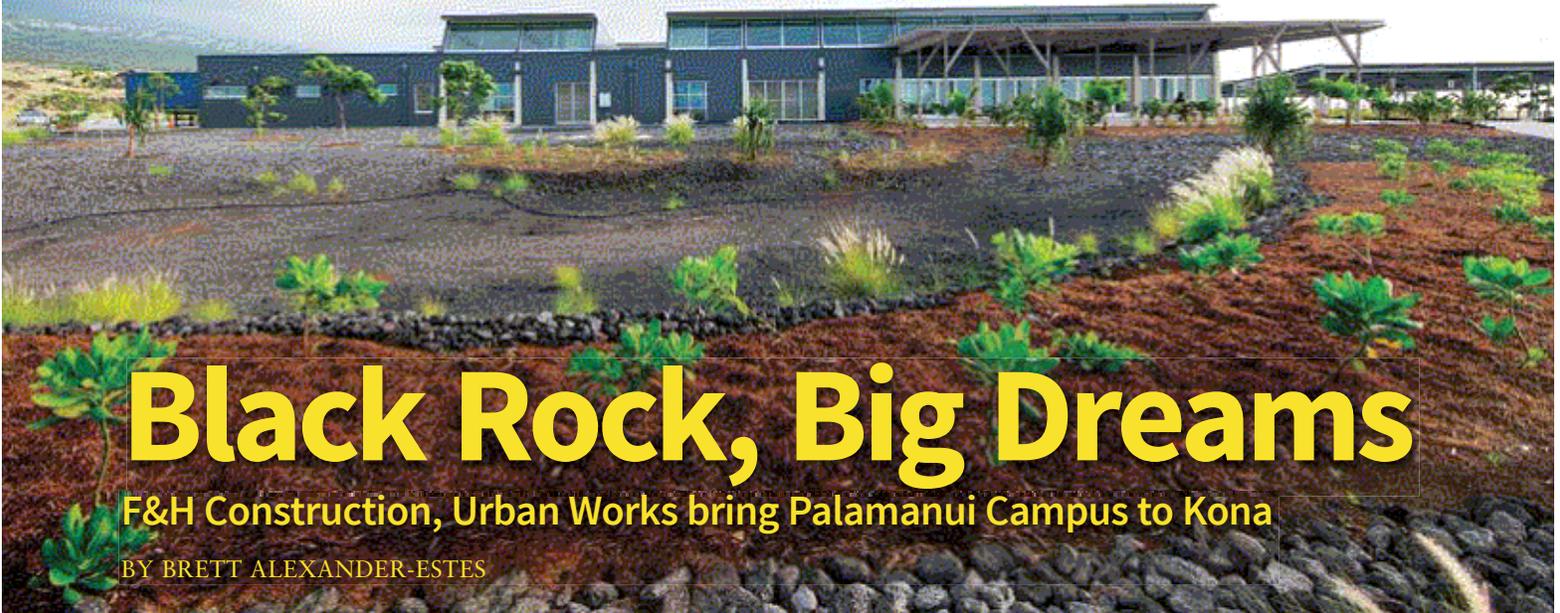


## COLLABORATION: General Contractors & Architects

Hawaii Community College-Palamananui on Hawaii Island  
PHOTO COURTESY ANDREW RICHARD HARA



# Black Rock, Big Dreams

F&H Construction, Urban Works bring Palamananui Campus to Kona

BY BRETT ALEXANDER-ESTES

For decades, a community college campus in West Hawaii was “just a dream,” says Steve Colón, president of Hunt Companies’ development division in Hawaii.

With no permanent facility, classes were held at temporary sites, including a Kealahou strip mall.

The University of Hawaii had long envisioned a permanent campus, says Karen Lee, senior associate at Urban Works Inc. So in 2010, the UH Foundation signed Hunt and other partners to develop a state-of-the-art community college near Kona.

Three years later, the dream broke ground on five acres of *a’a* and *pahoehoe* lava with F&H Construction as

general contractor and Urban Works as project architect.

“The project was to construct Phase 1A and 1B of the Palamananui Campus, which focused on Culinary Arts and Health Services,” says Dan Blackburn, division manager of F&H Construction.

The new Hawaii Community College-Palamananui welcomed its first students in August 2015, and in 2017 won the American Institute of Architects Honolulu Chapter’s Award of Excellence.

Recently, *Building Industry Hawaii* sat down with the project team, and explored Palamananui’s rise from debris field to shining star.



Steve Colón



Karen Lee



Dan Blackburn

### What sets Palamananui apart from other educational projects?

**Lee:** The campus was envisioned and designed as a learning laboratory: a place for learning and a learning tool itself.

### When Palamananui started, was it on or off the grid?

**Lee:** Off the grid.

### What infrastructure was needed?

**Lee:** Electrical, mechanical, data, plumbing, wastewater, fire protection, building controls, septic tanks, grease interceptors, acid interceptors and irrigation lines.

### What were your first steps?

**Lee:** A sustainable charrette with stakeholders and the architect/engineer team was held in the beginning of the design phase to identify and develop a

strategic plan to achieve a sustainable and ecologically driven campus. The project was targeting LEED Platinum from the beginning, with the client/stakeholders and design team on board.

### Did you and F&H Construction collaborate with the client in the design and build-out of the project?

**Lee:** F&H Construction was not

involved in the design. We worked closely with the client and stakeholders throughout the entire design process. During construction, F&H Construction worked closely with us, the client and its appointed construction manager, DAGS Kona.

### What were you contracted to build?

**Lee:** A new community college campus, including:

- Site infrastructures
- On-site improvements (Marae/Piko plazas, storm water detention basin, landscaping, two parking areas, one recycling center, mechanical enclosure, covered walkways and two covered study areas)
- Ground-up construction of seven classrooms, two teaching kitchens,



Frame for Palamanui's main buildings  
PHOTO COURTESY URBAN WORKS INC.

## What Goodfellow Does Best

At Palamanui, “the site was entirely rock,” says John Makoff, regional manager of Hawaii Island at Goodfellow Bros. Inc., which subbed on the project.

The rock “ranged in depth from less than a foot to several feet,” he says, “(and) had one common characteristic: very hard.”



John Makoff

GBI's site prep and other tasks included:

- Clear and grub
- Rough grade site
- Set up rock crusher
- Excavate sanitary sewer
- Main site electrical
- Excavate storm sewer
- Construction of wetlands
- Relocating the mechanical piping from trellis to underground

“Each are areas of work in which we excel,” Makoff says. “GBI used a CAT D-10, Hitachi 800 equipped with a hydraulic hammer (Hoeram), Hitachi 470 equipped with a hydraulic hammer, Hitachi 330 equipped with hydraulic hammer, several heavy-duty CAT rock trucks, a portable crushing plant, smaller ‘dozers, loaders, pickups and hand gear to complete the site work for the campus.”

GBI's entire site work effort took approximately eight months. “The item that was the newest and most impactful as an experience was being able to assist in the construction of an artificial wetland for the purpose of treating wastewater,” Makoff says. “This type of approach to wastewater treatment is a much-needed process—one that promotes sustainability and helps to better manage the use of fresh water.”



Goodfellow Bros. excavating “blue rock” at Palamanui.  
PHOTO COURTESY GOODFELLOW BROS. INC.

nursing skills lab, library/learning resource center, two science laboratories, administration, student service center, business center, staff offices and other support areas totaling 24,000 square feet.

**Blackburn:** The contract calls for an interface that visually tracks and analyzes data gathered from various systems where students and faculty can see what is being used at the college. The design included a constructed wetlands which has a disinfection building, viewing pavilion, primary treatment tanks, and sand filters and vegetation. Water will be treated and then sent back, which will allow reclaimed water for irrigation and other non-potable uses.

### How did you proceed?

**Blackburn:** The ground surface consisted of very ragged *a'a* and *pahoehoe* lava rock. F&H needed to crush the lava before we were able to prepare the site. (We went from mobilization to) sitework and excavation, foundations, structure, exterior and roof, interior rough-ins and finishes, equipment and final activities, wetland area, mechanical enclosure, atrium area/site hard and landscaping.

### Was utility installation difficult?

**Lee:** The sheer mass of MEP utilities meant the GC and subcontractor had to work closely with each other, and (they) developed a good working

relationship. We were all very elated when we finally poured the slab on grade.

**How did you achieve LEED Platinum?**

**Lee:** Key design strategies included sunlight harvesting (PV panels), daylighting, a mixed-mode air conditioning/natural ventilation system, onsite wastewater system (constructed wetlands) and water reuse for irrigating the landscape.

**Blackburn:** We had to pay more attention to VOC content of paints. Wood had to be from a sustainable forest, metal and roof siding had to be so much percentage. So lead times on wood and metal products were longer than normal.

**What was your biggest challenge?**

**Lee:** Opening the campus for Fall 2015. We were running slightly behind schedule due to some unforeseen issues. However, the owner, A/E and contractor were able pull resources together to resolve the issues and obtain the temporary certificate of occupancy at the 11th hour to open the campus on time.

**Blackburn:** Working through change orders and finding extra funds to complete design issues and owner-related changes.



Daylighting helped Palamanui Campus achieve LEED Platinum.  
PHOTO COURTESY ANDREW RICHARD HARA



A state-of-the-art instructional kitchen at Palamanui  
PHOTO COURTESY ANDREW RICHARD HARA

**What's your best example of teamwork?**

**Blackburn:** Relocating the mechanical piping from trellis to underground, which involved coordinating with mechanical, electrical and site work subcontractors.

**Which subs deserve special recognition?**

**Blackburn:** All our subs made this project a huge success, so it's hard to single out just one subcontractor. However, Goodfellow Bros., Dorvin D. Leis and A-1 A-Lectrician Inc. had to overcome huge obstacles and challenges in order to complete their scope of work.

**Now that the project has won AIA Honolulu's Award of Excellence, what does the project team feel is Palamanui's greatest achievement?**

**Colón:** We knew that building a campus in West Hawaii would improve educational opportunities for the area's residents. We could only hope that Palamanui Campus would be as successful a community project as it clearly is today.

**Blackburn:** It is also an award for the community of Kona, and the residents of Hawaii Island: They have dreamed of a university on that side of the island for years.

**Lee:** It is definitely an amazing feeling to be held in such high regard by our peers. We are greatly humbled and privileged to be given this very unique opportunity to work on a project of such high value to our community. 🏠

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