

Summary of Credits

**ID Innovation and Design Process 4 of 11 points**

Efforts for planning, team coordination, and innovative design/build solutions are rewarded in this category

**LL Location and Linkages 9 of 10 points**

Points are earned here for location of site in reference to community resources and public transportation as well as existing infrastructure. Many of these points are at “no cost” to the homeowner.

**SS Sustainable Sites 7 of 22 points**

Many credits here are related to surface water management and landscaping. Most of the site is covered with impermeable material. Consider replacing hardscapes with permeable materials to minimize water runoff and heat island effect.

**WE Water Efficiency 9 of 15 points (3 points minimum)**

Water efficiency credits are determined largely by high efficiency fixtures, rainwater catchments and gray water reuse. Active water reuse systems will add expense to the project: water storage tanks and additional plumbing might be beyond the scope of the budget. \*\* The owner should be very careful about choosing high or very high efficient fixtures. \*\*

**EA Energy and Atmosphere 10 of 38 points**

A preliminary HERS rating will be needed. This involves inputting information into a computer model for analysis. At least 8 points are anticipated for wood frame construction, 18 SEER system, and cellulose insulation with energy star windows.

**MR Material and Resources 5.5 of 16 points (2 credits minimum)**

Eight points of this category can be earned by using environmentally preferable products, and with care this is achievable. Three points for reducing waste can be earned but has proven to be very difficult. Up to three points can also be earned for advanced framing techniques.

**EQ Indoor Environmental Quality 13 of 21 points (6 point minimum)**

Points range from indoor purification systems to walk off mats at every entry. Indoor air quality will be a focus for this project.

**AE Awareness and Education 2 of 3 points**

Two credits are available for homeowner education and public awareness.

**POINT TOTAL: 59.5**

Adjusted Certification Thresholds

(4 additional points are needed for the bedroom to home size ration)

Certified	49-63
Silver	64-78

## Innovation and Design Process

4 points of 11

<b>ID</b>	<b>1</b>	<b>Integrated Project Planning</b>	<b>1 of 4</b>
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*Prerequisite:*

As early as possible conduct a preliminary LEED for Homes meeting with key members of the design/build team to create an action plan.

OPTIONAL *Design Charrette* – During the Schematic phase of development have one full day session with Key members of the design/build team to optimize green strategies for the project. (1 point)

*Building Orientation for Solar Design* – design the home with certain requirements for glazing, shading and ideal roof area for potential solar system. (1 point)

<b>ID</b>	<b>2</b>	<b>Durability and Management Process</b>	<b>3 of 3</b>
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*Prerequisite:*

GreenHaus Builders shall complete a durability risk evaluation form, and have a management process in place for ensuring the durability measures he/she planned.

*Third Party Verification* – Green rater to inspect and verify (3 points)  
(a small fee is associated with this)

<b>ID</b>	<b>3</b>	<b>Innovative/Regional Design</b>	<b>0 of 4</b>
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This allows for design solutions above and beyond LEED standards to get a point.

## Location and Linkages

9 points of 10

<b>LL</b>	<b>2</b>	<b>Site Selection</b>	<b>2 of 2</b>
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Avoid environmentally sensitive sites.

The property is not on an environmentally sensitive site (2 points)

<b>LL</b>	<b>3</b>	<b>Preferred locations</b>	<b>3 of 3</b>
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*Infill* - The site has development on 75% of the perimeter. (2 points)

*Previously Developed* – The new house will be on a previously developed site. (1 point)

<b>LL</b>	<b>4</b>	<b>Infrastructure</b>	<b>1 of 1</b>
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*Existing Infrastructure* – the site has an existing infrastructure. (1 point)

<b>LL</b>	<b>5</b>	<b>Community Resources</b>	<b>2 of 3</b>
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*Extensive Community Resources/Transit* – The site is located within ½ mile of 11 basic community resources. (2 points) **VERIFY**, Please see attached map.

<b>LL</b>	<b>6</b>	<b>Access to Open Space</b>	<b>1 of 1</b>
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*Access to Open Space* – The site is located within ½ mile of Evergreen Park and Carl Jung Park. (1 point)

## **Sustainable Sites**

**7 points of 22**

<b>SS</b>	<b>1</b>	<b>Site Stewardship</b>	<b>1 of 1</b>
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*Prerequisites* - Install erosion controls during construction.

*Minimizing Disturbed area* – over 40% of the buildable lot will remain undisturbed (1 point).

<b>SS</b>	<b>2</b>	<b>Landscaping</b>	<b>2 of 7</b>
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*Prerequisites* - No invasive plant species will be used.

*Basic Landscape Design* - landscape architect to design according to certain requirements (2 points) (verify with owner that a landscape plan will be developed)

<b>SS</b>	<b>3</b>	<b>Local Heat Island Effect</b>	<b>1 of 1</b>
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*Reduce Local Heat Island Effects* – Planting to shade 50% of hardscapes or install light colored materials for 50% of hardscapes (1 point)

<b>SS</b>	<b>4</b>	<b>Surface Water Management</b>	<b>1 of 7</b>
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*Permanent Erosion controls* – plant (1) tree, (4) five gallon shrubs, or 50 s.f. of native ground cover per 500 s.f. of disturbed lot including area under roof (1 point)

– OR –

*Management of runoff from roof* – install a permanent storm water control such as an onsite rain garden or rainwater cistern. (1 point)

<b>SS</b>	<b>5</b>	<b>Non Toxic Pest Control</b>	<b>2 of 2</b>
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*Pest Control Alternatives* – Implement as many pest control alternatives as possible (2 points)

## **Water Efficiency – Water Reuse**

**9 points of 15**

A min of 3 pts must be achieved.

<b>WE</b>	<b>1</b>	<b>Water Reuse</b>	<b>3 of 5</b>
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*Rainwater harvesting system* – Capture and hold 50% of rainwater from roof for outdoor use. (3 points) **CONFIRM COST WITH GreenHaus Builders AND HOMEOWNER**

<b>WE</b>	<b>2</b>	<b>Irrigation</b>	<b>3 of 4</b>
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*High Efficiency Irrigation* – Our goal is to earn points for a high efficiency system which features a central shut off valve, sub meter, etc. (2 points)  
**Include landscaper or irrigation company in team.**

*Third Party Inspection* – (1 point)

<b>WE</b>	<b>3</b>	<b>Indoor Water Use</b>	<b>3 of 6</b>
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*High Efficiency Fixtures* – All lavatory faucets, shower heads and toilets must meet flow rates outlined on page 159 such as Water Sense products. (3 points, 1 point for each fixture type)

**Note:** more points are possible for **very high efficiency fixtures**.

## **Energy and Atmosphere**

**10 points of 38**

*To determine the number of points here an energy calculation must be done with a building design. A minimum of 8 points is an assumption.*

<b>EA</b>	<b>1</b>	<b>Optimize Energy Performance</b>	<b>8 of 34</b>
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*Prerequisites* – The home must meet Energy Star rating to qualify for LEED Certification

*Exceptional Energy Performance* – Exceed the Energy Star rating. We assume (8 points)  
A HERS energy model will be performed and verified to achieve these points – re: page 169

<b>EA</b>	<b>7</b>	<b>Water Heating</b>	<b>1 of 3</b>
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Pipe Insulation – All hot water pipes will have R-4 insulation (1 point)

<b>EA</b>	<b>11</b>	<b>Residential Refrigerant Management</b>	<b>1 of 1</b>
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*Prerequisites* – Provide proof of proper refrigerant charge

*Appropriate HVAC refrigerants* – The air conditioning system will use an ozone safe refrigerant (1 point)

## **Materials and Resources**

**5.5 points of 16**

A min of 2 pts must be achieved.

<b>MR</b>	<b>1</b>	<b>Material Efficient Framing</b>	<b>1.5 of 5</b>
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*Prerequisite* – GreenHaus Builders to calculate the percentage of waste.

*Detailed Framing Documents* – create details which indicate locations, spacing, and sizes of framing members. (1 point)

*Framing Efficiencies* – GreenHaus Builders will size headers for actual loads and use 2 stud corners. (0.5 points)

<b>MR</b>	<b>2</b>	<b>Environmentally Preferable Products</b>	<b>4 of 8</b>
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*Prerequisite* – GreenHaus Builders to provide wood product suppliers with notice about FSC woods.

Certain products qualify as an environmentally preferable that have low emissions and are extracted, processed and manufactured within 500 miles of the home. Some examples: (0.5 points each)

Flooring – no carpet in the house

Icynene Insulation – listed in GreenSpec

Walls, Ceiling, Trim – All no VOC paints

Ceramic Bathroom Tile – Dal tile – locally made with recycled content.

Foundation Cement – Cement extracted and manufactured in *Midlothian, TX, 235 miles away.*

<b>MR</b>	<b>3</b>	<b>Waste Management</b>	<b>0 of 3</b>
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*Prerequisite* – GreenHaus Builders to complete tasks related to construction waste management  
Points are available for construction waste reduction.

## **Indoor Environmental Quality**

**13 points of 21**  
A min of 6 pts must be achieved.

<b>EQ</b>	<b>2</b>	<b>Combustion Venting</b>	<b>2 of 2</b>
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*Prerequisite* – meet basic combustion venting measures

*Enhanced Combustion venting* – there will be no wood stove or fireplace in the home (2 points)

<b>EQ</b>	<b>3</b>	<b>Moisture Control</b>	<b>1 of 1</b>
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*Moisture Load Control* – Install dehumidification equipment (1 point)

<b>EQ</b>	<b>4</b>	<b>Outdoor Air Ventilation</b>	<b>0 of 3</b>
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*Prerequisite* – Basic outdoor air ventilation system

*Enhanced Outdoor Air Ventilation* – An ERV Energy Recovery Ventilator maybe recommended with icynene insulation (2 points)

<b>EQ</b>	<b>5</b>	<b>Local Exhaust</b>	<b>2 of 2</b>
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*Prerequisite* – Meet requirements for local exhaust systems

*Enhanced Local Exhaust* – Use occupancy sensor OR automatic timer on exhaust fans in every bathroom (1 point)

*Third Party Inspection* – (1 point)

<b>EQ</b>	<b>6</b>	<b>Distribution System</b>	<b>0 of 3</b>
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*Prerequisite* – Room by room load calculations

<b>EQ</b>	<b>7</b>	<b>Air Filtering</b>	<b>1 of 2</b>
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*Prerequisite* – Good filters, see page 311 for requirement.

*Better Filters* – see page 311 for requirements. (1 point)

**Note:** An additional point can be earned for using **Best** filters.

<b>EQ</b>	<b>8</b>	<b>Contaminant Control</b>	<b>4 of 4</b>
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*Indoor Contaminant Control During Construction* – seal ducts and vents during construction (1 point)

*Indoor Contaminant Control* – show removal and storage at most used entry – AND – walk off mats at every entry – OR – central vacuum system (2 points)

*Preoccupancy Flush* – Flush the house with fresh air for one week at the completion of construction. (1 point) **Michael, please confirm that you plan to do this.**

<b>EQ</b>	<b>9</b>	<b>Radon Protection</b>	<b>0 of 1</b>
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In general Houston does not build for radon resistance.

<b>EQ</b>	<b>10</b>	<b>Garage Pollutant Protection</b>	<b>3 of 3</b>
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*Prerequisite* – No HVAC in garage

*Detached or no garage* – (3 points)

## **Awareness and Education**

**2 points of 3**

<b>AE</b>	<b>1</b>	<b>Education of Homeowner</b>	<b>2 of 3</b>
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*Prerequisite* – GreenHaus Builders to provide basic operations training of all systems.

*Enhanced Training* – additional training, see page 336 for eligible trainings (1 point)

*Public Awareness* – Conduct 3 of the following 4 tasks. (1 point)

- Display LEED signage on exterior of home.
- Hold public open house OR participate in green building tour.
- Generate article about LEED for Homes
- Publish a website; include info about benefits of LEED homes.