ANdAZ

MAUI at WAILEA

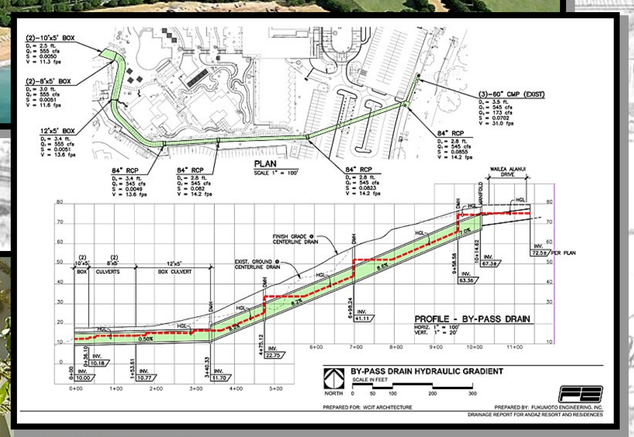
Banner Photo: Reinforcing rings for grass paving used to make a new 20-foot wide emergency vehicle access route that loops around the site.

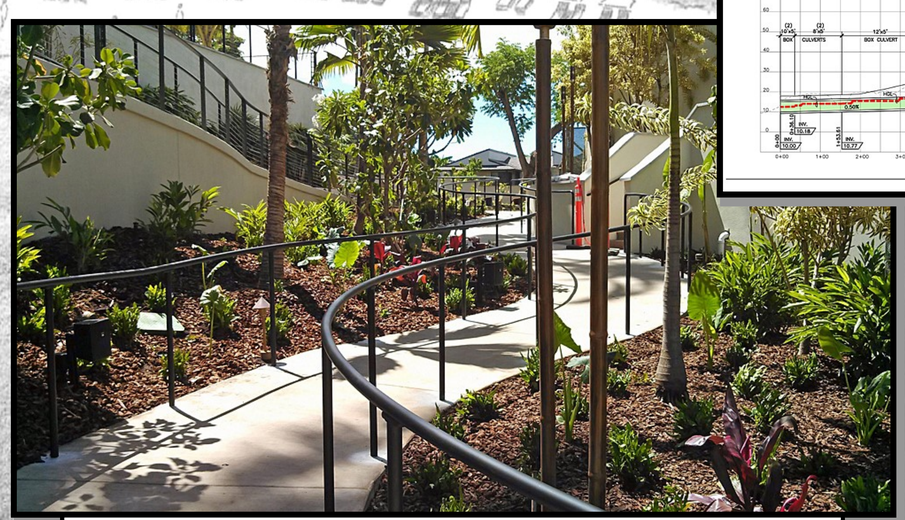
Near End of Construction

Early Construction

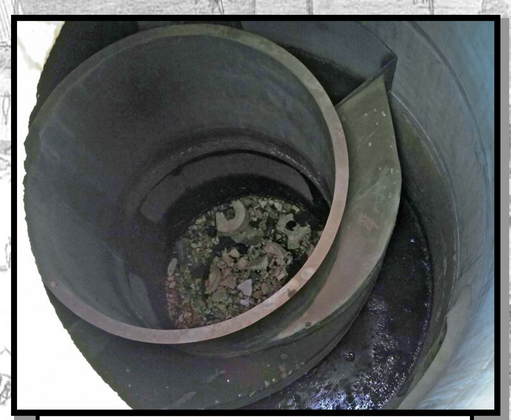
Ka'ana Kitchen: Farm-to-Table Restaurant

Aerial View of the Resort

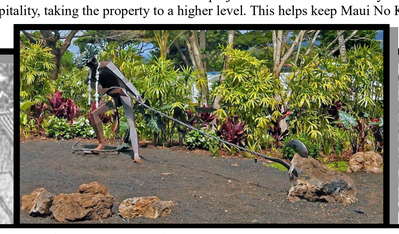




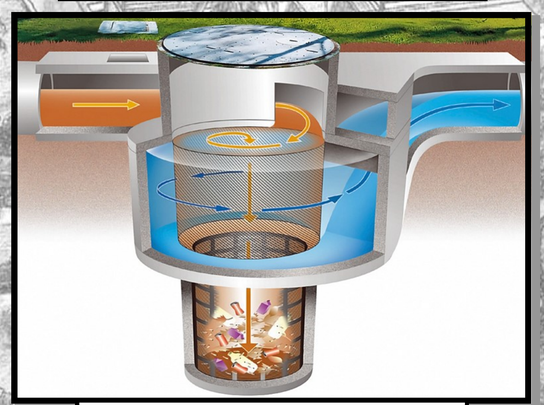
Four cascading pools are beautiful and a great way to work with the topography, but that same grade change poses challenges for accessibility. Affectionately known as the "jungle path," the accessible route snakes through the site and connects the restaurant level at a 55-foot elevation to the lower pool at a 20-foot elevation.



Debris Caught During Construction in Stormwater Filter



Demigod Maui at Resort Entrance



Stormwater Filters Protect the Ocean & Maui's Natural Resources

Career Shadowing Site Visit

PROJECT TEAM

Owner:	**Wailea Hotel and Beach Resort, LLC, includes Hyatt Hotels, Starwood Capital Group, and Kobayashi Group, LLC**
Project Manager:	**SL Busch & Associates, LLC**
General Contractor:	**Swinerton Builders**
Interior Designer:	**Rockwell Group**
Architect:	**WCIT Architecture**
Civil Engineer:	**Fukumoto Engineering, Inc.**
Mechanical Engineer:	**Notkin Hawaii, Inc.**
Electrical Engineer:	**Albert Chong Associates**
Structural Engineer:	**Baldridge & Associates Structural Engineers**
Landscape Architect:	**McCelvey & Associates**
Resort Planner:	**Site Concepts International**

PROJECT DESCRIPTION Originally built in 1978, the Wailea Beach Resort was one of the first two resorts in Wailea. The 15-acre property would later be known as the Stouffer Wailea Beach Resort and the Renaissance Wailea Beach Resort. With its inception over 30 years ago, the time had come for the resort to undergo a major renovation. The existing hotel structure stayed, but the majority of the site was redesigned and reconstructed. Five new villa structures were added. What was a 349-guestroom property is now a 297-guestroom-and-suite resort that includes seven luxury two to four bedroom villas, 12 privately-owned villas, two restaurants, a spa, four cascading infinity-edge pools, a separate adult pool, two poolside bars and lounges, 15,000 square feet of indoor and outdoor event space, and much more.

ENGINEERING DIFFICULTY

Civil: Off-site stormwater flows enter the top of the site at three culverts under Wailea Alanui Drive. The 555 cubic-feet-per-second flow (roughly the size of a water truck… per second!) was routed through the dense site and outletted at the shoreline. A double-barrel box culvert was chosen to spread the flow and slow it down, so it would not erode the shoreline or increase the danger at Wailea's beach walk. Elevations onsite range from 82 feet above mean sea level (AMSL) to 10 feet AMSL. The design team needed to be very creative to provide accessible routes to connect the many elements of the resort.

Electrical: All new power and communication services were installed. The project was able to utilize existing piping and re-feed the wiring. The previous electrical room was shared with the mechanical room. All the new wiring needed to go to a new electrical room that is split from the mechanical room to meet current code.

Mechanical: All new piping and ductwork were installed through the existing structure. An entirely new cooling system was also installed. Forced waste lines were needed from the food service areas to a remote grease interceptor. The grease interceptor location was chosen to be easily accessible, but also to minimize odor exposure. An extremely complex 3-D model of all the systems and the structure was developed to find conflicts.

Structural: While the majority of the existing concrete, 7-story structure stayed, a swath was cut right down the middle for a new arrival and lobby. Not knowing how the existing structure would react posed a challenge. Numerous calculations needed to be crunched for the new loads and new penetrations to the existing structure.

CONSTRUCTION DIFFICULTY The new structures and pools take up a large footprint and leave little room to work. The slope of the site added to the degree of difficulty. An intricate schedule showing sequencing of all tasks was essential to working efficiently and not getting boxed into a corner. On average, 250 to 300 construction workers were on site on any given day. At the peak, there were around 400 workers. Much coordination and cooperation were required between the numerous trades. There was much riding on getting the resort re-opened. Since the resort was closed in September 2007, revenues needed to be generated as quickly as possible. The construction team worked diligently, some even seven days a week, to complete the project for its re-opening in September 2013.

ENVIRONMENTAL CONSIDERATIONS The owner understands what brings people to Maui: its natural beauty. Including environmental protection measures was a top priority. In fact, the project is currently pursuing certification under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED). Once complete, the Andaz Maui at Wailea will be the first LEED certified resort in the State of Hawaii (the certification is currently pending verification of construction submittals). Following is a partial list of environmental benefits that go above and beyond what is required by code:

- Retain 85% of total post-development storm runoff
- Install stormwater filters onsite and in adjacent County beach park
- Keep existing structure and eliminate waste to landfill
- Reduce water demand from previous usage by over 4%, even with adding new buildings and pools
- Install 10 electric car charging stations

PUBLIC BENEFIT In addition to the 7-story structure, a metal sculpture of Hawaiian Demigod Maui was also restored. Originally set to be recycled, the sculpture was brought back to life and now sits at the resort's entry for future generations to enjoy. This beautiful piece of artwork was built in the 1970's by iconic Hawaiian sculptor Chuck Watson. It is an educational piece that embodies Hawaiian values and tells the story of Maui raising up the Hawaiian Islands from the ocean floor using a fish hook.

One of the most popular beaches for scuba lessons, the Mokapu/Ulua Beach Park is always full of cars. Previously, there was little chance of finding parking. As part of this project, 22 additional stalls were added in the County-owned park.

In our community and in communities around the world, there is a big push to be self-sustaining. Andaz Maui at Wailea supports our farmers, ranchers, and fishermen by purchasing local products for their farm-to-table restaurants where daily menus are dictated by availability of local meats and produce.

Tourism is the number one industry in the State. Maui is known as a world-class destination, winning awards year after year. In order for tourism to stay successful, we need to keep improving and updating. In turn, this maintains and creates jobs for our local families. This rehabilitation project raises the bar for luxury and hospitality, taking the property to a higher level. This helps keep Maui No Ka Oi.

Event:	**HSPE MAUI CHAPTER 2014 PROJECT OF THE YEAR COMPETITION**
Sponsor:	**Hawaii Society of Professional Engineers Maui Chapter**
Date:	**January 27, 2014**
By:	**Fukumoto Engineering, Inc.** 1721 Wili Pa Loop, Suite 203 Wailuku, Hawaii 96793