Baldwin Beach Park
Master Plan

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Special thanks to Tara Owens, UH Sea Grant Program and to the Rinzai Zen Temple and Rev. Yamaguchi for the use of their facility for PAC meetings.

Baldwin Beach Park around 1940. The structure in the foreground is the building that now houses the Paia Youth and Cultural Center.

Photo courtesy of Brian McCafferty
## Project Background and Purpose

In 2014, the county acquired 30 acres of former A&B land between the existing Baldwin Beach Park and Pā‘ia Bay Park. With this acquisition, the park doubled in size. But the acquisition did more than increase its acreage; it also created a contiguous open space that stretches over half a mile from the Maui Country Club to the outer edges of Pā‘ia town. With this new opportunity came an obligation to articulate a long-term vision based on protecting this resource while providing recreational opportunities for the area’s residents, many of whom remember a period when the park was a place where the community relaxed, played, and celebrated important milestones in their family’s lives.

<table>
<thead>
<tr>
<th>Purpose of the Plan</th>
<th>Key Ideas</th>
<th>Refining the Plan &amp; Implementation</th>
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</thead>
</table>
| The Baldwin Beach Park Master Plan proposes a new vision for the improvement of one of the county’s most popular parks on the north shore of Maui. The purpose of the master plan is to create a long-term concept that guides future planning, projects, and specific actions. | This broad vision is based on a few key ideas.  

The first is that **the park has and should continue to be an important part of the local community** – a place to enjoy the beach, the ocean, to get together with friends and family, and to participate in a variety of outdoor activities.  

These are basic needs and consequently, another key idea is to **keep the plan simple with a handful of key elements** -- open space, paths, parking, and basic facilities for people to get together.  

Finally, the plan responds to the current knowledge of sea level rise by **proposing improvements that are further mauka than existing facilities**. As new information is generated, the location of specific features may have to be adjusted. | Over the next few years, additional studies will be conducted to address specific technical aspects such as transportation and traffic, drainage and flooding, and infrastructure.  

Once these studies are done, this interim master plan will be refined and updated. In addition, the plan will not be built out in one phase; it will instead be implemented over many years as funding is available.  

Also, conditions and circumstances may change over the life of the plan. It is expected that when this happens, the plan’s underlying concept will be reviewed and refined as needed. |
Location and Context

Baldwin Beach Park is located on the north shore of Maui, just east of Kahului between the Maui Country Club and Paia town. The park is bordered by the Maui Country Club on the west, Hana Highway on the south, residential development on the east, and the ocean to the north.

As shown in the photo at right, the east and west edges of the park have been improved with a variety of recreational facilities and open areas. A large undeveloped section of 30 acres in the middle of the site was acquired in 2014 from Alexander & Baldwin (A&B) as part of a larger negotiated sale with the County of Maui.

Lower Paia Park functions as a separate park but is considered part of the study area for the master plan. The park also includes several uses and facilities not affiliated with the Department of Parks and Recreation. These include the Rinzai Zen Mission, Pā’ia Youth and Cultural Center (PYCC), a small graveyard (owned by A&B) and a small pump station mauka of PYCC owned by the county’s Department of Environmental Management.

Baldwin Beach Park is one of three county parks in central Maui along the north shore (see photo below). Each of the sites provides a different recreational experience because of their setting, character, and facilities. With easy access from Hana Hwy, and a large area of open space, most of which is undeveloped, Baldwin Beach Park has the potential to offer recreational experiences and activities that complement those of Kanaha Beach Park and Hookipa Beach Park.

Baldwin Beach Park is one of three County-owned oceanfront parks on the north shore. All are popular though each has its own distinctive profile of park visitors.
Baldwin Beach Park Master Plan Executive Summary

- Pāʻia Youth & Cultural Ctr.
- Rinzai Zen Temple
- Pavilion
- Graveyard
- "Lime Klin" site
- Lower Pāʻia Park
- Unimproved Area
- Hana Highway
- "Open lawn"
- Maui County Club
- Bike Path
Baldwin Beach Park History

Baldwin Beach Park was named after Harry A. Baldwin, son of Henry P. Baldwin, the co-founder of Alexander & Baldwin, Inc. It was originally developed as a company recreation facility by Hawaiian Commercial & Sugar Company, a division of Alexander & Baldwin, Inc.

According to the review of cultural studies for this project¹, there is evidence of "settlement along the Hāmākuapoko coastline, with dates indicating use of the shoreline as early as A.D. 1235-1420 as well as burial practices in the Sprecklesville area..."

In addition, previous studies found a minimum of 12 sites and features along the coastline and within a minimum of 0.5 miles inland of the park “that have been interpreted as being of Hawaiian origin prior to Western contact.” The study notes also that large portions of the park site “had been developed or previously affected by sand mining and vehicular disturbances”.

Maui Agriculture Co., run by Alexander and Baldwin, constructed the Pā‘ia Lime Kiln in 1907 at the park site and over much of the next seven decades, sand and coral were excavated from the beach to manufacture hydrated lime for plantation use, building roads and airstrips and producing cement during wartime.

A report² cited in the cultural study notes that “large volumes of sand, roughly 4,000 cubic yards per year or 150,000 cubic yards between 1910 and 1949, was mined from the immediate area of the kiln”. After 1949, “production of the kiln tripled thus indicating that sand, likely from the Puuone dune system that extends across the central isthmus of Maui, had been imported to the site for lime production thus indicating the possibility that some of the sand deposits encountered within their project area were secondary deposits from central Maui.”

Most significantly, the project’s cultural study notes that “The Pu’uone Sand Dunes of Central Maui are known to have concentrations of traditional human burials and the possibility of transport of human skeletal remains in imported sand to the area is highly possible”.


The Baldwin Beach Park site (outlined in red), from a 1911-12 map by the Department of Commerce and Labor, Coast and Geodetic Survey.

Note the shoreline in the area of the lime kiln and how it compares to existing conditions (photo on page 5).
The Planning Process

**Phase 1: Site Analysis and Technical Studies**

The project started in October 2018 when a few technical studies were prepared, including a site analysis, a coastal engineering study by Sea Engineering, Inc., and an archaeological literature review by ʻĀina Archaeology. These provided a basic description of site conditions, but more detailed studies are needed as the master plan is refined.

**Phase 2: Community Engagement**

Several techniques were used to involve the community in the planning process. The first step was to conduct a series of personal interviews with ten community members. A twelve-person Project Advisory Committee (PAC) was also established to work with the consultant team and DPR staff. Four meetings with the PAC were held throughout the planning process.

In addition, a series of public open houses were held with the general public and agency staff. The events attracted a cross section of the park’s users along with representatives from public agencies. Three open houses were held, in March, May, and August 2019. Each was held for 2.5 hours from 4:30 - 7:00 pm. One was held at the Kaunoa Senior Center in Sprecklesville and two were held at the Paia Community Center.

**Phase 3: Preparation and Review of Draft Plan**

A draft plan was prepared by the consultant team using information generated through the first three phases. Public open houses also were held to review the draft plan. After the draft plan was revised, another meeting was held with the PAC to discuss and refine the concept as it was being developed.
Existing Conditions

PARK FEATURES

The project area consists of three distinct zones: Baldwin Beach Park, the Baldwin Beach Park Extension/Middle Park, and the Lower Pā’ia Park. An image of three zones are shown in the map on page 9. Existing beach park structures and facilities are listed below.

Restrooms

There are two existing restrooms in the park, one at the western end of the park near the existing pavilion and one in the Lower Pā’ia Park portion of the project. One outdoor shower is included at each restroom.

Picnic Facilities

One covered picnic pavilion with 18 tables and a concessions kitchenette is located in the western portion of the park. Due to ocean flooding, the kitchenette is no longer in use.

Water Safety

One lifeguard station is located at the western end of the park. A Matson container for lifeguard supplies and equipment is also in the area.

Other Facilities and Improvements

Baldwin Beach Park also features an open lawn area that accommodates organized and pick-up soccer, rugby, Frisbee, and other activities. The area also includes a softball backstop at the western end of the park. An outdoor basketball court is located in the Lower Pā’ia Park portion of the site. Water fountains and spigots are provided at each barbeque.

Parking and Access

Three driveways provide access to the park. The main paved access at the western end of the park is accessed from Alawai Road off Hāna Highway.

An unpaved gated driveway provides access to the middle portion of the park off an interior circulation road adjacent to the highway. Direct access to Lower Pā’ia Park is provided via a driveway off the highway. The existing parking areas are unpaved, and the existing parking stall count is listed in the table below.

The Lower Pā’ia Park parking lot is scheduled for reconstruction in ____.

PARK USE

Baldwin Beach is a popular destination on Maui for community events, family gatherings, beach activities, and recreational sports. The area between Baldwin Beach Park and Lower Pā’ia Park, adjacent to “Secret Beach,” appears to be visited less frequently than the rest of the shoreline, due to its isolation and less convenient public access.

Located in Lower Pā’ia Park, Pā’ia Bay is a popular destination for bodyboarders and bodysurfers and is home to the Pā’ia Youth and Cultural Center (PYCC), a nonprofit center that provides educational and recreational opportunities for youth.

The beach shoreline trail, which runs from Lower Pā’ia Park to Baldwin Beach Park is frequently used for daily recreation.

<table>
<thead>
<tr>
<th>EXISTING PARKING</th>
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<tbody>
<tr>
<td><strong>BALDWIN BEACH PARK</strong></td>
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<tr>
<td><strong>MIDDLE PARK</strong></td>
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<tr>
<td><strong>LOWER PĀ’IA PARK</strong></td>
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<tr>
<td><strong>HIGHWAY SHOULDER</strong></td>
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</table>
**OTHER USES**

**Rinzai Zen Mission**

The Rinzai Zen Mission was established in 1932 by Reverend Nanshin Okamoto from Okinawa. The temple is the only one of its kind from the immigration era in the U.S.

After Reverend Okamoto left Maui to establish temples elsewhere in the country, Reverend Kiyoshi Oshiro succeeded him and further developed the Paia temple until his death 50 years later.

After Reverend Oshiro’s death, Reverend Seido Chisaka of Japan took care of the temple until Reverend Ryozo Yamaguchi was assigned as the temple’s resident minister. Shortly after Reverend Yamaguchi and his family settled in, a suspicious fire destroyed the temple and resident building in 1987.

After strong financial support from Japan’s Miyoshinji and Toenji Temples and much support from local residents, the temple was rebuilt and reopened in 1990. Rinzai Zen Mission is well known for having the only Okinawan O-Bon Festival on Maui with live Okinawan entertainment and Okinawan food. It also held monthly temple services and sponsored Zen Meditation weekly gatherings.

**Pa`ia Youth & Cultural Center**

The Pa`ia Youth Council, Inc. dba Pa`ia Youth & Cultural Center (PYCC) was formed in October 1993 by 26 youth to provide social, educational, cultural, vocational, and recreational experiences for youth aged 9-18 years old for Pa`ia and surrounding communities. It has been a fixture in Maui’s North Shore for youth and community related programs. Current annual membership averages 400 members.

A Drop-in Center hostss many programs and activities such as the Pa`ia Bay Cafe, The Hekili Multimedia Lab, Art, ESports, a variety of recreation activities, ocean sports, hiking, community service projects and paid youth internships.

Other programs include:

- The only exclusive bodyboard competition statewide since 1997. This competition is organized and run by the PYCC original alumni members.

- StoneWave SkatePark is a state of the art concrete bowl skate park that placed Pa`ia on the map internationally in the skateboarding world.

- RadiOpio (KOPO), their youth directed low power FM radio station, has been on the air since 2006 and was rated by Paste Magazine one of the 40 best little radio stations in the United States.

- In September 2017 the PYCC began another evidenced program, The Maui Hero Project. The original “Maui Hero Project” (MHP) began in 2000. The program ran uninterrupted for 10 years until the recession in 2008.

The PYCC’s biggest achievement is that it has remained youth-directed and community based. Many of its original members are still active at PYCC. These alumni members still come to hang out, skate, surf, and provide advice and direction. Many of their children are now members of PYCC.

The center is planning to develop a new facility mauka of the existing structure and closer to the highway. This expansion project was not part of the master plan process.
Natural Conditions

Topography and Vegetation

The park’s topography varies from flat zones of grass–land and trees to rolling sand dunes along the shoreline covered in coastal trees and shrubs. The sports field sits at about 8.0–11.0 feet above sea level, while the highest points of grassy dunes range between 20.0–27.0 feet above sea level.

Geology and Soils

The geology of the project area is a combination of Holocene and Pleistocene beach and dune deposits along the shoreline, Holocene alluvium mauka of or underlying the beach deposits and rock outcrops of the Pleistocene Kula lava series. The Holocene epoch extends from the present to approximately 10,000 years ago, and the Pleistocene epoch extends from approximately 10,000 to 2 million years ago.

The Pā‘ia coastline is lined by beachrock awash at the waterline and as much as 800 feet offshore showing the historical record of beach erosion is merely the latest stage in an ongoing process.

The shoreline is characterized by an extensive fringing reef complex associated with a broad and shallow reef flat that parallels most of the coastline and also contains the widespread presence of dunes in the project area.

Shoreline Conditions

Historically, a considerable loss of sand along the shoreline occurred between 1912 and 1960. This loss may be attributable to sand mining operations at the Pā‘ia lime kiln, although there may also be other factors. When the lime kiln was active, a revetment was constructed between Pā‘ia “Secret Beach” and Baldwin Beach and has been an effective protection for the shoreline. The structure provides a good access pathway between beach cells and is heavily used by fishermen.

Baldwin Beach has highly seasonal longshore sand migration patterns caused by the winter and summer wave climate. Winter waves from the northwest tend to push sand to the east side of the beach, while trade wind waves that dominate in the summer tend to push sand to the west side of the beach. See photos on page 14.

Sand volume changes are more dynamic at both the east and west ends of the beach (i.e. each end of the beach cell) but are more extreme at the east end. The total sand volume on Baldwin Beach since April 2012 appears to be approximately the same from year to year.

On the eastern end of Baldwin Beach, a sand headland previously extended from the beach to offshore beach rock outcrops providing general beach stability. Over time, likely due to a combination of sand mining, sea
level rise, and erosion of the offshore beach rock, the headland was reduced to a tombolo and later to a mild salient.

Between the salient and the lime kiln revetment is the popular cove that is enjoyed today. Since the disappearance of the tombolo, seasonal sediment transport volumes along Baldwin Beach have increased and may be eroding the soils landward of the beach in the fall when the shoreline position reaches the seasonal landward maximum. Shoreline recession along Pā‘ia “Secret Beach” and the cove has caused the exposure of a large number of tree stumps.

Coastal Hazards

The U.S. Geological Survey has given the project area a high tsunami, stream flooding, highwaves, and erosion hazard ratings. These designations suggest that the area is highly vulnerable to these environmental issues.

Episodic flooding is a major problem at the park and occurs when both the Kailua Gulch—a narrow 11.8 square mile watershed—overflows during heavy rains due to the build-up of the beach sand berm and into the parking lot and when large waves overtop the berms and water floods the pavilion.

Global sea level rise is also projected to increase sea level by 8.2 feet by the year 2100 in an extreme scenario which will affect beaches and shorelines in Hawai‘i including beach loss, beach narrowing, loss of land due to erosion and infrastructure damage.

The Baldwin Beach Park pavilion in winter 2016. Note the large expanse of beach on the makai side of the structure.

The makai side of the pavilion was undermined by high waves in September 2019, an action that will likely be more common in the future.
Kailua Gulch

Kailua Gulch is a stream located on the west end of the park. The stream is the outflow point of the larger Kailua Gulch watershed, which is a 11.8 square mile land area, extending up towards Halekalā, and channels rainfall to the ocean (Hawaii Watersheds Atlas, 2008). As the stream nears its outlet at the ocean, it passes through the former sugar cane land, under Hāna Highway via culvert, and through the west border of the park.

The stream is densely vegetated with large hau trees and is filled with vegetative debris. Just before the mouth of the stream is a small culvert which is no longer in use. The culvert is severely undersized and restricts the flow of water to the stream mouth, contributing to stream overflow into the park.

Additionally, the mouth of the stream is often blocked by a sand beach berm due to wave action pushing sand towards the mouth. Due to the decreased water velocity of the stream from the dense vegetation and abandoned culvert, there is not

*Aerial photos showing how the shoreline changes through the year. The top photo depicts typical winter conditions (October - April) and the bottom photo shows peak summer erosion conditions (August - September).*
enough force for the water to push through the berm and naturally outflow to the ocean. As a result, the water backs up into the stream and overflows into the park as far as the playfield and Rinzai Zen Mission.

Archaeological and Cultural Review

Roughly 29 formal archaeological studies that include cursory reconnaissance, intensive archaeological inventory survey, and archaeological monitoring studies; as well as, individual site visits and field inspections have been completed within a one-mile radius of the current project area.

An onsite review of the shoreline by the project’s archaeological consultant was conducted for this project to determine if there was evidence of potentially significant and culturally sensitive historic properties.

While no intact cultural deposits were noted within the exposed cliff faces, two potentially significant historic sites (Field Nos AA1818-001 and AA1818-002) were noted within the project area.

Within the current project area, two potentially significant historic properties were observed along the shoreline extent. AA1818-001 consists of one intact and one remnant World War II era pill-box located at the easternmost extent of the project area (see also Section 4.1) while AA1818-002 consists of the remnants of the lime kiln that began operations around 1909 (see also Section 4.2).

Though Titchenal (2000:37) notes the presence and potential historic significance of the remnant lime kiln features, it does not appear that the features were formally recorded or assigned an SIHP number.

Other studies have identified shoreline resource gathering, fishing artifacts, petroglyphs and stones as well as sand that may have been imported from Pu‘uone Sand Dunes which is known to have concentrations of traditional Hawaiian burials and human skeletal remains.

In February 2019 during an intense rain, Kailua Ditch overflowed across the large open space, flowed into the grassy area and the parking lot, then carved a channel in the beach sand to the ocean.
SEA LEVEL RISE EXPOSURE AREA (3.2FT SCENARIO)
BALDWIN BEACH PARK | PĀ'IA, MAUI

Sea Level Rise Exposure Area
Projected Erosion w/ Sea Level Rise (SLR) line (3.2ft scenario)
Baldwin Beach Park faces a number of challenges such as erosion issues, flooding issues, security concerns, lack of trails and access, and facility demand due to its popularity. Among the most important issues are the following:

**Coastal Erosion and Flooding**

Baldwin Beach Park faces both coastal erosion issues (including erosion due to sand migration patterns caused by the winter and summer wave climate), as well as flooding due to wave overtopping (caused by loss of berms over time and blockage of Kailua Gulch), and stream overflow into parking lots. According to climate scientists, the rate of sea level rise is likely to increase dramatically in the coming decades.

**Lack of infrastructure and basic park improvements**

The park lacks many of the basic features needed to accommodate recreational use such as basic infrastructure, roads, parking, and lighting. This is especially true for the newly acquired middle section of the park. An additional lifeguard station may also be needed at Lower Pā‘ia Park.

**Limited Opportunities for Recreation Activities**

Recreation facilities are now limited at the park. As visitation at the park increases in the future, there will be an increasing need for basic park features such as accessible paths, parking, access roads, picnic shelters, trees, restrooms, and multi-purpose open spaces.

**Managing Recreational Use**

Beach parks are among the county’s most popular recreational sites and Baldwin Beach Park is one of three in central Maui. Of those, only two -- Baldwin and Kanaha -- have spaces and facilities that can accommodate a range of activities. Baldwin’s proximity to Paia town generates another issue - the demand for parking, which can sometimes spill over into the park.

**Safety and Security**

Like many parks, there have been reports of chronic on-going safety and security issues at the park such as illegal parking, squatting, substance abuse, violence, and destruction to infrastructure. The presence of park visitors and active recreational opportunities can help to mitigate these issues.

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The pavilion was severely damaged in 2019, requiring that a portion of the structure be removed.

The dirt and gravel lot, which is flooded during heavy rains and high surf.

In addition to the pavilion, the bike path (North Shore Greenway) is one of the few improvements for park visitors.
### Key Strategies and Major Actions

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<tr>
<th>KEY STRATEGIES</th>
<th>MAJOR ACTIONS</th>
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<tbody>
<tr>
<td>CONTINUE TO RESTORE THE PARK’S COASTAL ECOLOGY AND SUPPORT COASTAL RESILIENCE</td>
<td>• Relocate parking and new development behind shoreline setback</td>
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<tr>
<td></td>
<td>• Strengthen and protect sand berm system</td>
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<tr>
<td></td>
<td>• Improve Kailua Gulch drainage to minimize impacts of flooding</td>
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<tr>
<td>EXPAND RECREATIONAL OPPORTUNITIES</td>
<td>• Expand multipurpose field for activities such as pick-up games and picnics</td>
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<td></td>
<td>• Provide campground with management program</td>
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<td></td>
<td>• Provide small covered picnic shelters for informal use by 2-4 people</td>
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<td></td>
<td>• Improve the undeveloped areas in the center of the park</td>
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<tr>
<td>IMPROVE PEDESTRIAN, BICYCLE, AND VEHICULAR CIRCULATION AND PARKING</td>
<td>• Create a network of walkways and trails throughout park</td>
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<td>• Provide vehicular drop-offs near the shoreline for unloading</td>
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<td></td>
<td>• Provide reserved stalls for ADA and cultural practitioners</td>
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<td></td>
<td>• Improve parking lot organization</td>
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<td></td>
<td>• Provide road to connect different areas of park</td>
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<tr>
<td>CREATE A SAFER AND MORE SECURE ENVIRONMENT</td>
<td>• Provide additional lifeguard stations and storage at “Secret Beach” and Pāʻia Bay</td>
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<td></td>
<td>• Use a variety of ways to improve security throughout the park</td>
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<td></td>
<td>• Provide separate entrance access to Rinzai Zen Mission</td>
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<tr>
<td>UPGRADE INFRASTRUCTURE AND FACILITIES</td>
<td>• Improve drainage throughout park</td>
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<td></td>
<td>• Provide additional large and small pavilions</td>
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<td></td>
<td>• Provide new portable restroom for park expansion area</td>
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<tr>
<td></td>
<td>• Repave basketball court at Lower Pāʻia Park</td>
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<tr>
<td>ENHANCE LANDSCAPE PLANTING AND GROUNDS AND FACILITY MAINTENANCE</td>
<td>• Provide shade trees throughout park</td>
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<td></td>
<td>• Restore native vegetation along shoreline and throughout park</td>
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<td></td>
<td>• Remove or thin ironwood trees and replant with native species</td>
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<td></td>
<td>• Additional and more frequent maintenance to overgrown vegetation</td>
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<tr>
<td>PRESERVE THE NATURAL CHARACTER OF THE SHORELINE</td>
<td>• Initiate shoreline restoration projects and programs</td>
</tr>
<tr>
<td></td>
<td>• Open views to shoreline from Hāna Highway</td>
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</tbody>
</table>
The Concept Diagram show how some of the major ideas in the table at left can be implemented.

The large green space is a major feature of the park and the park’s access roads and parking areas are located to maintain as much contiguous open space as possible.
The Concept Diagram shows how some of the major ideas in the table at left are implemented.

The large green space is a major feature of the park and the park’s access roads and parking areas are located to maintain as much contiguous open space as possible.
The Baldwin Beach Park and Shoreline Zone is the most heavily used and most popular part of the park, in part because it is the largest and most accessible. It includes most of the park’s shoreline areas and the facilities most in need of repair and/or renovation. It also is an area that has seen and will continue to see major impacts from sea level rise and other coastal threats.

Some of the critical issues in this zone include responding to threats from sea level rise and coastal flooding, improving drainage in Kailua Gulch, providing facilities (some in new locations) to meet current and future recreation needs, and improving connectivity to other parts of the park.

**APPRAOCH**

The focus for this area is to:
- Address sea-level rise along the shoreline,
- Replace and provide facilities to expand recreation opportunities, and
- Improve pedestrian connections between this part of the park and other sections to the east.

**KEY ACTIONS**

- Initiate dune restoration along shoreline.
- Explore options to address flooding from Kailua Ditch.
- Relocate parking, pavilion and other improvements out of the projected sea-level rise zone.
- Install new security gates at west entrance, maintenance road, vehicular drop-off road, and Rinzai Zen Mission entrance.

**SELECTED KEY ACTIONS**

- Expand paths to other parts of the park.
- Provide new entrance to Rinzai Zen Temple.
- Explore options to address flooding from Kailua Ditch.
- Relocate parking and pavilion mauka out of projected sea-level rise zone.
- Initiate dune restoration along shoreline.
Baldwin Beach Park Extension/Middle Park Zone

This zone comprises the bulk of the property acquired from A&B in 2014 and consequently, is unimproved and inaccessible for many visitors. It is however, an area with great recreational potential and can also serve as a space that links Paia Bay Beach Park with the existing Baldwin Beach Park.

The Middle Park portion of the project is the most open and disconnected from the other portions of the project, as well as having poor access and connectivity from Hāna Highway.

Some of the critical issues in this zone include improving connections between the two ends of the park, providing parking areas and additional access from Hana Hwy., and protecting the park from sea level rise and other threats.

**APPRAOCH**

The focus for this zone is to:

- Develop the unimproved areas as multi-purpose spaces that can be used for a variety of recreational activities,
- Provide basic improvements with paths, access roads, and recreational facilities, and
- Address sea-level rise along the shoreline.

**KEY ACTIONS**

- Create open lawn areas with a network of paths that connect to other parts of the park.
- Develop an access loop and parking lots.
- Develop small covered picnic shelters along the proposed access road.
- Initiate a dune restoration program.

**SELECTED KEY ACTIONS**

- Create multi-purpose open spaces and system of paved paths
- Create network of paths connected to existing paved path along highway
- Provide parking along road and outside SLR zone
- Develop access road and additional access point from highway
- Restore dune system along shoreline
The Lower Pā‘ia Park Zone comprises the area also known as Lower Pā‘ia Park. Although the site is relatively small, it includes several facilities - a restroom, basketball court, lawn area, parking, and the Pā‘ia Youth and Cultural Center (PYCC).

Because of its proximity to Pā‘ia town, this zone also attracts people visiting the shops and restaurants. The park is also heavily used during the annual PYCC-sponsored bodyboard competition.

One of the most critical issues in this zone is to address the need for parking, for both the public and PYCC. Also, the center is proposing to build a new facility closer to the highway, which will further increase the need for a clearly defined parking layout.

**APPROACH**

The focus for this area is to:

- Improve existing access, parking and circulation to PYCC and other portions of the park,
- Improve parking for park users and PYCC visitors, and
- Improve existing recreation facilities and provide new facilities as needed.

**KEY ACTIONS**

- Redevelop the parking area for the public and PYCC,
- Works with State DOT to develop a plan for the area along Hāna Highway to address parking issues along the road.
- Improve trails and provide additional trail connections to the shoreline and other parts of the park.
- Resurface existing basketball court, add more trees, and picnic facilities.

**SELECTED KEY ACTIONS**

- Address parking issues along Hāna Highway.
- Redevelop parking for park and PYCC.
- Improve/repair park features
- Install lifeguard stand
- Provide paths to other parts of the park.
- Site for new PYCC facility.
A generalized and preliminary cost estimate for the Baldwin Beach Park Master Plan was prepared for the County by J. Uno and Associates on October 24, 2019. The report’s construction cost is estimated to be $20,866,000 (2019 dollars), divided into three project phases. These costs are summarized below. They also include a 20% percent contingency.

The estimate included cost projections for demolition work, sidewalk/road/parking lot paving, parking lot lighting, landscaping, new structures including pavilions, and associated features such as picnic tables, playground and exercise equipment, lifeguard stands and equipment, and security gates. The estimate also included projected costs for design contingency, contractor overhead, profit, bonds/insurance, and G.E. tax.

<table>
<thead>
<tr>
<th>PARK ZONE</th>
<th>SIZE</th>
<th>COST ESTIMATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BALDWIN BEACH PARK</td>
<td>19.1 Acres</td>
<td>$4,986,000</td>
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<tr>
<td>MIDDLE PARK</td>
<td>26.0 Acres</td>
<td>$14,699,000</td>
</tr>
<tr>
<td>LOWER PĀ‘IA PARK</td>
<td>3.8 Acres</td>
<td>1,181,000</td>
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</table>
### Baldwin Beach Park and Shoreline Zone

---

#### Baldwin Beach Park

**Demolition**

<table>
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<tr>
<th>Description</th>
<th>City</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Remove Existing Pavilion</td>
<td>1</td>
<td>hr</td>
<td>$18,800.00</td>
<td>$18,800</td>
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<tr>
<td>Remove Existing Parking Lot</td>
<td>5900</td>
<td>sf</td>
<td>$2.40</td>
<td>$14,160</td>
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</table>

**Pavements**

- **Road Segment A**
  - Asphalt & Crushed Stone: 15800 sf, $5.25 = $82,950
  - AC Pavement: 22730 sf, $6.50 = $147,745
  - Site Lighting: 5 ea, $18,500.00 = $92,500

- **West Parking Lot**
  - AC Pavement: 53500 sf, $6.50 = $347,750
  - Site Lighting: 11 ea, $18,500.00 = $203,500

- **West Parking Lot Expansion**
  - AC Pavement: 24000 sf, $6.50 = $156,000
  - Site Lighting: 5 ea, $18,500.00 = $92,500

- **Paved Pathways**
  - West Parking Lot to Unpaved Trail, Concrete: 4376 sf, $6.50 = $28,444

**Unpaved Trail**

- Clear & Grub: 27920 sf, $1.80 = $50,256
- Compact, Stabilize Soil: 27920 sf, $5.00 = $139,600

**Landscaping**

- Canopy Trees, 15 g.c. Field Stock: 85 ea, $5,800.00 = $493,000

**Structures**

- Open Walled Structure: 6000 sf, $165.00 = $990,000
- Open Picnic Pavilions, 12' x 32': 6 ea, $6,200.00 = $37,200
- Picnic Tables, BBQ Grilles @ Lime Kiln: 6 ea, $3,200.00 = $19,200
- Playground/Exercise Equipment: 1 hr, $65,000.00 = $65,000
- Security Gates: 2 ea, $4,500.00 = $9,000
- Lifeguard Stand: 3 ea, $110,000.00 = $330,000
- Lifeguard Storage, Matton Container: 3 ea, $9,500.00 = $28,500

**Subtotal, Direct Cost:**

| Design Contingency | $632,021 |
| Prime Contractor's Overhead | $586,180 |
| Prime Contractor's Profit | $345,784 |
| Bonds & Insurance | $93,362 |
| G&E Tax | $224,360 |

**Total Estimated Contract Cost, Rounded:**

| $4,985,812 | $4,986,000 |
### Baldwin Beach Park Extension/Middle Park Zone

**Executive Summary**

**PROJECT:** Baldwin Beach Park Master Plan

**LOCATION:** Puna, Hawaii

**ARCHITECT:** Per Hawaii

**PRICES BY:** JUNO

**DATE:** 06/24/2019

---

**PROJECT COST SUMMARY**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CITY</th>
<th>UNIT</th>
<th>UNIT COST</th>
<th>TOTAL</th>
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<td><strong>DEMOLITION</strong></td>
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<tr>
<td>Remove Existing Pavement</td>
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<td>$16,600.00</td>
<td>$16,600.00</td>
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<tr>
<td>Remove Existing Parking Lot</td>
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<td>$2.40</td>
<td>$14,160</td>
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<td><strong>PAVEMENTS</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ROAD SEGMENT A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asphalt &amp; Crushed Stone</td>
<td>15800 sf</td>
<td></td>
<td>$5.25</td>
<td>$82,950</td>
</tr>
<tr>
<td>AC Pavement</td>
<td>22730 sf</td>
<td></td>
<td>$6.50</td>
<td>$147,745</td>
</tr>
<tr>
<td>Site Lighting</td>
<td>5 ea</td>
<td></td>
<td>$18,500.00</td>
<td>$92,500</td>
</tr>
<tr>
<td><strong>WEST PARKING LOT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC Pavement</td>
<td>53500 sf</td>
<td></td>
<td>$6.50</td>
<td>$347,750</td>
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<tr>
<td>Site Lighting</td>
<td>11 ea</td>
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<td>$18,500.00</td>
<td>$205,500</td>
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<tr>
<td><strong>WEST PARKING LOT EXPANSION</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>AC Pavement</td>
<td>24000 sf</td>
<td></td>
<td>$6.50</td>
<td>$155,000</td>
</tr>
<tr>
<td>Site Lighting</td>
<td>5 ea</td>
<td></td>
<td>$18,500.00</td>
<td>$92,500</td>
</tr>
<tr>
<td><strong>PAVED PATHWAYS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Parking Lot to Unpaved Trail, Concrete</td>
<td>4376 sf</td>
<td></td>
<td>$6.50</td>
<td>$28,444</td>
</tr>
<tr>
<td><strong>UNPAVED TRAIL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear &amp; Gravel</td>
<td>27920 sf</td>
<td></td>
<td>$1.80</td>
<td>$50,256</td>
</tr>
<tr>
<td>Compacted, Stabilize Soil</td>
<td>27920 sf</td>
<td></td>
<td>$5.00</td>
<td>$139,600</td>
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<tr>
<td><strong>LANDSCAPING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Canopy Trees, 15 g.c. Field Stock</td>
<td>85 ea</td>
<td></td>
<td>$5,000.00</td>
<td>$455,000</td>
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<td><strong>STRUCTURES</strong></td>
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<tr>
<td>Open Walled Structure</td>
<td>6000 sf</td>
<td></td>
<td>$165.00</td>
<td>$990,000</td>
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<td>Open Picnic Pavilions, 12' x 12'</td>
<td>6 ea</td>
<td></td>
<td>$60.00</td>
<td>$360.00</td>
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<tr>
<td>Pacific Tables, BBQ Grilles &amp; Lime Kiln</td>
<td>6 ea</td>
<td></td>
<td>$320.00</td>
<td>$1920</td>
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<tr>
<td>Playground/Exercise Equipment</td>
<td>3 cs</td>
<td></td>
<td>$65,000.00</td>
<td>$65,000</td>
</tr>
<tr>
<td>Security Gates</td>
<td>2 ea</td>
<td></td>
<td>$4,500.00</td>
<td>$9,000</td>
</tr>
<tr>
<td>Lifeguard Stand</td>
<td>1 ea</td>
<td></td>
<td>$110,000.00</td>
<td>$110,000</td>
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<tr>
<td>Lifeguard Storage, Matson Container</td>
<td>1 ea</td>
<td></td>
<td>$9,500.00</td>
<td>$9,500</td>
</tr>
</tbody>
</table>

**SUBTOTAL DIRECT COST:**

- $2,105,105

**DESIGN CONTINGENCY:**

- $62,021

**PRIME CONTRACTOR'S OVERHEAD:**

- 16.00%

- $596,180

**PRIME CONTRACTOR'S PROFIT:**

- 8.00%

- $345,784

**BONDS & INSURANCE:**

- 2.00%

- $93,362

**G.E. TAX:**

- 4.71%

- $224,360

**TOTAL ESTIMATED CONTRACT COST, ROUNDED:**

- $4,985,812
# Baldwin Beach Park Master Plan Executive Summary

## Project Costs Summary

<table>
<thead>
<tr>
<th>Description</th>
<th>City</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Total</th>
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<tbody>
<tr>
<td><strong>Middle Park</strong></td>
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<tr>
<td><strong>Structures</strong></td>
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<tr>
<td>Open Wall Structure</td>
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<td>$145.00</td>
<td>$870,000</td>
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<td>Shovel</td>
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<td>3 ea</td>
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<td>$5,500</td>
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<tr>
<td>Water Fountain</td>
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<td>$3,500.00</td>
<td>$3,500</td>
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<td>Open Picnic Pavilions, 12' x 12'</td>
<td></td>
<td>38 ea</td>
<td>$6,200.00</td>
<td>$235,600</td>
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<td>Picnic Tables, BBQ Grilles</td>
<td></td>
<td>38 ea</td>
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<td>$121,600</td>
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<tr>
<td>Playground/Exercise Equipment</td>
<td></td>
<td>3 ea</td>
<td>$65,000.00</td>
<td>$195,000</td>
</tr>
<tr>
<td>Lifeguard Stand</td>
<td></td>
<td>2 ea</td>
<td>$4,500.00</td>
<td>$9,000</td>
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</tbody>
</table>

**Subtotal Direct Cost:** $13,812,812

**Design Contingency:** 20.00%, $1,830,962

**Prime Contractor's Overhead:** 36.00%, $1,257,042

**Prime Contractor's Profit:** 8.00%, $1,019,316

**Bonds & Insurance:** 2.00%, $275,229

**G.E. Tax:** 4.71%, $661,410

**Total Estimated Contract Cost, Rounded:** $14,698,614

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**Baldwin Beach Park Master Plan Executive Summary**

27
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QTY</th>
<th>UNIT</th>
<th>UNIT COST</th>
<th>TOTAL</th>
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<td>LOWER PAʻIA: (line)</td>
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<tr>
<td>DEMOLITION</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Clear &amp; Grub Existing Vegetation</td>
<td>3.8 ac</td>
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<td>PAVEMENTS</td>
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<tr>
<td>LOWER PAʻIA PARKING LOT</td>
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<tr>
<td>AC Pavement</td>
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<td>Resurface &amp; Stripe</td>
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<td>Open Picnic Pavilions, 12' x 12'</td>
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<td>$65,000</td>
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<td>G.E. TAX</td>
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Lower Pā‘ia Park Zone