

## Project 3.0

# Waterfront Regenerator

## Site Analysis & Concept Design Study for a Development Site on Honolulu Harbor

*"A city is more than a place in space, it is a journey in time."*

– Patrick Geddes

Located over two thousand miles away from the west coast of North America, Honolulu Harbor is the primary shipping port for the entire State of Hawai'i and site of its cruise ship terminals. As Honolulu, the capital city of the State, and its harbor evolved over the 20<sup>th</sup> century, the public's access and use of this once vital waterfront declined. Today, in addition to the need to address the issues of *climate change adaptation/sea level rise*, the opportunity to *regenerate* Honolulu Harbor, with the *public's interest as a priority* appears to be possible.



Aerial view of the project site

Due to several factors, needs, and circumstances, it is *time* to reconsider the use of Hawaiian Electric Company's (HECO) historic downtown power plant. The power plant is a massive, high-profile complex of structures which is ideally situated *for the convergence of public transportation, commercial, residential, and hospitality uses*. The power plant is now partially *decommissioned/deactivated* and its future is uncertain.

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The power plant site is 3.5 acres and located at the foot of Honolulu's financial district. It is straddled by the Aloha Tower Market Place/Hawaii Pacific University Campus (HPU); historic Irwin Park; and a surface parking lot (Piers 5-6) which is also a prime development site. The City & County government's elevated rail transit line is planning to locate its Downtown Station on a portion of the power plant site. However, the selected site (corner of Bishop Street/Ala Moana Blvd.) is not ideal and there is no firm agreement in place yet. HPU is in need of student housing and car parking. And the State Department of Transportation Harbors Division (DOT-H) has recently kicked-off a 25 year master plan update for Honolulu Harbor. Hawaii Community Development Authority (HCDA) is the government agency which has land use, zoning, and design regulatory control of this site.

This project is a collaboration among the SHADE Institute, a public interest design organization, and the UNLV School of Architecture. Public interest design (PID) is an expanding mode of non-profit environmental design practice which provides pro-bono and low-cost research and services in collaboration with community partners, government, and other non-profit organizations to improve our built environments. SHADE's mission is to provide PID services through intern training, professional mentorship, and community engagement.

SHADE Institute has prepared a Context Study for this site and its vicinity for your review and use specifically for this project. This effort is supported in part by King Tide Capital, a private financial firm which invests in urban adaptive reuse projects nation-wide.

Utilize what you have learned during Project 2 of this course and PID methods to *research, analyze, and create concept design alternatives for a transformative waterfront complex that REGENERATES Honolulu Harbor. The success of your project will be measured by input from local community and government stakeholders around this site.* As a class you will prepare a final presentation document of this project in book/PDF form and an edited documentary video of the process and work products.

This 7 week project will consist of the following parts:

- 3.1 Field Work
- 3.2 Site Analysis
- 3.3 Program Analysis
- 3.4 Concept Design
- 3.5 Documentation

### 3.1 Field Work

Working in teams and collectively overall as a Studio, you will gather original information on the Project's urban context and the existing buildings on site. The purpose of Field Work is to document existing conditions, gather *quantitative* and *qualitative* data of the Physical and Social contexts of the site and its vicinity. This information will inform your Site and Program Analyses and provide supporting evidence, problem solving criteria, and inspiration for your Conceptual design proposals.

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General Field Work Information Categories by Teams of 5 students:

A. Physical Elements & Conditions

- Right of Way (streets/sidewalks and other public space)
- Existing Buildings documentation
- Existing Open Space documentation
- Infrastructure (i.e. transportation modes/traffic, utilities, natural elements and etc.)
- Natural elements and hazards

B. Social Factors & Conditions

- Historical and cultural significance
- Current uses and activities
- Problems and issues identification
- Stakeholder identification
- Political organization and governance

C. Regulatory Constraints & Compliance

- Applicable zoning and land use regulations
- Applicable site and building design rules
- Local and state government agency requirements
- Research and coordination among plan and policy overlays
- Security and site specific constraints (i.e. harbors and highways)

While on-site capture you information using the following (but not limited to) methods:

- Photographic and video documentation\*
- Measured/as-built drawings
- Observation notes
- Interviews
- Survey/questionnaires
- Spatial/Temporal analysis

\*Documentation/Presentation of this project will utilize video as its primary medium.

All Field Work information and data captured should be uploaded to our Web Canvas file according by categories.

### **3.2 Site Analysis**

Working as a class in teams, develop a comprehensive site analysis document which is informed by the SHADE Context Study and relevant information and data gathered during your Field Work.

Summarize information and data gathered in each Field Work Category using infographics/diagrams with minimal essential interpretive text.

While your analysis will focus on the HECO Power Plant site, it should include the immediate adjacent areas which include (but are not limited to):

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- HPU/Aloha Tower Market Place Campus (Piers 9-10)
- Irwin Park
- Piers 7-8 extension into harbor
- Piers 5-6 (parking lot)
- Ala Moana Boulevard/Future Rail Station and elevated guideway
- Harbor shoreline and Piers

Below are suggested minimum Site Analysis Diagrams:

- Existing site connectivity (pedestrian/vehicular)
- Existing exterior uses/activities
- Existing building spatial organization/functions
- Existing conditions observations
- Temporal Analysis
- Noise
- Coastal Hazards/Sea Level Rise
- Sun/Shade/Wind
- Topography
- View Corridors (to/from)
- Video and photo documentation

### Site Model

Working as a class in teams, students will make a site massing model of the project site and its vicinity for individual projects to be “plugged in.” Model scale, limits, and materials are to be determined. This model will be used as a study and presentation tool. Create a centrally located place in the studio as collaborative workspace for this model. Construct a durable and transportable/modular base for it. Scale and limits to be determined in studio.

### 3.3 Program Analysis & Statement

Working as a class, you will develop a joint Program Analysis which consist of the following possible uses/elements:

- Consolidated HECO Power Facility
- Downtown Rail Station Touchdown
- Bus Transit Station
- Car parking (600-800 stalls)
- Commercial/Retail
- Hotel (120 keys)
- Housing
  - Student units (3-4 bedroom/shared bath, 300-400 beds)
  - Market rate units (1-2 bedroom/bath, 600-800 SF each, 250-300 units)
  - Affordable micro units (300-400 SF, 100-150 units)

Your program analysis should determine the following:

1. Spatial area/volumetric list and diagrams

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2. Adjacency diagrams
3. Constraint/Opportunities Matrix and Diagrams based on Field Work Categories of Information
4. Program Drivers response diagrams (10 total, see below)

Like you did in Project 2, use Steffen Lehmann's Strategies for **Urban Regeneration** as program drivers. Below is the list of 10 Regen Strategies which are applicable to this Project:

1. Urban culture and heritage – maintaining a unique sense of place
2. A public space network for a compact, walkable and mixed-use city
3. Energy-efficient clean and convenient mobility
4. Coastal cities – transforming the waterfront of resilient, future-proof cities
5. Inclusive mixed-use urban living
6. High-quality architectural design and public space as a catalyst for a better city
7. Smart citizens, smart energy and citizen participation
8. Thinking long-term and making the most of what we have
9. Developing vibrant University quarters to regenerate the heart of the city
10. Cities sharing their experiences, learning from each other: new knowledge platforms

The total project area and building massing guidelines will be determined by the *jointly developed* Program Analysis.

Draft an overall Program Statement (150-300 words) supported by a list of project areas (SF).

### 3.4 Concept Design Alternatives

Teams of 5 students with each team will develop one of three conceptual design alternatives of the following general scope of redevelopment of the HECO Power Plant site:

1. Adaptive Reuse/Redevelopment of two (2) of the existing main buildings
2. Partial Adaptive Reuse/Redevelopment of one (1) of the existing main buildings
3. Total Redevelopment of the entire project site (existing buildings removed)

#### Refined Program Statement

At this point, each team should reassess the overall Site Analysis and Program Analysis in order to draft a refined Program Statement specific to their project scope of redevelopment.

The success of each Concept Design Alternative will be measured against its response to the Site Analysis, Program Analysis and *specific Program Statement*. The refined Program Statement should also make clear which *Urban Regeneration Strategies* are driving the concept design.

#### Precedent Examples

Each team should research, document and provide analysis of a minimum of three (3) built projects which are related to their Project's site, building type, program and/or design concept. Please cite all images used and sources of information.

Deliverables may include the following (scale TBD):

- Refined Program Statement and Area Breakdown
- Precedent Examples and analysis

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- Concept diagrams
- Concept Site/Floor/Roof plans
- Concept Building Section
- Concept Building Elevations
- Digital and Physical massing models for each concept
- Eye level exterior, interior and aerial 3D views
- Project Concept video

### 3.5 Documentation

A comprehensive project document for print/digital reproduction and video which captures the project travel experience, location and encounters; work process in studio/crits; and work in progress and completion is required. This set of documents are due before the end of Final Exam week (see Schedule below).

### Schedule

*Subject to Change*

- **Week 09**
  - 10/21 Project 3 Overview Discussion; Field Trip Briefing/Assign 3.1 Field Work
  - 10/23 Travel Day LAS-HNL
  - 10/24-25 Field Work and Stakeholder meeting
  - 10/26 Free Day
  - 10/27 Travel Day HNL-LAS
- **Week 10**
  - 10/28 3.1 Field Work Presentations/Assign 3.2 Site Analysis & Model
  - 10/30 Cluster crits/working session
  - 11/01 Pin-up Site Analysis Drafts
- **Week 11**
  - 11/04 Site Model Presentation/Assign 3.3 Program Analysis & Statement
  - 11/06 Cluster crits/working session
  - 11/08 Pin-up Program Analysis & Statement Drafts
- **Week 12**
  - 11/11 Kick-off 3.4 Concept Design Alternatives Discussion
  - 11/13 Cluster crits/working session
  - 11/15 Pin-up Refined Program Statement. Precedents, and Concept options progress
- **Week 13**
  - 11/18 Architectural Form Discussion A by Instructors
  - 11/20 Cluster crits/working session
  - 11/22 Pin-up Concept Design progress
- **Week 14**
  - 11/25 Architectural Form Discussion B by Instructors
  - 11/27 Cluster crits/working session
  - 11/29 Thanksgiving Holiday – no class
- **Week 15**
  - 12/02 Presentation Rehearsal/working session
  - 12/04 Final Project Review

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12/14 Final Project Document DUE

*\* Upload to Web Canvas file within 24 hours of notice. Missing or late uploaded files will impact grading. NO EXCEPTIONS.*

## Grading Criteria

- Participation, Service, Progress and quality of final Deliverables.
- Course Syllabus

## Readings\*\*

- Moneo, Rafael. Theoretical Anxiety and Design Strategies in the Work of Eight Contemporary Architects. The MIT Press, Cambridge, 2004. Chapters on James Stirling, Venturi & Scott Brown, Frank Gehry.
- Lehmann, Steffen. Urban Regeneration, A Manifesto for Transforming UK Cities in the Age of Climate Change. Palgrave MacMillan, Cham, 2019. Introduction, p. 1-50; Ch. 5, p. 133-155.
- Sakamoto, Dean with Karla Britton, et al. Hawaiian Modern: The Architecture of Vladimir Ossipoff. Yale University Press & Honolulu Museum of Art. 2007, 2015. *Introduction and Honolulu: Towards a Regionalist Urbanism*.
- Oahu Development Corporation, Urban Design Study of the Honolulu Waterfront, ODC, Honolulu, 1967.

\*\* Readings will be uploaded to our Web Canvas Readings File. Assigned readings are not limited to the list above and responses in writing should be recorded as Sketchbook Assignments by students. Sketchbooks will be reviewed at the end of Term.

## References

- SHADE Institute. HECO Downtown Power Plant Urban Context Study. SHADE, 2019.  
See Web Canvas Project 3 File
- Feldman, Palleroni, Perkes, and Bell. Wisdom From the Field: Public Interest Architecture in Practice, A Guide to Public Interest Practices in Architecture. AIA Latrobe Prize Research document, 2011.  
<https://www.publicinterestdesign.com/wp-content/uploads/2013/07/Wisdom-from-the-Field.pdf>
- Hawaii Community Development Authority, Aloha Tower Special District Development Guidelines, May 15, 1992.  
<https://dbedt.hawaii.gov/hcda/files/2013/12/Aloha-Tower-Special-District-Development-Guidelines.pdf>
- Honolulu Authority for Rapid Transportation (HART).  
<https://www.honolulutransit.org/>
- See Syllabus for other references listed and on our course ASL Reserve shelf.