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BELOW THE RIDGE

PBN takes a look behind the scenes as the groundwork is laid for the next phases of Koa Ridge.

BY STEPHANIE SALMONS | 10-13

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REAL ESTATE

KOA RIDGE UPDATE



Garret Matsunami, vice president of residential operations at Castle & Cooke, talks about the utility infrastructure in place for the next phases of Koa Ridge's development.

BUILDING UP KOA RIDGE

Infrastructure work is necessary for the next phases of the project underway in Central Oahu.

BY STEPHANIE SALMONS | ssalmons@bizjournals.com

PHOTOS BY EUGENE TANNER | PBN

Building a house is predictable. ¶ But there's no playbook for the creation of a massive residential development like Koa Ridge. ¶ "Every single site is different and every development is different and the logistics behind it. There is no playbook procedure telling you [that] you need to do this or this first," said Darian Chun, director of site development at Castle & Cooke Homes Hawaii, Inc. ¶ This week, Pacific Business News goes underground at Koa Ridge – Castle & Cooke's long-awaited master-planned community on 576 acres in Central Oahu – to look at the infrastructure work now underway in preparation for the next phases of the development.



Drainage

A view of the filters used in the storm drainage system at Koa Ridge development in Honolulu. The filters catch various debris before it drains into Kipapa Stream.



Drainage

A handmade steel mesh cage is constructed for the drainage culvert.

On Jan. 27, Chun and Vice President of Residential Operations Garret Matsunami led PBN on a tour of the Koa Ridge property, which started at the project's field office, currently located on the site of a future health care campus. In the background, Waioha, a detached, single-family condominium home series is under construction.

Site work on Malu Koa West, the first release of mid-rise condominiums in the mixed-use village green area, is expected to begin in April.

Roadwork in Hale Lau Koa, the village area, will begin this month, Chun said. Across from the village green area is commercial space at The Gateway at Koa Ridge, which abuts Ka Uka Boulevard. Matsunami noted that Castle & Cooke plans to sell the 30-acre parcel, which will be later developed.

"This will be the main road coming in from Ka Uka," he said, referring to Eolako Drive. "You drive past the commercial, and then right here in the middle will be our village green [area]. So that's where all the excitement will be, the heart of the project. This is



Drainage

A box culvert is under construction.



Pipes

A view of the various water pipes and storm drainage pipes to be used.

runs through a drain structure and is treated by a storm water quality filtration unit – from the upper portion of the property to the nearby Kipapa Stream.

It's the second such culvert in Koa Ridge, and Chun said Koa Ridge is the first development to use these storm water quality filtration units.

Above the box culvert, the developers will put in a 24-inch water transmission main that will replace an existing 20-inch transmission main, Matsunami said in a follow-up phone call, adding that sewer and electrical infrastructure will be included within the future roadway.

According to Chun, the box culvert will be finished within the next month and the waterline work will begin around June 2024. Work on the roadway in that area won't start until about January 2025.

Home construction at that particular site won't begin until 2026 or 2027, he said.

At another location within Koa Ridge, a waterline is under construction that will eventually go to another temporary reservoir.

According to Chun, the developers are building a permanent reservoir at the top of Koa Ridge property, across the H-2 freeway, as well as two pumps that will bring water to that reservoir, ultimately providing water for the upper three-quarters of the development.

But first, the developers must construct a temporary reservoir because the waterline needs to cross the H-2 in order to build the permanent fixture, an effort that requires both federal and local approvals, he explained.

"It takes a long time to get that done, so in the meantime we're going to build a temporary reservoir to [provide enough water] pressure," Chun said.

where the mid-rises will start."

Development of such a large tract of land seems much like a puzzle – one piece must be in position before the next can be placed.

For example, a temporary retention basin near the village area – one of several in the development – is in place to protect the downstream area from flooding. The material the developers had to dig out to create that basin is piled high nearby, "so later on, when we need to fill it in, we have the material that we can put right back here,"



Darian Chun,
director of site development at Castle & Cooke, discusses water and drainage infrastructure currently under construction.

Chun said. Where that stockpile of earth sits will be a housing site in the future.

"It goes away when we start grading and developing the lands around it and closing it up and putting in the permanent drainage," Chun said.

Infrastructure

Elsewhere on the site, heavy machinery moves the red dirt.

In a deep trench is a large box culvert under construction that will divert storm water – that first

CONTINUED ON PAGE 12

Matsunami said an existing Board of Water Supply reservoir services much of the lower property, which is why the developer could start work where they did without building wells or a reservoir.

"The importance for [Castle & Cooke] bringing in this water right now is we cannot start building until we have fire protection," Matsunami said. "So [we] need to put in the water line with the hydrants before any structures can go. We can do everything else, pour the pad, whatever, but we need fire protection."

Adding to the cost of this work is a special pipe coating that helps reduce corrosion, which Chun said is almost double the price.

Increasing costs

Has inflation and supply chain issues affected the infrastructure work?

"Yes," Chun is quick to answer.

"Concrete was one of the biggest ones," he said. "There's a cement shortage that occurred back in ... the last quarter of last year, and it's threatening to raise the prices of concrete because cement is ... one of the materials used to make concrete and it's looking like it could be a 10% or 20% increase in price."

Steel prices have also increased.

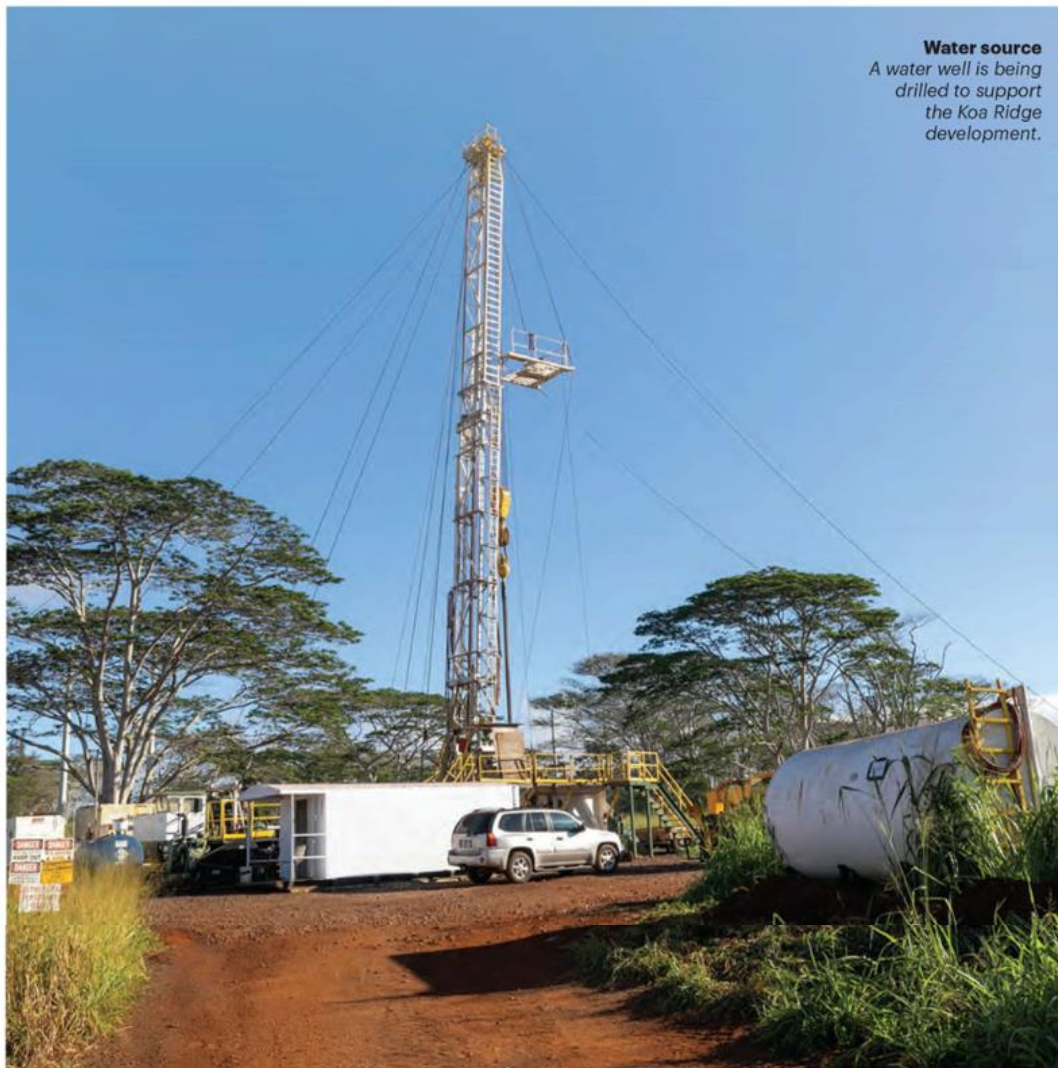
"We had other supply chain problems," Chun said, noting that it now takes a year to order ductile iron pipes and fittings for water lines, as opposed to two or three months.

"So, we have to order things one year in advance," he said. But because they're ordering the supplies so far in advance, Chun said the developer is still able to make its schedules.

The increased cost of materials is what increases the cost of homes, he said.

"When we talk about the challenges of affordable housing, infrastructure is definitely a big factor in why it's difficult to do that because it costs so much," Matsunami said at an earlier point in the conversation.

According to Matsunami in a follow-up email, the projected development cost of Koa Ridge now totals \$2.7 billion. Offsite infrastructure costs, or infrastructure that services the entire master-planned community, are a projected \$620 million, not including \$315 million of "onsite infrastruc-



Water source
A water well is being drilled to support the Koa Ridge development.



The land

A view of the area that will be developed into commercial space.

ture," or infrastructure that serves a specific housing project within the overall development.

Matsunami said the overall infrastructure costs are divided amongst the development.

According to Matsunami, Koa Ridge is financed by a combination of "us paying for it ourselves, along with our investment partners." The costs will be recouped as homes are sold.

On the Mainland, he said infrastructure is often built by local governments. The water infrastructure and roadways within Koa Ridge will later be dedicated to the City and County of Honolulu.

The work so far

It took more than two decades for Koa Ridge to come to fruition. Ground broke on the mixed-use community – one of the last large-scale developments currently planned on the island – in 2017.

Founded in 1851, Castle & Cooke

Currently available
Walea is a collection of
condominium townhomes
within Koa Ridge.



has, among its other efforts, delivered more than 24,000 homes in Hawaii since the 1960s, including those in Mililani – planning for which began in 1958 and the final phase of which was completed in 2008 – and a number of other developments around the Islands.

When it's complete, Koa Ridge will feature around 3,900 residences and rental units, as well as areas for commercial development, a business park, health care campus, parks, school, community center, a "village" and a 7.5 mile shared-use bicycle and walking path.

To date, 405 homes have been completed, with the developer expecting to complete another 140 this year, Matsunami said in a follow-up email to PBN.

Products currently available and under construction are Walea, condominium townhomes, and Waioha, detached single-family condos.

Total buildout – 3,500 homes



Under ground

A construction worker installs a water pipe.

and an additional 400-plus rental units – is expected in 2032, he said.

Castle & Cooke is working with more than 50 contractors and consultant partners, including Royal Contracting and Paradigm Construction among others, who provide contracting, engineering, geotechnical engineering, landscape architecture, environmental consulting, structural engineering, property management and other services.

According to Matsunami, there are typically 400 workers on site, but between 1,500 and 2,000 people are employed because of the Koa Ridge development.

Matsunami, who has been involved with the Koa Ridge project since joining Castle & Cooke in 2003, said it's "exciting" to see the project progress to this point.

"Seeing how happy our buyers are to be moving into their homes, that brings so much satisfaction to see all that excitement." 🏡