

NAHB

National Green Building Program

Designer's Report

Project Name: Canal Parc - DRAFT 11/10/2008

Project Description: Saimac Development LLC c/o Athena Group LLC Canal Parc MacArthur Boulevard, N.W. Washington D.C. 37 Townhomes ducted HVAC system Lessard Group Inc. Project Number: ATN003B00

Requirements - Verified by	Points Available	Points Claimed
Section 1: Lot Design Preparation, and Development		
1.1.1 Select the site Select the site to minimize environmental impact. Avoid environmentally sensitive areas as identified through site foot-printing process or existing third party data. Comments: Avoided environmentally sensitive areas as identified.		
Guidelines followed	7	7
1.1.2 Choose an <u>infill site</u> . Comments: Chose an infill site.		
Infill site selected	9	9
1.3.5 Manage storm water using <u>low-impact development</u> . A. Preserve and use natural water and drainage features. B. Develop and implement storm water management plans that minimize concentrated flows and seek to mimic natural hydrology. C. Minimize impervious surfaces and use permeable materials for driveways, parking areas, walkways, and patios. Comments: Site plan showing natural water and drainage features. Storm water management plan. Calculation of per cent of lot that is a permeable surface after all construction is complete.		
Guidelines followed	8	8
1.3.6 Devise landscape plans to limit water and energy demand while preserving or enhancing the natural environment.		

A. Formulate a plan to restore or enhance natural vegetation that is cleared during development. Within this plan, phase landscaping to ensure denuded areas are quickly vegetated. B. Select turf grass and other vegetation that are native or regionally appropriate species. C. Limit turf areas of landscaped area, selecting native and regionally appropriate trees and vegetation in a way that complements the natural setting. D. Group plants with similar watering needs (<u>hydrozoning</u>). E. Specify planting of trees to increase site shading and moderate temperatures (see also Energy Efficiency guideline 3.4.1.c specifying siting of trees to reduce the energy consumption of the home). F. Design vegetative wind breaks or channels as appropriate to local conditions. G. Require onsite tree trimmings or waste of regionally appropriate trees to be used as protective mulch during construction or as a base for walking trails. H. Establish an integrated pest management plan to minimize chemical use of pesticides and fertilizers.			
Comments: Landscape plan showing phased stabilization of lot; locations of native or regionally appropriate turf and plants; how plants are grouped by watering needs; trees specifically selected for site shading, temperature moderation, or wind breaks; areas where tree trimmings or waste is used as protective mulch during construction or as a base for walking trails; and the integrated pest management plan. List of locally approved plants.			
Guidelines followed		8	8
1.3.7 Maintain wildlife habitat. Comments: Rain Garden/ Wetlands. Details of how wildlife habitat is to be maintained on this site.			
Guidelines followed		5	5
Total Points Claimed in Section 1: Lot Design Preparation, and Development	37		Bronze Silver Gold
		Required Points Additional Points	8 29 10 27 12 25
Section 2: Resource Efficiency			
2.1.1 Create an efficient home floor plan that maintains a home's functionality. All measurements listed below are area of home in square feet, based on <u>ANSI Z765-2003</u>. The home must be no larger than the areas listed below for each bedroom type to earn points. Comments: Unit A 2BR 1,250			
1332 square feet 2 bedrooms	1825 square feet 3 bedrooms	2555 square feet 4 bedrooms	3296 square feet 5+ bedrooms
		1	1
2.1.2 Use <u>advanced framing techniques</u> that reduce the amount of home building material while maintaining the structural integrity of the home Builders need to employ at least two of the items listed in the <u>User Guide</u> in order to get 4 points for this line item. An additional point is granted for each additional technique employed to a maximum of eight points. Comments: Any 2 of - 19.2" or 24" on-center floor framing 19.2" or 24" on-center bearing wall framing 24" on-center roof framing 24" on-center interior partition framing Single top plate walls Right sized or insulated headers (where required)			

Eliminate headers in non-bearing walls Doubling joist in lieu of header (2x6 or deeper wall framing) Ladder blocking at interior wall-to-exterior wall intersections Two stud corner framing Award 4 points for any 2 items and 1		
Two Advanced Framing methods used	4	4
2.1.6 Use pre-cut or pre-assembled building systems or methods. Comments: Plans showing pre-cut floor joists and/or shop-built trusses, and/or panelized roof framing details.		
Provide a pre-cut (joist) or pre-manufactured (truss) floor	3	3
2.2.3 Install perimeter drain for all basement footings sloped to discharge to daylight, dry well, or sump pit Comments: daylight discharge of gravity perimeter drain or pumped discharge from basement sump or discharge to dry well where applicable		
Perimeter drain used	7	7
2.2.4 Install <u>drip edge</u> at eave and gable roof edges Comments: installation of drip edge on all eave and gable roof edges		
Drip edge installed	6	6
2.2.9 Provide a <u>water-resistive barrier (WRB)</u> or a <u>drainage plane system</u> behind the exterior veneer system or the exterior siding. Comments: Housewrap		
WRB or drainage plane installed	8	8
2.2.10 Install <u>ice flashing</u> at roof's edge Comments: Plans showing typical eave edge detail with ice flashing beyond code-minimum requirements.		
Ice flashing installed	5	5
2.2.11 Install <u>enhanced foundation waterproofing</u> . Comments: Include architectural plan detail to show water-proofing spec, not just code minimum damp-proofing. foundation waterproofing, not damp-proofing where applicable.		
Foundation waterproofing used	7	7
2.2.12 Employ and show on plans the following flashing details: 1. <u>Around windows and doors</u> 2. <u>Valleys</u> 3. <u>Deck/house juncture</u> 4. <u>Roof/wall junctures, chimneys step flashing</u>		

5. Drip cap above windows and doors.			
Comments: Show each required flashing detail on architectural plans, as they apply to this design.			
Flashing details employed		9	9
2.4.1 Use <u>recycled-content building materials</u> . In order to obtain three points, the project must have a minimum of two types of recycled content materials. Each type of recycled content material used thereafter would give the project another point each, to a maximum of six points. The <u>How to Implement section</u> includes a list of example recycled products.			
At least 2 recycled-content types used		3	3
2.6.1 Use materials manufactured from renewable resources or agricultural byproducts such as soy-based insulation; <u>bamboo</u> ; wood-based products. A builder can obtain three points for this line item if they incorporate at least two different types of renewable resources into the home's construction. An additional point can be earned for each additional type of renewable material used, for a maximum point total of five. During verification, careful review of the material manufacturer's claims and material specifications is required for this task, and points will be awarded for each material. Comments: 2x dimensional materials OSB or plywood sheathing Low formaldehyde emitting MDF or particleboard			
At least 2 types of renewable resources used		3	3
2.7.1 Use products that contain fewer resources to meet the same end-use as traditional products. A project must use resource efficient materials for at least two different types of components to receive the three points. Comments: TGIs in lieu of 2x joists Trusses in lieu of rafters			
Resource-efficient materials used		3	3
2.8.1 Use locally available, indigenous materials. A builder can obtain three points for this line item if they incorporate at least one type of locally available, indigenous material into the home's construction. An additional point can be obtained for each additional type of material for a maximum point total of five points. Comments: List of materials or components and manufacturing location used in the home that are extracted, processed, and manufactured within 300 miles, or within 1,000 miles if shipped via rail.			
One locally available, indigenous material used		3	3
Total Points Claimed in Section 2: Resource Efficiency		62	
		Required Points	Bronze Silver Gold
			44 60 77

		Additional Points	18	2	0
Section 3: Energy Efficiency					
3.1.1 The home is equivalent to the <u>IECC 2003</u> or local energy code whichever is more stringent. Conformance to this threshold shall be based on plan analysis using software such as <u>ResCheck</u> or other as approved by green building program administrator. Comments: Completed RESCheck (or equivalent) analysis of the home on its site showing compliance with the 2003 IECC and any % excess above the IECC minimum requirements					
<i>Check here if you claim compliance</i>		Yes/ No		Yes	
3.1.2 Size space heating and cooling system/equipment according to building heating and cooling loads calculated using <u>ANSI/ACCA Manual J 8th Edition</u> or equivalent. <u>Computerized software recognized by ACCA as being in compliance with Manual J 8th Edition</u> may be used. Comments: Completed ACCA Manual J analysis (or equivalent) for this house on this site, indicating heating and cooling equipment size to be used.					
<i>Check here if you claim compliance</i>		Yes/ No		Yes	
3.1.3 Conduct third-party plan review to verify design and compliance with the Energy Efficiency section. When multiple homes of the same model are to be built by the same builder, a representative sample (15%) of homes may be reviewed subject to a sampling protocol.					
<i>Check here if you claim compliance</i>		Yes/ No		Yes	
3.3.2.K Seal ducts, plenums, and equipment to reduce leakage. Use <u>UL 181</u> foil tapes and/or mastic. Comments: Inspect for UL 181 foil tape or mastic sealing all ducts to assure optimum performance of the forced air space conditioning system by reducing duct leakage.					
<i>Ducts properly sealed?</i>		6		6	
3.3.2.P Install <u>ENERGY STAR®</u> -labeled mechanical exhaust in every bathroom ducted to the outside. Comments: To achieve spot exhaust ventilation using highly-efficient ventilation equipment					
<i>Bathrooms include mechanical exhaust</i>		8		8	
3.2.1 Home is X% above IECC 2003					
A. 15% (Bronze)		37		37	
3.3.3.A Water heater <u>energy factor (EF)</u> equal to or greater than those listed in the following table: 					

GAS			
Size (gallons)	Energy Factor		
30	0.64		
40	0.62		
50	0.60		
65	0.58		
75	0.56		
ELECTRIC			
30	0.95		
40	0.94		
50	0.92		
65	0.90		
75	0.88		
100	0.86		
OIL			
30	0.59		
50	0.55		
Water heating equipment complies?		4	4
3.3.4.E			
Install <u>ENERGY STAR®-labeled appliances</u> :			
Refrigerator		3	3
Dishwasher		3	3
Washing Machine		5	5
Total Points Claimed in Section 3: Energy Efficiency	66	Bronze	Silver
		Required Points	Gold
		37	62
		Additional Points	100
		29	4
			0
Section 4: Water Efficiency			
4.1.3			
<u>ENERGY STAR® water-conserving appliances installed</u> , e.g., dishwasher, washing machine.			
Two ENERGY STAR water-saving appliances installed		14	14
4.1.11			
Innovative wastewater technology as permitted by local code, e.g., <u>constructed wetland</u> , <u>sand filter</u> , and <u>aerobic system</u> .			
Comments: on-site wastewater treatment system specs that are advancements over conventional septic systems. Wetlands Raingarden			

Innovative wastewater technology used			7	7	
Total Points Claimed in Section 4: Water Efficiency	21		Bronze	Silver	Gold
		Required Points	6	13	19
		Additional Points	15	8	2
Section 5: Indoor Environmental Quality					
5.1.1 For vented space heating and water heating equipment: A. Install direct vent equipment. B. Install induced/mechanical draft combustion equipment. Comments: Spec sheet for equipment to be installed					
Option A or B installed			8	8	
5.1.3 Install direct-vent, sealed-combustion gas fireplace, sealed wood fireplace, or sealed woodstove, or no fireplace or woodstove installed. Comments: Direct-vent gas fireplace optional					
Woodburning appliance installed properly, or not used			6	6	
5.1.5 Ensure particleboard, medium density fiberboard (MDF) and hardwood plywood substrates are certified to low formaldehyde emission standards <u>ANSI A208.1</u> , <u>ANSI A208.2</u> and <u>ANSI/HPVA HP1</u> , respectively. Composite wood/agrifiber panel products must either contain no added urea-formaldehyde resins or must be third party certified for low formaldehyde emission					
Materials meet conditions			6	6	
5.2.1 Vent kitchen range exhaust to the outside. Comments: installation and venting to outside					
Kitchen range vents outside			7	7	
5.3.2 Install moisture resistant backerboard - not paper-faced sheathing - under tiled surfaces in wet areas. Comments: Manufacturer's material spec of moisture resistant backerboard not paper-faced sheathing (presumably behind wall tile and under bath flooring)					
Moisture-resistant backerboard used			6	6	
5.3.3 Install <u>vapor retarder</u> directly under slab (6-mil) or on crawl space floor (8-mil). In crawl spaces, extend poly up wall and affix with glue and furring strips, or damp- proof wall below grade. Joints lapped 12 inches.					

Comments: 6 mil vapor barrier under slab					
Vapor retarder installed properly		9	9		
Total Points Claimed in Section 5: Indoor Environmental Quality	42		Bronze	Silver	Gold
		Required Points	32	54	72
		Additional Points	10	0	0
Section 6: Operation, Maintenance, and Homeowner Education					
6.2 Optional information to include in the Home Manual (Choose at least five) A. A list of local service providers that focus on regularly scheduled maintenance and proper operation of equipment and the structure (sealants, caulks, gutter and downspout system; shower/tub surrounds, irrigation systems, etc). B. A photo record of framing with utilities installed. Photos should be taken prior to installing insulation, clearly marked, and provided in homeowner's manual. C. List of Green Home Building Guidelines items included in the home. D. User-friendly maintenance checklist E. Instructions for proper handling and disposal of hazardous materials. F. Information on organic pest control, fertilizers, de-icers and cleaning products. G. Information about native or low-water landscape H. Information on how to keep a home's relative humidity in the range of 30-60% I. Instructions for checking crawlspace for termite tubes periodically J. Instructions for keeping gutters clean. Instructions should note that downspouts should divert water at least five feet away from foundation Comments: A./ C./ D./ F./ G.					
At least five topics covered		2	2		
6.3 Provide education to owners/occupants in the use and care of their dwellings. Instruct homeowner/occupants about the building's goals and strategies and occupant's impacts on costs of operating the building. Provide training to owners/occupants for all control systems in the house. Comments: Manual for homeowner training on GB strategy and use of all home control systems					
Instructions/training provided		7	7		
Total Points Claimed in Section 6: Operation, Maintenance, and Homeowner Education	9		Bronze	Silver	Gold
		Required Points	7	7	9
		Additional Points	2	2	0
Section 7: Global Impact					
7.1.2 Choose <u>low- or no-VOC indoor paints</u> . VOC concentrations (grams/liter) of interior paints should be equal to or less than those specified by the EPA's Environmentally Preferable Purchasing Program:					

- Interior latex coatings: - Flat: 100 grams/liter - Non-flat: 150 grams/liter - Interior oil-based paints: 380 grams/liter Comments: Builder to provide scope of work for trades using sealants (flooring installers, painters, VAC contractor, plumber, etc.) specifying what sealants are to be used. Add list of applicable trades. All trades must be covered in scopes. Builder contract must specify materials to be used or verifier has to identify actual materials used. Manufacturers spec sheet or MSDS showing the VOC concentrations.					
<i>Low VOC paints used?</i>		6	6		
Total Points Claimed in Section 7: Global Impact	6		Bronze	Silver	Gold
		Required Points	3	5	6
		Additional Points	3	1	0
Project Score: 243 Project Level: Bronze					