HO‘OKU‘I HONOLULU: CREATING HEALTHIER ENVIRONMENTS
TO PROMOTE A SENSE OF WELL BEING

A DARCH PROJECT SUBMITTED TO THE GRADUATE DIVISION OF THE
UNIVERSITY OF HAWAI‘I AT MĀNOA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF ARCHITECTURE

MAY 2015

By

Adele H. Beppu

DArch Committee:

Joyce Noe, Chairperson
Charles Morgan
Bryce Uyehara

Keywords: Architecture, Urban Planning, Honolulu
Dedication

I would like to dedicate my dissertation work to my Grandparents, who always supported me through my education and helped me find my love for art. I would not be where I am today if it weren’t for them and I give them many thanks for teaching me how to be compassionate toward others.

I also would like to dedicate this dissertation to my friend Frank Pablo, who is no longer here with us on this earth. Thank you for supporting me, being proud of me, and taking me under your wing like your own child. I wish that you could see how much of an influence you had on this project and my life. You will always be in my heart.

Finally, I would like to dedicate this to Karen Kimura, who has been my best cheerleader of all, spent countless hours talking with me, comforting me when times were rough, inspiring me and always leading me back to God.
Acknowledgements

I wish to thank my committee members for putting in a lot of their own time and
for sharing such great expertise with me. A special thank you to my chairperson, Joyce
Noe, who was always more than willing to meet with me any day of the week to help me
better my project. I could not have asked for a better chairperson. Thank you Bryce
Uyehara and Chuck Morgan for also agreeing to serve on my committee.

Thank you also to my church family, architecture family, and friends all over the
world who have been constantly praying for me and allowing me to share my dissertation
with them. There is a reason why each and every one of you is in my life and I am very
thankful for all of your support.

A special thank you to Anna Dondur, who spent countless hours helping me edit
my work, gave me much needed feedback, and helped me refine this dissertation to the
very end. I appreciate all the time and effort that you put into helping me making this
project the best it could be.

And last, but not least, I give thanks to our wonderful God, who makes all things
possible. He is the author of my life and this project glorifies Him through all the talent
that He has given me. He has been by my side from day one and has given me all that I
have. “Now all glory to God, who is able, through his mighty power at work within us, to
accomplish infinitely more than we might ask or think.” –Ephesians 3:20
Abstract

People today face many health problems associated with a sedentary lifestyle, including obesity, cardiovascular disease, type 2 diabetes, metabolic syndrome, and some cancers. About one third of Americans are obese and that number is projected to increase substantially. Even though regular exercise can alleviate and in some cases prevent many of these health problems and greatly benefits a person’s quality of life, many people still do not meet the recommended requirements. This project analyzes how to motivate people to add physical activity to their routines through architecture and how architectural design can play a part in promoting health and wellbeing. Based on its findings, the project proposes a redesign of Ala Moana Beach Park and a linking of nearby parks through pathways, exercise stations, and signage that will encourage the residents of Oahu to exercise more regularly.
Table of Contents

Dedication ................................................................. ii
Abstract ........................................................................ iv
Table of Figures ........................................................... vii
Chapter 1: The Benefits of Physical Activity ................................................ 1
    Medicinal ................................................................... 2
    Cognitive Learning through Exercise ................................. 4
Chapter 2: The Health of Americans Today ................................................... 7
    Early Disease Prevention .............................................. 8
Chapter 3: Major Influences of Adult Participation in Physical Activity .......... 10
Chapter 4: Existing Physical Activity Environment Evaluations .................. 12
Chapter 5: Space Typologies of Existing Physical Activity Environments ........ 14
    When comparing existing physical activity environments, one can find trends in
    spatial organization ..................................................... 14
    Social Spaces ............................................................ 14
    Eating Spaces ........................................................... 14
    Learning Spaces ....................................................... 14
    Group exercise spaces ................................................ 14
Chapter 6: “Healthy” States ........................................................................ 16
    Top 5 Healthiest States: Hawai‘i ..................................... 16
    What makes Hawai‘i healthy? ......................................... 17
Chapter 7: Human Needs in Physical Activity Environments ......................... 18
    Indoor vs. Outdoor Physical Activity Environments .......... 18
    Benefits of Natural Daylight ......................................... 20
    Green Exercising ....................................................... 22
Chapter 8: Precedent Studies ....................................................................... 24
    24 Hour Fitness USA .................................................... 24
    EC Fitness .................................................................... 26
    The Great Outdoor Gym ............................................... 28
    Research Results ........................................................ 29
Chapter 9: Precedents in San Francisco .......................................................... 31
    Marina Green Park ...................................................... 31
    Mission Rock (Sea Wall Lot 337) .................................... 34
    Golden Gate Park ....................................................... 36
Chapter 10: The “Big Dig,” Boston ................................................................. 39
    CA/T Project .............................................................. 39
    Rose Fitzgerald Kennedy Greenway ................................ 41
Chapter 11: Proposed Physical Activity Environment Site ............................. 44
    Prime Location for New Developments in Kaka‘ako .............. 44
    Cultural & Community Integration .................................. 45
    Makahiki Unit ............................................................ 45
    Park Features ............................................................ 48
Chapter 12: Ho‘oku‘i Honolulu Design .......................................................... 51
Project Vision .......................................................... 51
Linking Parks .......................................................... 51
Mumford’s Report on Honolulu ..................................... 52
Connecting with the “Lei of Green” ............................... 52
History of Kaka’ako ...................................................... 54
Overall History of Ala Moana Beach Park ....................... 56
Detailed History of the Original Design of Ala Moana Beach Park ......................................................... 58
Proposed Physical Activity Environment ......................... 62
Concept ........................................................................ 65
Opportunities and Constraints ....................................... 66
Existing Conditions in Hawai‘i ........................................ 66
Park Programs and Usages ............................................. 70
Master plan Conceptual Design .................................... 70
Linkage ....................................................................... 70
App for Smart Phones .................................................. 71
Native Hawaiian Gardens ............................................. 72
Art Installations .......................................................... 72
Ala Moana Park .......................................................... 73
Communities and Organizations .................................... 74
Maintenance of Parks .................................................... 74
Phases ........................................................................ 74
Chapter 13: Program of Spaces .................................... 76
Bibliography ................................................................ 81
Appendix ..................................................................... 93
Ala Moana Beach Park: Chronology .............................. 93
Ho‘oku‘i Honolulu Graphic Booklet ................................. 96
Table of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>Zoloft, a common antidepressant prescribed for depression</td>
<td>2</td>
</tr>
<tr>
<td>Figure 2</td>
<td>Students at Naperville exercising before class</td>
<td>4</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Working Americans in the San Francisco Financial District</td>
<td>7</td>
</tr>
<tr>
<td>Figure 4</td>
<td>Obese parent and child</td>
<td>8</td>
</tr>
<tr>
<td>Figure 5</td>
<td>Mountain biking in Hawaii</td>
<td>16</td>
</tr>
<tr>
<td>Figure 6</td>
<td>Runners at Ala Moana Beach Park</td>
<td>18</td>
</tr>
<tr>
<td>Figure 7</td>
<td>Woman running outdoors</td>
<td>20</td>
</tr>
<tr>
<td>Figure 8</td>
<td>Woman gardening</td>
<td>22</td>
</tr>
<tr>
<td>Figure 9</td>
<td>24 Hour Fitness Pearl City entrance</td>
<td>24</td>
</tr>
<tr>
<td>Figure 10</td>
<td>Natural Daylighting at EC Fitness in Honolulu</td>
<td>26</td>
</tr>
<tr>
<td>Figure 11</td>
<td>Outdoor fitness facilities at Wallace Park, Ireland</td>
<td>28</td>
</tr>
<tr>
<td>Figure 12</td>
<td>Marina Green Fitness Area</td>
<td>31</td>
</tr>
<tr>
<td>Figure 13</td>
<td>Marina Green multi-use field</td>
<td>32</td>
</tr>
<tr>
<td>Figure 14</td>
<td>Bicycle paths near Crissy Fields, San Francisco</td>
<td>33</td>
</tr>
<tr>
<td>Figure 15</td>
<td>Aerial render of Misson Rock, San Francisco</td>
<td>34</td>
</tr>
<tr>
<td>Figure 16</td>
<td>Aerial view of Golden Gate Park, San Francisco</td>
<td>36</td>
</tr>
<tr>
<td>Figure 17</td>
<td>Sit-up station at Golden Gate Park</td>
<td>37</td>
</tr>
<tr>
<td>Figure 18</td>
<td>The Big Dig, before and after</td>
<td>39</td>
</tr>
<tr>
<td>Figure 19</td>
<td>Aerial view of Rose Fitzgerald Kennedy Greenway</td>
<td>41</td>
</tr>
<tr>
<td>Figure 20</td>
<td>New developments near Ala Moana Beach Park</td>
<td>44</td>
</tr>
<tr>
<td>Figure 21</td>
<td>Kupuna playing music</td>
<td>45</td>
</tr>
<tr>
<td>Figure 22</td>
<td>Hawaiian arm wrestling</td>
<td>46</td>
</tr>
<tr>
<td>Figure 23</td>
<td>Makahiki games at Turtle Bay Resort</td>
<td>47</td>
</tr>
<tr>
<td>Figure 24</td>
<td>Kaka‘ako Boundary Map</td>
<td>54</td>
</tr>
<tr>
<td>Figure 25</td>
<td>Historical picture of Ala Moana Beach Park</td>
<td>56</td>
</tr>
<tr>
<td>Figure 26</td>
<td>Overview of Park Lane Ala Moana in connection with the shopping center</td>
<td>61</td>
</tr>
<tr>
<td>Figure 27</td>
<td>Exercise class at Ala Moana Park</td>
<td>63</td>
</tr>
<tr>
<td>Figure 28</td>
<td>Strength Training at Ala Moana Beach Park</td>
<td>64</td>
</tr>
<tr>
<td>Figure 29</td>
<td>Traffic on Ala Moana Boulevard</td>
<td>66</td>
</tr>
<tr>
<td>Figure 30</td>
<td>America’s Health Rankings 2014</td>
<td>67</td>
</tr>
<tr>
<td>Figure 31</td>
<td>Homelessness on Oahu</td>
<td>69</td>
</tr>
<tr>
<td>Figure 32</td>
<td>Central Park Phone app</td>
<td>72</td>
</tr>
<tr>
<td>Figure 33</td>
<td>Taro patches</td>
<td>72</td>
</tr>
<tr>
<td>Figure 34</td>
<td>Hawaiian Hale at Ala Moana Beach Park</td>
<td>77</td>
</tr>
<tr>
<td>Figure 35</td>
<td>Families biking together at Ala Moana Beach Park</td>
<td>78</td>
</tr>
</tbody>
</table>
Chapter 1: The Benefits of Physical Activity

According to the Center for Disease Control and Prevention (CDC), in 2013 heart disease and cancer were the two leading causes of death in the United States.¹ Studies show that something as simple as regular physical activity can greatly reduce a person’s risk of cardiovascular disease and some cancers as well as type 2 diabetes and metabolic syndrome. Regular exercise offers other advantages including weight management, strengthened bones and muscles, improved mental health and mood, improved ability to perform daily activities, and reduced number of falls for older adults.² Perhaps the greatest benefits of all are increased life expectancy and enhanced quality of life.

The CDC defines metabolic syndrome as “…a condition caused by a combination of too much fat around the waist, high blood pressure, low HDL cholesterol, high triglycerides, or high blood sugar.” Exercising on a regular basis can lower blood pressure and improve cholesterol levels. Studies have been conducted that show that both metabolic syndrome and type 2 diabetes can be alleviated and even prevented by exercising for a minimum of 150 minutes per week at a moderate-intensity level.

Colon and breast cancer are two of the cancers known to be positively affected by physical activity. Studies have shown that a person’s risk of getting colon or breast cancer also decreases significantly with a minimum of 150 minutes of physical activity per week. Currently, studies are being conducted to determine whether there is a correlation between exercise and endometrial and lung cancer. Some findings suggest that exercise may also lower the risks of these cancers.

Depression is a very common mental disorder that affects 340 million people globally. It is projected to become the leading cause of disability and the second leading contributor to the global burden of disease by 2020.\textsuperscript{3} It is considered to be a major illness with health and social consequences similar to chronic diseases such as diabetes, congestive heart failure, and hypertension. Incorporating daily physical activity into one’s life decreases the risk of developing depression. In some cases, exercise has been proven to be equivalent to medicine.

John J. Ratey, MD, researches the beneficial psychological effects of physical activity. Ratey is an Associate Clinical Professor of Psychiatry at Harvard Medical School.

\textsuperscript{3} Murray, Christopher J. L., and Alan D. Lopez. The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020; summary. Cambridge, Mass.: Published by the Harvard School of Public Health on behalf of the World Health Organization and the World Bank, 1996.
School and a researcher, speaker, and bestselling author of the book, *SPARK, The Revolutionary New Science of Exercise and the Brain*. Depression is basically an erosion of connections in brain cells. One of Ratey’s studies compares the effects on psychological disorders of depression medication to physical activity; he found that exercising can reestablish those disconnections just as well as depression medication does.

Ratey is not the only professional who believes that physical activity can replace depression medications in some situations. Researchers from the Royal Academy of Medicine in Ireland also found evidence that exercise and physical activity have beneficial effects on depression symptoms comparable to those of pharmaceutical antidepressant treatments. Doctors around the world have seen the same amazing effects of exercise on their patients suffering from depression. The body of evidence is so convincing that in Great Britain, doctors now use exercise as the first line of treatment for depression.

When depression is diagnosed by a primary care doctor and treated through pharmacological agents and psychotherapy, there is a 60-80 percent success rate in decreasing symptoms. Of those who are affected by depression, however, only 10-25 percent of them receive proper treatment. Some reasons for this low statistic include lack of resources and trained providers and the social stigma associated with admitting to this condition. It is therefore important to develop alternative, accessible therapeutic treatments. Extensive evidence shows that physical activity can be a good alternative to medicine in treating depression.

A recent meta-analysis reported a substantial clinical effect of physical activity and exercise interventions on the symptoms of depression for adults of both sexes. This

---

report showed that aerobic exercise had a moderate effect and that mixed and resistance training had greater results. Another recent study also showed that patients with major depression who received aerobic exercise training at home or in a supervised group setting experienced reduced depression symptoms comparable to those taking standard antidepressant medication (sertraline) and more than those on placebo controls.

Overall, when compared to treatments such as behavioral therapy or antidepressants, exercising has very similar, and sometimes equal, results. Published evidence thus shows that exercise and physical activity interventions are successful in reducing and preventing depression symptoms.

Cognitive Learning through Exercise

Ratey is the author of SPARK and the founder of the Sparking Life movement. He is best known for his research on how exercise affects cognitive learning. Many schools throughout the nation have been integrating more physical activity into the school day. In Naperville, Illinois, school district 203 has become well known for both its new

Figure 2: Students at Naperville exercising before class

Physical Education Fitness program and its academic success. Phil Lawler, who was the junior-high Physical Education (PE) teacher, helped affect change in the way his students were thinking and living. Instead of presenting PE as just sports, he changed the focus to cardiovascular fitness. Ratey claims, “there are fifty-two million children, from kindergarten through twelfth grade, who attend public and private schools in the United States. If all of them had the benefit of Naperville-style physical education, our next generation of adults would be healthier, happier, and smarter.”

Lawler worked to integrate fitness into regular classrooms, available throughout the day. Naperville now provides bikes, balls, and treadmills in almost every classroom. Students start their day with PE. Since the change in curriculum was implemented, the teachers and students have both seen amazing results. Teachers say students zone out much less often. When a student does, the teacher has the student take a brain break and perform a short burst of physical activity. Reading scores have almost doubled and math scores are up by a factor of twenty. The students also report that they like the fact that the additional activity helps them focus better in class. Ratey describes one student who “used to get Cs and Ds. Now she gets As and Bs. She says the exercise helps her focus.”

Having the students exercise before school is equivalent to stimulating their brains. Ratey says, “I tell people that going for a run is like taking a little bit of Prozac and a little bit of Ritalin because, like the drugs, exercise elevates these neurotransmitters. Exercise balances neurotransmitters – along with the rest of the neurochemicals in the brain. Keeping your brain in balance can change your life.” By exercising, our bodies naturally produce brain chemicals such as serotonin and endorphins that act as stimulants, which in turn help us to focus.

Since the 1990s, Naperville’s school district has been integrating exercise into its curriculum, not only to increase the fitness levels of its students, but also to help them

---

make fitness a part of their lifestyle. The school notes, “Of particular significance, in 1999, Naperville’s eighth graders finished first in the world in science, just ahead of Singapore on the international standards test called TIMSS (Trends in International Mathematics and Science Study), which included students from 38 countries. In math, they placed sixth – behind only Singapore, Korea, Taiwan, Hong Kong, and Japan.”

From 2009 to 2010, the CDC conducted a survey with the National Center for Health Statistics to gauge how healthy Americans really are. Data from the National Health and Nutrition Examination Survey showed that more than one third of Americans were obese (35.7%), which is about 78 million adults. The existing research estimates that by 2030, 51% of the population will be obese. Obesity is only one of many epidemics America has been confronting over the past decade. Other epidemics related to a sedentary lifestyle include heart disease, stroke, type 2 diabetes, and certain types of cancers. Studies show that many of the deaths from such diseases can be prevented.

---

The average workday for employed persons aged twenty-five to fifty-four with children is 8.8 hours. Therefore, on average, a third of the day is spent working, another third is spent sleeping, and the final third is divided between eating, drinking, caring for others, and leisure/entertainment. It is generally necessary to work in order to earn a living, but a person’s health should not suffer at the expense of their work. Only 48 percent of Americans follow the CDC recommended 150 minutes of exercise per week.\textsuperscript{17} Exercising less than this not only leads to health problems, but can also negatively affect wellbeing and quality of life.

**Early Disease Prevention**

![Figure 4: Obese parent and child](http://america24.com/data/photos/horiz/big/002/475/002475788.jpg)


Early prevention starts with children. Childhood obesity is at an all-time high and, although many schools across the United States do not provide daily PE classes, some

schools are starting to implement changes in response to new research. This research suggests that students’ brains and bodies function better when they participate in daily physical activity rather than the more common biweekly classes. Integrating physical activity into schoolchildren’s daily routines provides them with an opportunity and a foundation for building a lifestyle that includes regular physical activity. Such a lifestyle has many health, cognitive, and even social benefits in the long run.

The CDC recommends that adults aged 18 to 64 engage in at least two hours and thirty minutes (150 minutes) of moderately-intense aerobic activity every week and perform muscle-strengthening activities for all muscle groups two days a week.\textsuperscript{18} Thirty minutes a day may not seem enough to improve a person’s health, but much research supports this number. Being physically active does not require a person to get a gym membership and go there every day after work. Moderately-intense aerobic activity, such as the CDC recommends, can be something as simple as walking briskly in the park, riding a bike on level ground, or even pushing a lawn mower.

Chapter 3: Major Influences of Adult Participation in Physical Activity

In “Exercise Psychology,” Joe D. Willis, PhD, and Linda Frye Campbell, PhD, review the existing research to identify the most common influences that predict participation in physical activity. The authors summarize the work of Gerald Kenyon, who attempted to classify these influences. He categorized his findings into the following:

**Physical activity as social experience:** It is believed that involvement in some forms of physical activity can meet some of the social needs of certain participants. Some physical activities provide a medium for meeting new people or perpetuating existing relationships.

**Physical activity for health and fitness:** This subdomain relates to involvement in physical activity primarily for the development or enhancement of physical fitness.

**Physical activity as the pursuit of vertigo:** Kenyon modified the more traditional definition of the term vertigo to mean activities involving risk, danger, or a thrill derived from speed or acceleration. Activities in this category include skiing, mountain climbing, and skydiving.

**Physical activity as an aesthetic experience:** This subdomain pertains to physical activities that appeal to participants because of their characteristics of beauty, grace, symmetry, or other artistic qualities. Ballet, synchronized swimming, gymnastics, and aerobic dance are representative of this category.

**Physical activity as catharsis:** This subdomain refers to participation in physical activity to release tension and pent-up emotions.
**Physical activity as an ascetic experience:** The willingness or desire to endure long, strenuous, and often painful training in pursuit of a particular goal characterizes physical activity as an ascetic experience. Some examples include training for a marathon, running up Pikes Peak, or preparing for a decathlon.\textsuperscript{19}

Kenyon’s research method and theory is one of many approaches to exercise. Brunner (1969) created an adjective checklist and questionnaire to study the differences between men who exercised regularly and inactive men, all of whom had similar backgrounds, age, and occupation. The physically active group reported that the primary benefits of physical fitness are “feeling better physically and mentally, fun and enjoyment, and weight control. The inactive group ranked relaxation, feeling better, fun and enjoyment, and being outdoors as the main benefits of exercise.”\textsuperscript{20}

Ecological models have also been created based on existing data that show the environmental and sociological factors influencing adult participation in physical activity. These models create a multilevel view of the data, focusing attention on the multiple influences in the environments that affect whether a person chooses to exercise or not.

Chapter 4: Existing Physical Activity Environment Evaluations

Ken Hutchins is the inventor of the SuperSlow exercise protocol. A friend introduced him to the benefits of weight lifting at the age of fifteen and he has spent his life since immersed in the field of physical activity. For over a decade, Hutchins worked for Nautilus, Inc, as a surgery technician and surgical photographer, leading research projects, designing equipment, and writing and speaking. Later, he opened his own exercise practice and most recently, he and his wife work for Renaissance Exercise, continuing to innovate and develop exercise equipment and techniques. Through his years of research, writing, and development, Hutchins has come up with specific qualifications for a good exercise environment. The following is a summary of what comprises an ideal exercise environment, using both Hutchins research and that of several university studies:

**Privacy:** Privacy is difficult to provide in a typical gym where a majority of machines and weights are located in an open common area. Occasionally, during the hardest sets or circuits, a person may make grunting noises or odd sounds. This is a natural event as a person’s body releases some of the tension from the exertion, but may cause discomfort for some people. Hutchins argues that for a person to get the best work out possible, the environment should offer access to privacy, if the person wishes.

**Sound:** Most gyms or fitness facilities are loud from the constant banging and clanking of weights dropping and machines whirring. In addition, gym facilities typically play music over speakers, which some argue helps a person concentrate. The ideal environment, however, should be as quiet as possible, allowing the gym user to focus inward.

---

**Mirrors:** Most gyms have mirrors located throughout the facilities, which designers explain make a space feel larger and allow gym users to check their form. In “The Workout Environment,” M Doug McGuff argues against the use of mirrors in gyms, saying, “Our muscular and nervous systems possess proprioceptive capabilities that are quite advanced and do not need visual monitoring. Mirrors hamper concentration by pulling any visual stimulus in the room into your field of vision. In addition, mirrors make you visible to everyone else in the room, thus hampering your privacy.”

**Temperature:** The human body loses internal heat by conduction, convection, and evaporation. It is important for fitness facilities to keep a temperature cooler than the body’s internal temperature to ensure that the heat from the body will be released to the external environment. Muscles can produce heat rapidly and without cooling quickly, they can fatigue and fail.

---


23 Ibid.
Chapter 5: Space Typologies of Existing Physical Activity Environments

When comparing existing physical activity environments, one can find trends in spatial organization.

Social Spaces

A successful gym requires social spaces. Many gyms have waiting areas, front desks, and various open spaces, often with seating set up for socializing.

Eating Spaces

Another common type of space found in gyms is an eating area. Gyms in Las Vegas such as the Las Vegas Athletic Club (LVAC) often contain a juice bar. Smoothies, salads, and healthy sandwiches are sold at these bars. There are seating areas located near the food counters for gym members’ convenience. This benefits both the club and its members; it promotes business for the club and promotes healthy eating for the members in a convenient setting. These spaces are usually linked to social spaces as they foster socializing.

Learning Spaces

Learning areas are not commonly found in most fitness facilities, but I propose these be added to an ideal gym or physical activity space. A learning area would be used for conducting classes on weight management, for example, or making healthy lifestyle choices. Many people who frequent gyms are simply looking to lose weight, but there is much more to losing weight than simply losing pounds. It is important to understand how everything in a person’s life, from diet and nutrition, to amount and type of exercise, to thought patterns, affects lifestyle and actual, lasting change. Moreover, a person’s wellbeing is not only about the number that a scale tells them, but also about their whole lifestyle. If people have convenient access to such resources, I believe they will be more willing to learn about what they can do to improve their quality of life, and then do it.

Group exercise spaces
Group exercise spaces are a popular feature in gyms. A typical group space includes a room with hard floors, mirrors in the front, and a sound system for music or microphones. Many gyms, such as 24 Hour Fitness USA and the LVAC, have very large rooms to accommodate their large classes. Group exercise classes are great for groups of friends and for individuals interested in meeting new people who enjoy the same activities as they do. Many people appreciate these classes for their social aspect and comment that working out in the classes doesn’t feel like exercise. This becomes a motivating factor for some for exercising on a regular basis.
Chapter 6: “Healthy” States

Top 5 Healthiest States: Hawai‘i

In 2013, Hawai‘i was listed as the healthiest state in the annual Gallup-Healthways Well-Being Index.24 One thousand random people were picked in each state for the survey. The residents were interviewed by phone and asked questions about their everyday lives. For each question, they were asked to answer on a scale of 0 to 100, with 100 representing the ideal. From the responses of Hawai‘i’s participants, it was clear that the state’s beautiful environment greatly contributes to lower stress levels.

According to America’s Health Rankings, three of the statistics that explain why Hawai‘i was chosen as the number one healthiest state in 2013 are: “Low prevalence of smoking & obesity, High immunization coverage among children, and Low rate of

preventable hospitalizations.” America’s Health Rankings compiles their statistics from other resources and databases including the CDC, the American Medical Association, the FBI, the Dartmouth Atlas Project, the U.S. Department of Education, and the Census Bureau.

**What makes Hawai‘i healthy?**

Two factors that contribute to Hawai‘i’s high rank on the healthy state index are climate and location. Hawai‘i has a tropical climate, which means there is minimal temperature variation between seasons. During the summer months, temperatures average 85°F to 90°F, and during the winter months, 79°F to 83°F. One of the reasons Hawai‘i’s temperatures change so slightly is the constant flow of fresh ocean air. The trade winds also contribute to the constant moderate climate.

Located in the North Pacific Ocean, Hawai‘i is the southernmost state of the United States. All its islands lie within a narrow latitude band. This geographical location causes there to be only a slight variation in length of day and night. The combination of this, along with a small deviation in altitude of the sun over the horizon, creates minimal differences in the amount of incoming solar energy from one part of the year to another.

The mild and moderately changing climate allows residents to take part in outdoor activities more often throughout the year. During the winter season, there is a greater amount of precipitation, but even the winter months have plenty of sunshine.

---

Chapter 7: Human Needs in Physical Activity Environments

Indoor vs. Outdoor Physical Activity Environments

In many studies that have been done comparing the benefits of indoor and outdoor activity, researchers have found that a majority of participants experienced a greater positive impact when participating in outdoor activities than indoor ones. The participants in one study reported greater feelings of revitalization and positive engagement. Another study concluded that the first five minutes of exercising in an outdoor environment proved to have the biggest impact on mood and self-esteem.

Studies have shown that people’s bodies move differently when exercising indoors and outdoors. For example, many treadmills today can be set at an incline position, but very few have a decline or downhill setting. When running outdoors, a

---

runner uses muscles in a specific way for going downhill that is different from flat or uphill running muscle use. The treadmill runner will most often not experience this. Researchers found that outdoor running was also more strenuous on the body. The body experiences less exertion indoors because it is a controlled, predictable environment. Outdoors, on the other hand, there are many factors affecting the runner, such as wind resistance and topography.

Not only does the added exertion provide greater benefit to a person, but the outdoor setting can also help motivate a person to exercise. Many studies have been done comparing people walking on treadmills to walking outdoors on a track. The results from these studies showed that when volunteers walked outdoors, they scored higher on psychological tests measuring vitality, enthusiasm, pleasure, and self-esteem, and lower on tension, depression, and fatigue. Most importantly, they reported enjoying the walk outdoors a lot more than the indoor treadmill walk.

Similar studies have been conducted with senior adults. The results from these studies showed that those who exercised outdoors, exercised longer and more frequently than those who exercised indoors. As part of one such study, the volunteers were questioned about their exercise habits and then given electronic devices, which measured and recorded their activity levels for one week. The results showed that those who exercised outdoors, exercised about thirty minutes longer than those who exercised indoors.27 “If outdoor activity encourages more activity, then it is a good thing,” says Jacqueline Kerr, a professor at the University of California, San Diego, who led this study of older adults. After all, “despite the fitness industry boom,” she continues, “we are not seeing changes in national physical activity levels, so gyms are not the answer.”28

Research is showing us that exercising out of doors offers many benefits not obtainable in an indoor environment. Outdoor exercising can profit both short-term and long-term health outcomes.

Nature, alone, has its own healing power. Researchers have found that exposing cancer patients to natural views and sounds can help lessen the experience of pain for painful procedures such as bone marrow biopsy. Many more studies conducted in various hospitals have found a relationship between exposure to nature and healing times.

Today, a majority of the American population lives in urban areas. Perhaps directly related to this fact are visible trends showing significant increases in stress and mental health among the American population.\(^29\) The World Health Organization estimates that depression and depression-related illnesses will become the greatest source of ill health by 2020.\(^30\)

**Benefits of Natural Daylight**

Figure 7: Woman running outdoors

In the late 1800s, skin exposure to daylight became a popular and successful treatment for rickets and tuberculosis. In the 1970s, scientists discovered that this exposure to sunlight causes the body to produce vitamin D, which became known as the sunshine vitamin.\(^{31}\) The best method for obtaining the daily vitamin D recommendation is to receive sunlight directly on the skin; those who cannot get their daily dose from sunlight must take synthetic vitamins instead.

Studies have shown that people who have “habits of active sun exposure lower the risk of developing type 2 diabetes mellitus by 30%.” Regular exposure to sunlight also reduces the risk of seasonal influenza A infection by 42% and asthma attack by 93% in children six to fifteen years old. Taking in the sun produces other psychological and physiological effects as well, such as improved mood, enhanced morale, lower fatigue, and reduced eyestrain. Happiness and improved mood are correlated to the rate at which the brain produces the neurotransmitter serotonin. Studies were done on both humans and rats and in both cases, “there was also a positive correlation between serotonin synthesis and the hours of sunlight on the day the measures were made….\(^{32}\)

Sunlight furthermore helps our bodies to regulate our circadian rhythms, sleep/wake cycles, and chemical reactions such as melatonin production levels and vitamin D metabolism. Some people, typically older people, have only a modest daily intake of foods with vitamin D; daylight on their skin is thus their primary source of vitamin D. In this case, the natural sunlight adds to and sometimes even replaces their daily source of Vitamin D.

Today, much of America’s population spends more time indoors during the day than out. Natural daylighting in buildings is the planned admission of sunlight into an indoor space and enables the people within to obtain vitamin D; it connects people to the outside living environment.

---

\(^{31}\) Traynor, Victoria, Ritin Fernandez, and Katherine Caldwell. "What are the effects of spending time outdoors in daylight on the physical health of older people and family carers: a systematic review protocol." The JBI Database of Systematic Reviews and Implementation Reports 11, no. 10 (2013): 76.


Green Exercising

Some studies have classified exercising outdoors as *green exercise*. In these cases, the term *exercise* refers to preplanned, moderately strenuous physical activities such as walking, gardening, social and therapeutic horticulture, garden design, conservation activities, and dog walking. Such activities are typically less strenuous than jogging in a park or lifting heavy weights in the gym and are great for senior adults. In addition to the physiological benefits, activities such as gardening also encourage people to keep their minds active as they learn about the plants and flowers they are growing. Gardening can also provide a space for socializing.

The activities listed in the previous paragraph are actual projects put on by Local Mind Associations (LMA). LMA researches the effects of green exercise. The duration of LMA’s finished projects examined here varied from fifteen minutes to six hours. After
each study, LMA members gave a survey to the participants with questions pertaining to the activities in which the participants had just engaged. The graphs below present the results from one LMA study in which the participants walked both indoors and outdoors. The graphs show the difference in the reported effects participants experienced.

One of the leading gyms in the nation is 24 Hour Fitness. The company has been in business for twenty-five years and has about 400 locations across the United States. They offer state-of-the-art equipment, cardio and resistance training, online nutrition, high-energy group exercise classes, and have more than 4,000 certified personal trainers on staff.\footnote{“About Us.” About Us. http://www.24hourfitness.com/company/about_us/ (accessed March 17, 2014).} Some of the reasons that they are so successful are the convenient locations, variety of workout machines and classes, and the fact that most locations are open twenty-four hours a day, seven days a week.

I have been a member of 24 Hour Fitness for seven years and observe that their business is successful. The variety of amenities enables 24 Hour Fitness to reach a wide demographic. Their variety of classes attracts many different types of people, including
working adults, college students, and even senior adults. The fact that they are open twenty-four hours a day is a big draw because gym goers are able to work out on their own time instead of rushing to the gym before it closes. The company works to accommodate every type of lifestyle with their programs and facilities.

The organization of the gym is basic. There are components such as the cardio room, free weights, weight machines, group fitness rooms where they also offer classes, and, in some of the 24 Hour Fitness locations, a pool and sauna.

On Oahu, the Pearl City 24 Hour Fitness is the most popular location. It is classified as a super sport facility, which means the gym has a nice-sized pool in addition to all of the regular amenities. What is also special about this location is the shape and size of its space. Previously, the building held a CompUSA, a computer retail store, and the floor plan was very open. Because of this, the gym was also set to a very open floor plan, which is ideal. All of the spaces flow together and are roomy, which increases the users’ comfort levels. The openness of the floor plan also allows the managers of the gym to change its layout periodically. Most of the building’s construction, including the flooring, is concrete. This is especially important because of the number of people and the heavy exercise equipment constantly moving on each floor. A central staircase acts as a vertical connection within the building.
EC Fitness

EC Fitness is a private company owned by Eddie Clattenburg. It is located near the University of Hawai‘i at Mānoa on King Street on the second floor of Puck’s Alley. This 2,400 square foot\(^{35}\) facility is different from most gyms because of its open floor space that also extends outdoors. It also differs from bigger gyms like 24 Hour Fitness because the floor area is mainly empty and holds few machines. EC Fitness focuses on cross fit training and on exercises that incorporate body weights. The floor area’s openness gives Clattenburg plenty of options when training people; he is able to be very flexible and take into consideration each person’s specific needs, abilities, and wishes. An interesting fact about EC Fitness is that the initials stand for both Clattenburg’s name and the motto of the company. He calls it “everyone can” fitness because he believes that

everyone can engage in some kind of physical activity to better their lives, no matter what level they are at.

The second level of the building’s parking structure sits right outside of his door on the second floor of Puck’s Alley. Because there isn’t much vehicular traffic, Clattenburg uses the parking area as part of his gym’s workout space. He mainly uses it as a warm-up and cool-down area. Occasionally, he will integrate running exercises into his clients’ workouts, having them sprint across the lot.

I included this facility as one of my case studies because of its unique design. It is considered an outdoor and indoor space because of the way people flow in and out of the building during their workouts. Another important characteristic of the space is that it is lit mostly with natural sunlight during the day. The natural lighting requires less energy and provides an even greater connection to the outdoors. The whole front façade of the building is made up of glass jalousies; these are kept open most of the day allowing in natural light and producing a ventilation system. A constant flow of air is generated because a larger opening funnels air to a smaller opening basically creating a type of Venturi effect. This open-air ventilation helps clients’ body temperatures regulate more naturally than if the space was air-conditioned.

---

The Great Outdoor Gym Company is a company in Great Britain that has created a way to harness energy from its workout machines. The typical gym in most cities around the world requires the use of municipal energy, but these outdoor gyms transform energy taken from the machines and uses that to power light fixtures in the park areas for nighttime workouts. The energy produced is also now available for people to use to charge their electronic devices while they exercise. The company hopes to soon produce enough energy to return some to the grid.37

The Great Outdoor Gym Company uses machines built to withstand the elements, made of high-quality kite-marked steel. The equipment materials are also 85 percent recycled and recyclable. These low-maintenance machines do not require any kind of energy input.

The company prides itself in the safety of the gym elements and spaces. Studies that have been conducted on site show that anyone can use these gyms, even small children and people with disabilities. Before this company was started, there were no outdoor gym standards in Europe; the Great Outdoor Gym Company has inadvertently helped create the current standards. Some of these include a space free from general entrapments, crush-points, sharp edges, head and neck entrapments, exposed stops that act like guillotines, flailing arms and cranks, unsafe fall heights, and trip and slip hazards.38

The Great Outdoor Gym Company has surveyed communities where outdoor gyms have been installed and report an increase in physical activity in the overall population. Some of the factors that contribute to the reported increase include convenience, flexibility, and affordability (the gyms are free). These factors attract a demographic that does not usually attend membership-type gyms.

Research Results

The research that I have conducted during this Doc I semester has provided me with much greater insight into how the human body works in different environments and its basic need for daily physical activity. In light of this, I propose a project in two parts. The first part is a redesign for Ala Moana Beach Park that would transform it into a cultural village with a focus on physical activity; the second part is a system of pathways, exercise stations, cultural and botanical elements, and signage that will connect all of Honolulu’s parks to each other, with a focus on the connection between Ala Moana Beach Park and the parks in the Kaka‘ako neighborhood. I have performed a detailed site analysis of Ala Moana Beach Park and the Kaka‘ako neighborhood. In order to establish the park’s cultural significance, I have also mapped out where important historical events

took place and how the area was used in the past. The project’s goal is to connect the park and neighborhood with Hawai‘i’s culture and community while simultaneously encouraging a greater demographic to take part in regular physical activity, helping to increase the overall physical wellbeing of local communities.
Chapter 9: Precedents in San Francisco

Marina Green Park

The Marina Green is a park located in San Francisco’s Marina District. It runs along the San Francisco Bay, stretching from Fort Mason to the Presidio and offers park goers views of the Golden Gate Bridge, Alcatraz, Angel Island, and the downtown cityscape. The Marina District is home to the Palace of Fine Arts as well as many historic houses. The park’s beauty and views not only attract a great number of tourists, but also a great number of local runners, athletes, and picnickers.

There are many components that comprise the Marina Green strip. When walking toward the Golden Gate Bridge, you first pass the outdoor Fitness Court. This is a fairly new addition to the park, installed by the National Fitness Campaign, an organization that
strives to “get people moving by bringing free fitness to public spaces.” During the 1980s alone, the National Fitness Campaign erected 10,000 exercise jungle gyms in 4,000 cities across the country making sure the equipment was free to the public.

Mitch Menaged is the current campaign director and was also the person responsible for the installation of all the jungle gyms in the 1980s. His idea caught the attention of mayors, governors, and even presidents. After ten years of work, he felt his mission was finally complete; but a few years ago, he resurrected the campaign. When speaking about his reasons for this, he explained, “Look at the state of health care in America. It’s virtually a train wreck. Our kids are probably going to be the first generation in four generations to live shorter lives than their parents. We have lost the understanding of the importance of fitness and nutrition. We’re working our way toward

---


40 Ibid.
obesity, diabetes, heart attack. If we don’t do something about it we’re going to find ourselves in a terrible way. We’ll be sick and unhealthy and virtually bankrupt. It is imperative that we come together as a country and take responsibility for our health and fitness.” The fitness courts the National Fitness Campaign erects are built and funded by volunteers and sponsors.

I visited this Fitness Court on a Saturday afternoon in August. There was a good amount of people exercising on and around the site. Many were individuals working out alone, but some were in groups doing training sessions together. The court is set along Marina Green’s pedestrian pathway, which is fairly wide at twenty feet across. The path is a shared path for bikers going in two directions and walkers and runners. The path is painted with signs on the ground designating the direction of pedestrian and bicycle traffic. The width of the path is just right to control the traffic in a safe, comfortable manner.

Further down from the Fitness Court is a grass volleyball court. Again, when I visited, this area was in use and there were many people waiting to play. The grass field next to the volleyball courts was being used by soccer players scrimmaging as well as a bunch of dog owners playing catch with their dogs. The field was a nice length and appeared to be easily shared by the soccer players and the animal owners.

Figure 14: Bicycle paths near Crissy Fields, San Francisco
Providing this wide pedestrian and bicycle path alongside playing fields and courts creates a safe and healthy environment that promotes physical activity and wellness. The Marina District as a whole is fairly flat, so people of all levels are able to walk, run, or bike. It was nice to see families biking and jogging together.

The area is well planned out. There is visible signage to guide users through the district and between the different park spaces that connect to one another. If you start at the entrance to the Marina Green and walk toward the bridge, along the way you will pass the Fitness Court, the green field, the volleyball courts, Crissy Fields (another park), a wetland reserve, and finally the Golden Gate Bridge. There are many points of interest available to park users along a comfortable path in a safe and accessible environment.

Mission Rock (Sea Wall Lot 337)

Mission Rock is a development and urban design competition that was put on by San Francisco landscape architects Hargreaves Associates teamed with Perkins + Will and Beyer Blinder Belle. The project provides a development scheme for the last undeveloped parcel of Mission Bay, Lot 337. This project site is similar to the Ala Moana Beach Park site in that it was formed from rubble; layers of fill leftover from early twentieth century earthquakes form the ground under the site. The See Wall Lot 337
design reflects historic land use and use concepts of manmade land expanding into the waterfront. The urban revitalization project plans to include mixed-use housing and commercial buildings as well as open spaces.

Currently, the site is used as parking for the San Francisco Giants, whose stadium is located nearby. Hargreaves Associates proposed creating an open space at the northeast corner of the parcel and integrating street grids. The project will preserve specific view corridors. Views from this site include the San Francisco Bay, the Giant’s AT&T Park, and the business district across Mission Creek. Also similar to Ala Moana Beach Park, the location offers a great setting for viewing fireworks, sunrises, and the ships coming and going from the bay.

The Bay Trail is a regional trail system that runs around much of San Francisco Bay. The proposal connects the Bay Trail to the lot in the form of a promenade that runs along the Bay’s waterfront and offers the community direct access to the water with steps down into the water’s edge. The promenade will provide areas for people to launch their kayaks and also splits off in some places to provide spaces for art installations. The trail is similar to what I am proposing for Ala Moana Beach Park. A trail system will become the connection between the parks on Oahu, much like how the Bay Trail connects different parts of San Francisco.

When the Mission Rock project is completed, I feel it will be successful because of the connection it has to the water both physically and through the proposed view corridors and because of the new life it will bring to the neighborhood. Connecting the city with this park through view corridors will create a high visibility for the park. The urban revitalization will encourage the local community to draw closer to the water’s edge.
Golden Gate Park

Golden Gate Park is one of the most visited parks in the United States. The park covers more than 1,000 acres of land and has many unique features that attract both local people and tourists. In the 1860s, the park was only an idea and the site was covered with sand and shore dunes. In 1870, William Hammond Hill organized a survey of the land and created a topographical map; this map was later used as the blueprint for the new park. At first, three-quarters of the park was covered in dunes, but during the early years, many trees were planted covering much of the area. Around 1875, there were approximately 60,000 trees in the park; in 1879 alone, 155,000 more were planted.

Golden Gate Park was created because the people of San Francisco expressed the need for a spacious, public park to break up the urban setting. After the park was
established, many features were added, such as the Japanese Tea Garden and the de Young Museum.

Golden Gate Park is one of the most visited parks in America. One aspect of its attraction is its showcasing of many different cultures. For example, the Japanese Tea Garden and the Chinese Pavilion showcase Asian heritage. The de Young Museum exhibits are constantly changing and often feature different aspects of various cultures. The Botanical Garden displays plants from all over the world. Some of the park’s other diverse attractions include: the California Academy of Sciences, the Rose Garden, the Bison Paddock, the Golf Course, and the Chain of Lakes.

Fitness is also promoted throughout the park. There are wooden exercise stations along Polo Field. The signage present at these stations demonstrates how to do the exercises properly. Today, the equipment is a bit run down and hardly used. Polo Field is perfect for outdoor sports such as soccer or running. The inner field can hold many soccer
games at once and the outer area is great for runners. The outside running path is made of grass and sand, making it gentle on the user’s knees. By holding sporting events in Golden Gate Park, a different aspect of the local community has a chance to enjoy the park as well.

Another unique feature of the park is its pathway system. The bicycle pathways are separated from the pedestrian pathways. The walking paths are not ordinary, flat, and paved; they are set, rather, at varying elevations. If you wander along the pedestrian path, at some points you can see the bicyclists and cars away below you to your left; at other points, the bicyclists and cars are at your level closer by. Although this is a small detail, and may not stand out to everyone who walks along these paths, it is clear that this was an intentional aspect of the design. This allows for distinct experiences of the park based on whether the user is on foot or riding a bicycle.

One day is not enough time to fully experience the park. There are so many features, including museums that have much to offer visitors. There are also large green spaces such as fields and meadows where people can gather for many different types of events such as family picnics or a soak in the sun. The variety of activities that are available on the site gives so many different people a reason to go to the park. Golden Gate Park provides an escape from San Francisco residents’ workday lives and creates a balance between the urban and natural worlds.
Boston, Massachusetts is one of the oldest cities in the United States. The streets of Boston were not designed for the thousands of cars per day that need to travel on them. In the 1930s, the city planning board recommended a raised highway to draw traffic off the streets. This elevated highway system, named the Central Artery, was implemented and subsequently became one of the biggest traffic problems in United States history. Traffic eventually reached a point where vehicles could move at no more than a “crawl” for over 16 hours a day.

The Central Artery was an elevated six-lane highway, which ran through downtown Boston. When it opened in 1959, it transported about 75,000 vehicles a day. As the population grew, the number of cars on the roads grew and by the 1990s, the Central Artery carried approximately 200,000 cars a day, making it one of the most heavily used roadways in the United States.
The Central Artery was a problem from its beginning stages, requiring the displacement of about 20,000 people. The road also cut off Boston’s North End and Waterfront neighborhoods from the downtown area, making it difficult for residents of these neighborhoods to participate in the city’s economic life.

Along with the Central Artery, two tunnels under the Boston Harbor contributed to the city’s traffic congestion problems. Not long after the Central Artery was completed, it became clear to the city of Boston that they had not fixed but rather amplified their traffic problems. Without improvement, commuters could expect traffic to be stop-and-go from morning till night through the city, wasting both huge amounts of time and money for Boston’s residents, businesses, and visitors alike. The annual cost for this traffic problem toward the end of the road’s tenure, including the cost of lost time, fuel wasted from idling, unnecessary accidents, and charges for late deliveries, was estimated at $500 million.

The solution put together to fix the traffic mess was a mega project called the Central Artery/Tunnel Project (CA/T), unofficially, the Big Dig. It was designed and constructed to accommodate 245,000 vehicles a day. The planning of this project started in 1982; actual construction began in 1991. The project became the largest, most complex, and technologically challenging highway project in United States history.

The CA/T project replaced the Central Artery and moved its traffic underground, added two new bridges over the Charles River, extended the I-90 to Boston’s Logan International Airport and to Route 1A, and created more than 300 acres of open land. The underground expressway ranges from eight to ten lanes and leads to a fourteen-lane two-bridge crossing at the Charles River. The project also reconnected downtown Boston to the waterfront and helped to improve the city’s atmosphere and environment.

The project was completed in December 2007 with an estimated cost of $14.8 billion. The actual cost, though, was revealed in July 2012 at more than $24 billion.41

When the decision was made to put the Central Artery underground, community and political leaders seized the opportunity to create a greenway of parks and gardens, eventually named the Rose Fitzgerald Kennedy Greenway, which have re-connected Boston’s rifted neighborhoods. Some of the organizations that collaborated to make this Greenway possible include the Massachusetts Turnpike Authority, the Commonwealth of Massachusetts, the City of Boston, and various other civic groups. The parks stretch for a mile and a half through the heart of Boston. The gardens, plazas, and tree-lined promenades around these parks are now key features of the Boston community.

The Rose Fitzgerald Kennedy Greenway Conservancy is an independently incorporated non-profit organization that was established in 2004 to guide the emerging park system, raise funds for an endowment and operations, and work to create a sense of
shared community in the heart of Boston. The Conservancy oversees the operations of all the parks within the Greenway.

The Greenway is comprised of a variety of parks including the Chinatown Park, Dewey Square Park, Fort Point Channel Parks, Wharf District Parks, and North End Parks. Each park is unique with different types of landscaping, artwork, and pathways. The Chinatown Park, for example, has an Asian art influence, is accented with the color red, and has bamboo landscaping.

The beautiful parks are not the only unique feature of the Greenway. The manner in which the Conservancy maintains the parks is just as distinctive as the parks themselves. In 2012, the Greenway was designated a certified wildlife habitat by the National Wildlife Federation and in 2013, Boston’s mayor, Thomas F. Menino, awarded the Greenway with the Greenovate Award. These awards recognize the organic method the Conservancy uses to maintain the parks. The Greenway is the only public park in Boston that uses the organic method.

One of the goals behind the Conservancy’s choice to use an organic park care system is to establish a balanced, respectful relationship between the natural and the built environments. Because no herbicides or toxins are used, the run-off from the parks does not harm Boston Harbor’s marine life. The parks’ landscaping is also much more resilient and can better handle the everyday wear and tear from the parks’ users.

Many native plants have been included in the landscaping to provide food for the native birds in the area. The Conservancy is cautious when selecting plantings for the parks. They hold to the standard that there is “the right plant for the right place.”

The parks offer a range of public programs and events that welcome visitors and residents to explore and interact within the green spaces. The Conservancy works alongside cultural non-profit organizations to create events that are geared toward multi-generational and multi-cultural audiences. Many of these events are free, offering everyone a chance to enjoy and learn from them.

This part of Boston has come a long way, from once having a problematic and unseemly raised highway as its primary route, to having a more effective, partly

---

underground city transportation system and several hundred acres of beautiful open, green space. “You used to walk by it and it was an eyesore, and now it’s beautiful, and now I get to enjoy it,” said Rachel Engdahl, a 32-year-old from the North End who walks to the park every day with her 18-month-old daughter, Estella. “It kind of feels like our own little neighborhood.”

Chapter 11: Proposed Physical Activity Environment Site

Prime Location for New Developments in Kaka‘ako

The upcoming developments in Kaka‘ako will bring thousands of people to the area. These developments are expected to provide up to 2,750 new homes in seven high-rise towers and other low-rise buildings. This influx of population to the Kaka‘ako area will mean that many people will live within walking distance of Ala Moana Beach Park. The park would thus be a convenient place for them to go for their daily physical activity.

The park is centrally located and connects people from many different communities. Developing the park into a space designed for physical activity would not only attract a different demographic of tourists but also a greater number of residents living in the neighboring communities.

In our local communities today, there is very little emphasis on our unique Hawaiian culture. Many members of the older generations on our islands have some knowledge of it, but the younger generations have very little. The Hawaiian culture is rich with stories, important battles, and historic events that should be remembered, recognized, and honored. Knowledge of our history is diminishing because we are not teaching the younger generations about their heritage. In an effort to help illuminate our islands’ history, the project will set up strategically placed nodes throughout Ala Moana Beach Park, as well as other parks, with special signage composed of text and graphics relating to relevant Hawaiian history and culture.

**Makahiki Unit**

The cultural addition to Ala Moana Beach Park would be called the Makahiki Unit. In Hawaiian culture, *makahiki* is “an ancient festival beginning about the middle of October and lasting about four months, with sports and religious festivities and taboo on war.”[45] This ancient social event was split into the following three phases:

1. *Ho’okupu* was the period for making offerings to the deities as tribute for the previous year’s abundance and to call upon them for prosperity in the year to come.

---

2. Hula performances took place during the second period of the Makahiki. *Kanakas* (Hawaiian for people) gathered and celebrated by dancing hula, feasting, and playing games that tested their physical and mental abilities.

3. *Wa‘auhau* was the period for making offerings for the new year. The days following the second period involved sporting events and festivities meant to entertain the people of the district. During this period, work and warfare were forbidden.\(^{46}\)

\[\text{Figure 22: Hawaiian Arm Wrestling} \]

One of the goals of the Makahiki festival was to keep the warriors fit and strong; the events helped train the warriors with challenges focused on wit, skill, speed, and strength. The games were also friendly and played with good sportsmanship. The games used and integrated different parts of the body, including the muscular, neuromuscular, cardiovascular, interpretive, and aquatic systems.\(^{47}\)


Some of the festival’s most popular games include *Ulu Maika* (Hawaiian lawn bowling), *Konane* (Hawaiian checkers), *Uma* (supine arm wrestling), *Hukihuki* (Hawaiian tug-of-war), and *Lono Maka Ihe* (spear throwing). *Ulu Maika* is played by pounding stakes into the ground about six inches apart and then rolling a stone through the stakes from the starting line. *Konane* is just like checkers; two people hop over each other’s pieces until the winner captures all the opponent’s pieces. *Uma* is arm wrestling while lying on the ground; both contestants rest their elbows on the ground and try to press the other person’s arm down. *Hukihuki* is the Hawaiian version of tug-of-war, where two teams hold a long rope and try to pull the opposing team to their side. *Lono Maka Ihe* involves participants throwing spears back and forth to each other. This activity has no set endpoint as there are no real winners or losers. It is comparable to friends leisurely tossing a football back and forth. These are but a few of the games that the Hawaiian people played and are still played today in celebration of the *Kanaka Maoli* culture.

![Makahiki games at Turtle Bay Resort](turtlebayresortblog.com)
Each year, the Turtle Bay Resort on Oahu hosts Makahiki Kuilima. This event is presented by Naepuni Aloha, which is the parent group of Ke Kula ‘O SM Kamakau, a Hawaiian medium prekindergarten to twelfth-grade education program dedicated to teaching Hawaiian language and culture. The purpose of this event is to “preserve, perpetuate, educate, and share Hawaiian cultural traditions, values, and practices through the emphasis of the Hawaiian language and makahiki traditions.”

Makahiki Kuilima is a family fun day for both residents and tourists. There is live Hawaiian entertainment as well as an arts and crafts segment.

A Makahiki festival will be held annually at Ala Moana Beach Park, near the proposed Hawaiian pavilion. The games mentioned above will be part of the program itself and the event will be a celebration of the Hawaiian culture. The festival will also be a great opportunity for local artists to share their work and for local food vendors to participate in the celebration.

The incorporation of these traditional games through the Makahiki festival in the redesign of the park will add interest, a new cultural element, and an appeal to a different demographic than those who already use the park for physical activity.

Park Features

Hawai‘i is known as the melting pot of the Pacific, a place where many different cultures have settled in together. With this in mind, one park feature the redesign will introduce is the cultural pavilion. Several pavilion areas will be created to honor and celebrate some of the most represented cultures on the Islands, including Hawaiian, Japanese, and Chinese. This idea was a part of the Thompsons’ original plan for the park but was never implemented. These designated spaces could be used for cultural events and weekly group exercise classes such as Tai Chi or Bon dance practice. They could also showcase special parts of the cultures to park visitors.

Another feature the redesign proposes is a marker system. Markers will be placed at each half-mile point along the park’s walking path. These markers will not only inform the user of path distances, but they will also act as a node, or an exercise destination point. These nodes will each have different types of exercise equipment along with rest stops and amenities such as water fountains and benches. The perimeter of Ala Moana Beach Park is only 2.8 miles, so there will also be one-mile markers, to keep the signage regulated along the course. These markers, part of a wayfinding system, will become a part of the park experience. Wayfinding is an architectural term that refers to information provided that helps people orient themselves and navigate through public spaces.

Signage will also increase the park’s role in the community as a source of cultural education. Along with signs explaining how to use each station and its equipment properly, there will be signs describing the area’s historical significance and other cultural facts. This information will also be replicated on an app that could run on users’ smart phones. The app would indicate a person’s location, the station specifics and what other physical activities are available in the area.

The redesign will add one major new feature to Ala Moana Beach Park, an outdoor gym in the green space near the middle of the park. It will include typical gym equipment along with equipment specifically designed to integrate into the park’s landscape. This outdoor gym will be close to the Kaka'ako residential neighborhood and will be able to compete with the nearest existing gyms, 24 Hour Fitness on Kapiolani Boulevard, World Gym on Queen Street, the UFC gym on Pohukaina Street, and the YMCA on Atkinson Drive, because it will be free and easily accessible to the public.

Personal trainers from all over the island would be welcome to hold group fitness classes at Ala Moana Beach Park. This would bring a greater number of experienced physical activity members from the community into the park to help educate park users.

Humans need to spend a good amount of time outdoors and moving to be healthy, whether this means taking a stroll in the park, a leisurely bike ride, or even just a morning Tai Chi session. The redesign of Ala Moana Beach Park will provide a fuller range of activities and interest points that will ideally help to motivate a wider demographic and greater number of people in Honolulu to get more active.
Hoʻokui Honolulu
Conceptual Design
Chapter 12: Hoʻokuʻi Honolulu Design

Project Vision

The goal of this project is to encourage healthy living and enrich the lives of residents and tourists by redesigning Ala Moana Beach Park and by creating a pathway system that will link the parks in downtown Honolulu and enhance them with newly installed physical activity components as well as elements of Hawaiian culture. The connection between the parks will be safe, provide destination points for users, and will create a story in the Honolulu area.

Linking Parks

The main goal of this project, as a whole, is to connect and link all the park spaces in Honolulu together. On a smaller scale, there exists an opportunity to link Ala Moana Beach Park with the Kakaʻako neighborhood through walking and bicycle pathways. Other parks, such as Mother Waldron Playground and the Old Stadium Park, are not well-frequented. I propose to incorporate these parks into the Ala Moana redesign, connecting them through path systems and including similar exercise/cultural stations, each with different kinds of exercise equipment and signage. The stations will have similar characteristics that will also help connect the different parks visually.

The State of Hawaiʻi is already working on plans to connect some of the area through a bike-share program. By the summer of 2015, City and State leaders and environmental advocates seek to introduce this program in urban Honolulu. Bikeshare Hawaiʻi, a nonprofit organization, is working to implement bike pickup/drop-off stations near Chinatown, Waikiki, and the University of Hawaiʻi at Mānoa. On February 14, 2014, Michael Formby, director of Honolulu’s Department of Transportation Services, released a statement to the Honolulu Star Bulletin saying, “Once we get the seed money, we’ll put the [executive director] job description on the street and that’s when things will really start to take off. When we have [enough] money in-house we’ll look for vendors and
they’ll help us with implementation and stations and permitting and acquisition of the bikes.”

Currently, there are no specific locations set for the bike pickup/drop-off stations, but Ala Moana Beach Park and Mother Waldron Playground, among others, could be connected to the Kaka'ako area through such bike stations.

**Mumford’s Report on Honolulu**

Lewis Mumford was an American historian, sociologist, philosopher of technology, and literary critic. He was one of the leading thinkers of the 20th century. Mumford was influenced by Patrick Geddes, an eccentric Scottish biologist, town planner, educator, and peace activist. Mumford was especially interested in Geddes’ work as a town planner and he soon followed in his footsteps. Mumford was a consultant to the City and County Park Board in Honolulu and he wrote a booklet entitled *Whither Honolulu?* in 1938. This collection of essays studied the parks and playgrounds in Honolulu.

A chapter in the booklet called “Report on Honolulu” discussed city planning in the Honolulu area. Mumford evaluated the city and emphasized the importance of park planning. He believed, “…the park program remains the very core of a social conception of city development.” Mumford became an influence to others within the planning field. His book helped the public think about how important park planning is and how this can affect one’s everyday life for the better.

**Connecting with the “Lei of Green”**

The “Lei of Green” is a concept created by the late Tom Papandrew, who was the Director of Planning for the Roman Catholic Church of Hawai‘i, the Chairman emeritus of Belt Collins Hawai‘i (a successful landscape architecture firm), Instructor of Urban

---


Planning at the University of Hawai‘i, and the former president of the American Society of Landscape Architects. His concept, well-known among professionals in the field of architecture and landscaping, is about creating walkable streets and open spaces in Honolulu and connecting parks through safe walking or biking paths. Papandrew had hoped to make this idea a policy, but it did not happen in his lifetime.

Marisa Yamada, a previous doctoral student at the University of Hawai‘i at Manoa School of Architecture, used Papandrew’s concept as inspiration for her own doctoral project. The objective of Yamada’s project was to “create a greenway that sews Honolulu’s urban fabric together, linking gaps and separations caused by transportation barriers and connecting parks, beaches and landmarks through a string of bike and exercise paths, creating a walkable and healthier community”.  

Her research focused on “building upon the shoulders of those who preceded us.”

In a similar effort, my doctoral project works to connect Honolulu’s green spaces while focusing on building a sense of community wellbeing. I will incorporate the “Lei of Green” concept into my project but will focus on innovating physical activity opportunities and increasing cultural education in today’s communities.

Honolulu’s Lei of Parks, a project based on Papandrew’s concept, is currently underway. Honolulu Clean Cities, a nonprofit organization that is heading the project, has already begun to erect signage in the Honolulu area, including at Ala Moana Beach Park. As part of their bigger vision, they hope to help reduce dependence on imported oil. The Clean Cities program is a national alternative fuel/advanced technology deployment program that is administered by the US Department of Energy’s office of Energy Efficiency and Renewable Energy’s Vehicle Technologies Program. 

---


History of Kaka‘ako

Kaka‘ako is located near the southern shoreline on the island of Oahu and is currently the commercial and retail district of Honolulu. It sits between Ala Moana and downtown Honolulu. The actual Kaka‘ako boundaries are ambiguous; on early maps of the area, there was no place by this name. Henry Kekahunia (1881-1969), an ethnographer born and raised in Hawai‘i, defined the territory as being “on the Ewa side of Kuloloia Stream where the Honolulu Iron Works and Fort Armstrong are now.” There is also no knowledge of an actual definition for the name or word “Kaka‘ako”. Ethnographer Thomas Thrum translated the word as “to prepare the thatching” because “kaka” in Hawaiian means “to chop, beat, or thresh” and “ako” means “thatch”. Using Thrum’s

---

translation, it is possible to infer that the word relates to the salt marshes previously located on the site where the local population gathered tall pili grasses used to thatch the old Hawaiian houses.\textsuperscript{54}

Although Kaka‘ako’s history is not as documented as the history of other parts of Oahu, it remains significant. The area was once home to a thriving fishing and agricultural native Hawaiian community where Hawaiian royalty lived. “Kakaako was an area comprised of fishing villages, fishponds, and salt ponds. To native Hawaiians, salt was valued like gold and Kaka‘ako’s salt ponds were of major importance to the area.”\textsuperscript{55}

It was said that King Kamehameha I and his kahuna, Hewahewa, lived in the area. According to archaeological reports by Lurline Naone-Salvador and Cultural Surveys Hawaii, Kaka‘ako’s shoreline and waters held a special place in the community: “The waters were used for cleansing, fishing, canoe landings and religious practices. Naone-Salvador, in her research, found that selected individuals were drowned in the waters of Kewalo and then taken to Punchbowl and offered as sacrifices.”\textsuperscript{56}

The Kaka‘ako shoreline was also used for docking foreign ships. In 1853, the sailors on one such ship brought in a smallpox virus, which caused a serious outbreak; thousands of Hawaiians died. Because so many perished in such a short amount of time, many were buried in shallow mass graves inside Kaka‘ako’s boundaries.\textsuperscript{57}

During the 1800s, residential construction began in the area as immigrant camps were first created; this marked the birth of the region’s cultural diversity. Also at this time, industrial roots were planted with the establishment of the Honolulu Iron Works, a metal foundry and machine shop. Many other small businesses and institutions such as schools, churches, and parks soon followed and flourished in the area.

In the mid-1900s, zoning for the area changed from residential to commercial. Warehousing and wholesaling businesses moved in. Small businesses started to spread out, and slowly, the residential population was displaced. In 1974, as part of another

\textsuperscript{54} Ibid
planning effort (Kamehameha Schools 2008), the Kaka‘ako district changed its zoning from an industrial and commercial center to a mixed-use area. This mixed-use area would allow for light industrial, commercial, and also residential buildings. These plans were documented in the HCDA Mauka Area Plan and Rules, which incorporated the importance of living near work places to be more efficient.58

Today, Kaka‘ako has two different zoning classifications: Mixed-Use Zone Commercial (MUZ-C) and Mixed-Use Zone Residential (MUZ-R).59 Both of these zone types are still mixed-used and flexible but each has a different emphasis.

As new residential towers and businesses are constructed in the neighborhood, more and more burial sites are being uncovered. Archaeologists believe that still many more will be uncovered as the district continues to be developed.

Overall History of Ala Moana Beach Park

---


In 1912, Walter Dillingham of Hawaiian Dredging bought fifty acres of waterfront land in Honolulu for $25,000. He used this land for dumping dirt and coral from his dredging projects. This land is now part of the site on which Ala Moana Beach Park stands.

From 1928 to 1930, as part of one of Dillingham’s projects, a channel was dug and dredged in the coral reef connecting the Ala Wai Boat Harbor and the Kewalo Basin. The material collected from dredging the channel was also used to fill part of the park site. This channel enabled boats to travel more quickly through the area.

In 1931, the City and County of Honolulu started cleaning up the Ala Moana area in order to create a city park. Two landscape architects, Catherine Richards and Robert Thompson, developed a plan for the park that included two lagoons and alternating areas of massed foliage and open space. They also included a sports facility. The park they designed was a self-contained park, not a beach park.

In 1933, Harry Sims Bent was hired to supplement the original design. Incorporating the Art Deco style with an accent of the Streamline Modern, he added features to the park including the Sports Pavilion, the Banyan Garden, the Bridle Path Bridge, the Lawn Bowling Green, and the Waikiki Entry Portals, which are still standing. Bent helped shape the park’s unique environment that we experience today.

During World War II, military defense forces occupied the park and converted it into a makeshift coastal fortification, but it again became available to the public after the war ended. In 1947, the park was officially named Ala Moana Park, replacing its previous name, Moana Park. Ala Moana literally means “ocean street.”

In the mid-1950s, because a channel had been dredged from the Ala Wai Boat Harbor straight out to the ocean and Ala Moana Beach Park was becoming an increasingly popular swimming area, boat traffic was completely closed off in the original channel and a beach was created for the park. Just before 1960, the dressing rooms and showers that are still used today were built. In the early 1960s, the Magic Island peninsula was created by filling in a reef and was proposed as a new resort area.

---

The original plan included two additional man-made islands, but after much controversy, neither these nor the resort were completed. Instead, Magic Island became an extension of the park.

In 1975, McCoy Pavilion was added to the park area. In June of 1988, Ala Moana Beach Park was placed on the Hawaii Register of Historic Places. In 1991, its name changed again to Ala Moana Regional Park, which is its formal name. It is now known, however, to both locals and tourists, as Ala Moana Beach Park. Not only are the architectural features important and historic, but the trees also hold much value and are protected under the Exceptional Tree Act, a law passed in 1975. The City and County of Honolulu voted that rare trees of scientific and educational value be planted there. A site survey notes that 80-90 percent of the trees have been planted by visiting dignitaries and local citizens commemorating weddings or other special events.

The redesign of the park will incorporate, highlight, and celebrate Ala Moana Beach Park’s significant history, monuments, and flora while simultaneously acknowledging Kakaʻako’s new communities and developments.

**Detailed History of the Original Design of Ala Moana Beach Park**

**Location**

Ala Moana Beach Park stretches seventy-six acres, extending along the shore for a mile and a quarter from the mouth of the Ala Wai Canal to Kewalo basin. The width of the park is about six hundred feet. Because the park was built on coral reef, the site has no pre-contact or archaeological significance. What is now Ala Moana Boulevard used to be the shoreline.

**Acquisition**

In 1928, the City and County of Honolulu obtained the title of the land on which Ala Moana Beach Park sits today. Previously, the city was using a portion of the land as a garbage dump. Before this, the land changed hands two times. On October 25, 1927, the

---

federal government deeded the land to the Territory of Hawai‘i. On January 16, 1928, the Territory of Hawai‘i passed the land down to the City and County of Honolulu on the condition that the property “be used wholly as a public park or other public use of like nature, and upon ceasing to be so used as to the whole or any part thereof said property together with any and all additions, improvements and appurtenances shall revert to the Territory of Hawaii.”

Designing the Park: The 1930s

In early 1931, the city created the Honolulu Park Board who then employed professionals to plan the park. In July of 1931, the board approved the designs of two landscape architects, Robert Oliver Thompson and Catherine Jones Richards (later, Catherine Thompson).

Richards and Thompson presented their plan to the public in a popular monthly magazine in late 1932. Their goal was to design a park that would not only be aesthetically pleasing, but also functional. They designed a park that could not only be used and enjoyed by the public on a regular basis but also “handle the huge number of people wanting entertainment on holidays and over the weekends.” Their plan included six tennis courts, three baseball fields, volley ball courts, a children’s wading pool, a playground, picnic spots with outdoor grills, a bridle path linking Ala Moana and Kapiolani parks, a small boat harbor designed as a public alternative to private yacht clubs, and clubhouses for local rowing clubs.

They proposed a tropical landscape design that would express the cultural heritage of Hawai‘i. Part of that idea was to create multiple lagoons on the site. “The eastern lagoon was to provide a setting for a ‘Hawaiian village’ for municipal pageants; the western lagoon was to offer a ‘Japanese village’ and teahouse. Chinese pagodas ‘with all the atmosphere needed for such’ were planned for an oceanfront pier.”

---

62 Act 271, Sessions Laws of Hawaii for 1927, p. 346
By 1932, some of their plan had been executed; two lagoons were dredged and a drainage canal to control run-off from mountain showers was built. Not all of Richards’ and Thompson’s plan was implemented, but they did contribute much to the early development and planning of the park. During the mid-thirties, Lester McCoy, Honolulu Park Board Chairman, hired architect Harry Sims Bent to help supplement the landscape proposal that Richards and Thompson had created. As part of the proposal, Bent was asked to divide the park into fifteen units and to complete working drawings for each unit. Although he was an incredibly talented architect, he is not well known today. He is mostly known for the features that he designed that stand today in Ala Moana Beach Park such as the whimsical canal bridge and the entrance portals.65

The Park in the Wartime: The 1940s

During World War II, the military took control of Ala Moana Beach Park. Similar parks on the island were also taken over by the military and converted into makeshift coastal fortifications. In preparation for another war, gun emplacements, magazines, barracks, and barbed wire fences were placed in and around the parks. After the war, the military wanted to keep control of the park area and the park board approved the request for a one-year extension. In March of 1945, the military applied for a second extension for the control of the park, but the city’s board of supervisors refused the request.

In January of 1946, the park was finally reopened to the public. The military, however, had left its mark. There was still barbed wire all over the park and it took many years for the vegetation to grow back to what it had been before the war.

Creating a Beach Park: The 1950s

Originally, Moana Park was not a beach park; swimming was at first discouraged because of two sewer outfalls close by. There were no swimming beaches or facilities set up for swimmers; the area was used mainly by fishermen.

It wasn’t until after the war, during the 1950s, that the park began transforming into what it is today. The channel that was dredged in the 1920s was rarely used after

65 Ibid.
1951 because the city had dredged a direct entrance to the ocean for the Ala Wai Boat Harbor. Because of the population growth after the war, more people began to frequent the park and use the beaches. All boat travel was cut off along the shoreline and the park began to maintain the beach as part of the park. Sand was imported from the Leeward side of the island in order to construct a more official beach.

**Park Lane, Ala Moana**

[Image: Figure 26: Overview of Park Lane Ala Moana in connection with the shopping center. Source: The MacNaughton Group/Kobayashi Group/Blacksand Capital. “Overview of Park Lane Ala Moana in connection with the shopping center.” hicondos.com, http://www.hicondos.com/hawaii-Condos/Park-Lane-Ala-Moana.asp (accessed February 02, 2015)]

Park Lane is a mid-rise development that will be completed in late 2016. It was developed in partnership with General Growth Properties, the Kobayashi Group, and Blacksand Capital. It is a luxury low-rise and will be eight stories tall with two stories of private parking. The buildings will be facing Ala Moana Beach Park and will be about 100 feet tall. The units will range from 900 square-foot studios to 6,000 square-foot four-bedroom condominiums with an average unit landing around 2,000 square feet.

This development is part of the redevelopment of the Ewa wing of the Ala Moana Shopping Center. It will feature a Great Lawn, a multipurpose green space that can be
used for children to play on or for hosting events such as small weddings. The green space will include many small gardens with landscaping that will lead to the park and surrounding areas.

Park Lane is unique because it offers over ninety unique floor plans, ten-foot-tall ceilings, extra large lanais, and custom grills and outdoor cooking spaces. Some units may even have private pools, enclosed garages, or gardens.

This development is part of a new American trend in which luxury residential housing is built at shopping centers, on or near the parking structures. “The interest seems to have been pretty consistent, according to a vice president of Simon Property Group, the nation’s largest mall owner, who told The Wall Street Journal that it gets calls all the time from residential and hotel developers wanting to snatch up land in its parking lots.”

**Proposed Physical Activity Environment**

Based on the site analysis I conducted, I found that Ala Moana Beach Park is already quite successful as it is. The park attracts many people who fall outside the typical gym user demographic including those who do not use gyms because of the costs of membership, the location distance being too far from home or work, or the discomfort they feel in a gym setting. The goal of this redesign is to integrate architectural design as well as cultural and fitness elements to encourage an even greater demographic to experience effortless, healthy living.

Ala Moana Beach Park, as it is now, is not specifically designed for health and fitness; it is set up as a leisure environment where families and friends can gather and enjoy time together. Over the years, however, as more people understand the importance of regular fitness, an increasing number of people are using the park’s recreational areas for their workouts.

---

The weather in Hawai‘i is amenable to outdoor exercise most of the year and Ala Moana Beach Park is a prime location for such activities. Starting at dawn, people are in the ocean swimming laps, paddle boarding, walking in the water, fishing, and surfing. On land, people walk, jog, and ride bikes on pleasant pathways. Mostly flat green spaces stretch out through the middle of the park. These spaces are frequently used for exercise classes such as yoga, tai chi, and aerobics; for group sports such as Frisbee or soccer; and even for lawn sports such as croquet. The grassy areas can become a social gathering space for retired people or picnicking space for families.
For aerobic and strength training classes, instructors use everything they can from their environment. Coconut trees are used as anchors for ropes, rubber bands, and other strength training devices. The sand is used for resistance exercises, grass areas are used for anything from lying exercises to running sprints, and the beach perimeter wall is used as a stepping element or for specialized pushups. By using the environment in its natural form and beauty, instructors not only help others attain goals and improve their health, but they also have the opportunity to demonstrate, through different and creative exercises, that exercise can be successfully practiced in many different settings and is not limited to a gym. Not everyone will like working out in the park, but those who enjoy the outdoors can thrive.
The Ala Moana Beach Park redesign is meant to encourage people to live healthier lives by providing easy and convenient access to fitness activities and elements, such as fitness machines, and other amenities. The redesign will also provide a stronger connection to the Hawaiian Islands through cultural elements which offer information and events related to the people groups that make up Hawai‘i today. Finally, it will connect the park to a network of nearby parks in the Honolulu area in a similar way to the “Lei of Green.” (See pages 52-53 for more information on the “Lei of Green.”)

Concept

The fabric of urban Honolulu offers limited, disconnected green spaces. The concept of this part of the project is to weave Honolulu’s fabric together, to connect the mountains to the sea and the parks to one another. The idea of weaving comes from the old Hawaiian tradition of Lauhala weaving.

Lauhala is a versatile native plant that the Hawaiian people used to weave mats, baskets, and many other accessories. The Lauhala tree is a necessity in the native Hawaiian landscape. It is excellent for waterfront areas because it is able to withstand poor, salty soils and changing weather conditions such as heat and wind. The Lauhala tree is used for stabilizing sandy soils in many coastal lands.\(^67\)

On a side note, these characteristics make the Lauhala tree perfect for planting in certain areas of Ala Moana Beach Park. The native Lauhala tree, in this case, offers a link to traditional Hawaiian heritage and an opportunity to strengthen the native ecosystem. The Lauhala tree becomes a symbol of connection and stability and represents in physical form the weaving together this project hopes to address.

Opportunities and Constraints

The Ala Moana Boulevard is a major roadway in the Honolulu area that acts as an obstruction in the connection and flow between the mountain and sea, disrupting the old Ahupua‘a system. By linking the parks together and putting parts of Ala Moana Boulevard and Pi‘ikoi Street below ground, however, there are opportunities to recreate these connections between the mountain and the sea, between the green spaces, and to the city itself. The linkages will be created through new or better-marked bike and pedestrian pathways, bridges, and the use of distinct types of pavement materials to visually show the connections.

Existing Conditions in Hawai‘i
Some of the existing conditions in Hawai‘i that affect this project include the obesity epidemic, unsafe roadway conditions for bicyclists and pedestrians, and homelessness in public spaces. There is a need to change the way we live and take care of the land that we have.

**Hawai‘i’s Health**

![Figure 30: America’s Health Rankings 2014](americashealthrankings.org/reports/annual)

Although in 2014, Hawai‘i was ranked number one for the second year in a row as the healthiest state, there are still many people hampered by health conditions that affect their lives in negative ways. At 21.8 percent, Hawai‘i’s obesity percentage is lower than the national average, but still represents a relatively large number of residents.
Many people of Native Hawaiian ancestry have health problems linked to obesity that are causing diseases such as diabetes. Over the decades, the population of Native Hawaiian people has been declining. According to the 2000 Census, Native Hawaiians and part-Native Hawaiians number 239,655, which is about 20 percent of Hawai‘i’s population. It is also known that Native Hawaiians suffer higher disease, cancer, and mortality rates. It is important for the people in Hawai‘i to become more educated about health and wellness as a lifestyle change to ensure that they may live full and long lives.

**Road Safety**

Honolulu’s roadways are known to be hazardous for both bikers and pedestrians. There are numerous bicycle and pedestrian accidents recorded each year. The City and County of Honolulu is currently addressing bicycle safety by modifying streets to include designated bicycle lanes. Most recently, there have been major changes made to King Street, which now has a dedicated bicycle lane along its entire stretch.

The Hawai‘i Bicycling League (HBL) is a nonprofit organization that advocates for bicycling in Hawai‘i. The organization organizes free courses throughout Oahu hoping to build a safer biking community. The HBL also hold events throughout the year such as the Haleiwa Metric Century Ride and the Honolulu Century Ride. Currently, the HBL is also working to get more bike lanes placed throughout the island; they helped push the King Street Cycle Track that was just completed. The HBL also sits on many community boards and endeavors to push bike lanes through legislation.

---

Homelessness

Figure 31: Homelessness on Oahu

Homelessness is a third condition that affects this project. The island of Oahu has a significant population of homeless individuals and families. Many public areas, including beaches, parks, and even sidewalks, are occupied by homeless people throughout the city. Some homeless are even building temporary housing in these areas. The City and County of Honolulu has been working for years to come up with solutions for this huge and growing problem. One of the latest projects will provide land, through a city lease, on Sand Island to create a voluntary homeless camp.69 The camp will hold permanent amenities such as restrooms and showers. Spaces will be designated for tents and temporary housing. Sand Island is located near the Kalihi-Palama bus facility. This proximity to public transportation would benefit those who commute to work. This is only considered a temporary solution; more permanent solutions to the homelessness problem on the island are still being sought after.

Park Programs and Usages

Each park in Honolulu will receive new amenities and programs. These will focus on health, wellness, and culture. For example, Ala Moana Beach Park has existing outdoor exercise stations, jogging paths, a bicycle path, and tennis courts. A new playground will be added. The outdoor exercise stations will be renovated with state-of-the-art equipment. Historical and cultural signage will be placed at the physical activity stations throughout the park, and flora signage will be placed in and around the native vegetation gardens. Interactive game stations will be placed around the park alongside new ethnic pavilions. To help improve the wellness component of the park, the current concession stand will be changed into a healthy snack bar, where people can get a bite to eat before or after their workouts at the park. The snack bar will feature organic and local foods and will offer a variety of healthy alternatives to normal concession fare.

Master plan Conceptual Design

The idea for the Honolulu area master plan is to safely connect all the green spaces together through pedestrian- and bicycle-friendly paths. There will be a primary path and a secondary path to give the users options and different views and experiences. Physical activity nodes will be placed at each park in the loop along with signage that connects the area with a Hawaiian legend, story, or historical event. The total distance of the main loop is fourteen miles, which is close to a half marathon. Within the main loop, there will be smaller loops for shorter-distance exercise programs. The idea is to provide a variety of distances for walkers, runners, and bicyclists.

Linkage

The linkages between parks will be architectural and educational. There will be physical linkages such as new bicycle and pedestrian pathways, but also an overall educational linkage using the history of the area and Hawaiian stories. There are also some existing linkages that are historic and will be highlighted, such as the bridges at Ala Moana Beach Park. A new app for smart phones will be developed to help link people to all the parks and also to their surrounding areas.
App for Smart Phones

In response to today’s technology boom, I am proposing the creation of an interactive smartphone app that will connect the users with the parks. Each physical activity station that is installed will have a barcode that the user can scan with his or her smart phone. Once the phone reads the code, it will automatically go to a page that contains information on the station, its cultural and historical significance and how to use the exercise equipment. It will also provide the user with safety information and will link them to healthy restaurants and cafes in the vicinity.

Providing such an app will appeal to a wide demographic. Most people now have smartphones. This technology will provide users with more detailed information than what is on the standard park signage. The app will be free and will be formatted for both apple and android phones in order to better connect more people to the park.

Currently, a similar app is available but the information it provides is more general. Some of the equipment that Highwire Inc, a fitness equipment supplier, supplies to west coast locations in the United States comes with an app. The app only works with the fitness equipment and helps the user track his or her progress. The app that I am proposing will go beyond just the fitness equipment and exercise information and will also connect the user with the surrounding area, its history and culture, and healthy food choices nearby.
Native Hawaiian Gardens


Native Hawaiian gardens will be placed in every park. The sizes will be decided based on the size of the park. Currently, Ala Moana Beach Park is mainly made up of open grassy spaces with trees interspersed throughout; this park will showcase larger, more intricate gardens. The Lauhala plant will also be heavily used within the park, especially along the coastlines to help stabilize the earth.

The gardens will add landscaping to the parks in a similar manner to botanical gardens. Native and low maintenance plants will be strategically chosen and placed by landscape specialists. Special signage will be placed near a plant describing its native use(s) and the area in Hawai‘i where it originated. Growing native plants in the area will not only help create a stronger native floral environment, but it will also provide an educational aspect to the park goers’ experiences.

**Art Installations**

Permanent and temporary art exhibitions will be placed throughout the fourteen-mile loop. Permanent displays will be located at major intersections such as Ward
Avenue, Pi‘ikoi Street, and Kapahulu Avenue. Temporary displays will be set at secondary nodes in all of the parks and will be changed semi-annually. All of the artwork will feature local artists.

The installations will feature a wide range of artwork including interactive art, utilitarian sculptures, murals, and statues. The theme will focus on the culture in Hawai‘i as represented through each artist’s style.

**Stories**

Similar to the artwork along the jogging path, stories will be used to connect Honolulu’s parks. Since Hawaiian history is primarily oral, documented through song and dance, it is very important to document it through other mediums as well. Art is one effective way to capture stories and another is written English. Ancient mythologies and legends from all over Oahu will be tied in to the artwork installations, and stories will be written out on the signage along the pedestrian paths at each park. If there are certain site-specific historical facts, the story for the node in that area will reflect this.

**Ala Moana Park**

This project will focus a majority of its attention on the Ala Moana Beach Park vicinity and Kaka‘ako neighborhood. The Honolulu Rail Transit line will have a hub on Kona Street, near the Ala Moana Shopping Center. Because of this, Pi‘ikoi Street will become one of the major streets of the Ala Moana area. This project proposes to extend Ala Moana Beach Park across Ala Moana Boulevard, connecting it to the shopping center and providing direct access from the rail transit hub to the shopping center and to the beach park. This will become a new corridor that will be able to truly showcase the Ala Moana area to the public.

Many smaller green spaces and outdoor seating areas will be added to Pi‘ikoi Street through the rail project, providing future rail users comfortable places to wait during their commutes. Part of the existing parking at the Ala Moana Shopping Center will be turned into green space, bringing more light and vegetation into the currently darkened parking area.
Communities and Organizations

To make this project possible, there will need to be some community integration. There will be many opportunities for organizations such as the YMCA and YWCA to help teach exercise classes at the park. Other organizations such as the Japanese Cultural Center can also take part in events in the park, maybe offering free bon dance lessons several times a month.

The goal is to increase free opportunities for locals and tourists to learn more about the many different cultures in Hawai‘i. Promoting traditional, cultural dance classes and physical fitness classes in the park will also provide more people an opportunity to become more active.

Maintenance of Parks

With the goal of connecting all the parks and beautifying the landscapes, there comes the challenge of maintaining these spaces. Homeless people are considered to be “exiled” from society, but if they could become involved in the effort to maintain and beautify the parks, they could rejoin their communities on more stable ground. Organizations that help the homeless, such as Aloha United Way, would be great candidates for this project. They would be able to help transition the homeless people into transitional housing and offer them basic help to get them back on their feet through work programs at the park, if they wish. The homeless people who become involved in the program would in turn be able to earn a stable income and become active members in the community.

Phases

In order for this project to be completed, it will need to be completed in phases. The first phase will involve adding the new equipment, signage, and exercise stations to Ala Moana Beach Park and all other parks on the fourteen-mile loop. It is important that this be done first because the project centers on helping people become more active in their lives. The idea is to help get people out of the house, actively enjoying the outdoors.
The second phase involves creating the bicycle and pedestrian paths. This can be started during the first phase since there will be many logistics to be sorted out within the government to make this happen. Currently, the HBL is being proactive in community meetings where there are discussions about the future of our roads. They have been successfully advocating to have bicycle lanes added to many of the Honolulu’s streets, such as Waialae Avenue, which was just completed last year. The existing bike paths are not all connected and this creates dangerous transitions for bikers. The goal is to connect all the bike lanes so the roadways will become safer for bicyclists.

The third and final phase involves moving parts of Ala Moana Boulevard underground. This will be a challenge but it certainly can be done. Take a look, for example, at the Bay Area Rapid Transit (BART) line in San Francisco. The line goes over ground, underground, and even underwater in certain areas. It took time to engineer and build, but with today’s technology, possibilities seem endless. This is an important phase for this project because it will truly connect Ala Moana Beach Park to urban Honolulu.

The Pi‘ikoi Street/Ala Moana Boulevard intersection will be put underground. The tunnel would descend/arise between, and not interfere with, entrances and exits for the buildings alongside Pi‘ikoi Street and Ala Moana Boulevard. New pedestrian walkways will be built at the existing street level, across the top of the tunnel. The area will then be turned into more of a promenade with seating areas and gardens. The whole area will transform into a much more pedestrian-friendly environment.
Chapter 13: Program of Spaces

The redesign of Ala Moana Beach Park will integrate its existing historic features with new cultural and physical activity elements. The following list is a preliminary program, without square footages, that provides an idea of the features and amenities offered in the proposal:

Preliminary Program:
- Cultural Museum
- Hawaiian Pavilion
- Japanese Pavilion
- Chinese Pavilion
- Art Installations
- Outdoor gym/Strength training nodes
- New Walking/Jogging/Bike path
- Playground
- Hammock grove
- Bike rental stations
- Health Food and Snack Bar
- Board storage
- Restrooms + Showers
- Existing historic elements (to be preserved)
- Open lawn (for community events)
- Soccer Field
- Parking
- New Signage
- Native Hawaiian Gardens

The Cultural Museum will be relatively small but will offer visitors a brief introduction to the culture and history of the Hawaiian Islands focusing on the area
around Ala Moana Beach Park. It is important to understand the history of the beach, which has a unique story of transformation through the decades. Thousands of tourists visit the park each day and a visit to this museum can enhance their overall experience of Hawai‘i. The museum will display photographs of old Hawai‘i and the construction of Ala Moana Beach Park, which few people have seen. The Cultural Museum will be open from 9:30 am until 4:30 pm and will be run by volunteers.

Figure 34: Hawaiian Hale at Ala Moana Beach Park
Source: Kroshaw Studio of Photography. “Two women weaving coconut leaves at Ulu Mau Village, Honolulu.” Photograph. Hawaii Statehood Commission, PP-2-6-003

As previously stated, the Hawaiian, Japanese, and Chinese pavilions were part of an earlier plan for the park that was never implemented. I propose to integrate them into this redesign. Part of this decision was based on the idea of tying loose ends. Adding the pavilions will connect the park’s architectural past to the present and will enhance the park’s overall architectural interest since each pavilion will reflect the architecture of the culture it represents.

The outdoor gym area will hold permanent gym equipment similar to the Great Outdoor Gyms in London. This will provide an opportunity to partner with and showcase the ideas and work of the Great Outdoor Gym Company, which doesn’t usually work outside of the United Kingdom. The strength-training stations and gym will not only
attract a different group of people, but it will also offer park goers variety to their exercise routines.

The walking/jogging/biking path that is in place now will be modified and renovated. The new paths will be much wider than the existing six-foot path and will include wayfinding indications painted on the ground to help users navigate through the park. New signage will also be designed and implemented throughout the whole park.

A playground will be added to the park. Currently, the park has no existing playground but this addition would be great for families with young children. It will be added to the Magic Island side because many families gather on that side of the beach area to have picnics. This side of the park is very child-friendly; there is a small lagoon area connected directly to the ocean but protected from the bigger waves with a ring of large rocks that makes it feel safe. Currently, the Magic Island side of the park has a lot of open green space that could potentially hold a children’s playground.
The hammock grove will be a new feature added to the park that would be at the beachfront area directly across from Pi‘ikoi Street. Presently, this area is underutilized. Trash has been accumulating there, so adding several strategically placed trash cans and recycling bins is a must. The area has many banyan trees that provide excellent shade. The idea for the hammock grove is to provide smaller sets of trees placed close together where people can hang their hammocks and relax, read a book, or enjoy the sunlight. Over the last few years, hammocks have become more popular and this site would be perfect for that type of activity. Along with the hammocks, this area provides nice spaces for outdoor grills so it also becomes a picnicking spot right across from the water.

The Health Food and Snack Bar will be a part of the already existing concession stand. New signage and a new seating area will be added. The focus will be to provide park goers with a variety of fresh, healthy foods such as salads and smoothies. The Health Bar will also have a cultural flavor and offer local items such as poke bowls and local fresh fruits. This will present a convenient choice for those people exercising on their lunch break or immediately after work. Typically, when healthy food alternatives are readily available, there is a higher chance an individual will choose this rather than making an extra stop on the way home to buy food.

Restrooms and showers will also be renovated in the process. Old fixtures will be replaced and several private showers will be installed, supplementing the outdoor beach showers already in place. Emphasis will be placed on installing sustainable and green types of plumbing fixtures to help regulate the amount of water used in the park.

The redesign will preserve all of the historic buildings and decorative features of the park, such as the gateways. These elements are over fifty years old and are thus historically significant. These elements will be maintained by the State Historic Preservation Department and will be highlighted as some of the key historical features of the park.

The open lawn in the park will also be preserved. This space provides a nice area for sports practices and informal games. Currently, the space is used on a regular basis and will be maintained for community events. The lawn bowling club will continue maintaining their lawn as well.
The Magic Island parking lot will be preserved. No additions to parking will be made, but maintenance will be done to the pavement. The parking spaces along the sides of the roadway within the park will be remade into walking and biking paths. All parking will be located on the Magic Island side and will include loading zones for dropping off boards and heavy equipment. Board storage will also be available on-site near the waters edge.

Project Conclusion

Physical activity is much more important than simple physical appearances. Physical activity, when incorporated into one’s daily life, is a powerful pursuit that can have amazing affects on the body, mind, and soul. Today’s society does not encourage much physical activity, especially with so many technological advances readily available to all. This project was designed to encourage a greater sense of wellbeing in Honolulu’s local community.

The project links the many parks in Honolulu and creates in each inviting spaces that will attract a wide demographic, targeting even the non-gym-goer. It proposes using architecture to create accessible connections and features that will bring communities together to get healthier and active while also honoring the Hawaiian culture through historical and design elements.

The final half of the project shifts focus, zooming in on one site, Ala Moana Beach Park. It recognizes the history of the park and takes from the park’s original master plan inspiration for a smaller redesign with all the same design goals in mind, and ultimately endeavors to weave the park’s past and present together with accessible physical activity elements in order to promote a greater sense of wellbeing in Hawai‘i.
Bibliography

http://www.24hourfitness.com/company/about_us/.


"Aerobic Exercise Has a Positive Impact on the Entire Range of Depressive Symptoms."


Digital File Type.


http://www.ecfitnessoahu.net/facility/.


Hill, Tiffany. "The Outdoor Circle Celebrates 100 Years Beautifying Honolulu."


“img-Ala-Moana-Boulevard-Traffic.” Photograph. kitv.com,
(accessed March 20, 2015)


Kroshaw Studio of Photography. “Two women weaving coconut leaves at Ulu Mau Village, Honolulu.” Photograph. Hawaii Statehood Commission, PP-2-6-003

“Kupuna.” Photograph. northkohala.wordpress.com,
https://northkohala.wordpress.com/25-iwakaluakumamalima-idle-pursuits/
(accessed March 03, 2014)


causes-of-death.htm.


“Move Camp.” Photograph. hotdealshawaii.com,


Navalta, S. Wilfred. The Sports and Games of the Makahiki Festival: A History and a


“Reading, Writing, and Running.” Photograph. abcnews.go.com,


“Rose Fitzgerald Kennedy Greenway.” Photograph.

collaborativeservicesinc.wordpress.com,

Schaefers, Allison. "Bikeshare Hawaii Wants to Put 1,700 Bikes on Honolulu Streets."


“TGO Gym – Wallace Park, Ireland.” Photograph. tgogc.com,


The MacNaughton Group/Kobyashi Group/BlackSand Capital. “Overview of Park Lane Ala Moana in connection with the shopping center.” hicondos.com,


“View of Golden Gate Park from the air.” Photograph. wikiwand.com,

“Ward Village – Howard Hughes.” Computer Rendering. oceanviewproperties.com,


Appendix

Ala Moana Beach Park: Chronology

1897 U.S. government assumes title to site from Republic of Hawaii

c. 1900 Use portion of present site as a dump begins

1920 Shade Tree Commission established

1925 Outdoor Circle discusses idea of park on site with Governor Charles McCarthy

1927 May 3. Territorial legislature authorizes $200,000 Kewalo reclamation project through Act 271

1927 Oct. 25. Presidential proclamation deeds site to Territory

1928 Jan. 16. Territory deeds site to city for use as park

1928 Permit issued to Hawaiian Dredging Company for channel from Kewalo to Waikiki (Ala Wai)

1929 Shad Tree Commission discusses features of park

1930 Jan.-Oct. Filling of site with 400,000 cubic yards of fill

1931 July 7. First meeting of Honolulu Park Board

1931 July 10. General plan by Richards & Thompson approved

1931 Landscape work begins with territorial relief labor; nursery established

1933 FERA and CWA assistance begins

1933 Harry Sims Bent hired as park architect

1934 Canal bridge completed

1934 July 27. President Roosevelt dedicates entrance portals

1936 Lester McCoy describes progress on park

1937 Sports Pavilion, Banyan Garden, Eskridge murals completed
1938  Proposal to divide park into 335 residential lots
1939  Bowling green completed
1941-6  Military occupation of park
1946  Board of Parks and Recreation established
1947  Name changed from Moana Park to Ala Moana Park
1948  Village of Ulu Mau opens
1948  U.S. Army Corps of Engineers feasibility study of reef development
1949  Waikiki Beach Improvement Study by Law & Wilson recommends off-shore development
1949  Park roadway paved
1949  Plans approved for remodeled Oriental Lagoon
1950  Ala Wai entrance channel dredged
1951  City planning commission proposes off-shore island for use as park
1952  Children’s Center in pavilion opens
1954  Kaiser proposes $50 million resort on Ala Moana Reef
1954  Sand beach constructed
1954-5  Park board orders study of offshore island
1955  Concession stand built on Diamond Head side
1957  Aug. 18. Federal government deeds reef to territory
1958  Statehood
1959  Department of Parks and Recreation established
1959  Bathhouse built on Diamond Head side
1959  Ulu Mau renovated
1960  Belt Collins comprehensive plan
1961  Phase one (eastern peninsula) approved
1961  Bathhouse and concession stand built on ewa side
1961  Kaiser builds phase one (Magic Island)
1962  Bowling green renovated
1966-7  Request by Hazel Corning McCoy to city to build McCoy Pavilion in memory of her late husband
1968  Lifeguard towers built
1969  Decision that Magic Island is to be used only for recreation
1970  Wilson Okamoto master plan
1975  Completion of McCoy Pavilion
1975  Beach reconstructed with North Shore sand
1976-7

*Obtained from:

Hoʻokuʻi Honolulu Graphic Booklet
Ho‘oku‘i
Honolulu

Ho‘oku‘i: to connect

Adele Beppu | ARCH 547P | Spring 2015
THE GOAL OF THIS PROJECT IS TO ENCOURAGE HEALTHY LIVING AND ENRICH THE LIVES OF RESIDENTS AND TOURISTS BY PROPOSING A SYSTEM THAT WILL LINK THE PARKS IN THE ALA MOANA AREA ADJACENT TO DOWNTOWN HONOLULU WITH PHYSICAL ACTIVITY COMPONENTS AS WELL AS NEWLY INSTALLED ELEMENTS OF HAWAIIAN CULTURE. THE CONNECTION BETWEEN THE PARKS WILL BE SAFE, PROVIDE DESTINATION POINTS FOR USERS, AND WILL CREATE A STORY IN THE HONOLULU AREA.
Key Ideas

1. **Link different parks in Honolulu + Community**
2. **Enhance “Nodes” + Destination Points**
3. **Integrate Hawaiian Cultural Integration**
Site Location

Honolulu, HI
Cultural Influences: Ahupua’a System Example

The Ahupua’a system was the division of land from mountain to sea instituted by the Hawaiians. Through the development of urban Honolulu, this idea of land division has been all but lost. Over the decades, population density has increased dramatically, populating every space possible.

The idea for this project is to bring back the ancient Hawaiian concept of the Ahupua’a system to not only tie our culture back to the land, but also to create a connection between land and sea.
The Old Kakaʻako

In the more distant past, Kakaʻako was a place where royalty spent their leisure time. In the more recent past, Kakaʻako was known for having fisheries and salt ponds.
Parks in Honolulu

- Kolowalu Park
- Fort Derussy Park
- Diamond Head Crater
- Kapiolani Park
- Ala Moana Beach Park
- Ala Wai Community Park
- Mother Waldron Playground
- Thomas Square
- Fort Derussy Park
- Ala Wai Golf Course
- Honolulu Stadium State Park
- Mo'ili'i Neighborhood Park
- Kaka'ako Waterfront Park
- Ala Wai Community Park
Constraints

Ala Moana Boulevard and the Ala Wai Canal act as major dividers in the Honolulu area. They create a separation between the “mauka” (mountains) and “makai” (ocean).
Through the “Lei of Green” idea, the urban fabric can be stitched together.
Existing Conditions in Honolulu

• Obesity Epidemic (Hawaii’s obesity rate = 21.8%)
• Unsafe roadway conditions for Bicyclist & Pedestrians`
• Homelessness in public spaces
• Unhealthy & unsafe situations
Existing Conditions in Honolulu: Homeless

- City and County of Honolulu is proposing a temporary homeless camp on Sand Island, Oahu
- Provides restrooms, showers, and shelter
- Near bus hub for easy commuting
- Details are still being worked out with the C&C of Honolulu
Major Parks & Programs

- Kakaako Waterfront Park
- Ala Moana Beach Park
- Ala Wai Promenade
- Kapiolani Park
- Diamond Head Crater
<table>
<thead>
<tr>
<th>Park</th>
<th>Health &amp; Wellness</th>
<th>Culture</th>
<th>Points of Interest</th>
<th>Amenities</th>
</tr>
</thead>
</table>
| Kaka'ako Waterfront Park | • Outdoor exercise stations  
• Dog walking area  
• Bicycle & jogging path | • Cultural festivals  
• Cultural outdoor artwork  
• New cultural signage | • Honolulu Museum of Art  
• Neil Blaisdell Center  
• Food festivals | • Restrooms  
• Rest stops & benches  
• Amphitheater  
• Water fountains for dogs |
| Ala Moana Park           | • Outdoor exercise stations  
• Jogging path  
• Bicycle & jogging path  
• Tennis courts  
• Playground  
• Soccer Field | • New cultural signage  
• Interactive Hawaiian games  
• Hawaiian, Chinese, Japanese pavilions  
• Native Vegetation | • View of Diamond Head  
• Beach  
• Friday Fireworks show  
• Canoe races | • Restrooms & showers  
• Water fountains  
• Healthy cafe |
| Ala Wai Canal            | • Outdoor exercise stations  
• Bicycle & jogging path  
• Canoe racing | • New cultural signage  
• Canoe racing | • View of Diamond Head  
• View of the harbor  
• Waikiki | • Rest stops & benches  
• Restrooms  
• Water fountains for dogs |
| Kapiolani Park           | • Green open spaces  
• Group exercise classes  
• Bicycle & jogging path  
• Outdoor exercise stations | • Annual cultural festival  
• New cultural signage | • View of Diamond Head  
• Quick beach access | • Restrooms  
• Rest stops & benches |
| Diamond Head             | • Outdoor exercise stations  
• Diamond Head hiking trails  
• Green open spaces  
• Bicycle & jogging path | • Cultural outdoor artwork  
• Saturday Farmers market at K.C.C.  
• New cultural signage | • View from Diamond Head  
• Local food eateries | • Restrooms  
• Food trucks |
Scale Comparison: Golden Gate Park, CA

Golden Gate Park, San Francisco, CA

2.5 mi.
3.75 mi.
3.5 mi.
7 mi.

Main Bike + Pedestrian Path (14 miles total)
Master plan Conceptual Design

Major Destination Points
Primary Nodes
Secondary Nodes
Major View Corridors
Ala Wai Canal
Main Bike + Pedestrian Path (14 miles total)
Secondary Path
Park Spaces
User Profiles

Tourists
- Beaches
- Hikes
- Shopping
- Food

Working Adult
- Works in Honolulu
- Eats his lunch at the park

College Students
- Goes to UH School of Medicine in Kaka'ako
- Works at Ala Moana Shopping Center

Young Family
- Working parents
- Kids practice soccer at Ala Moana Park

Active People
- College Students
- Trains daily for sports and marathons

Serious Bikers
- Ride bicycles to work
- Bike rides with coworkers after work
User Journey: Existing

- Tourists
- Young Family
- Working Adult
- Active People
- College Students
- Serious Bikers
User Journey: Proposed

- Tourists
- Young Family
- Working Adult
- Active People
- College Students
- Serious Bikers

Adele Beppu | Spring 2015

Physical Activity + Architecture
Linking different parks in Honolulu + Community
"Unstitched": Existing Bike Paths
"Stitched": Proposed Bike Path

- Existing Bike Paths
- Proposed Bike Paths to Connect Existing Paths
- Proposed Secondary Bike Paths
The Lei of Green Connection: Pathways

Existing: Ala Moana Blvd. towards Honolulu Airport

Wider pedestrian sidewalks
New bike lane with berm
New vegetation

Existing

Proposed
“Nodes” + Destination Points
As the redevelopment of the Kaka'ako area continues, Ward Avenue will become a revitalized area for retail. The Kaka'ako art district is within walking distance from Ward Avenue and will encourage users to commute more sustainably.
Piʻikoi Street is a heavily used street. The new bicycle lanes and different paving for pedestrians will help keep the area safe and encourage people to walk in the area.
Kapahulu Avenue is one of the roadways that connects into Waikiki. Nearest to this node is the famous Waikiki Beach and the Honolulu Zoo. The new design will be safer for bicyclists and also help create a new entrance way to Waikiki.
Kakaʻako is currently being revitalized through an urban art movement. Many of the old warehouses are being turned into art galleries and cafes. In the recent years, Kakaʻako has been getting a lot more attention from locals and tourists. Introducing cultural elements to this area will deepen the experience of the users.
Major Hubs & Nodes: Ala Moana Park

Hawaiian Kahili bearer

Shaded, grassy areas for fitness classes

Banners on light poles

Paved Pathway with cultural patterns

New Node Signage with cultural elements

New Outdoor Fitness Equipment

Ala Moana Park is a destination for both locals and tourists. The image above captures the "Magic Island" side of the park, introducing physical activity nodes along the pathway.
The Great Outdoor Gym Company is based in Britain and specializes in long lasting outdoor gym equipment. Their products are of high quality steel, able to withstand all types of weather, is made from recycled metal, and also is integrated with technology. The gym equipment are well designed and very eye-catching to many different types of people. The case studies done in the U.K. have proven that these gyms are well used and promotes a healthier lifestyle.
Kapahulu Avenue is adjacent to the Honolulu Zoo. Currently, there is a lot of open green space near the entrance to the zoo, which is a potential area for a keiki playground. The playground will have new equipment that will encourage children to play outdoors.
Part of the nation's obesity epidemic deals with childhood obesity. Studies have shown that the children of today's generation do not do as much physical activity as previous generations. Many are playing video or computer games instead of playing outdoors with friends or neighbors. By creating exciting and fun new playgrounds, we can help encourage the keiki of Hawaii to go outdoors.
Hawaiian Cultural Integration
Native Hawaiian Gardens

Native vegetation will be grown in small gardens throughout Ala Moana Park and along Pi‘ikoi Street, leading up to the future rail hub. The vegetation will have signage indicating the type of plant it is and a history of the plant in Hawai‘i, similar to signage posted in a botanical garden.
Exercise nodes will be one of the connecting features throughout the “Lei of Green.” New outdoor gym equipment will be installed in the nodes. Each node will have different types of equipment, encouraging the users to travel to the different nodes in all of the parks. Technology will also be a part of the nodes with energy harvesting cardio equipment that can charge their phones while they exercise. Signage will have a barcode, which will be linked to a “Lei of Green” app on mobile devices. Once in the app, the user will be able to access training guides, safety information, and other useful information such as healthy eating places in their nearby vicinity.
Cultural Nodes

Cultural Activities | Signage | Way Finding | Cultural Pavilions

Cultural nodes will showcase a variety of Makahiki activities such as ‘ulu maika and other cultural information. The nodes will be numbered and will have special signage indicating this number and a map showing all of the nodes. Some of the cultural nodes will include larger spaces for cultural pavilions, which will be able to be used by the community. Wayfinding will also be indicated on the paths on the ground.
Art installations at Ala Moana Park will be permanent installations by local artists. The type of art ranges from sculptures to murals. Art installations in secondary nodes will be temporary and will change quarterly. They too will be designed by local artists.
The Stories

- Oral history, documented through song and dance
- Part of Hawai‘i’s heritage and culture
- Stories will be represented through art work at nodes along the pedestrian pathways similar to illustration above
- Legends and mythology will be from all parts of Hawai‘i, giving the user an idea of ancient Hawai‘i
Ala Moana Beach Park
Program of Spaces: Existing

- Cafe
- Tennis Courts
- Retail
- Seating Area
- Cultural Center
- Grocery Store
- Restrooms
- Showers
- Playground
- Canoe Launch
- Running Route
- Fitness Node

Adele Beppu | Spring 2015
Program of Spaces: New

Cafe
Tennis Courts
Retail
Seating Area
Restrooms
Showers
Grocery Store
Canoe Launch
Running Route

Future Rail Hub
Future Rail Line
Fitness Node
Cultural Center
Outdoor Seating
Playground

Aloha Tower
Kona Street
Entrance
Ala Wai Canal
Waikiki
Outdoor Seating

Adele Beppu | Spring 2015
Physical Activity + Architecture
Historic Buildings in the Ala Moana Vicinity

A Ala Moana Park Bridge
B Ala Moana Park Concession
C Ala Moana Park Lawn Bowling Club
D Ala Moana Park Gateway Portals
E Kaka'ako Pumping Station
Underground Traffic on Ala Moana Blvd.

- Existing
- Native Hawaiian gardens
- New Pedestrian Paths
- Underground tunnel for vehicular traffic

Adele Beppu | Spring 2015

Physical Activity + Architecture
Ala Moana Park's main entrance will be directly across from the shopping center on Pi‘ikoi Street. Since the rail transit hub will be linked to the shopping center, there will be a lot more people walking in this area.
Children's play areas will include safe environment to play in. This area on Magic Island shows the "Locals" brand "rubbah slippah" inside a sand box. The area also includes native vegetation. These playgrounds will not only be fun and exciting for our keiki (children), but also tie back to Hawai‘i and the culture.
Section: Looking towards Ala Moana Shopping Center
New Features of the Park

- Steps to the ocean
- Hammock Grove
- Hillside Soccer Seating
Community Organizations & Activities

- Memorial Day Lantern Festival
- Tai Chi Classes
- Friday night fireworks
- Yoga Classes
- Dragon Boat Race
- Strength Training Classes
Maintenance of Parks

As part of the effort to assist the homeless people in Hawai`i to get back on their feet, job opportunities will be available to maintain the renovated parks. The goal is to help them transition into having a job with a stable income and also transitioning back into being an active member of the community.
**Phases**

- **Nodes**
  - Equipment
  - Signage
  - Stations

- **Pathways**
  - Widen Sidewalks
  - Add bike lanes

- **Traffic**
  - Move traffic underground on Ala Moana Blvd.
Hookui Honolulu

Hoʻokuʻi: to connect
Bibliography

Page 4: Google Earth
Page 5: http://stewardofwaimea.org/images/Ahupuaa-01.jpg,
       http://www.hawaiihistory.org/upload%5Cwebsite%5CImages_m/img448.jpg
Page 6: WCIT Architecture
Page 7: Google Earth Screenshot
Page 8: Google Earth Screenshot
Page 9: Google Earth Screenshot, https://mihalanaauwork.files.wordpress.com/2014/05/main.jpg?w=290,
       http://www.thatchdepot.com/Products/Mats%20and%20Boards/Images/Cabana-Lauhula-Matting.gif
Page 11: https://camping.ehawaii.gov/camping/resources/spc,resource,1682,p,1,null,SandIsland2.jpg
Page 12: Google Earth
Page 15: Google Earth
       images.dashdigital.com/images/Blogs/Politics/Sept2014/TrevorOzawa.jpg?ver=1409862867,
       http://z2.cheggcdn.com/sites/default/files/2008/06/18/405806_5103406af49b_img_8945.jpg,
Page 17: Google Earth
Page 18: Google Earth
Page 20: Google Earth, https://lintvkhon.files.wordpress.com/2014/04/bicycling-incident.jpg?w=660&h=371&crop=1,
       http://www.kitv.com/image/view/-/17200080/highRes/1/-/maxh/630/maxw/1200/-/9x8eou/-/BIKERS-jpg.jpg,
       Polk-Contraflow-26-web.jpg, https://lintvkhon.files.wordpress.com/2014/09/king-street-bike-lane-
       intersection.jpg?w=650&h=365
Bibliography

Page 22: Google Maps
Page 23: Google Earth
Page 26: Google Maps
Page 27: Google Maps
Page 28: Google Maps
Page 29: Google Maps
Page 30: https://kapakulture.files.wordpress.com/2013/05/kahili-bearer.jpg?h=92
Page 32: Google Maps
Page 33: Peter Tammetta
Page 35: https://permablitzhawaii.files.wordpress.com/2012/06/31f39-taro_patch_mulched.jpg,
http://nativeplants.hawaii.edu/images/plants/Sesuvium_portulacastrum_feature.jpg,
http://keolamauloa.com/wp-content/uploads/2010/01/DSC_2631r.jpg,
http://k42.kn3.net/1914B24AB.jpg,
http://ecx.images-amazon.com/images/I/51WYo3D60LL.jpg
http://gshgold.com/wp-content/uploads/2015/02/NFC-Fitness-Court1.jpg, Peter Tametta,
http://4.bp.blogspot.com/-YOp8ZFlPMP4/UXxvvNIF5PI/AAAAAAAAl0o/Li2FHJa4pZY/s1600/bouldering_wall.jpg,
http://www.gfoutdoorfitness.com/img/large/2-Person_Ski.jpg,
http://blog.doethegreenthing.com/wp-content/uploads/2012/05/green_heart_outdoor_gym.jpg
Page 37: http://www.hawaiianweekly.com/storage/2014/02/B2_S-A_Waimea-Valley_002_w.jpg,
http://www.midweek.com/wp-content/gallery/041614_co_focus/co-012914-makahiki-focus.jpg,
http://s3images.coroflot.com/user_files/individual_files/original_399505_ERxDTcY8yQ7zzmys96yMXYpKN.jpg,
http://s3images.coroflot.com/user_files/individual_files/original_399505_wZRwpbcx23edABI67m7kqay.jpg,
http://4.bp.blogspot.com/-33LsfbmrHbE/TVrJAUG74zl/AAAAAAAASQ/WEL2HsZbOJg/s1600/4_brooklyn_pierpark.jpg
Bibliography


Page 38: http://sprinklerguy.org/wp-content/uploads/2013/10/gl02.jpg,
http://2.bp.blogspot.com/-EvS1vW2RoA0/Uj6yUkUeYCL/AAAAAAADN4/6CunGP5vY00/s1600/original_1364319882.jpg,


Page 44: http://1.bp.blogspot.com/-ia9uVefkzuk/Ue_9AZ8mCCI/AAAAAAAAYkE/x-

Page 45: http://ih1.redbubble.net/image.6849529.2027/flat,550x550,075,f.u2.jpg,
http://online.stradeeautostrade.it/img/news/articles/10015030699003/10015030699003_.jpg,

Page 46: Google Maps


Page 51: http://www.treebytreehawaii.com/uploads/1/3/1/2/1312143/s51076445716300970_p3_i1_w320.jpeg,
http://upload.wikimedia.org/wikipedia/commons/thumb/5/56/Starr_030612-0125_Pandanus_tectorius.jpg/1024px-Starr_030612-0125_Pandanus_tectorius.jpg,
http://www.lomihawaii.com/images/ulufestivalkapa.jpg,

Bibliography

background-photos-photosec-2924255.jpg,
https://d18gmz9e98r8v5.cloudfront.net/ptr/20140108025118_1575936819_10438_9.jpg,
Page 53: http://www.gannett-cdn.com/-mm-/ef4322a503ab049fc3cb06af86e185523282850/c=0-175-3504-2151&r=x453&c=800x450/local/-/media/USATODAY/test/2013/11/20//1384976086000-AP-Homeless-Veterans.jpg