiler IsolationTemperature reset controlsHydronic heat pump controlsWater-cooled AC controlsHeat rejection systemsHot gas bypass limitationRefrigeration systemsDoor switchesComputer room systemsService water heating systemsPool heater and time switches |  |  |
|   |  | Are there systems whose complete operation cannot be demonstrated due to prevailing weather conditions?Provide a note certifying that a supplemental inspection will be performed during the next immediate time period where conditions permit complete verification and supplemental report will be submitted at that time per Table II instructions. |  |  |
| IIB5 | HVAC-R insulation and sealing |  Does duct and HVAC system piping insulation comply with the approved mechanical notes and the Analysis? Note what values were found.Were duct seams and connections visually inspected and found to have proper sealing per applicable code sections? |  |  |
| IIB6 | Duct leakage testing | What is the static pressure of the installed ducts?Has at least 25% of duct area with static pressures in excess of 3 inches w.g. (747 Pa) been tested to verify that actual air leakage is below allowable amounts per relevant code section? |  |  |
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| **Electrical Power and Lighting Systems** |
| IIC1 | Electrical energy consumption | Does the number of meters for dwelling units and residential common areas match the number of relevant spaces?What is the gross SF of the building?2016 NYCECC only:In buildings > 25K SF are tenant spaces > 5k SF separately metered?2016 NYCECC Appendix CA only: In buildings 25K SF+ with tenant spaces 10k SF+ or residential common areas 10k SF+, are HVAC, interior lighting, exterior lighting and receptacle circuits metered separately? |  | *.* |
| IIC2 | Lighting in dwelling units | What % of lamps in permanently installed fixtures is high-efficacy per the NYCECC DEFINITIONS? Balcony lighting that is controlled from within the apartment is counted with the dwelling unit fixtures.Provide the type of lamp or the lumens/watt for each lamp type found. |  |  |
| IIC3 | Interior lighting power |  Does the quantity and wattage of interior fixtures in non-dwelling unit spaces match the lighting plans and the Analysis?If at least 75% of the lamps are not high-efficacy, are the dwelling unit fixtures included in the total LPD analysis? |  |  |
| IIC4 | Exterior lighting power | Does the quantity and wattage of exterior fixtures in non-dwelling unit spaces match the lighting plans and the Analysis? |  |  |
| IIC5 | Lighting controls | If at least 75% of the lamps are not high-efficacy, do the dwelling unit fixtures have all relevant controls?Have all applicable controls been installed in all non-dwelling unit spaces as indicated on the approved lighting plans and/or lighting controls schedule?List all relevant spaces and the controls installed including:occupant sensorsmanual interior lighting controlslight-reduction controlsautomatic lighting shut-offdaylight zone controlssleeping unit (hotel/motel) controlsexterior lighting controls |  |  |
|  |   | Were all installed controls tested for functionality and proper operation?Describe the functions and operation of each control as verified. |  |  |
| IIC6 | Electric motors (including but not limited to fan motors) |  For jobs filed under the NYCECC, do all motors 5 HP+ comply with the relevant code sections for that motor type/capacity? Identify relevant motors and code requirements.For jobs filed under ASHRAE 90.1 as amended by NYC, do all motors 1 HP+ comply with the relevant code sections for that motor type/capacity? Identify relevant motors and code requirements. |  |  *.* |
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| **IID Other** |
| IID1 | Maintenance Information | Have maintenance manuals been provided for:mechanical equipment ?service water (hot water heating) equipment ?electrical equipment ?other equipment requiring preventive maintenance ?Are they applicable to the equipment and systems installed?Have all equipment labels been inspected for accuracy and completeness? |  |  |

 Per RCNY 5000-01:

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