



Seth R Sommer, CBCO

Code Official

Construction & Development Services



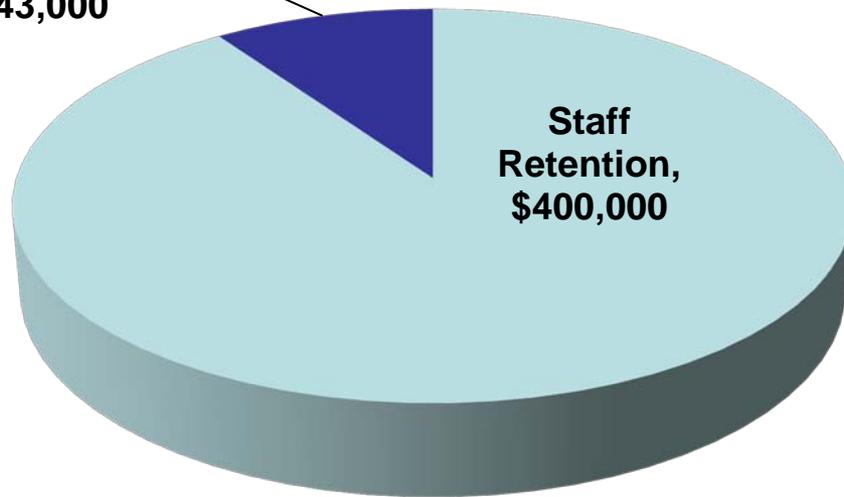
Proposed Sched.

	2009 Q4	2010 Q1	2010 Q2	2010 Q3	2010 Q4	2011 Q1	2011 Q2	2011 Q3	2011 Q4
Program Areas									
Energy Code Adoption									
Training & Outreach									
Plan Review									
Building Inspection									
Energy Documentation									
Specific Activities									
Energy Code Adoption		Committees	Committees						
			Ordinance						
Training & Outreach	Webinars	ICC Training	In House Training	Testing & Certs	Testing & Certs				
			Community Training						
Plan Review	BMEP	BMEP	BMEP	BMEP	BMEP	BMEP	BMEP	BMEP	BMEP
Building Inspection	BMEP	BMEP	BMEP	BMEP	BMEP	BMEP	BMEP	BMEP	BMEP
Energy Documentation	COMcheck	COMcheck	COMcheck	COMcheck	COMcheck	COMcheck	COMcheck	COMcheck	COMcheck
	Single Family	Single Family	Single Family	Single Family	Single Family	Single Family	Single Family	Single Family	Single Family
		Inspection Tags	Inspection Tags	Inspection Tags	Inspection Tags	Inspection Tags	Inspection Tags	Inspection Tags	Inspection Tags

Funding

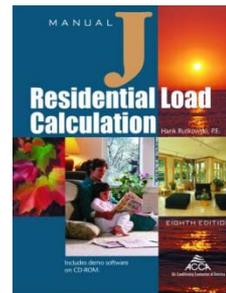
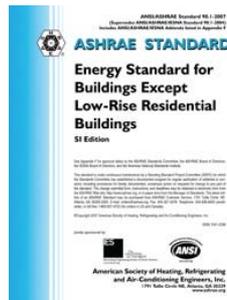
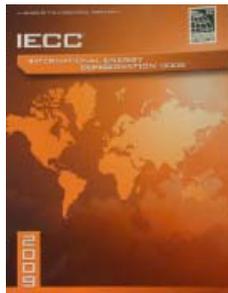
Materials,
Training &
Other,
\$43,000

Grant Allocations

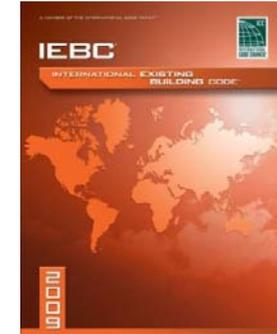
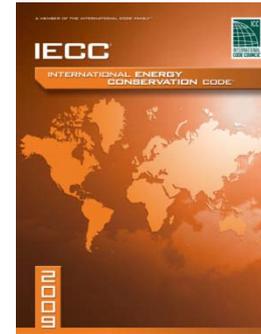


Funding used for the following:

- Staff retention - Major component because without staff, this program could not be implemented or continue to be run successfully
- ICC Materials such as:
 - Code Books
 - Study Guides
 - Inspection certificates
 - Inspection guides
 - Code Commentary
- ASHRAE guides
- Equipment sizing manuals
- And other reference material to help train our staff and aid in educating the public



Code Adoption

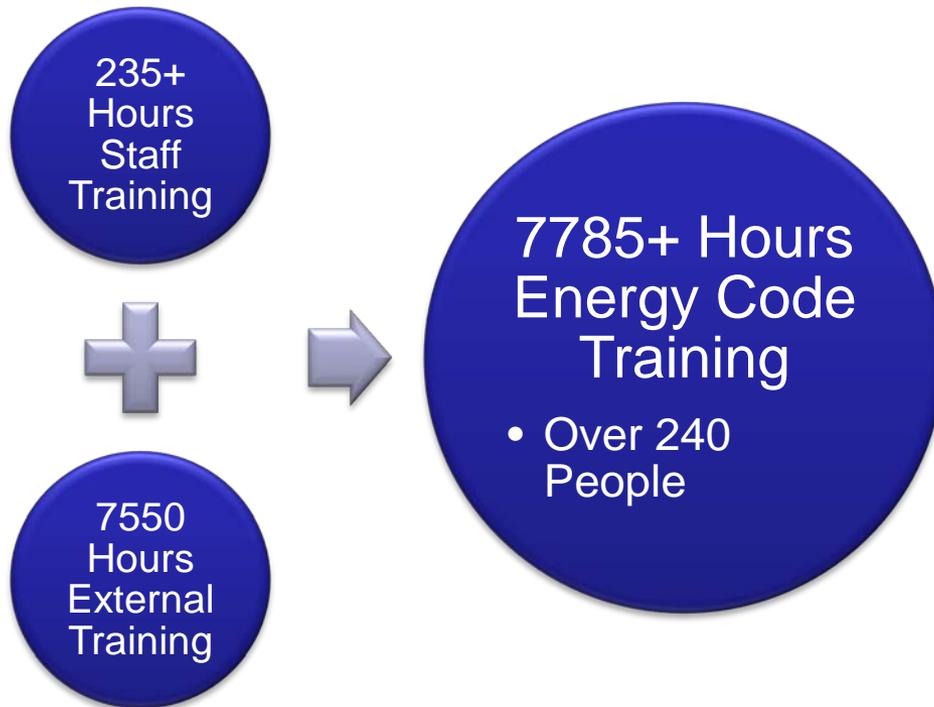


Code Adoption Process

- City of Rockford Adopted 2009 I-Codes – November of 2010
- State Adopted the 2009 IECC for Residential Buildings which took effect in spring of 2010, Commercial was adopted prior
- City of Rockford adopted for the first time ever the International Existing Building Code
 - City has a large stock of existing buildings
 - It is more “green” to reuse an existing building that to develop a green field



Training



Internal & External Training from several sources

- Online Webinars by DOE
- SEDAC – Department of IL DCEO
- ICC Seminars – City of Rockford Co-Sponsor with IL DCEO
- Online Practice Exams thru ICC
- Mechanical & Energy Code Class by ICC
- ICC Certifications obtained by staff

Documentation

- Developed Energy Compliance Checklist for Residential Construction
 - Makes Showing Code Compliance Easy & Simple
 - Excellent Feedback
- Requiring Information with Initial Building Permit Submittal for Residential Construction



Project Title: Lot 206 Linden Point

Address: 206 Linden Point
 Location: Rockford, Illinois
 Construction Type: Single Family
 Heating Degree Days: 5345
 Climate Zone: 5A

Contributor: [Name]

Design/Contributor: [Name]

Compliance: Passes using UA trade-off

Compliance: 2.7% Better Than Code Maximum UA: 260 Year UA: 260

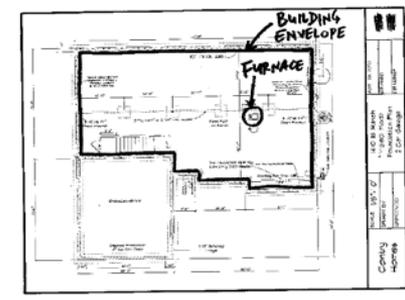
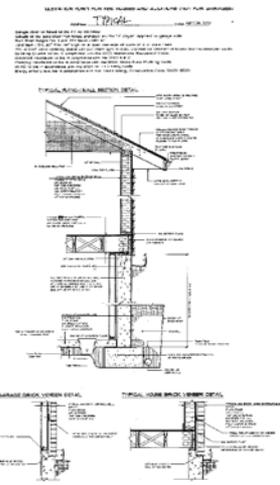
Year UA: 260

Assembly	Area of Envelope	U-Value	Conductance	Cost	Weight
Ceiling 1: Flat Ceiling on Rafter Truss	1537	0.0	0.0		
Wall 1: Wood Frame, 3/4" Insulation	645	0.8	0.8		
Window 1: Vinyl Frame Double Pane with Low-E	145			0.300	
Door 1: Solid	45			0.100	
Door 2: Glass	40			0.100	
Basement Wall 1: 8" Solid Concrete or Masonry	100	1.0	1.0		
Basement Floor 1: 4" Solid Concrete or Masonry	100	0.0	0.0		
Basement Floor 2: 2" Solid Concrete or Masonry	100	0.0	0.0		
Basement Floor 3: 4" Solid Concrete or Masonry	100	0.0	0.0		
Basement Floor 4: 2" Solid Concrete or Masonry	100	0.0	0.0		

Compliance Statement: The proposed building energy envelope is consistent with the building plans, specifications, calculations submitted with the permit application. The proposed building has been designed to meet the 2009 IECC (with REScheck version 4.3.1) and is exempt with the exception requirements listed in the REScheck report. Credits:

Name: [Name] Title: [Title] Signature: [Signature] Date: [Date]

Project Title: Lot 206 Linden Point
 Date Reported: C:\Users\Rock\Documents\206 L.P.



Energy Code Checklist for Residential Construction

(Required for all New Residential buildings, Additions and other residential building Permits as Applicable)

The State of Illinois amended the Energy Efficient Building Act to include residential buildings in Illinois. This law requires the 2009 International Energy Conservation Code (IECC) be the energy code for all residential construction in Illinois. The code sections listed are from Chapter 4 in the 2009 IECC.

Project Address	Permit #
Owner/Agent	Checked by
Phone #	Date
Project Type: <input type="checkbox"/> New Building <input type="checkbox"/> Addition <input type="checkbox"/> Renovation	Method
(Check One)	(Staff use only)

Required Documentation with Permit Submittal:

- Energy Compliance Documentation – Choose ONE method. All methods must meet mandatory requirements.
 - Prescriptive** (402.1 through 402.3, 403.2.1 & 404.1 & mandatory requirements) - USE THIS FORM (# 1.2,3,4,5,6)
 - Trade Off** (402.1 through 402.3, 403.2.1 & 404.1 & mandatory requirements) - USE THIS FORM (# 1.2,3,4,6) and attach documentation to show compliance (i.e. REScheck). REScheck must include compliance form, inspection checklist and certificate. www.enerecodes.org/REScheck (it's free & easy!).
 - Performance** (405 & mandatory requirements) - USE THIS FORM (#1.2,3,4) and attach documentation to show compliance. Documentation must include standard reference design and proposed design.
- Mandatory Requirements – All projects must meet the mandatory requirements of the IECC (401, 402.4, 402.5, 403.1, 403.2.2, 403.2.3, & 403.3 through 403.9). **COMPLETE ALL ITEMS (a through q)**

Mandatory Requirements	Compliance
a) Building Thermal Envelope (402.4.1) Seal building envelope from air infiltration	<input type="checkbox"/> Will Comply
b) Air Sealing and Insulation (402.4.2) Verify sealing and insulation-choose one method	<input type="checkbox"/> Blower Door <input type="checkbox"/> Visual Insp.
c) Fireplaces (402.4.3) Wood-burning have gasketed doors and outdoor combustion air	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
d) Fenestration Air Leakage (402.4.4) Windows, sliding glass doors, skylights	<input type="checkbox"/> ≤ 0.3 cfm/sf
e) Fenestration Air Leakage (402.4.4) Swinging doors	<input type="checkbox"/> ≤ 0.5 cfm/sf
f) Recessed Lighting (402.4.5) IC-rated and air tight when in thermal envelope	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
g) Heating/Cooling System Controls (403.1) Programmable thermostat for furnace	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
h) Duct Sealing (403.2) All ducts sealed with approved material	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
i) Duct Tightness Testing (403.2.2) Required if furnace/duct is outside of thermal envelope	<input type="checkbox"/> Test 1 <input type="checkbox"/> Test 2 <input type="checkbox"/> N/A
j) Building Cavities (403.2.3) Building framing cavities shall not be used as supply ducts	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
k) Mechanical System Piping Insulation (403.3) R-3 minimum for > 105°F or < 55°F	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
l) Circulating Hot Water System (403.4) Piping insulated R-2 min. and on/off switch	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
m) Mechanical Ventilation (403.5) Outdoor air intakes/exhaust require dampers	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
n) Equipment Sizing (403.6) Heating/Cooling equip. sized per M1401.3 of IRC	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
o) Systems Serving Multiple Dwelling Units (403.7) Shall comply with 503 & 504 (comm.)	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
p) Snow Melt System Controls (403.8) Automatic Shutoff	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
q) Pools (403.9) Pool heaters, Time Switches, Pool Covers	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A

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- Building Cross Section – Required for all new buildings and additions. Additional documents may be required by the Building Official. Minimum (1) section required. For interior alterations include documents to illustrate code compliance.
- Floor Plan – Required for all new buildings and additions. Floor plan must indicate thermal envelope, conditioned/unconditioned spaces and heating system location.
- Prescriptive Requirements – COMPLETE THIS TABLE, if prescriptive method is chosen.

Building Components	Prescriptive Standard	Actual Value	Remarks
Insulation (402.2) Prescriptive Standard is Minimum R-Value			
Ceilings with Attic Spaces (402.2.1)	R-38		R-38 for standard truss, can be reduced to R-30 with raised/heat/energy truss
Ceilings without Attic Spaces (402.2.2)	R-30		Limited to 50% of OR 20% of the total insulated ceiling area, whichever is less
Wood Frame Wall	R-20 or R-13+5		R-20 for interior cavity or R-13 for interior cavity plus R-5 insulated sheathing
Floors Over Unconditioned Space (402.2.6)	R-30		Floor insulation shall maintain permanent contact with subfloor decking
Basement Walls (402.2.7)	R-10 or R-13		R-10 continuous insulation on the interior or exterior or R-13 for interior wall cavity
Slab-on-Grade Floors (402.2.8)	R-10		Insulation depth shall be the depth of the footing
Crawl Space Walls (402.2.9)	R-10 or R-13		R-10 continuous insulation on the interior or exterior or R-13 for interior wall cavity
Fenestrations (402.3) Prescriptive Standard is Maximum U-Factor			
Windows, Sliding Glass Doors, and Swinging Doors with > 50% glazing	U-0.35		An area weighted average may be used to satisfy the U-factor requirements but must include all windows, skylights, glass doors and opaque doors. Provide documentation if this is used.
Skylights	U-0.60		

(The above table is based on wood frame construction and common building practices. If not addressed in the table above, please attach separate documentation to illustrate code compliance. Values are based on Climate Zone 5A from Chapter 3 in the 2009 IECC.)

- Other Prescriptive requirements:

Other Requirements	Compliance
Certificate (401.3) Permanent certificate posted on elec. panel with energy values	<input type="checkbox"/> Will Comply
Duct Insulation (403.2.1) Supply ducts in attic ≥ R-6, all other ducts outside thermal envelope ≥ R-6	<input type="checkbox"/> Will Comply <input type="checkbox"/> N/A
Lighting Equipment (404.1) A minimum of 50% of lamps permanently installed must be high efficacy	<input type="checkbox"/> Will Comply

Notes:

- For further clarification on any of the above items, please consult the International Energy Conservation Code (IECC).
- The IECC may be purchased through the International Code Council at www.iccsafe.org or 1-888-ICC-SAFE.
- For a Thermally Isolated Sunroom (Greater than 40% glazing area of walls and roof) addition, refer to the IECC.
- The City of Rockford has other useful material related to the energy code, please visit us at www.rockford.il.gov

For free, up-to-date energy references, energy training and energy code info, visit www.enerecodes.org

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Inspections

Energy Efficiency Certificate			
Form No. _____			
Address: _____			
Insulation Ratings		R-Value	
Roof/Ceiling	With attic: <input type="checkbox"/>		
	Without attic: <input type="checkbox"/>		
Walls	Frame: <input type="checkbox"/>		
	Mass: <input type="checkbox"/>		
	Basement: <input type="checkbox"/>		
	Crawl space: <input type="checkbox"/>		
Floors	Over unconditioned space: <input type="checkbox"/>		
	Slab edge depth: <input type="checkbox"/>		
Ducts	Outside conditioned space: <input type="checkbox"/>		
Fenestration Ratings		NFRC U-Factor	NFRC SHGC
Operable doors	<input type="checkbox"/>		
Windows	<input type="checkbox"/>		
Slights	<input type="checkbox"/>		
Equipment Performance		Efficiency	
Heating system	HPF/APLE		
Cooling system	COP/SEER		
Water Heater/Boiler	EF, E, or E+		
Builder/Designer	_____		
Certified by	_____ Date: _____		
Adopted Code Edition:	_____		
THIS CERTIFICATE SHALL BE PERMANENTLY POSTED ON OR IN THE ELECTRICAL DISTRIBUTION PANEL AS REQUIRED BY ENERGY / RESIDENTIAL CODES			



- New inspections added to enforce 2009 IECC (International Energy Conservation Code)
- Exterior Foundation Insulation Inspection prior to backfill
- Insulation Inspection after Rough Structural Inspection
- Several additional inspections required by 2009 IECC – Completed w/ others



Please visit

www.Rockfordil.gov

To view our Energy Compliance
Checklist and for Future Energy Code
Related Information