

# Welcome Home



## [HOME OWNER'S MANUAL]

Get to know your Home. Engage with the Community. Learn to live more Responsibly.

## Welcome Home to...



Dear Homeowner:

Congratulations on your decision to purchase a new green home!

This manual includes material about *Your Home*, the surrounding community, and educational literatures that will help you know how to properly operate and maintain your new green home.

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The purpose of this manual is to ensure you understand how your home should operate, so you can fully benefit from the advanced technologies and construction methods that were employed in the construction of your home.

As explained in our written warranty, provided by separate instrument, we will repair or replace defects in our construction (defects defined as a failure to comply with reasonable standards of residential construction) for a period of 1 year. Nothing herein should be construed as constituting an additional warranty.

Feel free to contact us if you have any questions or concerns about the information contained in this manual or any general questions you may have about your new green home. If you discover that minor repairs are needed, please formally notify us in writing—immediately. If you have initial service problems, make a list of items and send it to us. Adverse weather conditions or temporarily unavailable labor or materials may delay the completion of the jobs on your list. If this happens, we will explain the circumstances to you.

The manufacturers and trade contractors who made or installed the various parts and equipment in your house will be responsible for handling some of the service problems that may arise while you are living in the house. However, you are responsible for the day to-day maintenance of your new green home.

Should your home ever require major repairs, feel free to call us for advice or call a specialist for the type of repairs you need. In most cases, qualified professionals should handle major repairs. Your local home builders association can also refer you to qualified remodelers in your area. You can contact the Home Builders & Remodelers Association of Central Connecticut (HBRA) at (860) 563-4212 to get the contact information for your local home builders association.

Nelson Construction  
75 West Street, Simsbury, CT 06070  
<http://www.nelsonconstructionct.com>  
(860) 658-7600 (phone)  
(860) 658-8627 (fax)



## **Carson Way Selections Package**

The following document details all the specific selections for your Home.

# Green Features of Your New Home

## LOT DESIGN, PREPARTION, AND DEVELOPMENT (Section 500)

### Lot Selection (501)

#### Lot

X	The lot was selected to minimize environmental impact by one or more of the requirements outlined in the NGBS.
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#### Mass transportation

X	A range of mass transportation choices are promoted by one or more of the requirements outlined in the NGBS.
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### Lot Design (503)

#### Natural resources

X	Natural resources were conserved by one or more of the requirements outlined in the NGBS.
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#### Slope disturbance

X	Slope disturbance was minimized by one or more of the requirements outlined in the NGBS.
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#### Soil disturbance and erosion

X	Soil disturbance and erosion were minimized by one or more of the requirements outlined in the NGBS.
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#### Storm water management

X	Storm water was managed using one or more of the low-impact development techniques outlined in the NGBS.
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#### Landscape plan

X	A landscape plan was developed to limit water and energy use while preserving or enhancing the natural environment.
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#### Mixed-use development

X	Mixed-use development was incorporated.
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#### Environmentally sensitive areas

X	Environmentally sensitive areas were avoided.
X	Compromised environmentally sensitive areas were mitigated or restored.

## **Lot Construction (504)**

### **On-site supervision and coordination**

X	On-site supervision and coordination was provided during clearing, grading, trenching, paving, and installation of utilities to ensure that specified green development practices were implemented.
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### **Trees and vegetation**

X	Designated trees and vegetation were preserved by one or more of the requirements outlined in the NGBS.
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### **Soil disturbance and erosion**

X	On-site soil disturbance and erosion were minimized by one or more of the requirements outlined in the NGBS.
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## **RESOURCE EFFICIENCY (Section 600)**

### **Quality of Construction Materials and Waste (601)**

#### **Conditioned floor area**

X	Square footage limited to NGBS criteria..
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#### **Material usage**

X	Building-code-compliant structural systems or advanced framing techniques that optimize material usage were implemented.
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#### **Prefabricated components**

X	Precut or preassembled components, or panelized or precast assemblies were utilized.
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#### **Stacked stories**

X	Stories above grade were stacked, such as in 1½-story, 2-story, or greater structures.
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#### **Site-applied finishing materials**

X	Building materials or assemblies that did not require additional site-applied material for finishing were utilized.
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### **Enhanced Durability and Reduced Maintenance (602)**

#### **Exterior doors**

X	Exterior doors have covered entries.
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#### **Foundation drainage**

X	Exterior drain tile was installed where required by industry standards for habitable and usable spaces below grade.
X	Interior and exterior foundation perimeter drains were installed.

**Drip edge**

X	Installed at eaves and gable roof edges.
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**Roof water discharge**

X	A gutter and downspout system or splash blocks and effective grading were provided.
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**Finished grade**

X	Finish grade at all sides of the home was sloped to meet the requirements outlined in the NGBS.
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**Water-resistive barrier**

X	Where required by industry standards, a water-resistive barrier and/or drainage plane system was installed behind exterior veneer and/or siding.
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**Ice barrier**

X	In areas with a history of ice forming along the eaves causing a backup of water, an ice barrier was installed in accordance with industry standards.
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**Flashing**

X	Flashing details were shown on plans and flashing was installed at all applicable locations.
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**Recycling**

Homeowner recycling was facilitated by:	
X	1. A built-in collection space in each kitchen and an aggregation/pick-up space in a garage, covered outdoor space, or other area for recycling containers

**Reused or Salvaged Materials (603)**

**Salvaged materials**

X	Reclaimed and/or salvaged materials and components were used. The total material and labor cost of salvaged materials is equal to or exceeds 1 percent of the total construction cost.
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**Recycled-Content Building Materials (604)**

X	Building materials with recycled content were used for two minor and/or two major components of the building.
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**Recycled construction materials**

X	Construction materials (e.g., wood, cardboard, metals, drywall, plastic, asphalt roofing shingles, or concrete) were recycled offsite.
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### Resource-Efficient Materials (607)

X	Products containing fewer materials were used to achieve the same end-use requirements as conventional products.
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### Indigenous Materials (608)

X	Indigenous materials were used for major elements of the home.
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## **ENERGY EFFICIENCY (Section 700)**

### Minimum Energy Efficiency Requirements (701)

#### **HVAC systems**

X	Space heating and cooling system/equipment are sized according to heating and cooling loads calculated using industry standards or equivalent.
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#### **Duct systems**

X	Ducts were sealed with tape that complies with industry standards to reduce leakage.
X	Home cavities are not used as supply ducts.

#### **Insulation and air sealing**

X	Insulation and air sealing are in accordance with the requirements outlined in the NGBS.
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#### **Floors, foundations, and crawlspaces**

1. Floors. (including insulated floors above garages and cantilevered floors)	
X	The heated building envelope includes the basement area—both concrete floors and walls are insulated to a value of R12.
X	Batt and loose-fill insulation was held in place by permanent attachments or systems in accordance with the manufacturer's instructions.

#### **Walls**

X	1. Windows and doors. Caulking, gasketing, adhesive flashing tape, foam sealant, or weatherstripping was installed forming a complete air barrier.
X	2. Band joist and rim joists. Band and rim joists were insulated and air sealed.
X	3. Between foundation and sill plate bottom plate.
X	a. Sill sealer or other material that will expand and contract is installed between foundation and sill plate.
X	b. Caulk or the equivalent was installed to seal the bottom plate of exterior walls.
X	4. Skylights and knee walls. Skylight shafts and knee walls are insulated to the same level as the exterior walls.
X	5. Exterior architectural features. Code required building envelope insulation and air sealing were not disrupted at exterior architectural features such as stairs and decks.



### **Ceilings and attics**

X	1. Attic access (except unvented attics). Attic access, knee wall door, or drop-down stair was covered with insulation and gasketed. Knee wall door is an insulated unit or is covered with insulation.
X	2. Recessed lighting. Recessed light fixtures that penetrate the thermal envelope are airtight, IC-rated, and sealed with gasket, caulk, or foam.
X	3. Eave vents. Where ceiling/attic assemblies or designs have eave vents, baffles or other means are implemented to minimize air movement into or under the insulation.

### **Performance Path (702)**

#### **Energy cost performance levels**

X	Energy efficiency features were implemented to achieve energy cost performance that exceeds industry standards.
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### **Additional Practices (704)**

#### **Ducts**

X	Duct system was sized, designed, and installed in accordance with industry standards and meets the requirements outlined in the NGBS.
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#### **HVAC design and installation**

X	The heating and/or cooling equipment was selected according to industry standards.
X	The HVAC contractor and service technician were certified by a nationally or regionally recognized program.
X	Performance of the heating and/or cooling system was verified by the HVAC contractor in accordance with the NGBS.

#### **Installation and performance verification**

X	Third-party on-site inspection was conducted to verify compliance with all of the following as applicable: <ol style="list-style-type: none"><li>1. Ducts are installed in accordance with industry standards and ducts are sealed.</li><li>2. Building envelope air sealing is installed.</li><li>3. Insulation is installed in accordance with the NGBS.</li><li>4. Windows, skylights, and doors are flashed, caulked, and sealed in accordance with manufacturer's recommendations and in accordance with the NGBS.</li></ol>
X	Third-party testing was conducted to verify performance and installation.
X	Building envelope leakage rate was demonstrated by blower door test. Results satisfied the requirements of the NGBS.

## **WATER EFFICIENCY (Section 800)**

### **Indoor and Outdoor Water Use (801)**

#### **Indoor hot water usage**

X	Indoor hot water usage was reduced by one of the practices outlined in the NGBS.
X	The piping system design was implemented in accordance with one of the practices outlined in the NGBS.

#### **Food waste disposers**

X	A minimum of one food waste disposer was installed at the primary kitchen sink.
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#### **Showerheads**

X	Showerheads are in accordance with the requirements as outlined in the NGBS.
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#### **Faucets**

X	Water-efficient lavatory faucets with low flow rate when were installed:
X	all lavatory faucets

#### **Water closets and urinals**

X	Water closets and urinals are in accordance with the requirements as outlined in the NGBS.
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#### **Irrigation systems**

X	Irrigation system is in accordance with industry standards.
X	The irrigation system(s) are controlled by a smart controller.

## **INDOOR ENVIRONMENTAL QUALITY (Section 900)**

### **Pollutant Source Control (901)**

#### **Space and water heating options**

X	Air handling equipment or return ducts are not located in the garage, unless placed in isolated, air-sealed mechanical rooms with an outside air source.
X	The following combustion space heating and water heating equipment was installed within conditioned space:
X	1. direct vent furnace or boiler
X	2. water heater
X	a. GE Hybrid High Efficiency Water Heater

#### **Fireplaces and fuel-burning appliances**

X	Fireplaces and fuel-burning appliances (except cooking appliances, clothes dryers, water heaters, and furnaces) located in conditioned space are in accordance with the
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	requirements outlined in the NGBS.
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**Garages**

X	The attached garage meets the requirements outlined in the NGBS.
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**Carpets**

X	Wall-to-wall carpeting is not installed adjacent to water closets and bathing fixtures.
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**Hard-surface flooring**

X	A minimum of 85 percent of installed hard-surface flooring is in accordance with industry standards, as certified by a third-party program.
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**Pollutant Source Control (902)**

**Spot ventilation**

X	1. Bathrooms were vented to the outdoors. The minimum ventilation rate is within industry standards for continuous operation in bathrooms.
X	2. Clothes dryers were vented to the outdoors.
X	3. Kitchen exhaust units and/or range hoods were ducted to the outdoors and have a minimum ventilation within industry standards for continuous operation.
X	Kitchen range, bathroom, and laundry exhaust are verified to specification. Ventilation airflow at the point of exhaust is within industry standards for kitchens and within industry standards for bathrooms and/or laundry.
X	Exhaust fans are ENERGY STAR <sup>®</sup> , as applicable.

**Building ventilation systems**

X	One of the following whole building ventilation systems is implemented and is in accordance with the specifications of the NGBS.
X	1. exhaust or supply fan(s) ready for continuous operation and with appropriately labeled controls
X	Ventilation airflow was tested to achieve the design fan airflow at point of exhaust in accordance with the NGBS.
X	MERV filters 8 or greater were installed on central air systems.

**Radon control**

X	Radon control measures are in accordance with industry standards.
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**HVAC system protection**

X	1. HVAC supply registers (boots), return grilles, and rough-ins are covered during construction activities to prevent dust and other pollutants from entering the system.
X	2. Prior to home owner occupancy, HVAC supply registers (boots), return grilles, and duct terminations were inspected and vacuumed. In addition, the coils were inspected and cleaned and the filter was replaced if necessary.

### **Living space contaminants**

X	The living space is sealed to prevent unwanted contaminants.
X	1. Attic access, knee wall door, or drop down stair is caulked, gasketed, or otherwise sealed.
X	2. All penetrations (e.g., top plates, HVAC register boots, recessed can lights) were sealed in the following areas:
X	a. attic/ceiling
X	b. wall
X	c. floors

### **Moisture Management: Vapor, Rainwater, Plumbing, HVAC (903)**

#### **Tile backing materials**

X	Tile backing materials installed under tiled surfaces in wet areas are in accordance with industry standards.
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#### **Capillary breaks**

X	A capillary break and vapor retarder were installed at all concrete slabs in accordance with the NGBS .
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#### **Moisture control measures**

X	Moisture control measures are in accordance with the requirements as outlined in the NGBS.
X	Moisture content of subfloor, substrate, or concrete slabs is in accordance with the appropriate industry standard for the finish flooring to be applied.

#### **Plumbing**

X	Plumbing distribution lines are not installed in exterior wall cavities.
X	Plumbing is not installed in unconditioned spaces.

### **Innovative Practices (904)**

#### **Humidity monitoring system**

X	Kitchen exhaust unit(s) that equals or exceeds 400 cfm (189 L/s), and makeup air is provided.
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## **Product manufacturer's manuals and product data sheets**

The product manufacturer's manuals were provided at closing in a separate folder, but the product data sheets for all of the major equipment, fixtures, and appliances that are installed in your green home are included in the following pages. We encourage you to refer to them often to ensure that you know how to operate them properly.

## **Key Subcontractors Contact Information**

### **Heating, Ventilating, and Air Conditioning (HVAC)**

Glasco Heating & Air-Conditioning  
56 Glendale Road  
South Windsor, CT 06074  
(860) 289-5509

### **Plumbing**

EJR Plumbing & Heating  
81 Country Line Road  
Harwinton, CT 06791  
(860) 485-0640

### **Shower and/or Tub Surrounds**

Cyclone Systems  
124 White Oak Drive  
Berlin, CT 06037-1635  
(860) 380-4830

### **Painting**

FZ Enterprises  
94 Putnam Street  
New Britain, CT 06051  
(860) 348-1598

### **Flooring**

Dalene Flooring  
832 Queen St  
Southington, CT 06489  
(860) 276-9564

### **Electrician**

New Britain Electric  
84 S Main St,  
Burlington, CT 06013  
(860) 673-1041

### **Real Estate**

Gary Emerito  
Berkshire Hathaway  
(860) 716-7601

## Maintenance Checklist

Maintenance must be performed in accordance with manufacturer's recommended schedule and instructions and may require professional contractors. Refer to the manufacturer's product manuals and/or data sheets for further information.

<b>Date</b>	<b>Maintenance Performed by the Home Owner's Association</b>	<b>Recommended Frequency</b>	<b>Action Taken</b>
	Lawn Care	As Needed	
	Snow Removal	As Needed	
	Irrigation system	As Needed	
	Road Maintenance	As Needed	
	General site walkthrough	As Needed	
<b>Date</b>	<b>Maintenance Performed by the Home Owner</b>	<b>Recommended Frequency</b>	<b>Action Taken</b>
	Heating system maintenance	6-12 months	
	Cooling system maintenance	6-12 months	
	Water heater	As Needed	
	Humidifier/dehumidifier	3-6 months	
	Wood trim	As Needed	
	Smoke detectors	6-12 months	
	Faucets and other fixtures	As needed	
	Furnace Filter	3-6 months	
	Water filter (if applicable)	N/A	
	Caulking of siding, trim, fenestration, etc.	As Needed	
	Gutters and downspouts	As Needed	
	Basement (check for moisture, dampness, cracks, etc.)	6-12 months	
	General unit walkthrough	monthly	

## How to Care for a Pre-Finished Hardwood Floor

Wood flooring combines natural strength and durability with the rich coloring and unique grain patterns found in oak, maple and other hardwoods. Many homeowners choose pre-finished hardwood, which manufacturers stain and seal at the factory to allow for quick and easy installation in the home. While routine maintenance can keep your wood floor looking its best, pre-finished flooring requires special care and cleaning to protect the finished surface.

1

Sweep or dust mop your pre-finished hardwood floor every few days to remove dirt, dust and debris.

2

Vacuum your floor using a vacuum cleaner without a beater bar, which can scratch the surface of the wood. Use a nozzle attachment to clean the grooves between wood planks or to remove dust and dirt buildup in corners or niches of the room.

3

Clean the floor once a week or as needed using a hardwood flooring cleaner that is specifically made for pre-finished flooring. Consult the manufacturer to find the best cleaner for your floor. Mix the cleaner with water in a bucket according to the instructions on the bottle, then dip your mop into the bucket. Wring the mop out until it is just slightly damp, then use it to mop the floor. There is no need to rinse the floor when you are done.

4

Wipe up spills and wet spots immediately, as moisture can easily damage pre-finished flooring. Use a mop or rag to clean up spills as they occur.

5

Clean sticky spots using a damp sponge.

6

Remove tough stains using a stain removing product applied with a soft, clean rag. Consult the manufacturer of your floor to find a stain remover that will remove stains without damaging the finish of the floor.

<http://homeguides.sfgate.com/care-prefinished-hardwood-floor-48080.html>



# How to Care for Your Granite Countertop

## Know Your Stone

Natural stone can be classified into two general categories according to its composition:

1. Siliceous stone
2. Calcareous stone

Siliceous stone is composed mainly of silica or quartz-like particles. It is usually very durable and relatively easy to clean with mild acidic cleaning solutions. Types of this stone are: granite, slate, sand-stone, quartzite, brownstone and bluestone.

Calcareous stone is composed of mostly calcium carbonate. It is extremely sensitive to acidic cleaning products and sometimes requires different cleaning procedures. Refer to your fabricator. Types of this stone are: marble, travertine, limestone and onyx.

## Daily Care and Precautions

Use coasters under all glasses, especially drinks with alcohol or any type of citrus juice. A lot of common food and drink contain acids that can etch or dull the surface of your stone. Do not place hot items directly on your countertops, use trivets or mats under hot dishes and placemats under dishes.

## Sealing

The purpose of sealing your granite is to keep it from getting cloudy or stained due to extensive use. It is recommended to seal every one to two years, but if the stone gets a lot of use, sealing every six months is better.

## How to Seal Your Countertops

- Cover areas like corners and walls that you don't want sealed with masking tape.
- Be sure that the surface is clear of any debris and has been dry for 6-12 hours prior.
- Pour or spray the entire surface until it is completely wet. When it begins to dry within 3-5 minutes, re wet the surface with another thin layer of sealant.
- After 30 minutes, wipe the excess sealer off with a clean, dry white terry cloth towel.
- If the excess dries on the surface, spray or pour more sealer onto the granite and immediately wipe away.

It should be visible that the sealant has done its job, leaving your stone looking smooth and stainless.

## Basic Care and Cleaning

The natural stone you have purchased is an investment that will give you decades of beautiful service. Here are some simple care and maintenance tips that will keep your granite looking as great as the day it was installed.

Sand, dirt and grit do the most damage to natural stone surfaces because of their abrasiveness. If you have granite on your floors, place mats or area rugs in front of doors to reduce sand, dirt

and grit. Make sure the rug is non-slip on the underside. Normally, it takes a person about eight steps on a floor or surface to remove sand or dirt from the bottom of their shoes..

- Clean the surface whenever needed with just a few drops of neutral cleaner, stone soap (available with us or at any granite tile supply shop) or a mild liquid dishwashing detergent and warm water. Be sure to use a clean rag or towel and not too much soap as to avoid streaking.
- Rinse the surface thoroughly after washing with the soap solutions and dry with a clean towel. Be sure to change rinse water frequently.
- DO NOT use products that contain lemon, vinegar, scouring powders or creams, or any other cleaner with high acid count that might otherwise etch or scratch the surface.
- Soap scum can be minimized by using a squeegee after each use. To remove soap scum, be sure to use a non-acidic soap scum remover. Frequent use of ammonia solution may eventually dull the surface of the stone.
- Be sure to blot up all spills immediately, before they can penetrate the surface.
- Vanity tops may need a good quality marble wax or even a non-yellowing automobile paste wax can be applied to minimize water spots.

### **Stains**

**Organic** (coffee, tea, fruit, tobacco, paper, food, urine, leaves, bark, bird droppings): Outdoors, the sun and rain action will generally bleach out the stains. Indoors, clean with 12% hydrogen peroxide (hair bleaching strength) and a few drops of ammonia.

**Metal** (iron, rust, copper, bronze): These stains can be an orange or brown color, but copper and bronze stains tend to be a more green color. These stains may be removed with a poultice. A poultice is a liquid cleaner mixed with a white absorbent material that forms a paste. This is spread over the stain with a spatula about ¼ to ½ inch thick and left covered over 24 to 48 hours. This procedure may have to be repeated a few times if the stain is deep-seated. Remember that metal stains can be very difficult to remove and the stone may be permanently damaged.

**Oil-based Stains:** Poultice with baking soda and water, or one of the powdered poultice materials and mineral spirits.

**Organic Stains:** Poultice with a powder poultice and 12% acetone or hydrogen peroxide (hair bleaching strength).

**Biological** (algae, mildew, lichens, moss, fungi): Clean with dilute (1/2 cup to a gallon of water) ammonia, bleach or hydrogen peroxide. DO NOT MIX BLEACH AND AMMONIA.

**Ink** (magic marker, pen, ink): For light colored stone clean with bleach or hydrogen peroxide. For dark stones use a lacquer thinner or acetone.

**Paint:** Small amounts can be scraped off carefully with a razorblade or removed with lacquer thinner. Large paint stains can be removed with any commercial “heavy liquid” paint stripper found at any local hardware store. Paint strippers can easily etch the surface of the stone, so you may have to re-polish. Usually latex or acrylic paints won’t cause staining; however, oil-based paints may cause an oil-based stain. DON’T use acids or flame tools to strip paint.

Scratches and Nicks: Buff with a dry 0000 steel wool. You can also do this with water spots and rings.

Etch Marks: These are caused by acids left on your stone. Some materials will etch the polish, but leave no stain; others may both etch and leave a stain. Once the stain is cleaned, you will want to re-polish in order to remove the etch. This you can do by sprinkling a small amount of marble polisher after wetting it with water. Use a clean, dry towel to rub the powder into the stone, or you can use a buffing pad on a low speed power drill. All of these products can be found at a local hardware store.

### **Polishing and Enriching Color**

Polishing is recommended twice a year to keep your granite looking smooth and shiny. Any basic polisher will enrich the color of your granite as well.

- Shake bottle well to mix polisher fully.
- Apply the polish to stone surface using a clean, dry white terry cloth towel.
- Let polish dry to haze for 2 minutes.
- Wipe off haze with you're a clean, dry white terry cloth towel.

### **Products and where to purchase them...**

Any Costco, Home Depot or Best Buy will have everything from sealant to polisher to daily cleaner, and at reasonable prices. Remember if you have any trouble at all give us a call and we can locate you whatever products you may need.

Remember that your granite has already been sealed by use before installation, so you won't need to re-seal for another year to six months.

## **Safety Valves and Controls for Major Systems in Your Home**

The following diagram indicates the location of safety valves and the controls for the major building systems in your new home.

## **Carson Way Home Warranty**

The following document details the warranty for your new home.

## Local Recycling Programs

Recyclables are collected *every other week on the same day that garbage is collected by Paine's Inc Recycling & Disposal Service.*

**Trash Collection – Wednesdays    Recycling Collection – A Week**

Please include only items that are acceptable. Properly preparing those items increases the value of the material to recycling markets. Loads containing items not recyclable can be considered "contaminated" and may be rejected by the buyer and make it more difficult for the county to find markets.

See [http://www.painesinc.com/site/residential/recycling\\_details.html](http://www.painesinc.com/site/residential/recycling_details.html) and the provided inserts for all questions regarding what to recycle, when to recycle, and where to recycle.

Use the contact information below to get your recycling container:

Paine's, Inc, Recycling & Disposal Service

Paine's, Inc.

P.O. Box 307

Simsbury, CT 06070

T: 860-844-3000

[office@painesinc.com](mailto:office@painesinc.com)



## Local Utility Programs

The U.S. Department of Energy's (DOE) Green Power Network provides a nationwide list of local green energy utility programs. (See the additional resources section of this manual for Green Power Network Web site.)

These programs provide residential customers with an option to purchase power that is supplied in part or in whole from renewable energy sources. According to DOE, more than 50 percent of retail customers in the United States now have an option of purchasing a green power product directly from their electricity supplier.

In addition, consumers can support renewable energy development through the purchase of green energy certificates. The benefits of renewable energy include a reduced dependence of burning fossil fuels.

CL & P Clean Energy Options:  
Northeast Clean Power, by 3Degrees or Community Energy, Inc.

Visit [https://www.cl-p.com/Home/SaveEnergy/GoingGreen/CT\\_Clean\\_Energy\\_Options/](https://www.cl-p.com/Home/SaveEnergy/GoingGreen/CT_Clean_Energy_Options/) for more information about using clean energy.

# EVERSOURCE

## **Local Service Providers**

The following service providers offer regularly scheduled service and maintenance contracts to ensure proper performance of equipment and the structure of your new home.

### **Eversource**

P.O. Box 270  
Hartford, CT 06141-0270  
860-947-2000 | 800-286-2000

### **Connecticut Natural Gas**

76 Meadow Street  
East Hartford, CT 06108  
(860) 727-3000

### **Comcast**

630 Chapel St  
New Haven, CT 06510  
(800) 266-2278

### **Frontier Communications**

(800) 921-8101

### **Aquarion Water**

6 Station St  
Simsbury, CT 06070  
(860) 651-3824

### **Simsbury Water Pollution Control (Sewer)**

36 Drake Hill  
Simsbury, CT 06070  
860-658-1380



## Simsbury Trail and Path Accessibility

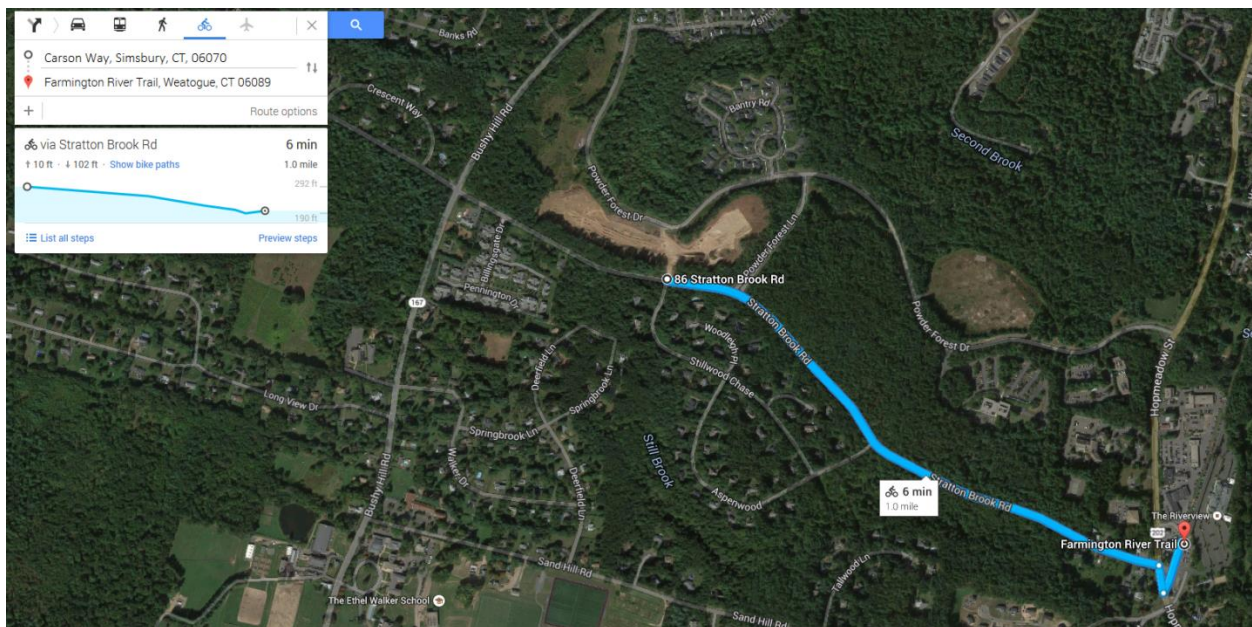
Simsbury is the only bicycle-friendly community in Connecticut and is part of an elite group of 179 cities and towns throughout the United States bearing this title.

<https://mapsengine.google.com/map/u/0/viewer?authuser=0&hl=en&mid=z6pR47Dy3ISU.kGRkPdQLS7ag> provides extensive information about trail and path routes in Simsbury.

The Farmington River Trail is built upon the former Central New England Railroad corridor and runs between the Farmington Canal Heritage Trail near Tunxis Meade Park and the Simsbury town line. A short disconnected section of trail extends between Bushy Hill Road to Hopmeadow Street, paralleling Village Rd./West St./Rt 167. The two segments can be linked by taking Stratton Brook State Park Trail, with an on-road section along Town Forest Road, from Stratton Brook Road, at the south end of the park.

<http://www.trailink.com/trail/farmington-river-trail.aspx>

Carson Way is a short, down-hill ride away from The Farmington River Trail.

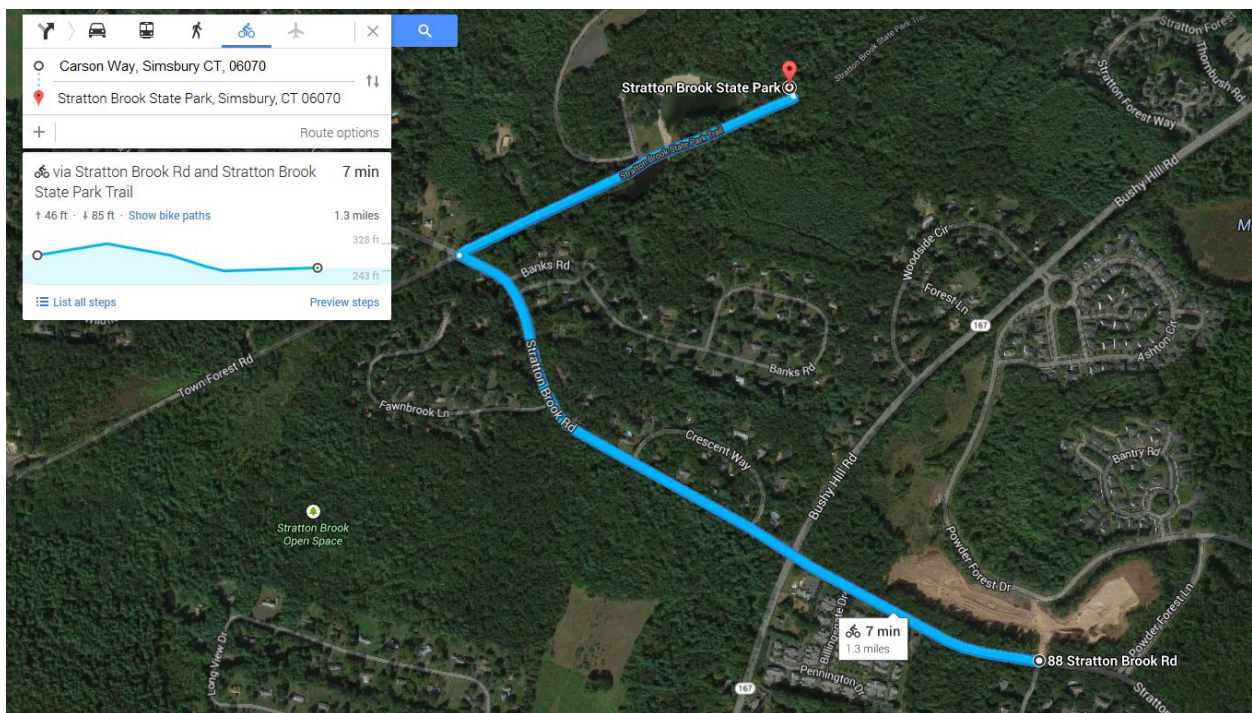


Carson Way is just over a mile away from the start of the Stratton Brook State Park Trail. The Stratton Brook State Park Trail presents a great way to work up an appetite for a picnic at Stratton Brook State Park, the first state park in Connecticut to be entirely wheelchair accessible. The park also offers picnic areas, as well as fishing and swimming on its lake, created by the Civilian Conservation Corps during the Great Depression when it dammed the brook. A covered bridge accesses the trail midpoint.

The Stratton Brook State Park Trail links the Farmington River Trail with the much longer Farmington Canal Heritage Trail.

<http://www.trailink.com/trail/stratton-brook-state-park-trail.aspx>

Carson Way is just over a mile away from the start of the Stratton Brook State Park Trail.



## Light Emitting Diode Lighting (LED)

A light emitting diode (LED) is a semiconductor device which converts electricity into light. LEDs last considerably longer than incandescent or fluorescent lighting. LEDs typically don't burn out like traditional lighting, but rather gradually decrease in light output. Their "useful life" is defined by the Alliance for Solid-State Illumination Systems and Technologies (ASSIST) as the time it takes until 70 percent of initial light output is reached, often 50,000 hours. LEDs are resistant to thermal and vibrational shocks and perform well when subjected to frequent on-off cycling. In addition, LEDs do not produce heat like incandescent bulbs. Individual LEDs are considerably more efficient (however, the lamp or fixture design is reduced by the driver and electronics.)

LED lights are more rugged and damage-resistant than compact fluorescents and incandescent bulbs, and they do not flicker. They are very heat sensitive; excessive heat or inappropriate applications dramatically reduce both light output and lifetime. Uses include:

- Task and reading lamps
- Linear strip lighting (under kitchen cabinets)
- Recessed lighting/ceiling cans
- Porch/outdoor/landscaping lighting
- Art lighting
- Night lights
- Stair and walkway lighting

LED lighting has been around since the 1960s, but is just now beginning to appear in the residential market for space lighting.

Each diode is about ¼ inch in diameter and uses about ten milliamps to operate at about a tenth of a watt. LEDs are small in size, but can be grouped together for higher intensity applications. LED fixtures require a driver which is analogous to the ballast in fluorescent fixtures. The drivers are typically built into the fixture (like fluorescent ballasts) or they are a plug transformer for portable (plug-in) fixtures. The plug-in transformers allow the fixture to run on standard 120 volt alternating current (AC), with a modest (about 15 to 20 percent) power loss.

LEDs are better at placing light in a single direction than incandescent or fluorescent bulbs. Because of their directional output, they have unique design features that can be exploited by clever designs. LED strip lights can be installed under counters, in hallways, and in staircases; concentrated arrays can be used for room lighting. Waterproof, outdoor fixtures are also available. Some manufacturers consider applications such as gardens, walkways, and decorative fixtures outside garage doors to be the most cost-efficient. (Source: *National Green Building Standard™ Commentary*)

## Compact Fluorescent Lighting (CFL)



Compact fluorescent lights (CFLs) are simply miniature versions of full-size fluorescent lights. They use an arc discharge through a phosphor-lined tube instead of heating a resistance filament which is used in incandescent light bulbs. A CFL consists of a lamp, lamp holder, and ballast. The ballast provides the electrical control to strike and maintain the arc. Historically, fluorescent lighting's bluish hue has turned people away from using the energy-efficient lighting in living spaces. However, the warm tones of newer compact fluorescent lighting make it almost indistinguishable from incandescent lighting.

The average rated life of a CFL is between 8 and 15 times that of incandescent lights. CFLs typically have a rated lifespan of between 6,000 and 15,000 hours, whereas incandescent lamps are usually manufactured to have a lifespan of 750 hours or 1,000 hours. A 23–30 watt CFL has approximately the same light output as a 100-watt incandescent.

[http://en.wikipedia.org/wiki/Compact\\_fluorescent\\_lamp](http://en.wikipedia.org/wiki/Compact_fluorescent_lamp)

To optimize the value of CFLs, it is best to use them in areas that are lit for relatively extended periods of time (15 minutes or longer). This could include the outdoor fixtures, the kitchen, family room, and bedroom. Switching a CFL on and off too frequently will shorten its life.

CFLs contain small amounts of mercury, so they should not be placed in regular disposal in order to keep their contents from seeping into a landfill. They should be taken to a qualified disposal facility.

Lowe's  
(860) 502-1068  
325 Cottage Grove Road  
Bloomfield, CT 06002

No additional tools or training are required for installation of CFLs. There are three types of CFL lamp-ballast systems.

- **Integral:** Light bulbs that combine a lamp, ballast, and standard screw base in a single sealed assembly, which must be discarded when the lamp burns out. They can be installed in any standard screw-type light fixture where incandescent bulbs are normally used.
- **Modular Units:** This type has a separate two- or four-pin base lamp that plugs into a separate adapter or ballast. When the lamp burns out, a relatively inexpensive replacement lamp can be installed in the original ballast and pin base.
- **Hardwired (dedicated) Systems:** These systems consist of a ballast and fluorescent lamp socket permanently wired into a fixture by the manufacturer, or as part of a retrofit kit. The lamp can be replaced with another similar pin-based CFL when it burns out.

## Energy Conservation Tips

- Use a programmable thermostat to keep your house comfortably warm in the winter and comfortably cool in the summer.
- Avoid setting your thermostat at a colder setting than normal when you turn on your air conditioner. It will not cool your home any faster and could result in excessive cooling and, therefore, unnecessary expense.
- Use LEDs or compact fluorescent light bulbs with the ENERGY STAR® label.
- Replace filters on furnaces per filter manufacturers' instructions.
- Clean warm-air registers as needed; make sure they are not blocked by furniture, carpeting, or drapes.
- Air-dry dishes instead of using the dishwasher drying cycle.
- Turn off your computer and monitor when not in use.
- Plug home electronics, such as TVs and DVD players, into power strips; turn the power strips off when the equipment is not in use (TVs and DVDs in standby mode still use several watts of power).
- Lower the thermostat on your hot water heater to 120°F.
- Wash only full loads of dishes and clothes.
- Look for the ENERGY STAR® label on home appliances and products.
- Turn off kitchen, bath, and other exhaust fans within 20 minutes after you are done cooking or bathing; when replacing exhaust fans, consider installing high-efficiency, low-noise models.
- During the heating season, keep the draperies and shades on your south-facing windows open during the day and closed at night.
- During the cooling season, keep the window coverings closed during the day to prevent solar gain.
- Keep all south-facing glass clean.
- Make sure that objects do not block the sunlight shining on concrete slab floors or heat-absorbing walls.
- Avoid placing lamps or TV sets near your air-conditioning thermostat. The thermostat senses heat from these appliances, which can cause the air conditioner to run longer than necessary.

## Water Conservation Tips

- Promptly repair leaky indoor devices and appliances and leaky outdoor irrigation systems. A leaky faucet can waste gallons of water in a very short period of time.
- Run dishwasher only when it is full.
- Turn off water faucet while brushing teeth or shaving.
- Take short showers rather than long showers or baths.
- Adjust the water level in the washing machine based on the size of the load.
- Do not overwater plants.
- Water the lawn early in the morning or late in the evening to reduce evaporation.
- Let the grass grow slightly taller to provide additional shade for the roots and to improve water retention in the soil
- Grow plants suitable for the climate zone. It can save more than 50 percent of the water normally used to care for outdoor plants.
- When washing a car, turn the hose off between rinses.

## Common Hazardous Materials

Potentially hazardous chemical substances should be used, stored, and disposed of properly to minimize effects on the humans and the environment. Chemicals that are commonly used in homes and garages include:

- Automotive fluid (motor oil, antifreeze, brake fluid, etc.)
- Landscape products (fertilizers, pesticides, etc.)
- Maintenance products (paints, stains, caulk, etc.)
- Pest control products (poisons, etc.)
- Household cleaners and detergents (window cleaner, carpet cleaner, etc.)
- Barbeque products (propane, charcoal lighter, etc.)

The instructions on the product label must be followed with regard to the use, storage, and disposal of all chemicals. Visit the Environmental Protection Agency's Web site (<http://www.epa.gov/epawaste/conserva/materials/hhw.htm>) for more information on household hazardous waste.

Instructions for handling of chemicals include the following:

- Read warning label before use.
- Store all chemicals out of reach of children and pets.
- Store chemicals separate from food.
- Store flammables, gas chemicals, and any chemicals that release gas outside or in a shed.
- Keep all chemicals in the original containers suited for their storage.
- Do not mix chemicals.
- Use up the entire container.
- Wear rubber gloves when handling chemicals and avoid all contact with skin.
- Use eye protection.
- Do not pour chemicals on the ground or down the drain.
- Dispose of the chemical in accordance with the label instructions and applicable regulations or recommendations
- Inquire about available local recycling programs and recycle all chemicals accepted by available recycling programs.
- Use non-hazardous options when possible.

For more information, visit EnvironmentalChemistry.com

<http://environmentalchemistry.com/yogi/environmental/household.html>.

To find the poison control center nearest to you visit the American Association of Poison Control Centers' Web site at:

<http://www.aapcc.org/dnn/Resources/FindLocalPoisonCenters/tabid/130/Default.aspx> or call the national poison help hotline at 1-800-222-1222.

## Maintaining Relative Humidity in the Home

Relative humidity is the amount of water the air contains compared with the amount it could contain at a specific temperature. When the relative humidity is 100%, the air is retaining the most moisture possible without precipitation. You will feel most comfortable in your new home when the relative humidity remains between 30 and 60 percent.

When relative humidity falls below 30 percent, discomfort increases. Nasal passages dry out and you get stuffed up. Your skin feels itchy and is susceptible to cracking. Eyes become irritated, especially for contact lens wearers. As relative humidity approaches 20 percent, static electricity and ozone increase. Wood furniture and floors shrink and crack. Asthma and allergies flare up. Less moisture means the air feels cooler, so occupants raise the temperature to maintain comfort—and heating bills go up.

Conversely, when the level is above 60%, the air is too wet, which is also harmful to both the home and the homeowners. Excess humidity is a breeding ground for mold, pests, and rot, and is more likely to cause heatstroke, heat exhaustion, headaches, and dehydration than a less humid atmosphere.

The introduction of fresh air into the home as well as keeping indoor humidity in the commonly-recommended range of 30-60% can be a good way to improve indoor environmental quality. While a green home can achieve better energy performance in part by requiring that walls, windows, doors, roof, etc. are well sealed against the elements, even a well-sealed green home needs ventilation to allow excess moisture to escape and to allow for a controlled introduction of fresh air into the home. That is why green homes are designed with ventilation in mind too. Your home incorporates certain ventilation techniques to help it maintain a good balance between a tight, energy efficient home as well as a home where excess moisture can escape and fresh air can enter the home in a controlled manner.

Follow manufacturers' instructions and regularly change the air filter in your heating, ventilation, and air conditioning system (if you have a forced-air system). Replacing air filters and regularly letting in fresh air by opening windows and doors are simple ways to help keep your indoor air healthy.



## Additional Green Resources

The following Web sites offer a wealth of information on green living.

- U.S. Environmental Protection Agency (EPA): [www.epa.gov](http://www.epa.gov)
- American Public Transportation Association:  
[www.publictransportation.org/systems](http://www.publictransportation.org/systems)
- National Association of Home Builders (NAHB) Green Program:  
[www.nahbgreen.org/Resources/Homeowners](http://www.nahbgreen.org/Resources/Homeowners)
- U.S. Geological Survey: <http://water.usgs.gov/>
- Alliance to Save Energy: [www.ase.org](http://www.ase.org)
- Consumer Reports' Greener Choices: <http://greenerchoices.org/>
- Green Landscaping: [www.epa.gov/greenacres](http://www.epa.gov/greenacres)
- Integrated Pest Management (IPM) Institute of America:  
[www.ipminstitute.org](http://www.ipminstitute.org)
- Green Shield Certified: [www.greenshieldcertified.org](http://www.greenshieldcertified.org)
- U.S. Department of Energy's (DOE) Green Power Network:  
<http://apps3.eere.energy.gov/greenpower/>