

KAMAKANA VILLAGES

LEED ND ISSUES SUMMARY

Dated November 19, 2009
Prepared by Calthorpe Associates (for Forest City Hawaii Kona, LLC)

A LEED for Neighborhood Development (ND) summary analysis was performed for the Kamakana Villages project in October, of 2009, using the Proposed Draft for Ballot of the LEED ND Rating System. The analysis evaluated the project for each prerequisite and credit, highlighting whether the prerequisite/credit is “likely” (green), “possible” (yellow) and “not possible” (red). The summary analysis is intended to estimate how many points the project may earn and what rating (i.e. Platinum, Gold, Silver, or Certified) is possible to achieve. The goal is to demonstrate Forest City’s commitment to smart growth and sustainable development standards, and their aim to make this project a transit-oriented, walkable, and healthy community.

In order to be certified, a development must meet all LEED ND prerequisites and earn a minimum number of points from the menu of credits. With the possible exception of one prerequisite (described in further detail below; see *Preliminary Certification Issues*), the analysis (attached) details and confirms Forest City’s pledge to achieve a LEED ND certification and the project’s ability to attain LEED ND Silver/Gold (Silver: 50-59 points, Gold: 60- 79 points).

Following this analysis, steps must be taken to accredit the Kamakana Villages at Keahuolu project under the LEED ND rating system. Because LEED ND has recently been adopted by the U.S. Green Building Council, registration has not yet opened for accreditation under this rating system. Therefore, the exact process cannot be defined at this time.

However, the registration and certification process under existing rating systems likely provides a good analog to the process that will be developed for the ND system. This process is adapted as follows:

1. Forest City will register the Kamakana Villages at Keahuolu project under the LEED ND track and pay the registration fee for the project. Projected registration fees for 2010 are \$900 for existing rating systems.
2. A certification team will be compiled from within Forest City and its consultants to prepare the LEED ND application for submittal. An expected timeline for application preparation has yet to be determined.
3. Forest City will then submit the project application and pay certification fees. Certification fees are dependent upon the rating system and size of the project, and therefore, cannot be anticipated at this time.
4. A design review phase will be completed by the Green Building Certification Institute’s (GBCI) certification staff in various steps (still to be determined). At this time, Forest City will have a chance to respond to pending and problematic credits in order to reconfigure and resubmit these for another round of review from the GBCI certification staff. It is also at this time that Forest City may take any credits (which they feel were unfairly denied) through the appeals process. Upon completion of review, certification may be awarded.

Preliminary Certification Issues:

SLL Prerequisite 1: Smart Location, Required

In the category Smart Location and Linkage (SLL) Prerequisite 1, the location prerequisite, has been noted as “the most important single standard in this system”. Kaid Benfield, Director of the Smart Growth Program in Washington DC further states that “it is designed primarily to exclude leapfrog development from green certification unless the project at least has regular transit service or is within walking distance of an existing community.”

In summary, “SLL prerequisite 1: Smart Location” says that a project is required to meet the following conditions: First: either (a) locate the project on a site served by existing publicly-owned water and wastewater infrastructure or (b) locate the project within a legally adopted, publicly-owned planned water and wastewater service area, and provide new water and wastewater infrastructure for the project. Second: the project is required to meet one of these four options: Option (1) Infill Sites; Option (2) Adjacent Sites with Connectivity; (3) Transit Corridor or Route with Adequate Transit Service; or Option (4) Sites with Nearby Neighborhood Assets.

The Kamakana project has the following issues concerning this prerequisite:

1. The project meets the conditions in Part One [1b]. In Part Two however, the project does not meet Option (1) Infill Sites or Option (2) Adjacent Site with Connectivity. And so Option (3) Transit Corridor or Route with Adequate Transit Service or Option (4) Sites with Nearby Neighborhood Assets are the remaining choices.
2. Option (3) states: *“At least 50% of dwelling units and non-residential building entrances (inclusive of existing buildings) are within a ¼ mile walk distance of bus stops and the transit service at those stops in aggregate meets the following minimums: 60 daily trips/weekdays and 40 daily trips/weekends.”* [paraphrased from SLL Prerequisite 1: Smart Location Option 3]

Currently the bus service, Intra-Kona, does not run buses on Sundays. This weekend service is explicitly required in order to meet the prerequisite using this option. Additionally, the Intra-Kona may not provide the minimum number of trips required (60 trips/weekday and 40 trips/weekend). This option may be possible if special consideration can be made concerning increased bus service when development begins and necessary density is met (e.g. although Sunday service is not currently provided, Intra-Kona will increase service and trips when a certain percentage of Kamakana is built).

3. Option (4) states: *“Include a residential component equaling at least 30% of the project’s total building square footage (exclusive of parking), and locate the project near existing neighborhood shops, services, and facilities so that the project boundary is within ¼ mile walk distance of at least 5 of the diverse uses (i.e. Food Retail, Community-Serving Retail, Services, Civic/Community Facilities, etc.), or so that the project geographic center is within ½ mile walk distance of at least 7, of the diverse uses.”* [paraphrased from SLL Prerequisite 1: Smart Location Option 4]

An informal survey of the Kamakana site shows this option may also be possible. Currently the Laiopua Community Center (to be built) and Crossroads Shopping Center (existing) make up the requirement of “at least 5 diverse uses” and are just at the ¼ mile distance of the project boundary. Additional analysis will be needed to confirm this is a viable option.

Kamakana LEED ND Checklist

reference: LEED for Neighborhood Development Rating System – Ballot Draft.pdf

last updated: 11/19/09

last updated by: Calthorpe Associates

	Credit Likely
	Credit Possible (requires further steps or analysis to be made)
	Credit Not Possible

Page Number	Smart Location & Linkage (SLL)	Applicable ?	Points Possible	Points Gained	Comments
Prerequisites	1 SLL Prerequisite 1: Smart Location OPTION 3 - TRANSIT CORRIDOR OR ROUTE WITH ADEQUATE TRANSIT SERVICE	Y			Intra-Kona will need to be contacted (if they are the intended operator of the future Ane K line) to determine route details in anticipation of the Kamakana Villages development. Intra-Kona does not seem to run buses on Sundays (currently) which is explicitly required under Option 3 for this prerequisite. I also doubt they are attempting 60 trips/weekday and 40 trips/weekend. Without a shift in these policies, Option 4 is the only other achievable requirement.
	5 SLL Prerequisite 2: Imperiled Species and Ecological Communities Conservation OPTION 2 – SPECIES OR ECOLOGICAL COMMUNITY FOUND: COMPLY WITH HCP	Y			
	7 SLL Prerequisite 3: Wetland and Water Body Conservation OPTION 1 – SITES WITH NO WETLANDS, WATER BODIES, LAND WITHIN 50 FEET OF WETLANDS, AND LAND WITHIN 100 FEET OF WATER BODIES	Y			
	9 SLL Prerequisite 4: Agricultural Land Conservation OPTION 1 – SITES WITHOUT IMPACTED SOILS	Y			
	12 SLL Prerequisite 5: Floodplain Avoidance OPTION 1- SITES WITHOUT FLOODPLAINS	Y			
Credits	13 SLL Credit 1: Preferred Locations OPTION 3 – DESIGNATED HIGH-PRIORITY LOCATIONS	Y	10	3	Check if the Kamakana Villages project qualifies under the Federal New Markets Tax Credit program.
	15 SLL Credit 2: Brownfields Redevelopment	N	2	0	
	16 SLL Credit 3: Locations With Reduced Automobile Dependence OPTION 1 – TRANSIT-SERVED LOCATION or OPTION 2 – MPO LOCATION WITH LOW VMT	N	7	0	Review this credit against the Intra-Kona Bus schedule and map.
	19 SLL Credit 4: Bicycle Network and Storage	Y	1	1	Review this credit against the county bike network and the "PATH" (Peoples Advocacy for Trails Hawaii, http://www.pathhawaii.org/) bike plan; also check the CDP Bike Transit Map
	21 SLL Credit 5: Housing and Jobs Proximity OPTION 1 – PROJECT WITH AFFORDABLE RESIDENTIAL COMPONENT	N	3	0	Not possible without an approach where the site is studied under a phased or staged certification.
	22 SLL Credit 6: Steep Slope Protection OPTION 1 – NO DISTURBANCE OF SLOPES OVER 15% or OPTION 3 – UNDEVELOPED SITES WITH SLOPES OVER 15%	Y	1	1	Additional analysis needed as more detailed slope analysis and site grading studies are completed.
	24 SLL Credit 7: Site Design for Habitat or Wetland/Water Body Conservation OPTION 1 – SITES WITHOUT SIGNIFICANT HABITAT OR WETLANDS/WATER BODIES	Y	1	1	
	26 SLL Credit 8: Restoration of Habitat or Wetlands/Water Bodies	N	1	0	
	27 SLL Credit 9: Long-term Conservation Management of Habitat or Wetlands/Water Bodies	N	1	0	Credit may be possible with a formal management plan for the archeological preserves located on the Kamakana Villages site..

SLL Points Possible	27
SLL Total Points Gained	6
LEED ND Project Total Points Gained	64

- **Certified:** 40-49 points
- **Silver:** 50-59 points
- **Gold:** 60-79 points
- **Platinum:** 80+ points

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reference: LEED for Neighborhood Development Rating System – Ballot Draft.pdf

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	Page Number	Neighborhood Pattern & Design (NPD)	Applicable ?	Points Possible	Points Gained	Comments
Prerequisites	28	NPD Prerequisite 1: Walkable Streets	Y			Additional review needed to analyze any non-conformities with part 'b'. If part 'b' is not possible under a 'whole-project' certification scenario, credit maybe possible with certifying phases of the project in stages.
	30	NPD Prerequisite 2: Compact Development OPTION 2 – ALL OTHER PROJECTS	Y			Need to phase each LEED accreditation district to coincide with 5 year increments from the date of first C/O of a building within that LEED district, in order to meet this prerequisite.
	32	NPD Prerequisite 3: Connected and Open Community OPTION 1 – PROJECTS WITH INTERNAL STREETS	Y			Analysis underway to determine if we will meet the connectivity requirements, and the extent to which we must intensify connections to the Mauka parcels. A potential solution to connectivity problems would be to redraw the boundaries of the certification area.
Credits	34	NPD Credit 1: Walkable Streets	Y	12	10	Kamakana achieves points here by implementing measures to improve the street environment in areas of facades, entries, ground-level use, parking, design speeds for safe pedestrian and bicycle travel.
	39	NPD Credit 2: Compact Development	Y	6	4	3 to 4 credits possible here. Increase the residential density (du/ac) and non-residential density (FAR) to increase number of points earned.
	40	NPD Credit 3: Mixed-Use Neighborhood Centers	Y	4	2	The inclusion of Lai'opua may allow us to achieve seven [7] uses (therefore, 2 credits). In addition, five [5] of these uses must be in a "neighborhood center" enclosed within a circle with radius 300'.
	42	NPD Credit 4: Mixed-Income Diverse Communities OPTION 1 – DIVERSITY OF HOUSING TYPES, OPTION 2 – AFFORDABLE HOUSING, and OPTION 3 – MIXED-INCOME DIVERSE COMMUNITIES	Y	7	7	
	44	NPD Credit 5: Reduced Parking Footprint	Y	1	1	
	46	NPD Credit 6: Street Network	Y	2	0	Update plan so that 1) "Design and/or locate projects so that there is a through-street and/or non-motorized rights-of-way intersecting, or terminating at, the project boundary at least every 400 feet, or at existing abutting street intervals and intersections (this does not apply to portions of the boundary where connections cannot be made because of some physical obstacles, i.e. slopes over 15%, etc.)" and 2) increase number of streets and intersections.
	48	NPD Credit 7: Transit Facilities	Y	1	1	
	49	NPD Credit 8: Transportation Demand Management OPTION 2 – TRANSIT PASSES? OPTION 4 – VEHICLE SHARING?	Y	2	2	Offer 2 or more of the following options: OPTION 1 – TRANSPORTATION DEMAND MANAGEMENT PROGRAM, OPTION 2 – TRANSIT PASSES, OPTION 3 – DEVELOPER-SPONSORED TRANSIT, OPTION 4 – VEHICLE SHARING, or OPTION 5 – UNBUNDLING OF PARKING.
	51	NPD Credit 9: Access to Civic & Public Space	Y	1	1	
	52	NPD Credit 10: Access to Recreation Facilities	Y	1	1	
	53	NPD Credit 11: Visitability and Universal Design OPTION 1 – PROJECTS WITH DWELLING UNITS	Y	1	1	
	56	NPD Credit 12: Community Outreach and Involvement	Y	2	2	
	58	NPD Credit 13: Local Food Production OPTION 3 - PROXIMITY TO FARMER'S MARKET	Y	1	1	Kamakana is expected to support its own Farmer's Market.
	60	NPD Credit 14: Tree-Lined and Shaded Streets OPTION 1 – TREE-LINED STREETS and OPTION 2 – SHADED STREETS	Y	2	2	
	61	NPD Credit 15: Neighborhood Schools	Y	1	0	Requirement states that "New school campuses must not exceed the following: elementary schools – 5 acres." Upon consultation and approval by the Department of Education, it may be possible to update plan to reduce the size of the elementary schools below 5 acres.

NPD Points Possible	44
NPD Total Points Gained	35
LEED ND Project Total Points Gained	64

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	Page Number	Green Infrastructure & Buildings (GIB)	Applicable ?	Points Possible	Points Gained	Comments
Prerequisites	62	GIB Prerequisite 1: Certified Green Building	Y			
	63	GIB Prerequisite 2: Minimum Building Energy Efficiency	Y			
	65	GIB Prerequisite 3: Minimum Building Water Efficiency	Y			
	68	GIB Prerequisite 4: Construction Activity Pollution Prevention	Y			
Credits	69	GIB Credit 1: Certified Green Buildings	Y	5	5	
	70	GIB Credit 2: Building Energy Efficiency	Y	2	2	
	72	GIB Credit 3: Building Water Efficiency	Y	1	1	
	74	GIB Credit 4: Water Efficient Landscaping	Y	1	1	
	75	GIB Credit 5: Existing Building Reuse	N	1	0	
	76	GIB Credit 6: Historic Resource Preservation and Adaptive Use	Y	1	1	
	77	GIB Credit 7: Minimize Site Disturbance in Design and Construction OPTION 2 – UNDEVELOPED PORTION OF PROJECT REMAINS UNDISTURBED	N	1	0	
	79	GIB Credit 8: Stormwater Management	Y	4	4	
	81	GIB Credit 9: Heat Island Reduction	Y	1	1	
	83	GIB Credit 10: Solar Orientation	N	1	0	
	85	GIB Credit 11: On-Site Renewable Energy Sources	Y	3	3	
	86	GIB Credit 12: District Heating & Cooling	N	2	0	
	87	GIB Credit 13: Infrastructure Energy Efficiency	Y	1	1	
	88	GIB Credit 14: Wastewater Management	Y	2	0	"Design and construct the project to retain on-site (with on-site treatment) at least 25% of the average annual wastewater generated by the project (exclusive of existing buildings), and reuse that wastewater to replace the use of potable water."
	89	GIB Credit 15: Recycled Content in Infrastructure	Y	1	0	"Use materials for new infrastructure such that the sum of post-consumer recycled content, in-place reclaimed materials, and one-half of the pre-consumer recycled content constitutes at least 50% of the total mass of infrastructure materials."
	90	GIB Credit 16: Solid Waste Management Infrastructure	Y	1	0	Meet at least 4 of the following 5 requirements and publicize their availability and benefits: a) at least one recycling or reuse station; b) at least one drop-off point; c) at least one compost station; d) litter (with recycle containers) receptacles on mixed use and non-residential streets; and/or e) recycle and/or salvage at least 50% of non-hazardous construction and demolition debris.
	91	GIB Credit 17: Light Pollution Reduction	Y	1	1	

GIB Points Possible	29
GIB Total Points Gained	20
LEED ND Project Total Points Gained	64

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- Gold: 60-79 points
- Platinum: 80+ points

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	Credit Not Possible

		Page Number	Innovation & Design Process (IDP) & Regional Priority Credit (RP)	Applicable ?	Points Possible	Points Gained	Comments
Credits	94		IDP Credit 1: Innovation and Exemplary Performance	Y	5	2	"In writing, identify the intent of the proposed innovation credit, the proposed requirement for compliance, the proposed submittals to demonstrate compliance, and the design approach and strategies that might be used to meet the requirements." (one point for each innovation credit)
	95		IDP Credit 2: LEED Accredited Professional	Y	1	1	"At least one principal member of the project design team shall be a professional who is credentialed with regard to new urbanism as determined by the Congress for the New Urbanism."
	96		RP Credit 1: Regional Priority Credit		4		

IDP & RP Points Possible	10
IDP & RP Total Points Gained	3
LEED ND Project Total Points Gained	64

- **Certified:** 40-49 points
- **Silver:** 50-59 points
- **Gold:** 60-79 points
- **Platinum:** 80+ points