

# Implementation Plan

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## O'ahu Bicycle Master Plan

Department of Transportation Services  
City & County of Honolulu

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DRAFT



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Work Product No. 4.3

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## APPENDICES

Appendix A: Proposed City and County projects likely to require environmental documentation

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## 1. Introduction

This report is a work product of the O'ahu Bicycle Master Plan (O'ahu Bike Plan) being prepared for the City and County of Honolulu (CCH), Department of Transportation Services (DTS). The *Draft Implementation Plan Report* is identified as Work Product 4.3. This report presents re-evaluation of the priority projects presented in Work Product 4.2 based upon funding, constraints, and environmental documentation required to implement them. It also presents benchmarks that lay a framework for implementation of the Plan.

## 2. Funding

The *O'ahu Bike Plan* provides a strategy for the bicycle component of O'ahu's future transportation system. It identifies an integrated network of on-road bike lanes and routes, and off-road shared-use paths that will link people with their favorite and most visited destinations. It also provides an array of important policy and program recommendations to institutionalize the commitment in all levels of government. The potential is great for bicycles to become a significant transportation mode for O'ahu.

If all of the projects in the *O'ahu Bike Plan* were built today, the projected costs to design and build the entire network are about \$232 million. In reality, however, the projects will be constructed over many years, and much of the funding will come from operating budgets for roadway repair, maintenance, and improvement. Almost half of the projects involve State roads or joint State/City and County roads (\$115 million). The State-owned projects would need to be programmed and funded by the State. Of the remaining \$117 million of potential CCH projects, a significant portion can be funded from regular line agency maintenance and capital improvement budgets, coinciding with other park and roadway improvements. Work Product 4.2 *Proposed Facility Design Concepts* contains a more detailed breakout and discussion of the projected costs.

A number of the projects, such as lane striping and intersection improvements, can be programmed as part of regular roadway repair, maintenance, and improvement projects. Some projects such as the Kapahulu bikeway have broad community benefits, and could be justified for funding with community redevelopment funds. Strategies to bundle projects together, such as a series of interconnecting bikeways or entire mega-projects such as the lei of parks, will reduce projected costs by achieving economies of scale in the design and construction process.

Creativity in identifying alternative funding sources and getting projects built will be required to realize the completed O'ahu network as proposed in the *O'ahu Bike Plan*. State of Hawai'i Law (§264-18 Hawai'i Revised Statutes) requires that at least 2% of eligible federal funds, as well as other available state highway fund moneys shall be expended for the creation of bicycle facilities as well as safety devices along bikeways. The CCH Bike Fund brings in about \$400,000/year from bicycle/moped registrations and is dedicated to funding bicycle projects as well as the BikeEd program and the Bicycle Coordinator position. Additional money from CCH's general fund can be budgeted to fund bikeway projects.

Other potential sources of funding may be available through community redevelopment grants, park improvement projects, and public works projects. A one-penny addition to the gasoline tax could be used for bicycle facilities and other human-powered modes of transportation. This tax could potentially generate an additional \$3.3 million dollars annually for bicycle projects (based on CCH 2007 rates of highway-use gasoline and diesel consumption – State of Hawai'i, 2007).

Federal, State, and private-sector funding will be used for a number of segments of the future network, particularly in the fast growing 'Ewa district, and additional revenue could be raised through the implementation of Community Facilities Districts, tax increment financing districts, and traditional improvement district mechanisms. Partnerships with community groups and non-profit organizations can help small projects become implemented quickly.

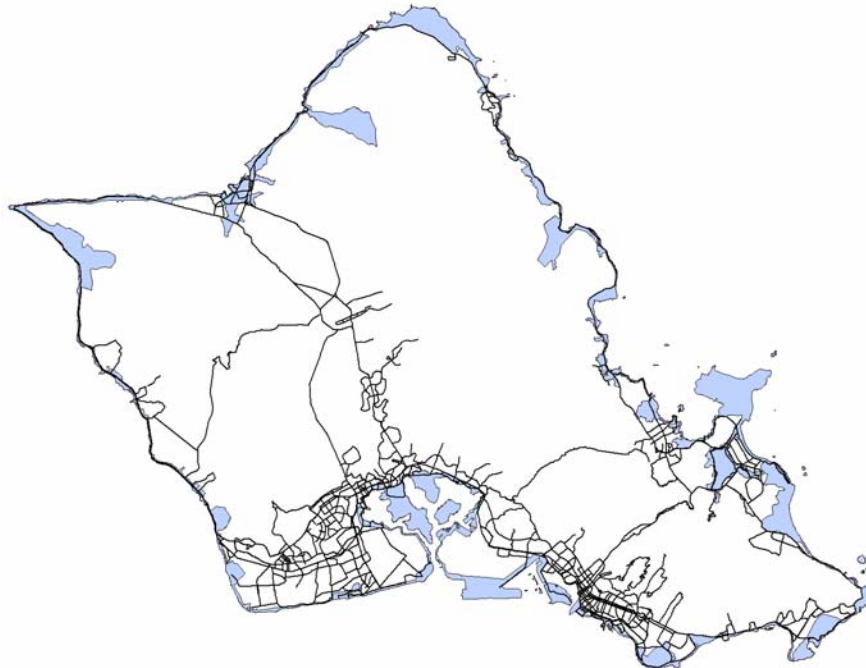
### **3. Environmental Documentation and Approvals**

Bikeway projects proposed for the *O'ahu Bike Plan* could be affected by environmental documentation requirements set forth in Chapter 343, Hawai'i Revised Statutes (HRS); Chapter 25, Shoreline Management, Revised Ordinances of Honolulu (ROH); and/or Chapter 23, Shoreline Setbacks, ROH. If a bikeway project falls under these categories and needs to undergo an environmental review, additional costs, risks, and time will need to be considered as part of implementation of the project.

#### **3.1 Applicability to O'ahu Bike Plan Projects**

Most bikeway projects are exempt from environmental review and permit requirements. Repair and maintenance of roads and highways within existing rights-of-way are not defined as “development,” and are not subject to assessment under Chapter 343. Projects involving new paving (such as shared-use paths) could be defined as “development” and therefore could require environmental assessment and processing under Chapter 343.

Projects like shared-use paths that are within the County's Special Management Area (SMA) could be defined as “development” and therefore could require environmental assessment and processing under the Chapter 25, ROH (See Figure 1, SMA boundaries). Projects determined to be within the shoreline setback area (typically within 40 feet of the shoreline) are either defined as minor shoreline structures or need to obtain a shoreline setback variance (Chapter 23, ROH) and be assessed under the provisions of Chapter 343, HRS.



### **SMA Boundaries (shown in blue) with Proposed Bikeway Network**

Appendix A lists those CCH projects identified in the *O'ahu Bike Plan* that would need to be screened for some sort of environmental documentation to implement as the proposed project is located completely within SMA. Appendix B lists those CCH projects that could potentially require some sort of environmental documentation in order to implement because a part of the project will be located within the SMA.

## 3.2 Other Considerations

### Right of Way Acquisition

Work Product 4.2.1 *Proposed Facility Design Concepts* identifies various constraints for projects such as public right-of-way acquisition and the removal of on-street parking. Right-of-way (ROW) acquisition can be very expensive, exponentially increasing project costs and in some cases, creating community opposition. ROW acquisition should be viewed as a last resort for projects and only utilized for small segments of a larger, high priority project. Over the long term, the ROW expansion via Ordinance No. 2412 (Article 21, Section 14-21, ROH) can be utilized as a means of incrementally acquiring additional right-of-way for bikeway facilities.

### On-Street Parking Removal

In order to create an extensive network of bicycle facilities and benefit the island-wide cycling community, some on-street parking will inevitably need to be removed. The removal of on-street parking should be a carefully weighed decision and involve input from the local community. Many older neighborhoods rely heavily on street parking for their needs. These areas were built prior to more recent parking standards and oftentimes do not have adequate off-street parking. In some older business districts, removing on-street parking for bicycle facilities may be negatively perceived as anti-business. Recent studies have shown that the spending habits of cyclists and pedestrians along heavily travelled corridors may offset the loss of immediately adjacent on-street parking, particularly if off-street parking is provided (Clean Air Partnership, 2009). Where businesses may be affected, it is important to involve them in the planning process to clearly understand the trade offs involved.

When the removal of on-street parking is judged to be contentious (more than 25% of parking stalls are filled during the peak-hour), parking studies should be conducted in order to determine the number of businesses and/or residences that are likely to be impacted, the availability of off-street parking, and estimated use of on-street parking (including duration, turnover, and vehicle types). In places where removing on-street parking is likely to greatly impact the surrounding community, mitigation measures should be implemented, such as purchasing empty lots in order to create small neighborhood municipal parking lots. The management strategies for these lots should be aimed at increasing the supply of parking only where and when it is most needed. Other options should include encouraging the sharing of parking lots between multiple businesses and the off-peak use of parking facilities (e.g., a church parking lot used during the week for business parking).

## 4. Prioritization

After reviewing project costs and feasibility, a final prioritization of proposed projects was conducted to analyze O'ahu's future bicycle network. This final adjustment was based on the prioritization table presented in Work Product 4.1.1 *Priority Project Listing* and the cost estimates contained in Work Product 4.2.1 *Proposed Facility Design Concepts*.

Projects that were considered technically difficult (e.g., significant utility relocation), significant on-street parking removal required (e.g., greater than 25%), required additional traffic studies (e.g., King Street and Beretania Street), or too expensive (over \$2.5 million or over \$3 million/mile) were downgraded in priority. This number is based on the recent CCH bike fund related facility construction budgets of about \$1 million per year. Since a project that costs over \$2 million could take a minimum of two years to finance, it was considered too long-term to be a Priority One project.

Priority Two projects that were considered affordable (less than \$2.5 million) and that served popular areas were upgraded to Priority One. In a continuing effort to provide geographic equity throughout O'ahu, various Priority Two projects that served more rural areas were upgraded to Priority One. Additionally, select loop ride projects were upgraded in order to help O'ahu achieve "bicycle friendly community" designation from The League of American Bicyclists, one of the goals of the *O'ahu Bike Plan*.

The following projects were downgraded from Priority One:

- Bishop Street
- Kaena Point Path
- King Street
- Manoa-Palolo Stream Path
- McCully Street
- Meheula Pkwy

The following projects were upgraded to Priority One:

- Ala Moana Beach Park Path (extension)
- Dole Street
- Hamakua Street
- Homestead Road, Waianae Valley Road, Lualualei Homestead Road, Mailiilii Road, Paakea Road, Lualualei Naval Road (Waianae – Maili loop ride)
- Keahole Street
- Lanikuhana Loop
- Makakilo Loop
- McCully Street

- Mokuola Street
- Naniloa HaleLaa Cane Haul Roads (Laie)
- University Avenue
- Varsity Place

The following projects were downgraded from Priority Two to Priority Three:

- Alakea Street
- Bishop Street
- Dillingham Boulevard
- Waipahu Street

*Note: The Mokuola Street bike lane costs more than \$3 million/mile, but due to its important connections to existing facilities as well as to TheBus Waipahu Station and the planned rail station, it remains a Priority One project.*

#### 4.1 Preferred vs. Interim Treatments

A key objective of the future O'ahu bikeway network is to provide the best possible facilities. This may not always be feasible due to high construction costs (due physical constraints such as narrow roadway widths and substandard building setbacks). Interim treatments have been recommended in this report in order to provide short-term bicycle facilities. Over the long-term, the preferred treatments should be implemented as funds become available through roadway redesign and/or community redevelopment projects. The following table includes the projects that have been assigned interim treatments, but whose preferred treatments should be implemented in the future.

Projects assigned interim treatments, but whose preferred treatments should be implemented in the future.

Facility Name	Length (miles)	Preferred Treatment	Preferred Treatment Costs	Interim Treatment	Interim Treatment Costs	Priority
Dole Street	0.63	Lane Classes C & D	\$1,400,000	Route B w/sharrows & Lane Class C	\$95,000	1
Kalaniana'ole Highway (Kahala)	0.87	Lane Class D	\$2,875,000	Route Class B	\$130,000	2
Kapahulu Avenue	1.12	Lane Classes B & D	\$2,450,000	Route Classes A & B w/sharrows	\$70,000	1
Ke Ala Pūpūkea Path	4.5	Path Class C	\$4,195,000	Route Class B & Lane Class C	\$1,115,000	1
Kilauea Avenue	1.29	Lane Classes B & D	\$1,585,000	Route Class B	\$130,000	2
University Avenue	0.36	Lane Class D	\$1,190,000	Route A & B w/sharrows	\$23,000	1
Waipahu Street	3.06	Lane Class D	\$10,115,000	Route Classes B & C	\$1,005,000	3

*Note: Future work products and maps will show the preferred treatment types for these facilities.*

## 4.2 Priority Project List

The following three tables show the future network for City and County-owned projects by priority, type, and geographic area. Total costs have been rounded up to the nearest \$1,000.

## Priority 1 Projects

### College Access

	Name	Type	Length (miles)	Cost
<b>Ko'olau Loa</b>				
1	Nanihoa Hale Laa Cane Haul Roads	Route	3.98	\$150,000
<b>PUC</b>				
2	Dole Street	Route	0.63	\$95,000
3	Kapahulu Avenue	Route	1.12	\$70,000
4	McCully Street	Lane	0.61	\$80,000
5	Monsarrat Avenue Diamond Head Road	Lane	2.36	\$1,380,000
6	University Avenue	Route	0.36	\$25,000
7	Varsity Place	Route	0.15	\$85,000
<b>7</b>			<b>9.21</b>	<b>\$1,885,000</b>

### Crosstown Route

	Name	Type	Length (miles)	Cost
<b>PUC</b>				
1	Civic Center Shared Use Path	Path	0.25	\$185,000
2	Thomas Square Park	Path	0.11	\$80,000
3	Young Street	Lane	1.40	\$1,540,000
<b>3</b>			<b>1.76</b>	<b>\$1,805,000</b>

### Lei of Parks

	Name	Type	Length (miles)	Cost
<b>Central O'ahu</b>				
1	Central Oahu Regional Park	Path	0.95	\$690,000
<b>Ko'olau Poko</b>				
2	Kalaheo Avenue	Route	2.12	\$1,130,000
<b>North Shore</b>				
3	Haleiwa Road	Lane	1.60	\$1,105,000
<b>PUC</b>				
4	Ala Moana Beach Park (extension)	Path	0.15	\$110,000
5	Diamond Head Road (E. Segment)	Route	0.72	\$75,000
6	Diamond Head Road (W. Segment)	Lane	0.74	\$435,000
<b>6</b>			<b>6.28</b>	<b>\$3,545,000</b>

**Loop Ride**

	Name	Type	Length (miles)	Cost
<b>'Ewa</b>				
1	Makakilo Loop	Lane	5.18	\$565,000
<b>Wai'anae</b>				
Plantation Waianae Valley Lualualei Homestead Maililili Paakea Lualualei				
<u>2</u>	Naval	Route	9.34	\$2,215,000
<b>2</b>			<b>14.52</b>	<b>\$2,780,000</b>

**Popular Destination**

	Name	Type	Length (miles)	Cost
<b>'Ewa</b>				
1	Kamaaha Avenue	Lane	0.39	\$0
<b>Ko'olau Poko</b>				
2	Hamakua Drive	Lane	0.79	\$465,000
<b>PUC</b>				
<u>3</u>	Kalakaua Avenue (Southern Section)	Lane	1.18	Underway
<b>3</b>			<b>2.36</b>	<b>\$465,000</b>

**Transit Access**

	Name	Type	Length (miles)	Cost
<b>Central O'ahu</b>				
1	Lanikuhana Avenue	Path	2.64	\$1,920,000
2	Mokuola Street	Lane	0.20	\$665,000
<b>'Ewa</b>				
3	Wakea Street	Lane	1.22	\$0
<b>East Honolulu</b>				
4	Keahole Street	Route	0.71	\$75,000
<b>Ko'olau Poko</b>				
<u>5</u>	Kamehameha Highway (Kaneohe)	Lane	1.09	\$640,000
<b>5</b>			<b>5.15</b>	<b>\$3,300,000</b>
<b>26</b>	<b>Priority 1 Totals</b>		<b>39.28</b>	<b>\$13,780,000</b>

## Priority 2 Projects

### College Access

	Name	Type	Length (miles)	Cost
<b>'Ewa</b>				
1	Farrington Highway (Hoopili)	Path	2.30	\$0
<b>Ko'olau Poko</b>				
2	Keaahala Road	Lane	1.28	\$130,000
<b>PUC</b>				
3	Alakawa Street	Lane	0.41	\$45,000
4	Coyne Street	Route	0.28	\$11,000
5	Kapalama Canal (Eastern Section)	Path	0.76	\$700,000
6	Kapalama Canal (Western Section)	Path	1.15	\$1,100,000
7	Kilauea Avenue	Lane	1.29	\$130,000
8	Manoa-Palolo Stream Path	Path	0.99	\$1,610,000
9	University Upper Fire Road	Path	0.11	\$80,000
10	Wilder Avenue	Lane	1.37	\$150,000
<b>10</b>			<b>9.94</b>	<b>\$3,956,000</b>

### Crosstown Route

	Name	Type	Length (miles)	Cost
<b>PUC</b>				
1	School Street	Lane	2.68	\$1,565,000
2	Waiialae Avenue	Lane	1.35	\$1,525,000
<b>2</b>			<b>4.59</b>	<b>\$3,090,000</b>

### Lei of Parks

	Name	Type	Length (miles)	Cost
<b>Central O'ahu</b>				
1	Waipahu Depot Road Waipio Pt Access Road (W. Segment)	Path	1.24	\$960,000
<b>'Ewa</b>				
2	North Road	Lane	1.71	\$190,000
3	Onuela Beach Park	Path	1.05	\$765,000
<b>Ko'oalau Poko</b>				
4	Awakea Road	Route	0.67	\$100,000
5	Kaha Street	Lane	0.27	\$30,000
6	Kapaa Quarry Road	Route	2.54	\$1,415,000
7	Luluku Road	Route	3.46	\$345,000

8	Waihee Street	Path	0.41	\$305,000
<b>North Shore</b>				
9	Goodale Avenue	Path	0.78	\$605,000
<b>PUC</b>				
10	Kapiolani Park	Path	0.85	\$620,000
11	Kuilei Street	Lane	0.25	\$150,000
12	Nuuanu Stream	Path	0.33	\$305,000
13	Nuuanu Stream Path (Extension)	Path	0.07	\$55,000
<b>13</b>			<b>13.63</b>	<b>\$5,845,000</b>

### Loop Ride

	Name	Type	Length (miles)	Cost
<b>Central O'ahu</b>				
1	Royal Kunia Loop	Lane	1.65	\$180,000
<b>East Honolulu</b>				
2	Halemaumau Street	Route	0.85	\$85,000
3	Hawaii Kai Drive	Route	1.70	\$170,000
4	Hawaii Kai Drive (extension)	Route	1.80	\$510,000
5	Kawaihae Street	Route	0.90	\$90,000
6	West East Hind Drive	Route	1.15	\$115,000
<b>'Ewa</b>				
7	Makaiwa Hills	Route	2.25	\$1,515,000
<b>Ko'olau Poko</b>				
8	Keolu Drive	Lane	2.67	\$3,240,000
9	Kumuhau Waikupanaha Ahiki			
9	Hihimanu Poalima Oluolu Streets	Route	5.50	\$210,000
10	Lilipuna Road	Route	2.39	\$90,000
<b>PUC</b>				
11	Manoa Loop	Route	4.84	\$185,000
<b>Wai'anae</b>				
12	Makaha Valley Huipu Kili	Route	3.19	\$390,000
<b>12</b>			<b>28.89</b>	<b>\$6,780,000</b>

### Popular Destination

	Name	Type	Length (miles)	Cost
<b>East Honolulu</b>				
1	Portlock Lunalilo Home Road	Route	0.81	\$30,000

<b>'Ewa</b>				
2	Keoneula Blvd Extension	Lane	3.22	\$0
<b>Ko'olau Poko</b>				
3	Hahani Street	Lane	0.19	\$21,000
4	Kahuhipa Street	Route	1.57	\$160,000
5	Kuulei Road	Lane	0.74	\$260,000
<b>PUC</b>				
6	Aloha Stadium Access Lanes	Lane	0.56	\$330,000
7	Auahi Street	Route	0.98	\$100,000
8	Fort Street Mall	Route	0.38	\$15,000
9	Kahala Avenue	Route	1.51	\$150,000
10	Kalakaua Avenue (Northern Section)	Lane	1.00	\$585,000
11	Kamakee Street	Lane	0.35	\$205,000
12	Pensacola Avenue	Route	1.05	\$105,000
13	Piikoi Street	Route	1.20	\$135,000
<b>13</b>			<b>13.56</b>	<b>\$2,096,000</b>

## Regional Corridor

	Name	Type	Length (miles)	Cost
<b>Central O'ahu</b>				
1	Anania Drive	Route	1.27	\$130,000
2	Paiwa Street	Lane	1.08	\$120,000
<b>'Ewa</b>				
3	Kapolei Parkway (Ewa Beach)	Path	0.72	\$0
4	Papipi Road	Route	0.87	\$90,000
<b>Ko'olau Poko</b>				
5	Kalaniana'ole Highway (Waimanalo) Kamehameha Highway (North Kaneohe)	Shoulder Bikeway	6.30	\$3,510,000
6		Route	4.14	\$2,310,000
7	Wanaao Road	Route	0.85	\$85,000
<b>North Shore</b>				
8	Kaukonahua Road	Route	7.38	\$4,115,000
<b>PUC</b>				
9	Queen Street	Route	1.21	\$170,000
<b>9</b>			<b>23.82</b>	<b>\$10,530,000</b>

## Transit Access

	Name	Type	Length (miles)	Cost
<b>Central O'ahu</b>				
1	Ainamakua Drive	Lane	1.12	\$125,000
2	Awalau Street	Lane	0.39	\$43,000
3	Awanui Street Bike Path	Path	0.38	\$350,000
4	California Avenue	Route	1.71	\$170,000
5	Hoaeae Stream Path	Path	0.88	\$815,000
6	Honowai Street	Route	0.71	\$75,000
7	Kapakahi Stream Path	Path	0.41	\$300,000
8	Kilani Avenue	Route	0.67	\$26,000
9	Leilehua Golf Course Road	Route	0.27	\$27,000
10	Leokane_Kaihuopalaai	Route	1.64	\$65,000
11	Leoku Street	Lane	0.57	\$65,000
12	Leowahine Street	Route	0.47	\$47,000
13	Meheula Parkway	Lane	4.96	\$540,000
14	T. Makalena GC Stream Path	Path	0.94	\$870,000
15	Waikele Stream Path	Path	0.64	\$590,000
<b>'Ewa</b>				
16	Aliinui Drive (Extension)	Lane	1.71	\$0
17	Kapolei Parkway	Lane	0.95	\$0
18	Kapolei Parkway (Kapolei)	Path	2.82	\$0
19	Renton Road	Route	2.14	\$165,000
20	Saratoga Road (Extension)	Lane	4.32	\$470,000
<b>PUC</b>				
21	Ala Liliko Street	Lane	1.20	\$130,000
22	Beretania Street	Lane	3.32	\$365,000
23	Date Street	Lane	0.37	\$220,000
24	Halekauwila Street	Route	0.76	\$180,000
25	Honolulu Airport	Route	1.18	\$45,000
26	Hotel Street	Lane	0.26	\$36,000
27	Iwilei Transit Station	Path	0.25	\$185,000
28	Keeaumoku Street_Kona Street	Route	1.86	\$110,000
29	King Street (Northern Section)	Lane	1.97	\$215,000
30	King Street (Southern Section)	Lane	3.80	\$415,000
31	Kuala Street	Lane	0.28	\$39,000
32	Lagoon Drive	Lane	2.26	\$250,000
33	Middle Street (Southern Section)	Lane	0.46	\$50,000
34	Pearl Ridge Transit Station	Lane	0.09	\$10,000
35	Radford Drive	Lane	0.24	\$26,000
36	River Street	Route	0.22	\$9,000
37	Salt Lake Boulevard	Lane	2.54	\$665,000
38	South Street	Lane	0.78	\$63,000

39	Waikamilo Kalani Puuhale Kam Hwy	Lane	1.35	\$790,000
40	Waimano Home Road	Lane	1.25	\$136,000
41	Ward Avenue	Route	1.16	\$100,000
<b>41</b>			<b>54.01</b>	<b>\$8,782,000</b>
<b>100</b>	<b>Priority 2 Totals</b>		<b>148.44</b>	<b>\$41,079,000</b>

## Priority 3 Projects

### College Access

	Name	Type	Length (miles)	Costs
<b>Central O'ahu</b>				
1	LCC - Pearl Harbor Bike Path Access	Path	0.70	\$1,615,000
<b>PUC</b>				
2	10th Avenue	Route	2.12	\$210,000
3	16th Avenue	Route	0.61	\$65,000
4	Alohea Avenue	Lane	0.34	\$37,000
5	Makapuu Avenue	Lane	0.27	\$160,000
<b>5</b>			<b>4.04</b>	<b>\$2,087,000</b>

### Lei of Parks

	Name	Type	Length (miles)	Costs
<b>East Honolulu</b>				
1	Hanauma Bay Road	Route	0.32	\$12,000
<b>Ko'olau Poko</b>				
2	Waimanalo District Park	Path	0.41	\$300,000
<b>PUC</b>				
3	Holomoana Street	Lane	0.27	\$30,000
4	Isenberg Street (Northern Section)	Lane	0.17	\$19,000
5	Kalia Road	Lane	0.49	\$55,000
6	Kapiolani Boulevard	Lane	0.33	\$195,000
7	Saratoga Road	Lane	0.27	\$30,000
<b>7</b>			<b>2.26</b>	<b>\$641,000</b>

## Loop Ride

	Name	Type	Length (miles)	Costs
<b>Ko'olau Loa</b>				
1	Hauula Homestead Road Huamalani Lihimauna Hauhele Kekio	Route	1.13	\$245,000
2	Pohuehue Streets	Route	1.11	\$115,000
3	Pualalea Kekauoha Huehu	Route	1.07	\$110,000
<b>Ko'olau Poko</b>				
4	Ahilama Street	Path	0.77	\$150,000
5	Mapele Road	Path	0.75	\$585,000
6	Maunawili Loop	Route	2.63	\$100,000
7	Old Kalaniana'ole Highway	Route	1.56	\$160,000
8	Wailehua Road	Route	0.31	\$255,000
<b>PUC</b>				
9	Palolo Loop	Route	2.42	\$95,000
10	Tantalus Loop	Route	8.87	\$335,000
<b>Wai'anae</b>				
11	Nanakuli Nanaikala Haleakala	Route	2.52	\$370,000
<b>11</b>			<b>23.14</b>	<b>\$2,520,000</b>

## Popular Destination

	Name	Type	Length (miles)	Costs
<b>Ko'olau Poko</b>				
1	Aumoku Street	Route	0.82	\$85,000
<b>1</b>			<b>0.82</b>	<b>\$85,000</b>

## Regional Corridor

	Name	Type	Length (miles)	Costs
<b>Central O'ahu</b>				
1	Kuahelani Avenue	Path	2.20	\$1,600,000
2	Kupuna Loop Kahakea Street	Route	0.86	\$90,000
3	Waipahu Street	Route	3.06	\$1,005,000
<b>'Ewa</b>				
4	Makakilo (Lower Section)	Path	3.82	\$3,670,000
<b>PUC</b>				
5	Moanalua Road (Aiea)	Lane	1.78	\$195,000

6	Nuuanu Street Pali Drive	Route	1.78	\$180,000
7	Pali Highway (Punchbowl)	Route	1.57	\$875,000
<hr/>			<b>15.07</b>	<b>\$7,615,000</b>
<b>7</b>				

## Transit Access

	Name	Type	Length (miles)	Costs
<b>'Ewa</b>				
1	East-West Rd	Lane	1.16	\$0
2	Kalaeloa Harbor	Lane	2.30	\$1,345,000
3	Kamaaha Avenue (Extension)	Lane	0.29	\$0
<b>PUC</b>				
4	Alakea Street	Route	0.82	\$31,000
5	Aolele Street	Lane	0.86	\$95,000
6	Bishop Street	Route	0.60	\$23,000
7	Cooke Street	Lane	0.76	\$85,000
8	Dillingham Boulevard	Lane	1.43	\$4,730,000
9	Kakaako Transit Station	Path	0.10	\$75,000
10	Kaonohi Street	Lane	1.54	\$170,000
11	Mokauea Street	Lane	0.94	\$105,000
<hr/>			<b>10.80</b>	<b>\$6,659,000</b>
<b>11</b>				

## Other

	Name	Type	Length (miles)	Costs
<b>Central O'ahu</b>				
1	H-2 Mililani Interchange	Lane	0.27	\$30,000
2	Honowai Street	Lane	0.18	\$20,000
3	Kauka Boulevard	Route	0.27	\$27,000
4	Lumiaina Street	Route	0.13	\$13,000
5	Pupupuhi Street	Lane	0.52	\$60,000
6	Village Park Connector (Extension)	Path	0.16	\$150,000
7	Waipio Point Access Rd.	Path	0.40	\$290,000
<b>East Honolulu</b>				
8	Ahukini Street	Route	0.73	\$28,000
9	Analii Street	Path	1.10	\$800,000
10	Hawaii Kai Golf Course	Route	0.93	\$95,000
11	Hind Iuka Drive	Route	0.55	\$21,000
12	Wailua Street	Route	0.37	\$37,000
<b>'Ewa</b>				
13	Aliinui Drive Extension (Northern	Lane	0.22	\$0

Section)				
14	Campbell Industrial Park	Lane	1.78	\$1,040,000
15	Ewa Marina Access	Lane	1.45	\$160,000
16	Fort Barrette Road (Southern Section)	Lane	0.31	\$34,000
17	Geiger Road	Lane	1.56	\$170,000
18	Iroquois Drive	Lane	1.02	\$110,000
19	Kaimalie Street	Path	0.71	\$515,000
20	Kamokila Blvd (Extension)	Lane	0.17	\$0
21	Kapolei Community Park Connector	Path	0.13	\$0
22	Kapolei Villages Path	Path	0.83	\$0
23	Keaunui Drive (Northern Section)	Path	1.17	\$0
24	Keaunui Drive (Southern Section)	Path	0.43	\$0
25	Ocean Point	Lane	0.53	\$0
26	Plantation Road (E-W Connection)	Lane	0.62	\$365,000
27	Pohakapuna Road	Path	0.87	\$635,000
<b>Ko'olau Poko</b>				
28	Anoi Road	Route	0.35	\$14,000
29	H-3 - Kahekili Interchange	Route	0.48	\$18,000
30	Hamakua Marsh Trail	Path	0.48	\$445,000
31	Keneke Street Greenway	Path	0.35	\$255,000
32	Kihapai Street	Route	1.18	\$120,000
33	Makalani Street	Route	0.61	\$60,000
34	Mokulele Drive	Route	1.17	\$44,000
35	Oneawa Street	Route	1.29	\$720,000
36	Puaina Street	Route	0.43	\$43,000
<b>North Shore</b>				
37	Kealohanui Street	Route	0.38	\$38,000
38	Paalaa Road	Route	0.76	\$29,000
39	Puiki Street	Route	0.56	\$315,000
<b>PUC</b>				
40	18th Avenue	Lane	0.33	\$36,000
41	Ahua Street	Lane	0.07	\$8,000
42	Aiea Heights Drive	Lane	0.18	\$20,000
43	Alapai Street	Lane	0.05	\$6,000
44	Aliamanu Drive	Lane	1.76	\$195,000
45	Auiki Street	Route	0.79	\$80,000
46	Bougainville Drive	Lane	0.60	\$70,000
47	Gulick Avenue	Lane	0.56	\$65,000
48	Harding Street	Route	1.31	\$730,000
49	Honomanu Street	Lane	0.16	\$18,000
50	Ilalo Street	Route	0.33	\$17,000
51	Iolani Avenue Prospect Street	Lane	0.48	\$55,000
52	Isenberg Street (Southern Section)	Lane	0.39	\$43,000
53	Kaahumanu Street	Lane	1.01	\$110,000

54	Kaamilo Street	Lane	1.35	\$150,000
55	Kamehameha IV Road	Lane	0.67	\$75,000
56	Kanealii Avenue	Route	0.55	\$21,000
57	Kapalu Street	Route	0.09	\$4,000
58	Kapiolani-Waiialae Intersection	Lane	0.14	\$16,000
59	Kaua Street	Lane	0.87	\$510,000
60	Kilauea Avenue (Extension)	Lane	0.28	\$31,000
61	King Street (Chinatown)	Lane	0.22	\$24,000
62	Kuakini Street	Route	0.40	\$40,000
63	Liliha Street (Nuuanu)	Lane	0.99	\$110,000
64	Lusitana Street	Route	0.55	\$55,000
65	Makuahine Street	Route	1.58	\$160,000
66	Middle Street (Northern Section)	Lane	0.44	\$48,000
67	Moanalua Gardens	Path	0.58	\$425,000
68	Moanalua Road (Moanalua Gardens)	Lane	0.32	\$35,000
69	Moanalua Road (Tripler)	Path	1.37	\$1,265,000
70	Nehoa Street	Route	2.65	\$265,000
71	Noelani Street	Lane	1.23	\$135,000
72	Nuuanu Street	Route	1.23	\$685,000
73	Pauoa Road	Route	0.55	\$21,000
74	Pearl Harbor Bike Path Access at Blaisdell Park	Path	0.18	\$135,000
75	Pearl Harbor Bike Path Access at Kanuku Street	Path	0.05	\$37,000
76	Pearl Harbor Bike Path Access at Lehua Avenue	Lane	0.34	\$37,000
77	Pearl Harbor Bike Path Access at McGrew Point	Path	0.04	\$30,000
78	Pearl Kai Center	Path	0.16	\$120,000
79	Pukoloa Street	Lane	0.26	\$29,000
80	Punchbowl	Lane	0.85	\$95,000
81	Puuloa Road	Lane	1.15	\$125,000
82	Radford Drive Valkenburgh Street	Lane	0.95	\$105,000
83	Red Hill	Path	1.01	\$935,000
84	Spencer Street	Lane	0.51	\$55,000
85	Victoria Street	Lane	0.13	\$15,000
86	Waiaka Road	Lane	0.17	\$19,000
87	Waihona Street	Lane	0.37	\$41,000
88	Wyllie Street	Lane	0.26	\$29,000
<b>88</b>			<b>55.96</b>	<b>\$14,036,000</b>
<b>130</b>	<b>Priority 3 Totals</b>		<b>112.09</b>	<b>\$33,643,000</b>

## 5. Implementation and Benchmarks

### 5.1 Implementation

The Priority One projects suggested for the *O'ahu Bike Plan* would take approximately 18 years to be constructed if budgeting for bicycle project were to continue at the recent amount of \$1 million per year. Based on the overwhelming support of Charter Amendment 8, there may be a mandate to accelerate the projects of the *O'ahu Bike Plan*. The Revised Charter of Honolulu now specifically mentions bikeways under the powers, duties, and functions for the Director of Transportation Services, and a new section (Section 6-17) has been added that explicitly states one of DTS's priorities is to make the City and County of Honolulu pedestrian and bicycle friendly.

The financing and implementation of the recommended future bikeway network, programs, and policies is a challenging effort. The planning timeframe for the Plan is both long and short term. There is a potential for redevelopment and quality of life projects to occur through other CCH initiatives and long term planning efforts beyond DTS-initiated bicycle projects. Successful implementation of the *O'ahu Bike Plan* will require a dedicated staff, coupled with strong administrative, legislative, and community support over a sustained period.

### 5.2 Benchmarks

Benchmarks have been developed to measure the success of meeting the goals and objectives of the *O'ahu Bike Plan* (identified in *Work Product 2.1 Vision, Goals, and Objectives*). Benchmarks are used to indicate progress in reaching an ultimate vision. They specify a time frame in which achievement should be attained. They are crucial in recognizing and defining priorities, as well as in measuring the achievement of goals and objectives to realize the vision of a bicycle-friendly O'ahu. The benchmarks are organized by the four goals and 13 objectives of the Plan. Each of the objectives is accompanied by a specific benchmark(s) to realize the established objective. Unless otherwise noted, DTS is the responsible party for tracking and evaluating progress on the benchmarks.

Goals	Objectives	1-Year (2010)	5-Year (2015)	10-Year (2020)	20-Year (2030)
<b>Goal #1: To increase the mode share of bicycle trips.</b>					
	<b>Objective #1: Increase the number of people who ride bicycles.</b>	Continue to hold and promote, in collaboration with bicycling partners (DOT, HBL, and cycling groups), an annual Bike to Work Day.	Expand to annual Bike to Work Week event. Expand to include Bike to School Day.	Expand to several Bike to School Days.	
		Establish a one-day street closure for bicycle/pedestrian festival.	Establish a one-day street closure for festival in several areas of the island.	Expand street festival to every weekend for an entire month.	Expand street festival to a semiannual event.
		Develop a plan to create baseline inventory of bike traffic counts at selected screen-lines along corridors, with participation from bicycling partners. Organize and implement an annual "bike count" day.	Expand program to semiannual counts, and publicize trend data online.	Expand bike count program geographically.	Continue to refine bike count program.
		Maintain 2000 Census mode split (1.2% for Honolulu; 0.9% for O'ahu) in 2010 Census.	Commute mode share has increased by 50% over 2010 levels.	Commute mode share has doubled 2010 levels.	Commute mode share has doubled 2020 levels.
		Bicycle license registration have increased to 25,000/year (from 5-year average of 23,000/year).	Bicycle registrations have increased 50% from 2010 levels.	Bicycle registrations have doubled from 2010 levels.	Bicycle registrations have doubled from 2020 levels.
	<b>Objective #2: Increase the number of bicycle trips.</b>	Establish baseline inventory of bicycle trip counts (see Objective 1 year-1).	Bicycle trips have increased by 50% over 2010 levels.	Bicycle trips have doubled from 2010 levels.	Bicycle trips have doubled from 2020 levels.
	<b>Objective #3: Provide and maintain a continuous bicycle network.</b>	Identify sufficient sources of funds to design & construct desired bicycling facilities. Create an implementation plan for how high-priority projects will be built.	Complete 50% of Priority One project recommendations.	Complete remaining Priority One project recommendations.	Complete the majority of Priority Two project recommendations.
	<b>Objective #4: Provide and maintain bicycle support facilities (e.g., showers and bicycle racks).</b>	Coordinate with Department of Planning and Permitting to introduce an amendment to the Land Use Ordinance/Building Code that follows LEED-NC Bicycle Support Facilities credit requirements.	Bike parking and support facilities available in most major commercial and employment centers (for example: Downtown, regional malls, colleges, and universities).	Long-term bike parking available at all high-volume destinations (educational institutions, the airport, and transit centers).	Showers and changing facilities available at all employment centers.
		Support establishment of BikeStation© or similar attended parking/showers/lockers facility in Downtown Honolulu through tax incentives or other economic incentives.	Attended parking/showers/lockers facilities are operational in Downtown Honolulu. Other locations are under active consideration.	Additional attended parking/showers/lockers facilities have been established in other areas of the Island.	Four attended parking/showers/lockers facilities have been established in high demand areas across the Island.
		Implement <i>O'ahu Bike Plan</i> recommendations for City Parks bicycle parking.	All parks have adequate bicycle parking.		
		Initiate an outreach program to educate employers on the benefits of commuter cycling and participation in LAB's Bicycle Friendly Business (BFB) program. Host an annual recognition program for employers that have adopted bike friendly personnel policies.	Honolulu has two businesses certified by LAB as Bicycle Friendly Businesses. Many employers are offering convenient showers and changing facilities to all commuter cyclists who need them. Awards program has grown to include several geographic areas and competitions between public/private sectors. A number of firms have received LAB BFB status.	Honolulu has ten businesses certified by LAB as Bicycle Friendly Business. Reassess and re-evaluate major employment areas to ensure parking and support facilities exist for cyclists. Create a plan to address shortfalls.	Implemented plan that addressed shortfalls.
		City hosts two events using bike valets	City regularly hosts events using bike valets		

Goals	Objectives	1-Year (2010)	5-Year (2015)	10-Year (2020)	20-Year (2030)
<b>Goal #2: To enhance cooperation between roadway users.</b>					
	<b>Objective #5: Increase the awareness of bicyclists, motorists, and pedestrians of their rights and responsibilities.</b>	Expand the BikeEd grant to double the number of 4 <sup>th</sup> graders who receive bicycle education through BikeEd.	100% of all 4 <sup>th</sup> graders receive bicycle education through Bike Ed.	Establish a high school BikeEd refresher program. Re-evaluate the BikeEd program to ensure it is reaching its goals.	Consider further expansion of the BikeEd program.
		Engage bicycling partners in planning annual Island-wide events promoting cycling activities.	Plan and hold annual Island-wide events promoting cycling activities in conjunction with bicycling partners.	Expand Island-wide event promoting cycling activities to a semi-annual events working with bicycling partners.	Expand to quarterly Island-wide events promoting cycling activities.
		Expand the BikeEd grant to include Effective Cycling classes for adults. Work with City Parks Dept. to include Effective Cycling in its list of offered programs/classes.	Expand the BikeEd grant to ensure Effective Cycling classes are held regularly at convenient locations and times across the Island.	Bike Ed program is continuously refined and improved	Bike Ed program is continuously refined and improved
	<b>Objective #6: Enforce the traffic code.</b>	Broadcast two new public service announcements (PSAs) reminding motorists and bicyclists of their rights and responsibilities on the road, emphasizing safety for all roadway users.	Broadcast two additional new PSAs. Bike PSAs are now heard regularly by most Island residents. Scientific polls indicate a shift in attitude between motorists and cyclists and a broad acceptance of the "law of the splintered paddle." Violations relating to bicycle offenses held constant at 2010 levels.	PSA program is continuously refined and improved Violations relating to bicycle offenses reduced 10% over 2010 levels.	PSA program is continuously refined and improved Violations relating to bicycle offenses reduced 20% over 2010 levels.
<b>Goal #3: To encourage and promote bicycling as a safe, convenient, and pleasurable means of travel.</b>					
	<b>Objective #7: Provide a variety of bikeways.</b>	Identify sufficient sources of funds to design and construct desired bicycle facilities.	Complete 50% of Priority One project recommendations in roughly equal proportions of lanes, routes, and paths.	Complete the rest of Priority One project recommendations.	Complete the majority of Priority Two project recommendations.
	<b>Objective #8: Reduce the number of traffic crashes involving bicycles.</b>	Implement a program where State (e.g., DOT, DOH) and City (e.g., DTS, HPD) agencies set bicycle safety metrics and publish an annual report. Establish a baseline of crash data.	Number of major bicycle crashes reduced by half from 2010 data; with zero fatalities.	Number of major bicycle crashes reduced by half from 2015 data; with zero fatalities.	Number of major bicycle crashes reduced by half from 2020 data; with zero fatalities.
	<b>Objective #9: Reduce the number of bicycle thefts.</b>	Continue to install bicycle parking in safe, secure areas visible to passersby. Coordinate with HPD to obtain data on number of bicycle thefts.	Bicycle thefts are reduced by 10% over 2010 levels.	Bicycle thefts are reduced by 20% over 2010 levels.	Bicycle thefts are reduced by 40% over 2010 levels.
	<b>Objective #10: Increase the number of people who rent bicycles.</b>	Obtain baseline information on number of bicycle rentals.	50% increase in the number of bicycle rentals over 2010 levels.	Bicycle rentals have doubled 2010 levels.	Bicycle rentals have doubled 2020 levels.
		Distribute visitor-friendly maps of O'ahu's bicycle network and popular destinations to hotels to be made available to each guest.	Update the map and create an interactive online version showing O'ahu bicycle network and popular destinations for Island guests.		

Goals	Objectives	1-Year 2010	5-Year 2015	10-Year 2020	20-Year 2030
		Hawaii Visitors and Convention Bureau (HVCB), Hawai'i Tourism Authority (HTA), hotels, bike shops promote bicycle tours, club rides, and rentals.	HVCB, HTA, and CCH promote O'ahu as a Bicycle-Friendly Island publicizing listing as one of LAB's Bicycle-Friendly Communities.	HVCB, HTA promote Island-wide cycling events to visitors (See Objective 5).	HVCB, HTA promote O'ahu as a destination for Island-wide bicycle tours.
	<b>Objective #11: Ensure integration of bicycles with transit.</b>	Identify and install lockers or other long-term bicycle parking at two major transit centers.	Ensure all transit centers have adequate bicycle parking. Identify transit stops in need of bicycle parking and wayfinding signage.	Install bicycle parking and wayfinding signage at all high-volume destination transit stops and rail transit stations.	Re-evaluate bicycle parking and signage at transit stops to ensure adequate level of service. Ensure all transit centers have at least one bicycle facility serving it.
		Establish a wayfinding signage program.	Install wayfinding signage to and from all transit centers.		
		Coordinate with Google to synch O'ahu bicycle maps other modes of Google trip planning.			
<b>Goal #4: To be recognized by LAB as a Bicycle-Friendly Community.</b>					
	<b>Objective #12: Implement the O'ahu Bicycle Master Plan.</b>	Broadcast one new PSA illustrating the health benefits and convenience of bicycle riding.	Regularly provide news organizations with updates of bicycle improvements and events. Bike PSAs are heard regularly by most Island residents.	Re-evaluate effectiveness of the PSA program.	Refine PSA program as needed.
		Prepare and distribute bicycle maintenance improvement request forms online, to bike shops, satellite city halls, etc. Use Facility Inventory Database to streamline maintenance requests and establish a baseline.	Implement improved maintenance procedures such that maintenance requests decrease by 10% from 2010 levels and average response times are less than 48 hours.	Continue to improve maintenance procedures such that maintenance requests decrease by 15% from 2010 levels. Obtain feedback from bicycle riders on effectiveness of maintenance program.	Evaluate and assess maintenance improvement program and prepare a plan to address any necessary improvements.
		Support and formally charge the Mayor's Advisory Council on Bicycling with overseeing implementation of the <i>O'ahu Bike Plan</i> as well as monitoring and updating the benchmarks.	Identify necessary areas of improvement and issues that need to be addressed in the five-year bike plan update.	<i>O'ahu Bike Plan</i> is regularly updated and improved on a five-year cycle. Increased efforts to work with bicycling partners and members of the public to make certain adequate bicycling projects, policies, and programs exist.	Program is continuously refined and improved
		In association with bike partners, host a county-wide forum to discuss bike planning tools and techniques	Host a Statewide conference on the state of bike planning, with an emphasis on technical training and best practices/lessons learned.	Host a regional conference.	Host a national conference.
		Achieve LAB for Bicycle-Friendly Community status.	Re-apply to LAB to achieve a higher award level Bicycle-Friendly Community designation.	Re-apply to LAB to achieve a higher award level.	Achieve Platinum –level Bicycle-Friendly Community designation by LAB.
		Maintain and enhance the <i>O'ahu Bike Plan</i> website as a central repository of bicycle plan information as well as other bicycling information.	Continue to update and enhance the <i>O'ahu Bike Plan</i> website and explore using new technologies for route and trip planning.	Evaluate success of the website to disseminate <i>O'ahu Bike Plan</i> information to the public.	
	<b>Objective #13: Provide funding to achieve the goals of the Plan.</b>	See Objective 3 year-1.	Increase funding for bicycle programs and facilities by 100% from 2010 levels.	Increase funding for bicycle programs and facilities by 200% from 2010 levels.	Increase funding for bicycle programs and facilities by 400% from 2010 levels.

## 6. References

Clean Air Partnership. *Bike Lanes, On-Street Parking and Business Parking Study*. Toronto, Canada. 2009.

State of Hawai'i . *2007 Economic Development Data Book*.

<http://hawaii.gov/dbedt/info/economic/databook/db2007/section17.pdf>. 2007.

### Appendix A: Proposed City and County Projects that could require environmental documentation

Project Name	Facility Type	Jurisdiction	Length (miles)
Cane Haul Road (South)	Path	County/Private	1.16
Honouliuli Path	Path	County/Private	3.51
Waipahe Place	Route	County/Private	0.33
Aloha Tower Path	Path	County/State	1.12
Haleiwa Waialua Beach Park	Path	County/State	2.07
18th Avenue	Lane	County	0.33
Ala Moana Beach Park (extension)	Path	County	0.15
Aliinui Drive Extension (Northern Section)	Lane	County	0.22
Aloha Stadium Access Lanes	Lane	County	0.56
Auiki Street	Route	County	0.79
Awakea Road	Route	County	0.67
Awanui Street Bike Path	Path	County	0.38
Cooke Street	Lane	County	0.76
Diamond Head Road (Eastern Segment)	Route	County	0.72
Diamond Head Road (Western Segment)	Lane	County	0.74
Ewa Marina Access	Lane	County	1.45
Hahani Street	Lane	County	0.19
Haleiwa Road	Lane	County	1.60
Halemaumau Street	Lane	County	0.85
Hamakua Drive	Lane	County	0.79
Hauula Homestead Road	Route	County	1.13
Hawaii Kai Drive	Lane	County	1.70
Hawaii Kai Golf Course	Route	County	0.93
Hoaeae Stream Path	Path	County	0.88
Holomoana Street	Lane	County	0.27
Huamalani Lihimauna Hauhele Kekio Pohuehue Streets	Route	County	1.11
Ilalo Street	Route	County	0.43
Iroquois Drive	Lane	County	1.02
Kaha Street	Lane	County	0.27
Kahala Avenue	Route	County	1.51
Kalaeloa Harbor	Lane	County	2.30
Kalaheo Avenue	Route	County	2.12
Kalakaua Avenue	Lane	County	2.18
	Shoulder		
Kalaniana'ole Highway (Waimanalo)	Bikeway	County	6.30
Kalia Road	Lane	County	0.49
Kamehameha Highway (North Kaneohe)	Route	County	4.14
Kapaa Quarry Road	Route	County	2.54

Kapakahi Stream Path	Path	County	0.41
Kapiolani Park	Path	County	0.85
Kaukonahua Road	Route	County	7.38
Kawaihae Street	Route	County	0.90
Kawainui Canal Path	Path	County	0.48
Keahala Road	Lane	County	1.28
Keahole Street	Route	County	0.71
Keoneula Blvd Extension	Path	County	3.22
Kihapai Street	Route	County	1.18
Kuulei Road	Lane	County	0.74
Lagoon Drive	Lane	County	2.26
LCC - Pearl Harbor Bike Path Access	Path	County	0.70
Leokane Kaihuopalaai	Route	County	1.64
Leoku Street	Lane	County	0.57
Lilipuna Road	Route	County	2.39
Makaha Valley Huipu Kili	Route	County	3.19
Mapele Road	Path	County	0.75
Maunawili Loop	Route	County	2.63
Mokulele Drive	Route	County	1.17
Monsarrat Avenue Diamond Head Road	Lane	County	2.36
Nanakuli Nanaikala Haleakala	Route	County	2.52
Nanihoa Hale Laa Cane Haul Roads	Route	County	3.98
Ocean Point	Lane	County	2.44
Oneawa Street	Route	County	1.29
Onuela Beach Park	Path	County	1.05
Paalaa Road	Route	County	0.76
Papipi Road	Route	County	0.87
Pearl Harbor Bike Path Access at Blaisdell Park	Path	County	0.18
Pearl Harbor Bike Path Access at Kanuku Street	Path	County	0.05
Pearl Harbor Bike Path Access at Lehua Avenue	Lane	County	0.34
Pearl Harbor Bike Path Access at McGrew Point	Path	County	0.04
Pearl Harbor Bike Path Access at Pearl Kai Center	Path	County	0.16
Pearl Ridge Transit Station	Lane	County	0.09
Waianae – Maili loop ride	Route	County	9.34
Pohakapuna Road	Path	County	0.87
Portlock Lunalilo Home Road	Route	County	0.81
Pualalea Kekauoha Huehu	Route	County	1.07
Punchbowl	Lane	County	0.85
Pupupuhi Street	Lane	County	0.52
Salt Lake Boulevard	Lane	County	2.54
South Street	Lane	County	0.78
T. Makalena GC Stream Path	Path	County	0.94
Waihee Street	Path	County	0.41
Waikele Stream Path	Path	County	0.64
Wailehua Road	Route	County	0.31

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Waimanalo District Park	Path	County	0.41
Waipahu Depot Road Waipio Pt Access Road (Western Segment)	Path	County	1.24
Wanaao Road	Route	County	0.85
Ward Avenue	Route	County	1.16
West East Hind Drive	Route	County	1.15

**Appendix B: Proposed City and County projects that could require environmental documentation**

Project Name	Facility Type	Jurisdiction	Length (miles)
Ala Moana Beach Park (extension)	Path	County	0.15
Diamond Head Road (Eastern Segment)	Route	County	0.72
Diamond Head Road (Western Segment)	Lane	County	0.74
Haleiwa Road	Lane	County	1.60
Holomoana Street	Lane	County	0.27
Huamalani Lihimauna Hauhele			
Kekio Pohuehue Streets	Route	County	1.11
Ilalo Street	Route	County	0.43
Kapaa Quarry Road	Route	County	2.54
Kawainui Canal Path	Path	County	0.48
LCC - Pearl Harbor Bike Path Access	Path	County	0.70
Paalaa Road	Route	County	0.76
Waipahu Depot Road Waipio Pt Access Road (Western Segment)	Path	County	1.24
Kawainui Marsh Path (Gateway to Kailua Town)	Path	State/Co	0.26
Kawainui Marsh Path (Western Section)	Path	State/Co	2.80