



CITY OF PARK RIDGE

505 BUTLER PLACE
PARK RIDGE, IL 60068
TEL: 847/ 318-5291
FAX: 847/ 318-6411
TDD: 847/ 318-5252
URL: <http://www.parkridge.us>

DEPARTMENT OF COMMUNITY PRESERVATION AND DEVELOPMENT
BUILDING SAFETY DIVISION

This handout is for general information purposes only, and is not a substitute for the full code text. If discrepancies arise, the code shall govern.

Residential Energy Conservation Guidelines

Details:

The State of Illinois had passed the Energy Efficiency Building Act (HB 3987 & SB 3724) which effected both residential and commercial, involving both remodeling and new construction. The Act adopted the **2015 International Energy Conservation Code** published by the International Code Council.

Climate Zone:

The established climate zone is ZONE 5

Submittal:

Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment as herein governed. Details shall include, but are not limited to, the following as applicable:

- The building's thermal envelope shall be represented on the construction drawings.
- Submit a copy of the approved passing Res-Check Certificate. Provide a signed and stamped copy from the design professional to ensure that the structure complies with the International Energy Code. Refer to www.energy.gov

Air Leakage 2015 International Energy Conservation Code Section R402.4 shall be documented on the plans:

- "The registered design professional or contractor shall provide a whole-house air leakage test resulting in a leakage rate less than 3 air changes per hour. The written test report shall be signed and submitted prior to occupancy approval."
- Every occupied space shall be ventilated by natural means in accordance with Section IMC 402 or by mechanical means in accordance with Section IMC 403. Where the air infiltration rate in a dwelling unit is less than 5 air changes per hour when tested with a blower door at a pressure of 0.2-inch water column (50 Pa) in accordance with Section R402.4.1.2 of the International Energy Conservation Code, the dwelling unit shall be ventilated by mechanical means in accordance with Section 403.

Equipment Sizing:

- Provide a copy of the heating and cooling sizing in accordance with ACCA Manual S and Building loads calculated in accordance with ACCA Manual J. The written test report shall be signed and submitted prior to mechanical installation pending approval.

Insulation Details:

- Provide Insulation material and their R-Values,
- Provide: Fenestration U-factors,
- Provide one copy of: SHGC's area-weighted U-factor,

- Provide one copy of: SHGC calculations

Mechanical system Design:

- Provide: mechanical and service water heating systems & eq. Types, sizes, & efficiencies
- Provide: Economizer descriptions
- Provide equipment and system controls
- Provide fan motor horsepower (h.p)

Duct Sealing/Pipe insulation detail:

- Provide: Duct and pipe insulation size and location (Heated water pipes 3/4" inch and larger shall be insulated to a minimum of R-3)

Lighting Fixtures:

- All recessed lighting being installed shall be IC rated and must meet the 2015 International Energy Conservation Code.
- 75% of all new lighting must be energy efficient and meet the 2015 International Energy Conservation Code.
-

Unless performance-based, construction shall follow the prescriptive:

- Ceilings shall have an R-49 insulation value.
- Windows shall have an U.32 insulation value.
- Slabs shall have an R10, 2ft insulation value.
- Crawlspace shall have an R-15/19 insulation value.
- Floors shall have an R-49 insulation value.
- Walls shall have an R-20 or -13 continuous on the interior or exterior with a plus R-5 continuous on the exterior or interior of the home.
- Basement walls shall have an R-15 continuous insulation on the interior or exterior of the home or an R-19 cavity insulation value.
- Ducts shall be insulated to a minimum of R-8.

Fireplaces

- Wood-burning fireplaces shall have tight fitting air dampers. Where using tight-fitting doors on masonry fireplaces, the doors shall be listed and labeled in accordance with UL 907.
- On factory-built fireplaces gasketed doors are required and shall be listed and labeled in accordance with UL 127.
- Return / combustible air is required and located within 10' of the firebox.

Air Leakage:

Document on the plans:

- "The registered design professional or contractor shall provide a whole-house air leakage test resulting in a leakage rate less than 3 air changes per hour. The written test report shall be signed and submitted prior to occupancy approval."
- Provide confirmation that outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is no working.

System Controls:

- Submit details of the thermostatic controls. A programmable thermostat is required.
- Duct testing is required if any ducts are not located entirely within the building thermal envelope.

Document on the plans:

- "An approved party, independent from the installer of the insulation shall inspect the air barrier and insulation. The document shall provide a duct air leakage test resulting in a leakage rate less than 4 cfm per 100 sf.... The written test report shall be signed and submitted prior to occupancy approval.
- Provide duct sealant (welds and/or spray foam)
- Heated water pipes shall be insulated.
- Provide the proposed R-value based upon pipe sizing.
- A Circulating water system shall have an on/off switch.

Document on the plans:

- “The insulation installer shall sign, date, and post the certificate listing the predominant insulation value in a conspicuous location in the attic. Blown or sprayed roof/ceiling insulation thickness shall be identified in written inches, affixed to the truss or joists every 300 feet for inspection. This shall be posted prior to the insulation inspection.”
- “The registered design professional or contractor shall post on the electric distribution panel a permanent certificate. The certificate shall list the predominant insulation value, each piece of the building thermal envelope, R-values of insulation installed, U-factors of the windows, R-values of ducts in unconditioned spaces, and types and efficiencies of heating cooling and water heating equipment. (R303.1.1 & R401.3) This shall be posted prior to the insulation inspection.”
- Simulated Performance alternatives are acceptable, review section R405 and submit necessary information.

Contact the City of Park Ridge upon completion for all rough and final inspections at 847-318-5291.

Review the City Ordinances at www.parkridge.us

To purchase code books, contact ICC at: 800-214-4321 / www.intlcode.org

Construction Documents (approved SITE copies) shall be available at all times at the job site. Any alterations to the approved SITE copies must be submitted to the City of Park Ridge in triplicate for review and approval.

CALL JULIE BEFORE YOU DIG....It's FREE - nationwide number 8 - 1 - 1