

Photo courtesy of Friends of the Natatorium

Waikiki War Memorial Natatorium Swim Basin Rehabilitation Alternative November 2016



National Trust for
Historic Preservation
Save the past. Enrich the future.



World War I

- World War I, aka The Great War, lasted from 28 July 1914 – 11 November 1918.
- The United States entered the conflict on 6 April 1917.
- Over 9 million soldiers were killed, and another 21 million wounded.
- Over one million soldiers were killed in the Battle of the Somme, including about 30,000 in just one day.
- About 116,000 Americans were killed.



The Territory of Hawai‘i in World War I

- Over 10,000 people of Hawai‘i contributed to the war effort through the Red Cross, Ambulance, British & U.S. Forces
- Record-setting bond sales and volunteers for service



U.S. Army Museum photo

“... the Territory of Hawaii stands in a class by itself among the States and Territories having already furnished nearly 2,000 men as volunteers in excess of the number required from the islands to fill up the first army.”

- *Washington Post*
July 15, 1917

WWI Memorials



World War I Memorial, Germany



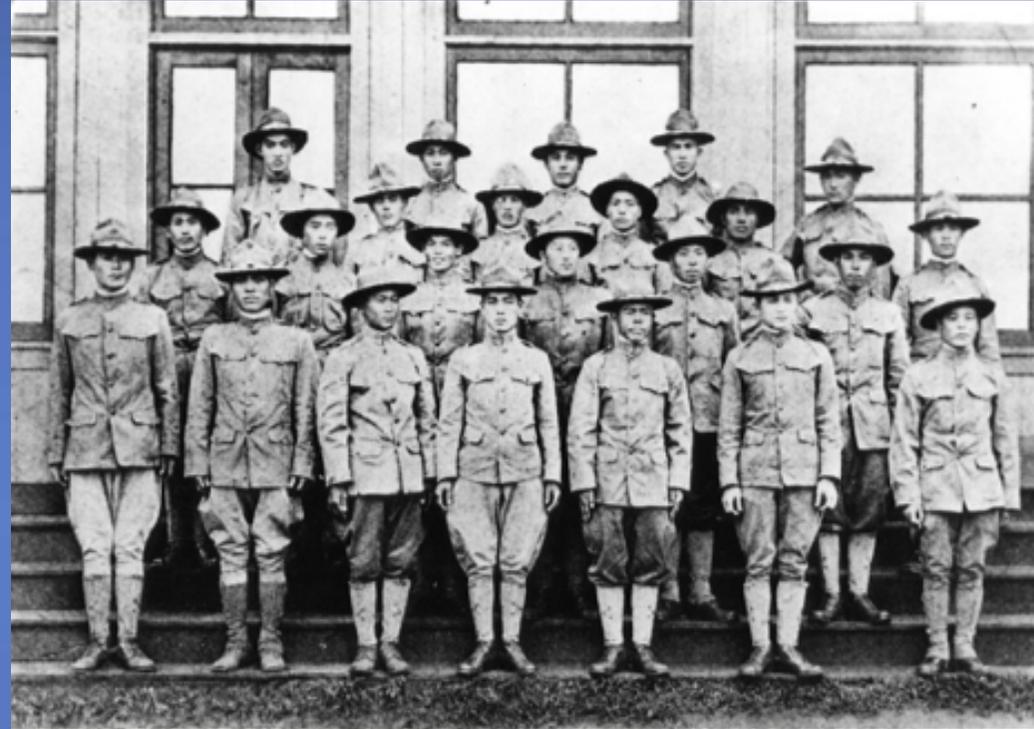
Soldier Field, Chicago (1926)

In the years following the end of World War I a heated debate occurred in the United States as to whether memorials should be the standard sort that were created after the Civil War or a more progressive sort of "living memorials." These consisted of bridges, parks, libraries, playgrounds, community centers, civic auditoriums and athletic fields. Examples include Soldier Field and Veterans Stadium.

Honor the Memory



Officers of the Sixth Aero Squadron December 1918. Courtesy of Hawai'i Aviation



*Japanese from Hawaii who entered the Army during World War I, ca. 1917. United Japanese Society.
Courtesy of Bishop Museum*

PURPOSE: “To the men and women of Hawai‘i who served during the Great War”

- Act 15 (1921)

Living Memorial



ACTION: “...shall include a swimming course at least 100 meters in length.”

- Act 15 (1921)

Construction & Design

Design competition resulted in selection of Lewis Hobart of San Francisco as the architect



City and County of Honolulu

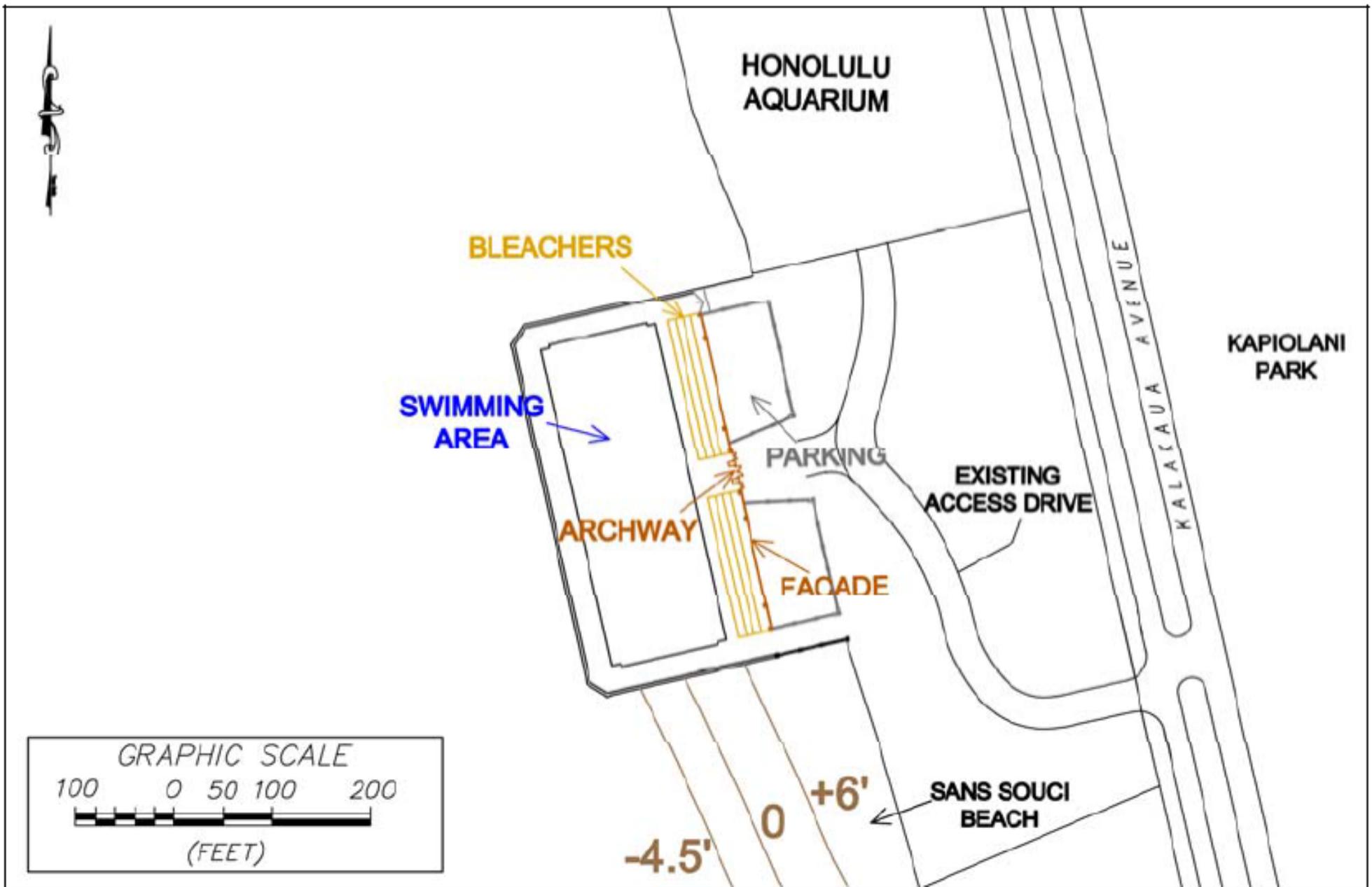


Figure 6-1 Existing Natatorium Structures

Opening August 24, 1927

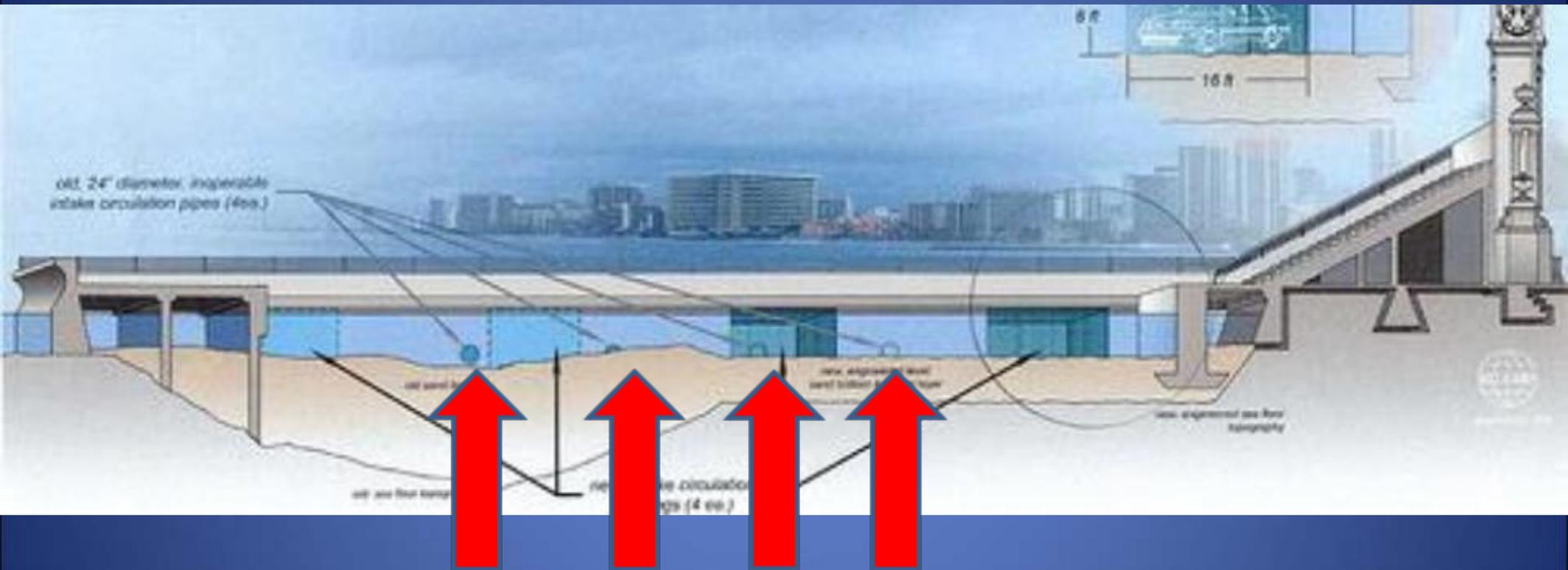
“Tonight the Hawai‘i War Memorial opens. It is highly appropriate that this Memorial to the heroes of the World War should be a public natatorium....”

“The Natatorium epitomizes Hawaii’s prominence in one of the world’s great sports. Situated at Waikīkī, it looks upon and is a part of the ocean, whereof Hawai‘i is the “cross road.”

- *The Honolulu Advertiser*
August 24, 1927

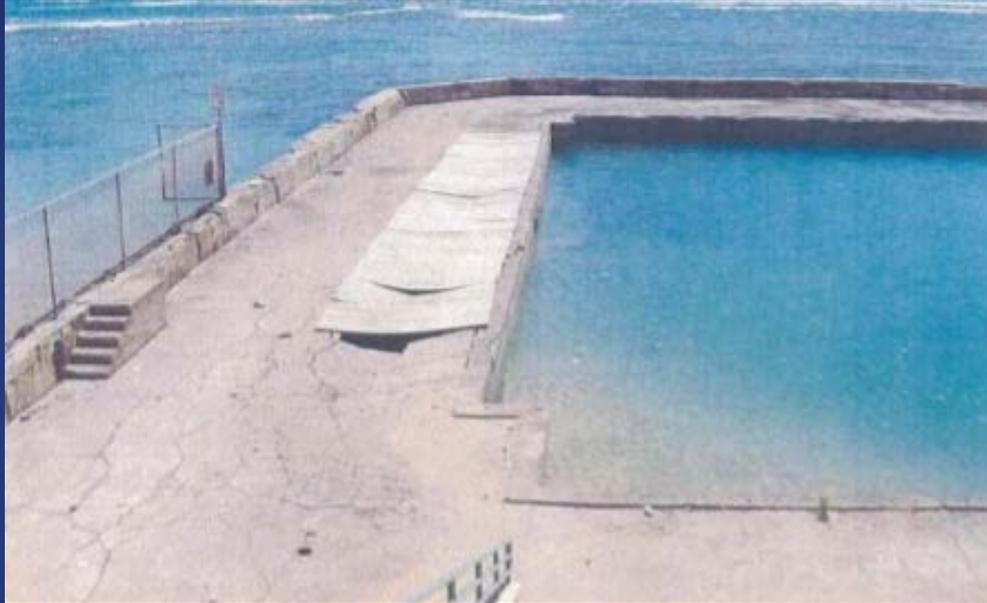


What Went Wrong?



Four 24" pipes in side walls for circulation:
accumulate sand and clog water circulation

Current Conditions: Demolition by Neglect



2004

Wilson Okamoto Photo



2009

Historic Hawai'i Foundation Photo

“Ensuing failures are likely to occur suddenly.”

- *Existing Building Structural Condition Report* , prepared by Wilson Okamoto for the C&C of Honolulu July 2004

“If the San Souci Beach side of the basin perimeter collapses, the beach will de-stabilize. If the north side wall also collapses, then it is likely that a dry sand beach will no longer exist along this shore.”

- *Wil Chee Planners Emergency Preparedness Contingency Plan*, September 2008

Current Conditions

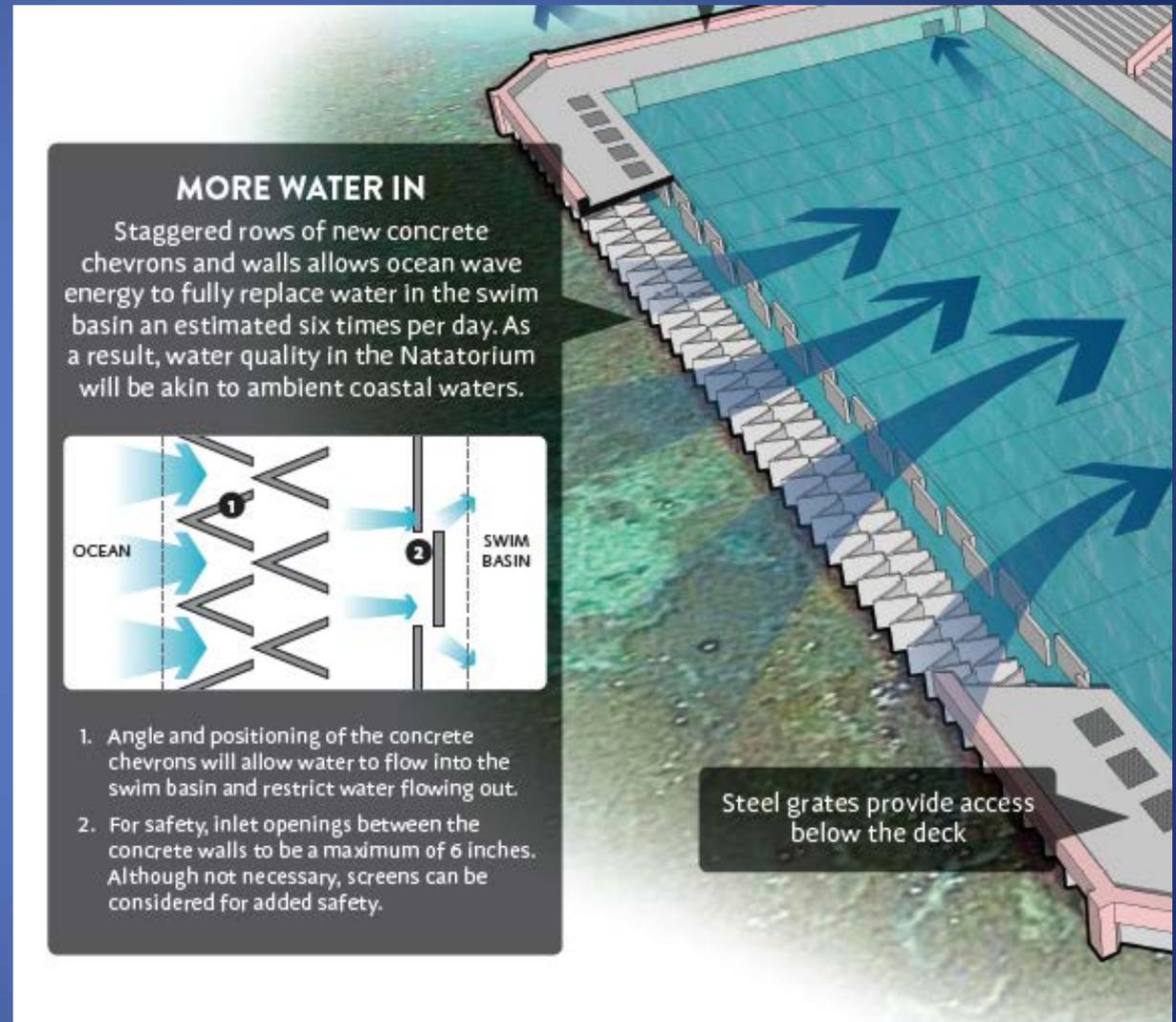


Rehabilitation Proposal

The Rehabilitation alternative would replace the Natatorium swim basin's makai seawall with individual chevron units topped with decking.

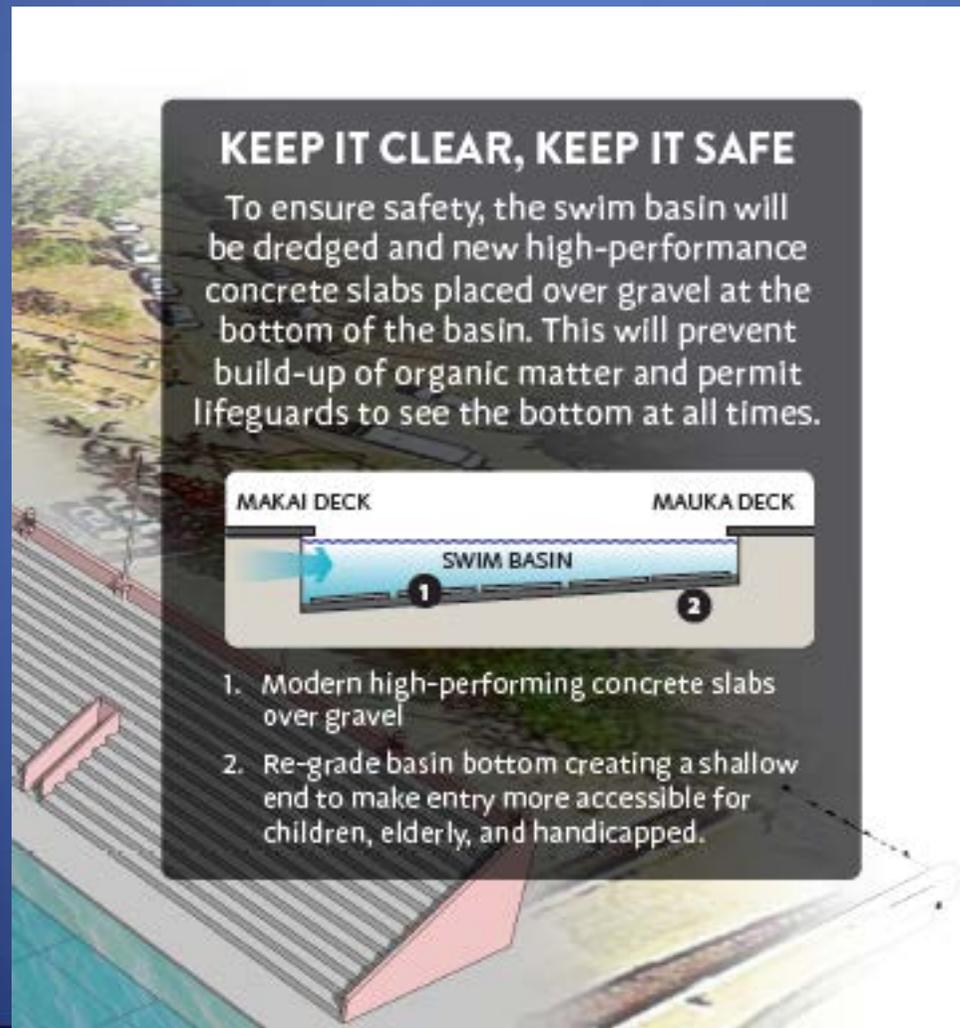
The chevrons would serve as a breakwater to prevent wave action against the bleachers, yet allow for sufficient water to circulate in the swim basin.

CLEAN. A combination of wave energy, allowed into the swim area through chevrons that comprise the seawall, and circulation through openings in the side walls nearest to the bleacher structure would fully exchange the Natatorium with ocean water at least six times per day.



Rehabilitation Proposal

CLEAR. To avoid murkiness in the water, silt would be dredged from the swim basin and replaced with an inert material, such as gravel, that could then be contoured to allow for a shallow and deep end, and covered with precast concrete panels. The use of silicone dioxide sand on top of the panels would be a safe and long-lasting solution.



Rehabilitation Proposal

SIMPLE. The relative simplicity of this design—essentially a sheltered ocean environment—is its major advantage. The Natatorium could be regulated as a “marine pool” or “protective cove” and would not require the addition of special pumps or drainage infrastructure and related maintenance.

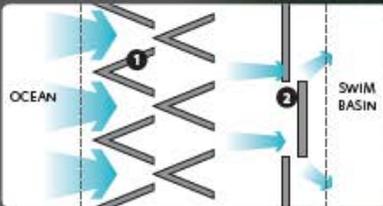
Rehabilitation Proposal

MODERNIZED DECK

The existing deck will be re-built with a new high-performance concrete that offers better strength and durability.

MORE WATER IN

Staggered rows of new concrete chevrons and walls allows ocean wave energy to fully replace water in the swim basin an estimated six times per day. As a result, water quality in the Natatorium will be akin to ambient coastal waters.



1. Angle and positioning of the concrete chevrons will allow water to flow into the swim basin and restrict water flowing out.
2. For safety, inlet openings between the concrete walls to be a maximum of 6 inches. Although not necessary, screens can be considered for added safety.

Steel grates provide access below the deck

KEEP IT CLEAR, KEEP IT SAFE

To ensure safety, the swim basin will be dredged and new high-performance concrete slabs placed over gravel at the bottom of the basin. This will prevent build-up of organic matter and permit lifeguards to see the bottom at all times.



1. Modern high-performing concrete slabs over gravel
2. Re-grade basin bottom creating a shallow end to make entry more accessible for children, elderly, and handicapped.

MORE WATER OUT

Openings at both Diamond Head and 'Ewa corners improve circulation. Openings to be covered with metal screens for safety. Locating the outflow nearer to the intake will help to preserve the shoreline at Kaimana Beach

Historic Hawai'i Foundation Supports Rehabilitation

- ✓ Retains and preserves the character and integrity of the historic structure;
- ✓ Honors the memory of veterans at a World War I memorial;
- ✓ Meets swim basin water quality standards;
- ✓ Protects the marine environment and coral reefs;
- ✓ Retains the adjacent beach;
- ✓ Protects the land environment and historic park;
- ✓ Provides recreational opportunities safe for children and those with disabilities;
- ✓ Safeguards public health and safety;
- ✓ Uses natural systems and wave action for water circulation so does not have energy costs or mechanical systems;
- ✓ Comparable in cost to the other alternatives; and
- ✓ Feasible to build and operate

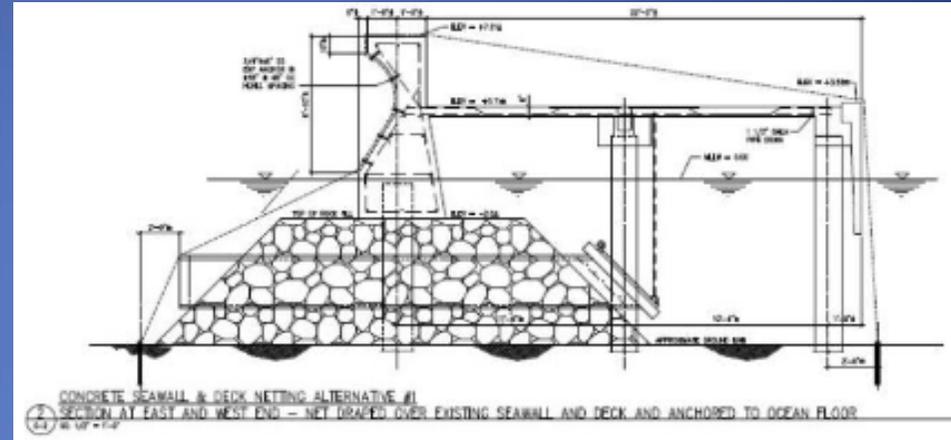
EIS Alternatives

City & County of Honolulu is preparing an Environmental Impact Statement to evaluate and compare alternatives:

1. NO ACTION
2. DEMOLITION/NO CONSTRUCTION
3. DEMOLITION/CONSTRUCT GROINS & SAND BEACH
4. REHABILITATION

OPTION #1: No Action

- Collapse Containment
- Install additional Warning signs
- Fence Pool
- Cover pool with Geo-net
- Apply bleacher coating



OPTION 2: Demolition/No Construction (Return to the Natural Shoreline)

Current View



View After the Removal



Photos courtesy City & County of Honolulu

- Complete demolition and removal of all structures
- Return to pre-construction condition
- Eliminates 87 parking spaces

OPTION 3: Demolish & Build Groins For Beach

- Demolish all structures
- Construct beach area with new groins
- Rebuild arch in different location
- Eliminates 46 parking stalls along the access drive and 31 Natatorium parking stalls now reserved for safety personnel.
- Safety Station relocated
- Restrooms rebuilt

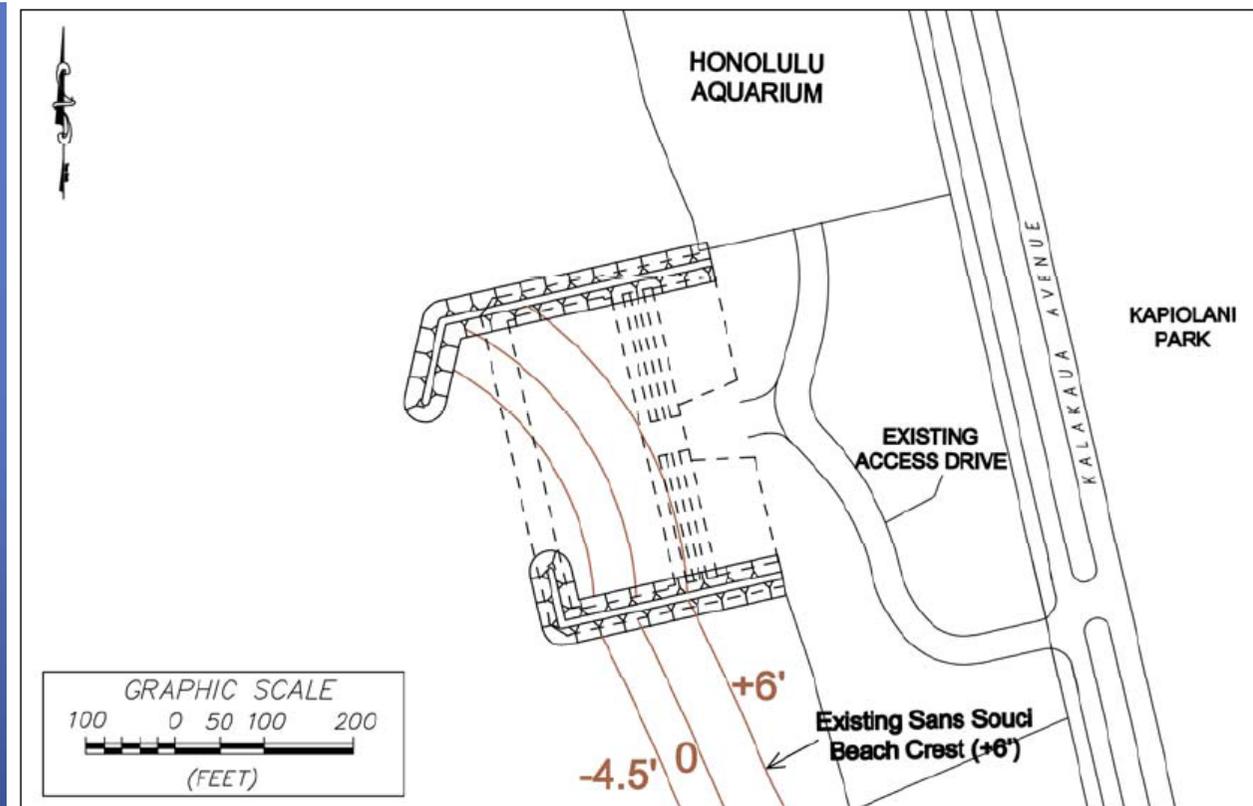
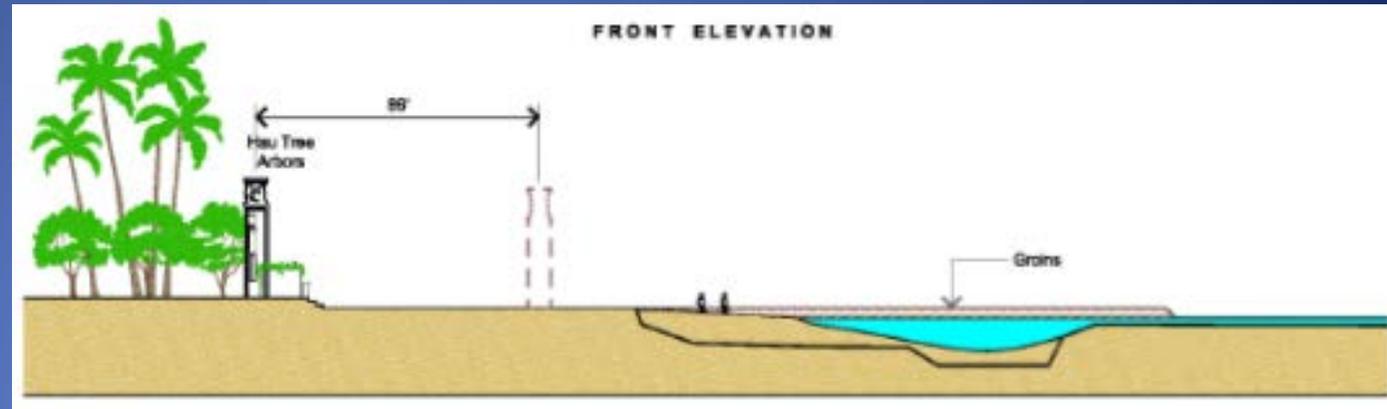


Figure 6-7 Conceptual Design 2b projected beach planform

OPTION 4: Rehabilitation

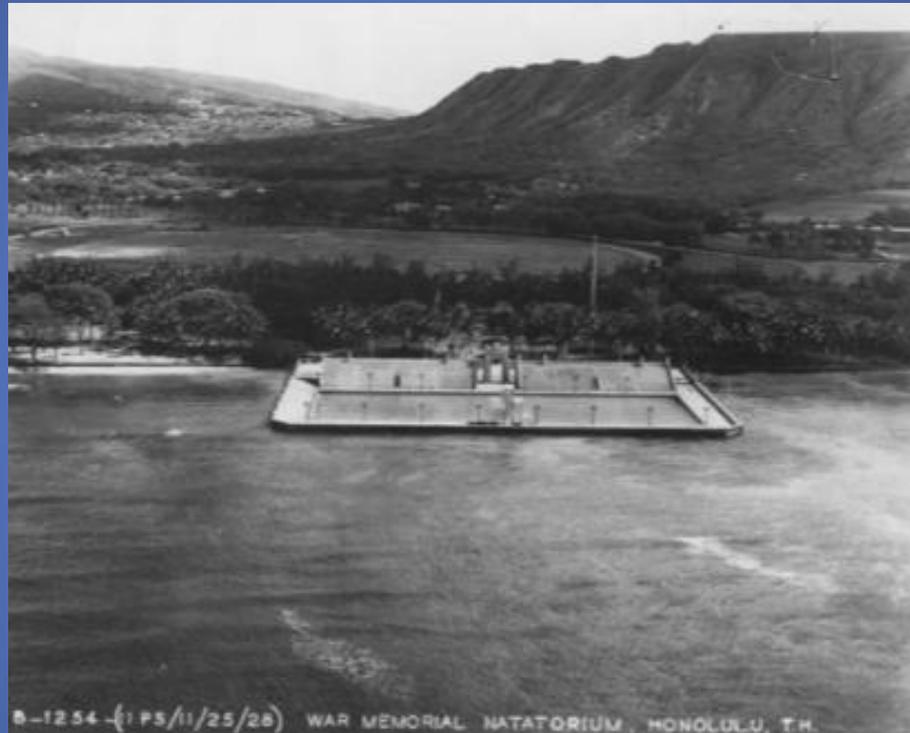


- Re-engineer the swim basin
- Cosmetic fixes to the bleachers, restrooms
- Retain shore-based amenities, including parking

From Here...

- Ask City & County of Honolulu to evaluate the rehabilitation alternative in the EIS and give it a fair hearing
- Sign on letter at www.savingplaces.org/places/natatorium
- Environmental Impact Statement public comment

Save the Memorial



“The commitment to restoring the authentic monument is consistent with the best of American traditions: we do not discard our national treasures”

- Former Senator Daniel Akaka
Referring to the Tomb of the Unknown Soldier