

Potential Projects, Programs, and Policies Report

O'ahu Bicycle Master Plan

Department of Transportation Services

City & County of Honolulu

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Work Product 3.2.1

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1.0 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 Potential Projects, Programs, and Policies Report* is identified as Work Product 3.2.1. This report is a baseline document, with further evaluation of the projects, programs, and policies to occur as the Bike Plan planning process continues. This report:

- provides a summary of existing , planned, and potential segments of O'ahu's bikeway network; and
- provides a summary and description of potential programs and policies being considered.

2.0 Projects

The criteria and methodology used in the selection of the proposed bicycle facilities was discussed in Work Product 2.2.1 *Corridor/Transit Spoke/Route Selection Methodology Report*. Additionally, recommendations from the 2008 updates to the CCH Sustainable Communities Plans (SCP) and input gathered from the 2nd round of workshops (WP 3.3.4) were included for consideration.

There are currently 99 bicycle facilities on O'ahu, covering nearly 114 miles. Another 203 facilities (361 miles) were proposed by the 1999 Honolulu Bike Plan and the 2003 State of Hawaii Bike Plan. The O'ahu Bike Plan Team has identified an additional 152 projects (198 miles) for consideration. If all proposed facilities were created, there could potentially be 673 miles of bikeways on the island of O'ahu.

2.1 Existing Network

Table 1 summarizes the existing bicycle facilities for O'ahu by Development Plan (DP)/SCP district, jurisdiction (State/County), and type of facility (path, route, lane). There are currently 99 facilities, covering nearly 114 miles.

Table 1
Existing Bicycle Network

Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
Central O'ahu				
1	Aiki Street (Village Park Connector)	Lane	County	0.42
2	Anonui Street	Lane	County	1.12
3	California Avenue	Lane	County	0.42
4	California Avenue	Route	County	0.82
5	Farrington Highway	Route	State	2.16
6	Kahelu Avenue	Lane	County	0.63
7	Kamehameha Highway	Route	State	0.72
8	Kilani Avenue	Route	County	1.24
9	Kunia Road	Route	State	1.50
10	Kunia Road	Path	State	0.43
11	Kupuohi Street	Lane	County	0.59
12	Lumiaina Street	Path	County	0.84
13	Mahele Street	Route	County	0.13
14	Managers Drive / Mokuola	Lane	County	0.75
15	North Cane Street	Lane	County	0.13
16	Paiwa Street	Path	County	0.90
17	Pearl Harbor Bike Path	Path	State	0.83
18	Waipio Uka Street Path	Path	County	1.44
19	Whitmore Avenue	Route	State	1.85
19	Total Facilities		Miles	16.90
East Honolulu				
1	Hawaii Kai Drive	Route	County	1.12
2	Kalaniana'ole Highway	Lane	State	5.18
3	Kealahou Street	Route	County	0.79
4	Lunalilo Home Road	Route	County	1.73
4	Total Facilities		Miles	8.82
Ewa				
1	Aliinui Drive	Lane	Private	1.94
2	Farrington Highway	Lane	State	1.35
3	Fort Weaver Road	Path	State	2.79
4	Fort Weaver Road	Lane	State	1.19
5	Geiger Road / Iroquios Point Road	Path	County	0.65
6	Kaileolea Drive	Lane	County	0.93
7	Kamaaha Avenue	Lane	County	1.38
8	Kamokila Boulevard	Lane	County	0.82
9	Kapolei Parkway	Lane	County	0.24
10	Kapolei Parkway	Path	County	1.53
11	Kealanani Avenue	Lane	County	0.59
12	Keaunui Drive	Path	County	0.72

Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
13	Keoneula Boulevard	Path	County	1.01
14	Kolowaka Drive	Lane	County	0.57
15	Kolowaka Drive	Path	County	0.57
16	Leeward Bikeway (Ewa)	Path	State	1.80
16	Total Facilities		Miles	18.08
Ko'olau Loa				
	None			
Ko'olau Poko				
1	Aalapapa Drive	Lane	County	1.21
2	Haiku Road	Route	County	0.70
3	Hamakua Drive	Route	County	0.48
4	Kahekili Highway	Lane	State	1.09
5	Kailua Road	Lane	County	0.76
6	Kailua Road	Lane	State	1.27
7	Kailua Road	Path	County	0.08
8	Kailua Road (West section)	Lane	County	0.15
9	Kainalu Drive	Lane	County	1.76
10	Kainui Drive	Lane	County	0.90
11	Kamehameha Highway	Route	County	0.31
12	Kaneohe Bay Drive	Route	County	1.10
13	Kawailoa Road	Path	County	0.82
14	Kawainui Levee Path	Path	County	1.25
15	Keolu Drive	Lane	County	0.51
16	Mokapu Road	Lane	County	0.40
17	Mokulua Drive	Lane	County	1.20
18	North Kalaheo Avenue	Route	County	0.35
19	South Kalaheo Avenue	Route	County	0.42
19	Total Facilities		Miles	14.76
North Shore				
1	Haleiwa Bypass Road	Route	State	2.06
2	Ke Ala Pupukea Bike Path	Path	County	3.91
3	Waialua Beach Road	Path	County	2.60
3	Total Facilities		Miles	8.56
PUC				
1	18th Avenue	Route	County	0.33
2	Ala Moana Park Drive	Path	County	2.59
3	Ala Wai Boulevard	Lane	County	1.90
4	Ala Wai Promenade	Path	County	1.49
5	Civic Center Bike Path	Path	County	0.44
6	Date Street	Path	County	0.59
7	Dole Street	Lane	County	0.35

8	Hokulani School Path	Path	State	0.09
9	Hotel Street	Route	County	0.51
Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
10	Kalakaua Avenue	Lane	County	0.79
11	Kamehameha Highway	Lane	State	0.82
12	Kamehameha Highway	Path	State	2.67
13	Kapahulu Avenue	Path	County	0.84
14	Kealaolu Avenue	Lane	County	0.69
15	Keawe Street	Lane	County	0.13
16	Kuala Street	Lane	County	0.74
17	Maile Way	Lane	County	0.06
18	McCully Street	Route	County	0.73
19	Metcalf Street	Lane	Co/St	0.36
20	Middle Street	Path	County	0.46
21	Nimitz Highway	Lane	State	3.34
22	Noelani School Path	Path	State	0.20
23	Oahu Avenue	Route	County	0.49
24	Paki Avenue	Path	County	0.92
25	Pearl Harbor Bike Path	Path	County	2.92
26	Pearl Harbor Bike Path	Path	State	1.53
27	Salt Lake Boulevard	Lane	County	0.90
28	Sand Island Access Road	Lane	State	3.37
29	St Louis Heights Drive	Lane	County	0.11
30	University Avenue	Lane	County	0.75
31	University Upper Fire Road	Path	County	0.08
32	Waiakamilo Road - Houghtailing Street	Lane	County	1.18
33	Waikiki Beach Path	Path	County	0.56
34	Waterfront Park	Path	State	0.41
35	Young Street	Lane	County	0.21
35	Total Facilities		Miles	33.53
Waianae				
1	Farrington Highway	Route	State	4.25
2	Farrington Highway	Lane	State	1.43
3	Farrington Highway	Route	State	7.64
3	Total Facilities			13.32
99	Grand Total Facilities		Grand Total Miles	113.97

2.2 Proposed and Potential Projects

Table 2 includes the proposed projects under consideration for the O'ahu Bike Plan by Development Plan/Sustainable Communities Plan district, jurisdiction (State/County), and type of facility (path, route, shoulder bikeway, lane). New additions to those projects included in the 1999 County Plan and 2003 State Plan are marked with an asterisk (*). These additional potential projects were identified by reviewing DP's/SCP's (in both existing and draft form), the Ewa Connectivity Study, input received at public workshops and small group meetings, and other research conducted as part of the planning process. There are 355 projects representing 559 miles of new bikeways.

Table 2
Potential Bicycle Network

Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
Central O'ahu				
1	Ainamakua*	Lane	County	1.12
2	Awalau Street*	Lane	County	0.21
3	California Avenue	Route	County	1.71
4	Cane Haul Road (North)	Path	County	1.16
5	Cane Haul Road (South)	Path	County	2.35
6	Central Oahu Regional Park*	Route	County	2.31
7	Farrington Highway (Waiawa Interchange)	Lane	State	0.77
8	H-2 Mililani Interchange	Lane	County	0.27
9	Honowai Street*	Lane	County	0.18
10	Kamananui Road	Shoulder Bikeways	State	1.13
11	Kamehameha Highway	Route	State	2.76
12	Kamehameha Highway	Shoulder Bikeways	State	2.71
13	Kamehameha Highway (Southern Section)	Route	State	0.91
14	Kamehameha Highway at Waiawa	Lane	State	0.73
15	Kapakahi Stream*	Path	County	0.25
16	Kauka Boulevard*	Route	County	0.27
17	Kaukonahua Road	Route	County	2.21
18	Kilani Avenue	Route	County	0.67
19	Kipapa Gulch Pathway	Path	County	2.60
20	Kuahelani Loop*	Path	County	2.20
21	Kunia Road	Shoulder Bikeways	State	7.11
22	Lanikuhana Loop*	Path	County	2.64
23	LCC (eastern entrance)*	Path	State	0.60
24	LCC Access Road*	Path	State	0.59
25	LCC Access Road*	Route	State	0.27
26	LCC Frontage Road*	Lane	State	1.08

Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
27	Leilehua Golf Course Road*	Route	County	0.27
28	Lumiaaina Street*	Route	County	0.13
29	Meheula Parkway	Lane	County	4.96
30	Mokuola Street	Lane	County	0.20
31	Paiwa Street	Lane	County	1.08
32	Pearl Harbor Bike Path	Path	County	1.29
33	Pearl Harbor Bike Path Access at LCC	Path	County	0.17
34	Pupupuhi Street*	Path	County	0.50
35	Pupupuhi Street*	Lane	County	0.44
36	Royal Kunia*	Lane	County	1.65
37	Village Park*	Route	County	0.86
38	Village Park Connector	Path	County	1.20
39	Village Park Connector (extension)*	Path	County	0.16
40	Waipahu Depot Road	Lane	County	0.41
41	Waipahu Depot Road_Waipio Pt Access Road	Path	County	1.91
42	Waipahu Street	Lane	County	3.06
43	Waipahu Transit Station*	Path	County	0.57
44	Waipahu Transit Station*	Lane	County	0.57
45	Waipio Point Access Road*	Path	County	0.40
46	Wilikina Drive	Route	County	1.79
47	Wilikina Drive	Route	State	2.14
47	Total Facilities		Miles	62.54
East Honolulu				
1	Ahukini Street	Route	County	0.73
2	Analii Street	Path	County	1.10
3	Halemaumau Street	Route	County	0.85
4	Hawaii Kai Drive*	Lane	County	3.51
5	Hawaii Kai Drive	Route	County	1.71
6	Hawaii Kai Golf Course*	Route	County	0.93
7	Hind Iuka Drive	Route	County	0.55
8	Kalaniana'ole Highway	Shoulder Bikeways	State	4.46
9	Kawaihae Street	Route	County	0.90
10	Keahole Street	Route	County	0.71
11	Portlock Road	Route	County	0.81
12	Wailua Street	Route	County	0.37
13	West_East Hind Drive	Route	County	1.15
13	Total Facilities		Miles	17.76
Ewa				
1	Aliinui Drive (Northern Section)*	Lane	Private	0.22
2	Aliinui Drive (Extension)	Lane	County	1.81
3	Bravo Road	Route	Federal	3.57
4	Campbell Industrial Park*	Lane	County	1.78

Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
5	Coral Sea Road	Path	State	5.51
6	DHHL (Eastern Section)*	Route	State	1.34
7	DHHL (Western Section)*	Path	State	0.91
8	East-West Road*	Lane	County	1.16
9	Enterprise Avenue	Route	State	1.01
10	Essex Road	Route	Federal	0.64
11	Ewa Marina Access	Lane	County	1.45
12	Farrington Highway	Route	Co/St	3.44
13	Farrington Highway	Lane	State	2.89
14	Farrington Highway	Path	County	2.30
15	Farrington Highway (Kapolei)	Route	State	0.74
16	Farrington Highway*	Path	State	1.10
17	Farrington Highway*	Shoulder Bikeways	State	3.31
18	Fort Barrette Road	Lane	State	1.22
19	Fort Weaver Road*	Path	County	3.50
20	Fort Weaver Road	Route	State	6.19
21	Future North-South Road	Lane	State	4.02
22	Geiger Road	Lane	County	1.56
23	H-1 Makai Bike Path*	Path	State	2.63
24	H-1 Mauka Bike Path*	Path	State	2.67
25	Hanson Road	Route	Federal	1.55
26	Honouliuli Path	Path	County	3.51
27	Hoopili*	Route	County	12.11
28	Iroquis Drive*	Lane	County	1.02
29	Kaimalie Street*	Path	County	0.71
30	Kalaeloa Boulevard*	Lane	County	4.32
31	Kalaeloa Boulevard	Route	St/Co	2.73
32	Kalaeloa Harbor*	Lane	County	2.30
33	Kamaaha Ave (Extension)*	Lane	County	0.29
34	Kamaaha Avenue (Extension)	Lane	County	0.39
35	Kamokila Boulevard. (Extension)*	Lane	County	0.17
36	Kapolei Community Park Connector*	Path	County	0.13
37	Kapolei Parkway (Kapolei)	Lane	County	3.85
38	Kapolei Parkway (Ewa)	Lane	County	1.58
39	Kapolei Parkway*	Path	County	2.71
40	Kapolei Villages*	Path	County	0.83
41	Keaunui Drive (Northern Extension)*	Path	County	0.43
42	Keaunui Drive (Southern Extension)*	Path	County	1.17
43	Keoneula Boulevard. (Extension)*	Path	County	3.22
44	Leeward Bikeway (Ewa)	Path	State	7.72
45	Makaiwa Hills	Route	County	2.72
46	Makakilo*	Lane	County	3.29
47	Makakilo*	Path	County	3.82
48	Manawai (Extension)	Lane	County	0.61

49	Mango Tree Road	Path	County	3.20
50	North Road	Lane	County	1.71
Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
51	North-South Road*	Path	County	4.00
52	Ocean Point*	Lane	County	3.15
53	Onuela Beach Bike Path	Path	County	1.05
54	Palailai Mall*	Path	County	0.93
55	Papipi Road	Route	County	0.87
56	Plantation Road (E-W Connection)	Lane	County	0.62
57	Pohakapuna Road*	Path	County	0.87
58	Renton Road	Route	County	2.03
59	South Fort Barrette Road*	Lane	County	0.31
60	UH West Oahu Road "A" *	Lane	State	0.26
61	UH West Oahu Road "B" *	Lane	State	0.35
62	UH West Oahu Road "C" *	Lane	State	0.19
63	UH West Oahu Road "D" *	Lane	State	0.77
64	UH West Oahu Road "E" *	Lane	State	0.32
65	UH West Oahu Road "F" *	Lane	State	0.90
66	UH West Oahu Road "G" *	Lane	State	0.25
67	Uluohia Street*	Lane	County	0.27
68	Waipahe Place	Route	Private	0.33
69	Wakea Lane*	Lane	County	1.22
69	Total Facilities		Miles	139.75
Ko'olau Loa				
1	Hauula Loop*	Route	County	1.13
2	Kaaawa Loop*	Route	County	1.11
3	Kahuku Loop*	Route	County	1.07
4	Kamehameha Highway	Route	State	25.25
5	Laie Loop*	Route	County	4.30
5	Total Facilities		Miles	32.86
Ko'olau Poko				
1	Ahilama St*	Path	County	0.77
2	Anoi Road	Route	County	0.35
3	Aumoku Street	Route	County	0.82
4	Awakea Road	Route	County	0.67
5	H-3*	Route	State	8.81
6	H-3 - Kahekili Bypass*	Route	County	0.41
7	Hahani Street	Lane	County	0.19
8	Haiku Road	Route	County	0.38
9	Hamakua Drive*	Sharrows	County	0.67
10	Hamakua Drive	Route	County	0.31
11	Kaha Street*	Lane	County	0.27
12	Kahekili Highway	Route	State	3.32
13	Kahuhipa Street	Route	County	1.19

14	Kailua Shopping Center*	Path	Private	0.34
15	Kalaheo Avenue*	Shoulder Bikeways	County	2.12
Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
16	Kalaheo Avenue	Route	County	1.35
17	Kalaniana'ole Highway	Shoulder Bikeways	State	2.52
18	Kalaniana'ole Highway (Castle Junction)	Route	State	1.82
19	Kalaniana'ole Highway (Waimanalo)*	Route	State	6.32
20	Kalaniana'ole Hwy – Waimanalo	Shoulder Bikeways	State	6.30
21	Kamehameha Highway	Route	County	4.14
22	Kamehameha Highway	Lane	County	1.09
23	Kamehameha Highway	Route	State	1.94
24	Kamehameha Highway	Lane	State	1.08
25	Kamehameha Highway (Pali)	Route	State	1.26
26	Kaneohe Bay Drive (Eastern Section)*	Shoulder Bikeways	State	2.61
27	Kaneohe Bay Drive (Western Section)*	Lane	State	2.48
28	Kaneohe Bay Drive	Route	State	4.22
29	Kapaa Quarry Road	Route	County	2.54
30	Kawainui Canal*	Path	County	0.49
31	Kawainui Marsh (south side)*	Path	County	2.02
32	Kawainui Marsh Path	Path	County	2.80
33	Keaahala Road*	Lane	County	1.51
34	Keaahala Road	Route	County	0.79
35	Keneke Street Greenway	Path	County	0.35
36	Keolu Drive	Lane	County	2.67
37	Kihapai*	Route	County	1.18
38	Kuulei Road	Lane	County	0.60
39	Likelike Highway	Route	State	0.49
40	Lilipuna Road	Route	County	2.39
41	Luluku Road	Route	County	3.46
42	Makalani Street	Route	County	0.61
43	Mapele Street*	Path	County	0.75
44	Maunawili Loop*	Route	County	2.63
45	Mokapu Boulevard	Lane	State	3.35
46	Mokulele Drive	Route	County	1.17
47	Old Kalaniana'ole Highway	Route	County	1.56
48	Old Pali Road	Path	State	1.50
49	Oneawa Street*	Sharrows	County	1.29
50	Pali Highway	Route	State	1.60
51	Puaina Street*	Route	County	0.43
52	Waihee Street*	Path	County	0.41
53	Wailehua Road*	Shoulder Bikeways	County	0.31
54	Waimanalo Circuit	Route	County	5.50

55	Waimanalo District Park*	Path	County	0.41
56	Wanaao Road	Lane	County	0.85
56	Total Facilities		Miles	101.42
Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
North Shore				
1	Cane Haul Road*	Route	County	2.24
2	Farrington Highway	Route	State	9.49
3	Haleiwa Road*	Lane	County	1.60
4	Haleiwa Road	Route	County	1.60
5	Kaena Point Path	Path	County	3.51
6	Kamehameha Highway	Shoulder Bikeways	State	8.73
7	Kamehameha Highway	Route	State	9.33
8	Kaukonahua Road	Route	State	5.17
9	Ke Ala Pupukea Path (Extension)	Path	County	3.92
10	Kealohanui Street*	Route	County	0.08
11	Paalaa Road*	Route	County	0.76
12	Puiki Street*	Route	County	1.23
12	Total Facilities		Miles	47.68
PUC				
1	10th Avenue	Route	County	2.12
2	16th Avenue	Route	County	0.61
3	18th Avenue*	Lane	County	0.33
4	Ahua Street	Lane	County	0.07
5	Aiea Heights Drive	Lane	County	0.18
6	Ala Lilikoi*	Lane	County	1.20
7	Ala Moana Beach Park*	Path	County	0.09
8	Ala Moana Boulevard	Lane	State	2.85
9	Ala Moana Boulevard	Lane	County	0.24
10	Alakawa Street	Lane	County	0.41
11	Alakea Street*	Lane	County	0.60
12	Alapai Street	Lane	County	0.05
13	Aliamanu Drive	Lane	County	1.76
14	Aloha Stadium*	Lane	County	0.56
15	Aloha Tower	Path	Co/St	1.12
16	Alohea Avenue	Lane	County	0.34
17	Aolele Street*	Lane	County	0.86
18	Atkinson Drive*	Lane	County	1.06
19	Auiki Street*	Route	County	0.79
20	Beretania Street	Lane	County	3.32
21	Bishop Street*	Lane	County	0.82
22	Bougainville Drive	Lane	County	0.60
23	Cooke Street	Lane	County	0.76
24	Coyne Street	Route	County	0.28

25	Date Street*	Lane	County	0.37
26	Diamond Head Road	Lane	County	2.46
27	Dillingham Highway (Extension)*	Lane	County	1.43
28	Dole Street*	Route	County	0.25
29	Dole Street	Lane	County	0.63
Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
30	Fort Street Mall	Route	County	0.38
31	Gulick Avenue*	Lane	County	0.56
32	Halekauwila Street*	Route	County	0.76
33	Harding Street*	Route	County	1.31
34	Holomoana Street	Lane	County	0.27
35	Honolulu Airport*	Route	State	1.18
36	Honomanu Street	Lane	County	0.16
37	Hotel Street	Lane	County	0.26
38	Ilalo Street*	Route	County	0.43
39	Iolani Avenue	Lane	County	0.36
40	Isenberg Street*	Lane	County	0.39
41	Isenberg Street	Lane	County	0.17
42	Iwilei Station*	Path	County	0.25
43	Kaahumanu Street	Lane	County	1.01
44	Kaamilo Street	Lane	County	1.35
45	Kahala Avenue*	Route	County	1.51
46	Kaimuki High School*	Path	State	0.28
47	Kakaako Station*	Path	County	0.10
48	Kakaaoko Waterfront Park*	Path	County	0.77
49	Kalakaua Avenue	Lane	County	2.18
50	Kalanianiole Highway*	Lane	State	0.31
51	Kalia Road	Lane	County	0.49
52	Kamakee Street*	Lane	County	0.35
53	Kamehameha Highway	Lane	State	5.43
54	Kamehameha Highway	Lane	County	1.35
55	Kamehameha IV Road	Lane	County	0.67
56	Kanealii Avenue	Route	County	0.55
57	Kaonohi Street	Lane	County	1.54
58	Kapahulu Avenue	Lane	County	0.77
59	Kapalama Canal (Eastern Section)*	Path	County	0.76
60	Kapalama Canal (Western Section)*	Path	County	0.51
61	Kapalama Stream	Path	County	0.64
62	Kapalu Street	Route	County	0.09
63	Kapiolani Boulevard*	Path	County	0.14
64	Kapiolani Boulevard	Lane	County	0.33
65	Kapiolani Park*	Lane	County	0.84
66	Kaua Street	Lane	County	0.87
67	Keeaumoku Street*	Lane	County	1.73
68	Kilauea Avenue*	Lane	County	0.28
69	Kilauea Avenue	Lane	County	1.29

70	Kuakini Street*	Route	County	0.40
71	Kuilei Street	Lane	County	0.25
72	Lagoon Drive	Lane	County	2.26
73	Liliha Street	Lane	State	0.37
74	Liliha Street	Lane	County	0.99
75	Lusitana Street	Route	County	0.55
Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
76	Makalapa Road*	Lane	County	0.95
77	Makapuu Avenue	Lane	County	0.27
78	Makuahine Street*	Route	County	1.58
79	Manoa-Palolo Stream	Path	County	0.99
80	McCully Street	Lane	County	0.02
81	McKinley High School	Path	State	0.43
82	Metcalf Street	Lane	Co/St	0.18
83	Middle Street*	Lane	County	0.46
84	Middle Street	Lane	State	0.05
85	Middle Street	Lane	County	0.44
86	Moanalua Gardens	Path	County	0.58
87	Moanalua Road (Central Section)	Path	County	1.37
88	Moanalua Road (Eastern Section)	Lane	County	0.32
89	Moanalua Road (Western Section)	Lane	County	1.78
90	Mokauea Street*	Lane	County	0.94
91	Monsarrat Avenue	Lane	County	1.36
92	Nehoa Street*	Route	County	2.65
93	Nimitz Highway	Lane	State	4.78
94	Noelani Street	Lane	County	1.23
95	North King Street (Chinatown)*	Lane	County	0.22
96	North King Street	Lane	County	1.97
97	North School Street	Lane	County	2.68
98	Nuuanu Street*	Route	County	1.23
99	Nuuanu Stream	Path	County	0.88
100	Nuuanu-Pali Drive	Route	County	1.81
101	Old Waialae Road	Lane	County	0.50
102	Pali Highway	Route	State	1.49
103	Pali Highway (Downtown)	Route	State	1.27
104	Pali Highway (Honolulu)*	Sharrows	County	2.93
105	Pali Highway (Honolulu)*	Route	County	1.57
106	Pali Lookout Access Road	Route	State	1.14
107	Pauoa Road	Route	County	0.55
108	Pearl Harbor Bike Path*	Path	State	0.75
109	Pearl Harbor Bike Path Access at Blaisdell Park	Path	County	0.18
110	Pearl Harbor Bike Path Access at Kanuku Street	Path	County	0.05
111	Pearl Harbor Bike Path Access at Lehua Avenue	Lane	County	0.34
112	Pearl Harbor Bike Path Access at McGrew Point	Path	County	0.04
113	Pearl Harbor Bike Path Access at Pearl Kai	Path	County	0.16

	Center			
114	Pearl Highlands Station*	Lane	County	0.28
115	Pearl Ridge Station*	Lane	County	0.09
116	Pensacola Avenue	Route	County	1.05
117	Piikoi Street	Route	County	1.20
118	Pukoloa Street	Lane	County	0.26
119	Punchbowl Street*	Lane	County	0.85
120	Puuloa Road	Lane	County	1.15
Facility #	Facility Name	Treatment	Jurisdiction	Length (miles)
121	Queen Street*	Lane	County	1.70
122	Radford Drive	Lane	County	0.24
123	Red Hill	Path	County	1.01
124	River Street	Lane	County	0.22
125	Salt Lake Boulevard	Lane	County	2.54
126	Saratoga Road	Lane	County	0.27
127	South King Street	Lane	County	3.80
128	South Street*	Lane	County	0.78
129	Spencer Street	Lane	County	0.51
130	Thomas Square Park*	Path	County	0.11
131	Ulune Street	Lane	Co/St	1.16
132	University Avenue	Lane	County	0.36
133	University Lower Quarry	Lane	County	0.41
134	University Upper Fire Road	Path	County	0.11
135	Varsity Place	Route	County	0.15
136	Victoria Street*	Lane	County	0.13
137	Vineyard Boulevard*	Lane	County	1.34
138	Waiaka Road*	Lane	County	0.17
139	Waialae Avenue	Lane	County	1.91
140	Waihona Street*	Lane	County	0.37
141	Waimano Home Road	Lane	County	1.25
142	Ward Avenue*	Route	County	1.09
143	Waterfront Park	Lane	County	0.66
144	Wilder Avenue	Lane	County	1.37
145	Wyllie Street*	Lane	County	0.26
146	Young Street	Lane	County	1.40
146	Total Facilities		Miles	133.06
Waianae				
1	Farrington Highway	Route	State	5.52
2	Farrington Highway (Maili)	Route	State	0.74
3	Leeward Bikeway (Waianae Coast)	Path	State	3.43
4	Maili Loop*	Route	County	8.56
5	Makaha Loop*	Route	County	3.19
6	Nanakuli Loop*	Route	County	2.52
6	Total Facilities		Miles	23.96

355	Grand Total Facilities	Grand Total Mileage	559.03
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3.0 Implementing Programs and Policies

A range of programs and policies are required to “institutionalize” bicycle facility planning into the CCH’s transportation and land use planning processes. The following section provides a listing and brief description of programs and policies under consideration to promote the institutionalization of bicycling on O’ahu.

The starting point for the programs and policies described in this report was the 1999 Honolulu Bikeway Master Plan (1999 Plan). Community input received through public workshops held in May and October 2008, results of input from a bicycling survey, and general comments submitted through the project website and by telephone all provided additional options for consideration. Research of other communities’ bicycle plans was conducted to ensure that the O’ahu Bike Plan will be in alignment with best practices across North America. Steps for this synthesis included: literature review of other community bicycle plans’ policies and programs; review of public input with analysis of themes; review of requirements for the League of American Bicyclists’ (LAB) ‘Bicycle-Friendly Community’ designation; and evaluation of the existing 1999 Plan’s policies and programs in comparison with best practices and themes. The policies and programs were then updated to reflect differences in existing conditions and community concerns.

3.1 Potential Programs

Five elements combine to create a successful and vibrant bicycle-friendly community: engineering, encouragement, education, enforcement, and evaluation. Together they are commonly referred to as the ‘five Es’. **Engineering**, involves physical improvements built on the ground for bicycle facilities, and is primarily addressed in Chapter 2 as projects. **Encouragement** programs inspire and support residents in changing their transportation habits to bicycle use. **Education** programs can give bicyclists, motorists, and pedestrians the knowledge and confidence necessary to safely share the road. **Enforcement** programs help bicyclists ride more often and more safely, and are generally implemented by the police who help reinforce compliance with traffic laws and safety among all users of the transportation system. **Evaluation** programs note if the programs are working to increase ridership, helping public officials learn about bicyclist behavior and whether or not implementing the projects and programs effects change in the bicycle mode share.

The following sections discuss the five E programs to help O’ahu meet the vision, goals, and objectives of the O’ahu Bike Plan. Each section includes background discussion as well as tables listing additional ideas that have been proposed by the public for consideration. The programs included without detailed discussion are new ideas recently received through public input. Table 3 provides a summary of the

proposed programs under consideration. New additions to those programs included in the 1999 Plan are marked with an asterisk (*) in Table 3 and throughout this chapter. The programs are organized by "E" and are not listed in order of priority.

Table 3
Potential Programs

1. Implement comprehensive on- and off-street bikeway maintenance programs
2. Establish proactive identification of and response to maintenance needs, including a robust phone hotline and online request system *
3. Establish a variety of on- and off-street signage *
4. Continue and expand bicycle parking facilities
5. Improve bike accessibility to, and integration with, transit facilities
6. Establish a network of facilities to provide bike commuters with clothes storage, showers, and secure bike parking
7. Encourage employee incentives *
8. Implement individualized outreach to O'ahu residents *
9. Implement encouragement programs
10. Provide bicycle facility information to residents and visitors *
11. Encourage establishment of a bike sharing program on O'ahu *
12. Develop a multi-modal access guide
13. Education Programs
14. Establish a neighborhood traffic calming program to make neighborhoods more pedestrian / bike-friendly
15. Implement enforcement programs to enforce the laws of the road as they apply to motorists and bicyclists
16. Perform annual counts and surveys of bicyclists according to national practices *
17. Support DOT efforts to implement Safe Routes to School programs on O'ahu *

3.1.1 Engineering

In addition to bike routes, lanes, paths, and shared shoulders, this section discusses several programs to enhance the bicycling infrastructure on O'ahu. On the ground improvements for bicycles include programs to enhance maintenance of on and off-street bikeways; traffic control devices with both on and off-road signage; and various types and options for parking.

A. Roadway Maintenance

Maintenance programs are important to ensure bicycle facilities are in the best biking condition, resulting in a safer bicycling environment. Both on-street and off-street bikeways need regular maintenance. Bicycles are more susceptible than motor vehicles to roadway irregularities such as potholes, broken glass, and loose gravel. The CCH should evaluate its current street maintenance and repair policies to ensure that they reflect the needs of bicyclists. Specific measures to review include:

Street sweeping. As motor vehicles travel along the roadway, debris is pushed to the outside lanes and shoulder. Debris also collects at the center of intersections. Roads striped with bike lanes or designated as bicycle routes should be swept more frequently than roads without designated bikeways. Street sweeping on these roadways should include removing debris on the shoulder and at intersections.

Minor repairs and improvements. Potholes and cracks along roadway shoulders primarily affect bicyclists and should be repaired in a timely manner. All repairs should be flush with the existing pavement surface.

Drainage grates. When repaving or maintaining roadways, drainage grates should be inspected to ensure that grate patterns are perpendicular to the travel direction. Replacement of bicycle-unfriendly drainage grates should be a standard practice.

Street resurfacing. When streets are resurfaced, utility covers, grates and other in-street items should be brought up to the new grade of the pavement surface. Similarly, the new asphalt should be tapered to meet the gutter edge and provide a smooth transition between the roadway and the gutter pan. The practice of limiting new pavement to the vehicle travel way should be discouraged as it ignores the edge of the roadway where cyclists travel and creates a dangerous condition for cyclists unless care is taken to taper the pavement edge.

Proactive identification of and response to maintenance needs. The CCH has a Pothole Report Phone Line, and an online Pot Hole Service Request Form to identify needed repairs to roadways. The CCH should promote this service and make it more robust to ensure maintenance needs for on-street bikeways and trails are identified. Portland Oregon's B-SMART bicycle safety monitoring and reporting tool is an example that CCH could follow. The online tool allows the public to: (1) precisely mark an incident (collision or close call) location on a map and include specific details of turning movement and direction of both parties involved; and (2) precisely mark and report the location of a problem (design, condition, maintenance) that affects bicyclists (see http://bikeportland.org/closecall/login_incident.php).

Regular maintenance of shared-use paths. Shared-use paths require regular maintenance, including trimming adjacent vegetation, sweeping, plowing, and removing trash and debris. The City and County of Honolulu Department of Parks and Recreation should develop a schedule for these routine items and should consider

assigning staff to monitor the pathways on a weekly basis to proactively identify maintenance needs.

Actively coordinate with maintenance workers. Maintenance workers should be involved in the development of bicycle related maintenance policies to ensure that staff and maintenance workers understand each other's needs and limitations.

Proactively sweep streets after collisions. A system should be developed that ensures streets are swept after automobile collisions.

Potential programs

1. Implement comprehensive on- and off-street bikeway maintenance programs to:
 - Perform street sweeping on roads with bicycle facilities more frequently than those without;*
 - Repair potholes and cracks in roadways to be flush to existing pavement surface*;
 - Actively coordinate with maintenance workers*;
 - Minimize encroachment from trees/bushes;*
 - Establish a system to ensure proactive street sweeping after collisions;*
 - Maintain shared-use-paths; and
 - Replace non-bicycle-friendly storm grates and utility covers in conjunction with routine maintenance and street resurfacing*.
2. Establish proactive identification of and response to maintenance needs, including a robust phone hotline and online request system*

Additional ideas and comments to be considered

Maintenance programs that have been proposed by the public for consideration include:

- Ensure any road repaving includes shoulders (not just the driving area);*
- Roads and gutters need attention; and*
- Ensure that trash bins, bulky rubbish, green waste, recyclables aren't put in bike lanes on trash day.*

B. Traffic Control Devices

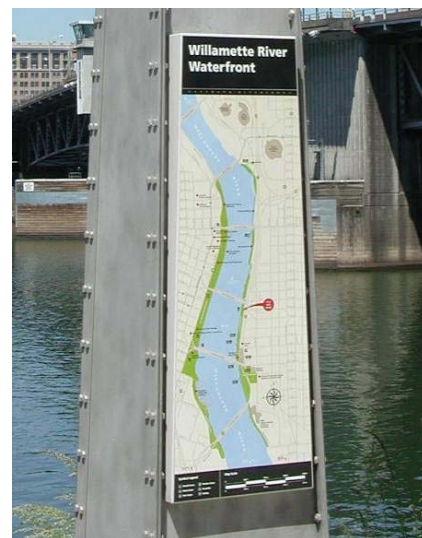
Not only can signs help bicyclists locate the best routes, distance and direction of population destinations (wayfinding signage), they can also direct bicyclists to short loop rides around a community, amenities such as bike parking, and bikeway system maps. Signs should be in locations that are easily viewable to bicyclists. In addition to messages telling bicyclists where to ride, such as “Bike Route” signs, signs can also inform bicyclists where not to ride.

Destination signage helps bicyclists use the bikeway network as an effective transportation system. These signs typically display distance, direction and in some cases, estimated travel time information to various destinations such as transit centers. On O‘ahu, destination signage would be helpful for directing bicyclists to destinations such as downtown, the Universities, beaches and parks, and shopping areas. Signage can also assist users to navigate towards major bikeways.

Bikeway Sharing Campaigns. Share the road programs seek to remind road users that both bicyclists and motor vehicles are legal road users. While the laws for bicyclists and passenger vehicles differ, all groups share the responsibility to use the road safely and respect the rights of others to use the road. “Share the Road” signs are posted on the CCH streets and this program should continue. The phrase also has appeared in driver education classes, newspaper articles, bumper stickers and advertising campaigns. “Share the Road” bumper stickers are produced by the CCH, and should be reprinted and widely distributed.

“Share the Path” campaigns are similar to Share the Road, but they occur on paved pathways where bicyclists and pedestrians share the same space. These campaigns often include checkpoints on bike paths, where free water, sport drink mix, and energy bars are offered, in addition to safety flyers. Expansion of the checkpoints to occur several times per year could greatly increase the impact of the Share the Path message, a critical one as more bicyclists appear on the roads through the implementation of the O‘ahu Bike Plan. Funds may be used to pay for staff time, materials, services, graphics, and other items.

Posted Bikeway Maps. Posted bicycle maps are an important feature of a bikeway system. They can help bicyclists figure out the best routes to access their destination. Bike maps can be for the entire bicycle system on the island, the certain region of the island (Windward, Leeward), or the area immediately surrounding where the map is located. Typically user maps are color coded, showing the type of bike facilities that are present, whether they are routes, lanes, or paths, and the



Bikeway system map

level of expertise a bicyclist should have to ride the various segments. Often user maps denote hills, difficult intersections or connections, bicycling safety tips, and destination locations such as schools and shopping areas. In addition to directing bicyclists where to go, posted bicycle user maps also market bicycling. They help spread the word about bicycling and raise awareness for bicycling opportunities in the area.

Bicycling user maps can pay for themselves or be subsidized through public-private partnership. The CCH could work with local businesses and sell space on the map for advertisement, thereby subsidizing or paying for the cost of the maps' development or production. These types of arrangements occur throughout the US, varying from partnerships between jurisdictions, to partnerships with bike stores or even banks.

Pavement Markings. Pavement markings work in conjunction with signs, helping bicyclists access bikeways from popular destinations. Directional markings inform bicyclists of where to ride, and also visually queue motorists that they are traveling along a bicycle route and should exercise caution.

Shared Lane Marking. Shared Lane Markings (also referred to as “sharrows”) provide positional guidance to bicyclists on roadways that are too narrow to be striped with bicycle lanes and to alert motorists of the location a bicyclist may occupy on the roadway. Shared Lane Markings are intended to reduce the chance of a cyclist colliding with an open car door of a vehicle parked on-street, parallel to the roadway. Shared Lane Markings are also appropriate in areas that experience a high level of “wrong-way” riding, along with bicycle network streets that have moderate to high parking turnover such as commercial areas. They are intended for use on roadways without striped bicycle lanes or shoulders.



Bicycle Traffic Control. A bicycle signal is an electrically powered traffic control device that may only be used in combination with an existing traffic signal. Bicycle signals may be used to address an identified safety or operational problem involving bicycles. Signals use green, yellow and red lighted bicycle symbols, to control bicycle movement through an intersection.

Potential program

3. Establish a variety of on- and off-street signage *
 - Continue to promote sharing of roadway space between motorists and bicyclists through signing roadways with “Share the Road” signs and “Bike Route” signs;*
 - Promote sharing of shared-use-path space through signing paths with “Share the Path” signs; *

- Provide wayfinding signage and posted bike maps for popular destinations and short loop rides; *
- Utilize bicycle signals at intersections deemed appropriate for safety precautions; *
- Establish on-pavement treatments (e.g. sharrows) where appropriate for additional awareness and marking of bicycle facilities; and *
- Develop a sign maintenance program. *

Additional ideas and comments to be considered

Traffic Control Device programs that have been proposed by the public for consideration include:

- Colored bike lanes (blue or red) and bike boxes *
- Signs guiding drivers to watch for bikers as they open doors *
- Bright orange/yellow/pink street signs and markings *
- No signs that say “End Bike Lane” *
- Ensure signage not in the bike route during construction *
- Add signage to indicate where cars may enter or crossover into a bike lane for left or right turns *
- Include signs to find facilities/parking/amenities @ popular locations *
- If bike lane ends abruptly, provide signage to direct cyclists *

C. Parking

Existing bicycle parking is already scarce and more is needed. As more bikeways are constructed and bicycle usage grows, the demand for bike parking will increase even more. Bicycle parking should be installed on public property, or available to private entities on an at-cost basis. Bicycle parking facilities should be standard at public destinations, including government buildings, community centers, parks, schools and shopping centers.

Short-term parking. Short-term bicycle parking accommodates short-term visitors, customers, delivery persons and others expected to depart on bike within two hours. Short term parking is typically provided by bicycle racks that support the bicycle but do not have a built in locking mechanism. These racks are relatively low-cost devices that typically hold between two and eight bicycles, allow bicyclists to securely lock their frames and wheels, are secure to the ground, and are in highly visible areas. Installation in high-visibility areas allows increased security.



A covered enclosure or bike oasis can add shade and weather protection to bicycle parking stands

Another option is installation of short-term bicycle parking or “bike corrals”, which are placed in the street in place of a vehicle parking stall. This is an alternative bike parking location in areas with narrow sidewalk widths. Up to 14 bicycles can fit in the elongated racks in the space of one vehicle parking stall, and in some cities they are often paid for by the businesses fronting them.

Long Term Bike Parking. Long-term bicycle parking is for those riders expecting to leave their bike unattended for several hours or more. This parking is provided in a secure, weather-protected manner and location. Where security is not a major issue, a cluster of bicycle racks may be sufficient, with optional shade coverage to provide protection from the weather. Where theft is a potential problem, long-term parking should be accommodated by either attended bicycle racks or fully enclosed bicycle lockers.



Bikestation© Long Beach is located near light rail and bus services

Technology for bicycle lockers is evolving. Original bicycle lockers used a lock-and-key mechanism and a monthly rental period. These types of lockers are still in use throughout the US. For safety reasons, lockers should have some transparency so people passing by can see what is inside.

Bikestations© provide attended bicycle parking at areas where bicycle use is popular. These long-term bicycle parking facilities are best suited where bicycling is a major mode of transportation and where there is residential, employment, and service land uses. These long-term bicycle parking facilities typically use a cage or a large locked room with controlled access to store bicycles.

Many BikeStations© offer other amenities including bicycle rentals and maintenance service for a charge. Amenities can include free access to showers, bike sharing, and 24 hour secure bicycle parking.

Potential program

4. Continue and expand bicycle parking facilities through:
- Bike rental lockers for long-term parking at major destinations including the airport, Downtown Honolulu, Park & Ride transit facilities, regional malls, universities, and colleges; *
 - Promote establishment of Bikestations (or similar attended bicycle parking facilities) at major destinations; *
 - Bicycle rack installation program, especially at major destinations and major event venues (Kapiolani Park, Waikiki Shell, Ala Moana Beach Park); and *
 - Designate bicycle parking areas and ensure adequate bicycle parking signs and pavement markings. *

Additional ideas and comments to be considered

Parking programs that have been proposed by the public for consideration include:

- Bike parking needs to be secure--facilities are useless if your bike gets stolen all the time *
- Bike racks at hiking trails *
- Increased security for bike parking *
- Park & Ride for bicycles *
- Large bike racks with bicycle guards *
- More temporary racks at special events/parks/beaches *
- Off sidewalk on campus parking at all University campuses *
- Bike boxes/cages at beach parks for triathlete training *
- Require existing commercial areas to provide bike parking *
- Require existing and future multi-family residential units to provide bike parking *
- Standard for locations of bike racks. Make sure bike racks are completely useable. Some racks are placed in places where a chained bike can get hit by a car. *
- Eliminate mopeds use of bicycle racks through heavy enforcement *
- Provide bike parking for large group rides at eating establishments *
- Use bike trees as a type of parking *

3.1.2 Transit

Effective public transit depends on people being able to bicycle comfortably and safely to and from stops. This reduces the need for additional car parking, improves mobility choices, can create denser and mixed-use urban environment, and improves physical health through active lifestyles. Improvements to the bicycle environment around transit stops increases bicycle safety, comfort, and may lead to an increase in public transit ridership. To do this effectively, the on-street bicycle network or bicycle paths must link directly to transit centers and transfer points.

Currently TheBus has bicycle racks on all of its buses. Most buses have capacity for two bicycles, some have three, and there are plans for all new buses to have capacity for three bicycles. Additional capacity is needed for O'ahu's buses to accommodate bicycle commuters, as they are often left behind because of insufficient capacity on the buses.

Bicycle wayfinding signage is an important part of the bicycle network and the integration of the transit system. Implementing a well-planned and attractive system of signage can greatly enhance bikeway facilities and provide many benefits. Wayfinding signage can lead bicyclists to city bikeways from high volume destinations, transit stops, and vice-versa, encouraging O'ahu residents and visitors to bicycle for work and for pleasure. On O'ahu, destination signage would be helpful for directing bicyclists to destinations such as downtown, the Colleges, beaches and parks, and shopping areas, as well as transit facilities.

Potential program

5. Improve bike accessibility to, and integration with, transit facilities:
 - Provide safe, secure long-term parking , with covered bicycle corrals or bicycle lockers, at major transit transfer centers, regional transit centers, and park & ride facilities; *
 - Add wayfinding signage to provide distance and time estimates to and from transit stops; *
 - Ensure folding bikes are allowed inside public transit vehicles; *
 - Provide bikes on transit information online, including trip planning; *
 - Add signage and publicize the fact that bicycles are allowed on “public transit vehicles only” lanes; and
 - Identify points where bikeways and key transit nodes intersect. Add bike routes to transit maps and create bike maps that include transit routes.

Additional ideas and comments to be considered

Transit access programs that have been proposed by the public for consideration include:

- Create bicycle-transport buses with 2/3 dedicated to bike racks *
- Increase number of bike spaces on bus *
- Improve biker expectations of bus arrival times through use of GPS signs at each bus stop *
- Ensure adequate amenities exist for commuters. Amenities must be safe and locational information must be available online for trip planning *

3.1.3 Encouragement

In bicycle planning, encouragement programs are designed to meet a range of objectives, including raising awareness for bicycling as an activity and for existing bicycle infrastructure, connecting current and future bicyclists to existing resources, and encouraging residents to bicycle more often. These types of programs can help motivate new bicyclists to start riding and help existing bicyclists ride more often.

Provision of Showers and Bicycle Lockers. Encouraging employers to provide shower and bike locker facilities for employees should be a component of all commute and traffic demand management programs as these facilities are used by current bicycle commuters and may encourage more employees to ride their bicycles. While more extensive accommodations, such as bicycle storage areas and shower and locker facilities are recommended, simpler solutions may be more feasible. In many cases, simply providing a secure indoor space to park a bicycle is a significant improvement. Bicyclists are not the only employees that may benefit from shower and locker facilities; these facilities are useful for employees who wish to run or exercise on a work break.

Some cities in the United States have requirements for shower and locker facilities in new and reconstructed developments. For example, the model planning ordinance for the City of San Francisco requires that new industrial and commercial developments over 10,000 gross square feet in floor area must provide at least one shower and two clothes lockers. The CCH should consider requiring bicycle end-of-trip support facilities in new developments as appropriate. End-of-trip facilities could include: secure bicycle parking, drinking fountains, bathrooms, showers, lockers, changing rooms, and signage to direct people to them. Requirements would vary based on the size and type of the proposed development.

Individualized Social Marketing. In the United States, many cities are increasingly interested in an emerging type of transportation demand management program based on individualized socialized marketing. The first such program was created in Perth, Australia and named TravelSmart®. Several communities, including Portland, Oregon and Alameda, California have planned and implemented similar individualized marketing programs aimed at shifting residents' travel mode away from drive-alone trips. Marin County is currently undergoing a similar program (more information is available here:

<http://walkbikemarin.org/waytogo/>). This type of marketing program has proven successful to increase bicycle mode share and integrate many other of the marketing and



Way to Go Sausalito! is an individualized social marketing program to increase the use of nonmotorized transportation

promotional programs into one strategy.

Bike to Work Events. Bike to work events promote commuters to use their bicycle to get to and from work. Most events are held during May, which is National Bike to Work Month, and the third Thursday in May, which is National Bike to Work Day. These events are promoted in a variety of ways. Energizer stations are set up at transit stops, bikeways, and other commuter routes to provide refreshments and Bike to Work gear. Booths are set up during Bike to Work morning in central plazas and public spaces and provide attendees with valet bicycle parking, how to commute safely, and how to use bicycles with public transit. City officials also make appearances, bicycling to work themselves, and speaking of the advantages of bicycle commuting.

Employer Incentives. A majority of people will commute by bicycle only if the conditions at their workplace are supportive of the activity. In addition to structural facilities such as quality long-term bicycle parking, showers, and lockers, there are several incentives that the government or employers can provide. As a complement to their Bicycle-Friendly Community program, the LAB has instituted a Bicycle-Friendly Business (BFB) program to honor businesses that have made an effort to create bicycle friendly conditions for both employees and customers. This could be a program that businesses on O'ahu could participate in.

Some incentives that have shown success in a variety of work environments include:

- Offer discounts at bike shops.
- Subsidize bicycle repair.
- Encourage friendly competitions that publicize firms commuting habits and provide weekly drawings for bicycle commuters.
- Provide giveaways, such as a bicycle 'starter kit' which might include a water bottle, patch kit, reflective stickers, and instructions to obtain a bike map
- Inform employees about bicycle commuting with weekly brown bag discussions or a website.
- Coordinate a 'bicycle buddy' system in which another employee rides to work with a new commuter, providing advice, information, and moral support. Bike Buddy programs match up beginning cyclists with experienced cyclists to take the mystery and uncertainty out of urban cycling. The experienced Bike Buddy commuter can share with the beginner the safest and fastest commute routes; the best commuter clothing and gear to use; how to patch a flat and perform light repairs; and provide the motivation to bicycle rather than drive. Bike Buddies can be linked through online blog, or bicycling clubs and groups.
- Sponsor recreational or fitness rides at lunchtime or after work, where employees can socialize and ride together.
- Acknowledge people who bike to work regularly with prizes.
- Give cash back to bicyclists who do not use an employee parking space.

- Offer flextime or a longer grace period for bicycle commuting.
- Monitor the program's progress with a newsletter and established company goals.
- Offer cash incentives to frequent commuters.

Bike Sharing. Bicycle rental systems, often referred to as 'bikesharing' or 'PUB – Public Use Bicycles', are gaining popularity in many metropolitan cities across the world. These systems provide bicycles at rental locations throughout a city and then users can return the bicycles to any of the rental locations. The operators are usually private companies that pay for the bicycles and rental stations, in return for advertising rights on public transit vehicles and stations. With the advances in technology, the risk of bicycle theft and malfunction is minimized. Bicycles can be outfitted with GPS tracking devices as well as digital sensors to alert the operator of malfunction. Pay systems are all similar in that they usually require a credit card deposit on a 'smartcard' that allows access to bicycles locked at rental stations.

Printed Bicycle Maps. Printed bicycle map can provide a wealth of information to bicycle riders. They can show designated pathways, streets with traffic calming treatments, local bike stores, bicycle rental locations, and shower and storage facilities. Bicyclists can keep the map with them during rides for use in wayfinding. A bike map is an excellent resource for both local bicyclists and tourists visiting O'ahu.

Maps may be printed on several different qualities of paper, ranging from light-weight newspaper-grade stock to more durable tear-resistant and water-resistant versions. This allows the map provider to issue one version of the map for free while recovering printing costs with the other. Riders can buy the map at or near cost, or print the map for free if it is made available as an online document. Employers and bicycle shop owners can provide maps for free as an encouragement activity or they can pay for advertising on the maps, subsidizing development and printing costs.

Currently, the State Department of Transportation (DOT) has an online version of the State bike map (which includes CCH bike map information). The CCH should develop their own online version of the bike map, and continue coordinating with the State DOT to update this online resource with the construction of new facilities. Enhancing the online maps so it includes more features, like route and distance information would benefit all users and discussed more in the next section.

Online Maps and Trip Planning. Online maps are becoming increasingly viable with improvements made to internet service and data within the last five years. "Map Quest" type route finding services specific to bicyclists occur with increasing frequency. Features can include route choice based on parameters such as scenery, topography, and maximization of bike facilities, points of interest; GPS interactivity to map and display routes; and inclusion of health information based on ride statistics. Customization of on-line tools allows varied uses including an individual fitness tool,

display of varied bicycle routes, a public improvement tool allowing people to identify locations where maintenance is needed. Some sites even allow users to create and store routes using online maps and Google Earth imagery to share with other interested parties. As previously mentioned, DTS has a map of bicycle facilities on O'ahu, and an on-line bikemapper that integrates many of these features would benefit users. Walking, driving, and bus routes can be mapped using GoogleMaps; bicycle trips should be added as a feature.

Potential programs

6. Establish a network of facilities to provide bike commuters with clothes storage, showers, and secure bike parking:
 - Encourage building owners and facility managers to provide covered, secure bicycle parking by offering tax incentives; and
 - Encourage health centers and fitness clubs to offer membership packages for bicycle commuters;
7. Encourage employee incentives such as: *
 - Flextime for bike commuters; *
 - Cash back to cyclists that do not use employee parking; *
 - Discounts offered at bike shops; *
 - Subsidize bicycle repair; *
 - Encourage friendly competitions that publicize firms commuting habits; *
 - Coordinate a bicycle-buddy system; and *
 - Sponsor bicycle rides during lunchtime or after work. *
8. Implement individualized outreach to O'ahu residents to include: *
 - Survey of bicycling needs and questions; *
 - Delivery of customized packets of maps, brochures, discounts for bike shops; and *
 - Host safety classes and guided rides. *
9. Implement encouragement programs:
 - Establish a "Bike to Work Week" with program incentives that support bicycling and alternative transportation modes; and
 - Include bicycles in the City motor pool.
10. Provide bicycle facility information to residents and visitors: *
 - Create and disseminate bicycle maps showing designated paths, streets, lanes, bicycle rental locations, shower and storage facilities (both print and online versions); *
 - Establish online bicycle trip planning maps to include route selection based on scenery, topography, type of facility, and points of interest; *
 - Create and provide information for tourists including maps, guides, and rules of the road. Distribute this information to bike shops, hotels, youth

- hostels, and bed and breakfast accommodations; *
- Maps/pamphlets for tourists and residents to participate in Island-wide rides that include places including camp grounds, hostels, and B&Bs; *
- Encourage hotels and other visitor accommodations to provide and / or expand bike parking and storage; and
- Promote O'ahu as a bicycle-friendly community by the Hawai'i Visitor's and Convention Bureau.

11. Encourage establishment of a bike sharing program on O'ahu *

Additional ideas and comments to be considered

Encouragement programs that have been proposed by the public for consideration include:

- Bicycle tourism; Get Hawai'i Tourism Bureau involved *
- Public officials ride-beginner group rides with elected officials *
- Mayors Advisory Committee on Bicycling- - give authority (maximum allowed by advisory nature) to manage and oversee projects and plans *
- Money – priority change for CCH funding – re: Charter 2006 \$150K for bike education from General Fund; CCH needs to appropriate funds for bicycle programs *
- Bicycle representative to act as a liaison (between bike shops, city, cycling orgs) to promote bicycling at large companies, events etc. *
- Hawaii Bicycling League – support them in promotion of group rides/existing cycling groups/organizations to promote bicycle education *
- Support of the Cycle Manoa Initiative *
- Beach park shower availability connected with bus lines *
- Make sure schools allow children to bike to school. (Some schools prohibit children from biking to school) *
- Create a bike recycle program -Hi5 system for bikes *
- Bike carpool organizations *
- UH dorm students – show them how to get around town *
- CCH should pioneer encouragement programs to set examples for other employers *
- Bike day events where close the roads to cars on Sundays (Cambridge, MA & Portland examples); link to Sunset on the Beach/Waikiki *
- Support community riders and events such as Critical Mass *
- Hold higher profile events (e.g. Bike to Work) with community organizations*
- Aloha Bike Friday where Fridays are casual and bicycling to work is encouraged *
- Tax incentives for businesses that are bicycle friendly (add showers/lockers) *
- Increase funding for bicycling: retain /allocate portion of gas tax *

- no GET on bike sales-state tax incentives for bicycle commuters; on line registration *
- \$20 tax free monthly for bike commuting *
- \$20/month bike fringe benefit from CCH *
- Encourage corporate involvement – bicycle friendly award *
- Bike tour industry *
- Include scenic/fun/historic routes on online bicycle trip maps *
- Calculate difficulty of route, provide information (topography, traffic flow) *
- Google maps with bicycle routes/paths/lanes tied into length of trip/time/difficulty of ride/traffic conditions *
- 1 map with city and state bikeways shown *
- Update bicycle maps annually *
- Give bicycle maps with HBL membership *
- Identify local loops/routes on maps (online and print) *
- Hotline for bike route information (how do I get from X to Y?) *

3.1.4 Education

Objectives for educational programs include promoting safety and teaching current and future bicyclists about their rights and responsibilities. Educational programs can help bicyclists learn about riding with other bicyclists as well as sharing space with other users of the transportation system.

Multi-Modal Access Guides. In conjunction with a printed bicycle map, the CCH should develop a multi-modal access guide. A multi-modal access guide provides concise customized information on how to access specific destinations with emphasis on biking. Access guides can be as simple as a map printed on the back of a business card or as complex as a multi-page packet distributed to employees. Some items commonly included in access guides are:

- A map of the area with transit route and stops, recommended walking and biking routes, nearby landmarks, facilities such as restrooms and drinking fountains, locations of bicycle and vehicle parking and major roads.
- Information on transit service including: frequency, fares, accepted methods of payment, first and last runs, schedules, phone numbers, and websites of transit service providers and taxis.
- Information on how long it takes to walk or bike from a transit stop to a destination.
- Accessibility information for people with disabilities.

Best practices include using graphics, providing specific step-by-step travel directions, providing parking locations and pricing information, and providing information about the benefits of biking. High-quality access guides should be concise and accurate and

should incorporate input from key stakeholders, including public transportation operators, public officials, employees, staff who will be distributing the access guide, and those with disabilities.

Adult Bicycle Commuter Education. Providing information regarding proper bicycling habits can encourage bicycle commuters to follow the rules of the road and have proper equipment such as reflectors, lights, and helmets resulting in possible a reduction in collisions. This information can be dispersed through work-related programs, in conjunction with other forms of incentives and encouragement, or it could be provided by the CCH through brochures, bike fairs, guided tours, or personal communication with DTS. The CCH should work with organizations like Hawai'i Bicycling League (HBL) to develop an adult bicycle education program.

Public Service Announcements. Public Service Announcements (PSAs) are an important part of creating awareness for bicycling. They are an effective way to reach the general public via TV, radio, or print media and reinforce other education and outreach messages. A well-produced public service message can be memorable and effective. CCH already has established PSAs that should continue to be available. They can be found online at: <http://www.honolulu.gov/dts/bikemusicadnvideos.htm>. San Luis Obispo has some stellar examples of PSAs as well, found online at: <http://slobikelane.org/sharetheroad.htm>.

Traffic Calming. Traffic calming treatments can improve the bicycling environment by reducing vehicle speeds to the point where they generally match bicyclists' operating speeds, enabling motorists and cyclists to safely co-exist on the same facility. Some examples can include chicanes, mini traffic circles, and speed humps. More detailed information on these can be found in Work Product 3.1.1, *Typical Facility Design Treatments*.

Potential programs

12. Develop a multi-modal access guide that includes:
 - A map of the area with rail and bus stops, recommended walking and biking routes, nearby landmarks, facilities such as restrooms and drinking fountains, locations of bicycle and vehicle parking, and major roads; *
 - Information on public transit service including: frequency, fares, accepted methods of payment, first and last runs, schedules, phone numbers and websites of transit service providers and taxis; *
 - Information on how long it takes to walk or bike from a transit stop to a destination;
 - Given at point of sale and available at all bicycle shops, on line; and *
 - Accessibility information for people with disabilities. *
13. Education Programs:

- Include questions regarding bicycles on driver's license tests;
 - Continue to fund the BikeEd education program for all fourth graders;
 - Promote adult bicycle education classes to teach proper equipment and etiquette;" and
 - Create and air public service announcements.
14. Establish a neighborhood traffic calming program to make neighborhoods more pedestrian / bike-friendly:
- Educate Neighborhood Board members, developers, and public and private sector designers and engineers of traffic calming initiatives;
 - Add bikeway sharing signage (e.g. "Share-the-Road", "Bicycle Route") to neighborhood streets; and
 - Slow traffic on neighborhood streets thereby improving pedestrian and bicycle safety and access.

Additional ideas and comments to be considered

Education programs that have been proposed by the public for consideration include:

- City sponsored 3-hour bicycle safety classes with visual and bicycle demonstrations
- Education – training of regular public for bicycle etiquette and driver education
- Small presentation on bicycle education and safety for tours/bike stores/tourists
- Look at Seattle's adult education for cyclist provided by bicycle league
- Motorists need to be educated about cyclists right of way; if no bike path/lane, make sure people know bicyclists are allowed to take the whole lane
- Bike education for novice cyclists
- Include bike education as part of drivers ed and drivers test (and renewal)
- Reduce animosity between drivers, peds, and cyclists--all need to be made aware of traffic code
- Volunteer bike patrol
- Require on-road practical test for all drivers (including police, cabs, commercial licenses) where they must ride a bike in traffic
- Bicycle regulations issued with bicycle license
- How do you treat bicycles as vehicles / laws for bicycles
- Update bicycle pamphlet by CCH and make it more user-friendly
- Cyclists on sidewalks need to be mindful of motorists
- Bike path blog
- Adult Ed Video on Olelo or other public access station
- PSAs include awareness of the fun of cycling, and that walkers need to share

the bike paths

- High visibility letting drivers know cyclists rights of way; that biking is OK and here to stay
- Careful use of media to educate people the rules of the road
- TV spots should feature real riders/situations

3.1.5 Enforcement

An enforcement program's requirements differ slightly from education and encouragement campaigns due to the necessary involvement of the Police Department. In light of the necessity of cooperation between multiple governmental departments, organization and clear communication becomes increasingly important. The following suggestions represent possible ways for the Honolulu Police Department (HPD) to interact with DTS, prioritize enforcement activities, and receive valuable statistics regarding collisions that can help determine targets for future education and encouragement programs.

Moving Violations. DTS should actively work with the HPD to create a program that focuses on enforcement of traffic safety laws directly affecting bicyclists. Appropriate employees at DTS and the HPD should work together to determine the priority for handing out citations to motorists and bicyclists. Priority for issuing citations should be given to motorist violations that most frequently cause collisions with bicyclists, such as failure to signal, failing to stop at a stop sign or light (especially when making a right turn), and passing too closely.

When cited for riding without lights and/or reflectors, bicyclists should have the option to avoid a fine if they present evidence of properly equipping their bicycle within a reasonable time period, such as a "fix-it ticket" policy. This policy could also address the enforcement of other bicycle safety violations, such as properly operating bicycles. Another policy option is for enforcement officers to give coupons for bicycle lights when a bicyclist is riding without a light. For example, police officers in Davis, California give 10 percent off the cost of a bike light coupons at local retailers when they see bicyclists without lights.

Citations issued for moving violations are bicycle-safety education opportunities. While proactive measures are best, classes to correct errant roadway behavior should be developed by DTS in partnership with HPD and offered at traffic school when deemed appropriate. The curriculum should focus primarily on bicycling skills including: bicycling in traffic, share the road concepts, and rights and responsibilities of both the bicyclist and the motorist. As an alternative to a fine for a bicycle-related violation, offenders might be given the option of enrolling in a traffic school program with an emphasis on bicycle rules of the road. Such a program could also be an option for non-bicycle related traffic infractions.

Police Department Education. DTS should work with the HPD to provide bicycle traffic education to police officers focusing on the rights and responsibilities of bicyclists and the practice of proper bicycle positioning techniques in traffic. Bicycle traffic education should be integrated into training for all police officers. In addition to developing awareness of the challenges of maneuvering a bicycle in traffic, a bicycle safety training course should provide a list of guidelines to assist with bicycle-related collision reports. This helps ensure valuable documentation of information for public health studies regarding injury prevention. A LAB Certified Instructor should administer the bicycle safety training.

Bicycle-mounted police officers are more sensitive to bicyclists' rights and bicycle safety issues due to their increased understanding of the physical characteristics of bicycles, the relationship of bicyclists to motorists in traffic situations, and the challenges of bicycle operation in urban, suburban, and rural environments. As police departments have learned throughout the US, bicycle patrols are effective in dealing with crimes that take place where police cars cannot access. HPD's bicycle mounted patrols are commendable and should be continued.

Variable Speed Feedback Signs. Variable speed feedback signs are permanently mounted at specific locations. These devices show current vehicle speeds, speed limits and are programmable to flash and/or display a "slow down" message when vehicle speeds exceed a pre-set limit. The speed limit can vary depending on the time of day (e.g. for time-based school zones), special events, or other traffic conditions. The CCH should consider incorporating these devices in areas where speeding is a problem.

Speed Radar Trailers. Speed Radar Trailers can be used to reduce speeds and enforce speed limit violations in known speeding problem areas. In areas with speeding problems, police set up an unmanned trailer that displays the speed of approaching motorists along with a speed limit sign. The trailer can be used as both an educational and enforcement tool. By itself, the unmanned trailer serves as effective education to motorists about their current speed in relation to the speed limit. As an alternative enforcement measure, the police department may choose to station an officer near the trailer to issue citations to motorists exceeding the speed limit. Because they are easily moveable, radar trailers are often used on streets where local residents have complained about speeding problems. If



Speed Radar Trailers are mobile devices for encouraging and enforcing slower vehicle speeds

frequently left in the same location without officer presence, motorists may learn that speeding in that location will not result in a citation and increase their speeds. HPD should continue to use this program to control speeding. Attention needs to be given to the placement of these trailers to ensure they do not block the bicycle travel lane.

Potential program

15. Implement enforcement programs to enforce the laws of the road as they apply to motorists and bicyclists:
 - Integrate bicycle traffic education into training of police officers on rights and responsibilities of cyclists; *
 - Target enforcement activities to motorist violations most unsafe for bicyclists; *
 - Offer 'fix-it' ticket policy for improperly equipped or operating bicycles; *
 - Offer traffic school for bicycle-related violations for both motorists and bicyclists; *
 - Utilize variable speed feedback signs and trailers to reduce speeds and enforce speed limits; *
 - Implement an enforcement program for dangerous behavior on the road by all road users; and
 - Create a positive reinforcement program for good behavior.

Additional ideas and comments to be considered

Enforcement programs that have been proposed by the public for consideration include:

- Increase police bike patrols to enforce the law
- Concerned that there is abuse by police with fix it tickets – harass cyclists
- More police on bicycles, especially in peak times
- Enforce cars parking in bike lane

3.1.6 Evaluation

Evaluation programs are critical in determining whether bicycle infrastructure and bicycle programs are working to increase ridership. In the likely event that bicycle ridership increases, reported evaluation is an excellent source to help the CCH earn media coverage, and include in its funding applications for bicycle projects and programs. These data are also useful to compare the relationship between bicycle riders and reported collisions over time.

Targeted Enforcement and Evaluation. While enforcement is important in all parts of O'ahu, areas with high numbers of motorists, bicyclists, and pedestrians, or areas with frequent collisions represent ideal locations for visible enforcement actions

that can serve education, enforcement, and evaluation purposes. By working with police officers to coordinate these locations, DTS can conduct field visits before and after enforcement activities to determine whether the actions have the desired, measurable effects. This sort of activity will allow DTS and the HPD to determine the types of enforcement activities that achieve the best performance under various conditions and more effectively target future enforcement activities.

Annual Bicycle Counts and Surveys. Many jurisdictions do not perform regular bicycle user counts. As a result, they do not have a mechanism for tracking ridership trends over time, or for evaluating the impact of projects, policies, and programs. CCH should ensure completion of annual counts of bicyclists (and pedestrians if desired) according to national practices. The National Bicycle and Pedestrian Documentation Project (www.fhwa.dot.gov/environment/bikeped/study) has developed a recommended methodology, survey and count forms, and reporting forms, and can be modified to serve the needs and interests of individual jurisdictions. DTS could work with groups such as HBL to assist with these counts and surveys. One of the recommendations from the LAB for attaining Bicycle-Friendly Community status is to set an ambitious attainable target to increase the percentage of trips made by bicycle.

If desired, further bicycle and pedestrian data collection opportunities may be pursued as well, including:

- Include before-and-after bicycle/pedestrian/vehicle data collection on priority roadway projects;
- Insert bicycle/pedestrian survey questions into any existing travel mode or CCH audit survey instrument;
- Require counting of bicyclists/pedestrians in all traffic studies; and
- Purchase National Household Travel Survey add-on data.

Potential program

16. Perform annual counts and surveys of bicyclists according to national practices:
 - *
 - Assist volunteer groups in establishing programs to monitor bicycle use patterns;
 - Conduct baseline counts on key recreation and commuter routes and update counts to track changes in use;
 - Require counting of bicyclists/pedestrians in all traffic studies; *
 - Insert bicycle/pedestrian survey questions into any existing travel mode or City and County of Honolulu audit survey instrument; *
 - Collect data on crashes/deaths and what causes them and location (e.g. bike

- path or route); and
- Conduct counts before and after new projects to monitor use and effectiveness.

3.1.7 Additional public input on programs

General programs that do not systematically fall within the 5 Es, that have been proposed by the public for consideration include:

- Promote community bike resource/recycling center *
- Cameras on bikes/cars to capture license plates info-upload to online complaint system *
- Implement more Bike School Buses *
- Provide lighted night bike paths *
- Bicycle operator license (as official state ID) *
- Implement the Plan *
- Promote Kamehameha's Law of the Splintered Paddle *
- Law prohibiting cell phone use while driving *
- Law opposing headphones while riding *
- Tax developers for bike fund *
- Elevated bikeways/separated from vehicle traffic *
- Add Bike to School events similar to Bike to Work events *
- Support HBL in promotion of group rides/existing cycling groups/organizations to promote bicycle education *
- More DTS staff *
- Increase budget for the Bicycle Program within DTS *
- Integrate UH bike plan with City Plan *
- Enforce no mopeds on bike paths *
- Ensure that bike lanes are wide enough to avoid parked car doors opening into bike lane *
- Ensure that where bike facilities join with other facilities are safe, well marked *
- Include safe routes to recreation trailheads and assured access for mountain bikes to all trails *
- Partner with the State Department of Health's fitness advocacy program for bike programs *

3.1.8 Safe Routes to School Program

Safe Routes to School (SRTS) is a federally-funded program designed to implement the five E's to help increase the number of students that walk and bike to school. The Hawai'i program is managed by the State DOT. SRTS programs began in the late

1990's and early 2000's as grassroots efforts in several communities throughout the US. Today, they have spread to communities countrywide. The goals of SRTS programs are typically to:

- Reduce traffic congestion around schools;
- Increase physical activity for children and youth;
- Foster a healthier lifestyle for the whole family;
- Create safer, calmer streets and neighborhoods; and
- Improve air quality and a cleaner environment.

By employing a range of programs and engaging participants in a variety of activities and the program maximizes the number of people who will hear, understand and apply the lessons learned. Even though the SRTS program is currently managed by the State DOT, DTS can help support expansion of the program to all O'ahu schools.

Potential program

17. Support DOT efforts to implement Safe Routes to School programs on O'ahu.*

3.2 Potential Policies

The following section discusses policies to further help meet the vision, goals, and objectives of the O'ahu Bike Plan. Table 4 lists the policies under consideration. Existing policies from the 1999 Plan are included first (#1-12) and are not accompanied by a detailed discussion. Additions to those policies included in the 1999 Plan are marked with an asterisk (*). Where an existing policy has been modified in a significant way, an asterisk marks it as well. For new policies being proposed for consideration, background discussion follows.

**Table 4
Potential Policies**

<ol style="list-style-type: none"> 1. Adopt major bicycle policy statements in the City's <i>General Plan</i> and <i>Primary Urban Center Development Plan</i> that "every street and highway on which bicycles are permitted to operate is a "bicycle street" and should be designed and maintained to accommodate shared use by bicycles and motor vehicles."
<ol style="list-style-type: none"> 2. Create a roadway classification system in the <i>Development and Sustainable Communities Plans</i> which designates bicycle priority streets separately from other modes.

3.	Incorporate appropriate bicycle and pedestrian facilities into all new roads and roadway improvements, ensuring safe linkages to existing bicycle facilities. *
4.	City agencies involved in roadway construction and design should review and adopt the <i>1999 AASHTO Guide for the Development of Bicycle Facilities</i> and the design guidelines outlined in the MUTCD for bikeway facilities. *
5.	Periodically update City design manuals to be consistent with MUTCD and AASHTO changes. *
6.	Incorporate project recommendations from the <i>Oahu Bicycle Master Plan</i> into the <i>O'ahu Regional Transportation Plan</i> and subsequent updates of the State's <i>Bike Plan Hawaii</i> .
7.	Incorporate recommendations of the <i>Oahu Bicycle Master Plan</i> into other City plans as they are updated. These include the <i>General Plan</i> , Sustainable Communities and Development Plans, and Special Area Plans.
8.	Establish a bicycle parking requirement in the City and County of Honolulu's <i>Land Use Ordinance</i> to identify minimum short- and long-term bicycle parking requirements by land use type. Provide incentives for developers to provide secure short- and long-term bicycle storage facilities and showers.
9.	Continue to work closely with the Neighborhood Boards, community associations, school organizations, and other community-based groups to establish and maintain bicycle and pedestrian-friendly neighborhoods.
10.	Identify opportunities for bicycle projects to be incorporated into capital improvement and maintenance projects.
11.	Use the benchmarks identified in the <i>O'ahu Bicycle Master Plan</i> to monitor progress toward implementation of the O'ahu Bicycle Master Plan.
12.	DTS should prepare an annual Bicycle Master Plan progress report to be submitted to the Mayor, the Transportation Commission, the City Council, O'ahu Metropolitan Planning Organization (OMPO), and the Mayor's Advisory Committee on Bicycling.
13.	Ensure appropriate accommodations for bicycles during roadway construction, following recommendations of the Mayor's Advisory Committee on Bicycling. *
14.	Provide bicycle access to and amenities such as parking and showers at major transit stations and high volume destinations. *
15.	Provide bicycle valet services at major city events. *
16.	Implement the '3-ft rule'; a three-foot zone of protection for bicyclists from motor vehicles. *

17. Allow folding bicycles on transit vehicles. *

Traffic Control During Construction. Construction activities on O'ahu present additional maintenance requirements that should be addressed in the O'ahu Bike Plan. Construction affects bicyclists through increased roadway wear due to heavy vehicle traffic and increased debris such as sand and gravel from construction equipment. Construction activities may also hinder bicyclists if bikeways are closed off or obstructed due to road maintenance, landscaping or other construction activities. Special accommodations should be made to provide for bicyclists during construction periods.

The Mayor's Advisory Committee on Bicycling has been working on principles related to road construction and bicycle facilities. The principals include:

- A bicyclist is to be informed of road work interfering with an established bike route in a manner appropriate for the cyclist and at a point where a cyclist can make a decision to use an alternate route.
- When a bicycle route is interrupted by construction activity, a clearly delineated alternative route or detour is to be provided at the point where construction activity interrupts the route (same as for motor vehicles).
- Active bike routes shall not be encumbered with construction related obstacles and signage.
- Construction debris shall not be allowed to encumber an active bike route.
- Where a bike lane ends due to construction activity and cyclists are merged into motor vehicle lanes, signage shall be provided advising motor vehicle drivers they are sharing the lane with bicyclists.

Potential policy

13. Ensure appropriate accommodations for bicycles during roadway construction, following recommendations of the Mayor's Advisory Committee on Bicycling. *

Transit Access. As discussed in Section 3.1.2, all forms of public transit need to accommodate bicycles and bicyclists. By providing convenient access, bicycle parking, and showers at major transit destinations, CCH can increase transit ridership as well as the area from where transit can draw riders. Important amenities for commuters include long-term parking options and easy transfers to other public transit modes.

Potential policy

14. Provide bicycle access to and amenities such as parking and showers at major

transit destinations. *

Bicycle Valet. A formal program to provide secure bicycle corrals at all large public permitted events to encourage residents and visitors to bicycle rather than drive should be instituted. Improperly parked bicycles can harm vegetation, impede pedestrian travel, and clutter sidewalks. In the past, bicycle valet parking has been provided by the HBL at special events such as at the annual Kokua Festival at Kapiolani Park. Volunteers are critical to the success of such a program as they are typically used to staff the corral during the events. Examples of events which could benefit from such a program include sporting events, parades, festivals, and other events that receive the use of CCH facilities where temporary bicycle parking is desired as an alternative to permanent racks. One example of instituting valet bicycle parking is San Francisco's ordinance that requires all major city events to provide bike parking. (<http://www.sfbike.org/?valet#requirements>).

Potential policy

15. Provide bicycle valet services at major city events. *

Three-foot Rule. To ensure bicycle safety from motor vehicles, several states and many municipalities have passed a so called '3-ft rule' where a person operating a motor vehicle on a public or private road shall maintain a zone of protection for a distance of not less than 3 feet between the motor vehicle and a bicycle.

Potential policy

16. Implement the '3-ft rule'; a three-foot zone of protection for bicyclists from motor vehicles. *

Folding bicycles on transit. Surveys and public input indicate many cyclists are unable to load bicycles during rush hours due to the limited bus capacity (two bikes/bus). The CCH bus fleet are being retrofitted with three bike racks to partially alleviate the problem. Folding bicycles are becoming an increasingly popular mode of travel, particularly in urban areas, perhaps because they are easy to transport into high rise multi family dwellings and office buildings. Currently folding bicycles are allowed on TheBus as long as they can fit under the seat or on the passengers lap, and they are inside a storage bag. Allowance of folding bikes on city transit vehicles needs to be continued, and signs posted notifying passengers of this policy to encourage this mode of travel. Many other transit authorities allow folding bicycles inside the transit vehicles, including North Carolina (see http://www.ncdot.org/transit/bicycle/biking/biking_folding.html).

Potential policy

17. Allow folding bicycles on transit vehicles. *

3.2.1 Additional public input on policies

This section includes additional ideas of policies that have been recently proposed through the series of public workshops and comments submitted via the website. The list is inclusive to ensure that all public input is considered. Further evaluation will occur as the Bike Plan process moves forward.

- Policy to require any new road or repair to include shoulders (not repave just the driving area) *
- Existing roads need to have smoother pavement/sweeping *
- New developments/subdivisions must include safe bike routes to all schools, central stores/shopping *
- Complete Streets policy (statewide) *
- Policy to ensure cars give bikes the lane (like Wisconsin) *
- Bike roads – every road a bike road *
- Pedestrian/Bike friendly concepts in planning *
- Design standards for new developments to link up/connect to bike facilities *
- Policy that city must post on-line their bicycle lane to street ratio of miles*
- Policy to expand Bus/Bike-only streets *
- Ensure cooperation between State DOT and DTS on creating a bicycle-friendly O'ahu *
- Ensure schools allow children to bike to school *

4.0 References

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