

# **DEPARTMENT OF PUBLIC WORKS**

## **ROLES AND DUTIES**

The Department of Public Works handles all matters relating to engineering; public and private building construction and inspection; construction inspection and maintenance of public streets, highways, and bridges; acquisition of public and private properties for public purposes, design, operation and maintenance of traffic signals and traffic control devices; sewer construction and the operation and maintenance of five sewer systems; solid waste disposal and landfill programs.

Public Works is also a key support agency for Civil Defense emergencies.

Effective December 4, 2000, the Department of Environmental Management was created to manage the solid waste, wastewater, and recycling programs of the county.

## **TOTAL DPW BUDGET FY 2000-2001**

Division	<u>Total Budget</u>
Administration	663,480
Engineering	1,433,506
Building	3,281,436
Highways	6,882,045
Flood Control	156,925
Traffic	3,078,512
Wastewater	6,174,155
Solid Waste	9,209,607
Vehicle Disposal	680,500
Automotive	1,782,892
TOTAL	33,343,058

## **TOTAL DPW EMPLOYEES**

As of 6/30/01 By Division

Division	<u>Total Employees</u>
Administration	16
Engineering	27
Building	50
Highways	133
Traffic	25
Wastewater	48
Solid Waste	59
Automotive	24
TOTAL	382

## **AUTOMOTIVE DIVISION**

### Highlights/Activities

Developed through a consultant a new program to process all of the fuel bills generated as the Inter-Department billings to departments and agencies. The Automotive Division now has the capability of processing fuel bills within a few days versus a tedious process of almost three weeks.

Assisted the Highways Division when the heavy storm and rains hit the island in November 2000, by working extra hours repairing the equipment and vehicles needed to clean up the debris.

Built and installed a mezzanine for the Traffic Divisions Signs and Markings section.

Built and installed a gate for the new temporary roadway at the end of Route 130 in Kalapana.

## **BUILDING DIVISION**

The Building Division issues building, plumbing and electrical permits for all structures regulated under the building code. In fiscal 2000-2001 the division issued 3,233 building permits, 2,561 plumbing permits, and 2,783 electrical permits with a construction valuation of \$ 378,363,568.00. For those permits the division conducted 20,750 inspections or about 83 inspections per day throughout the county's 4,000 square miles.

This division is also responsible for the maintenance of all police, fire, public works, and administrative facilities and assists in the planning, design, and construction of new county facilities. This past fiscal year the division began the \$ 7 million renovation of the One Pauahi (former JC Penney building) county office facility. When completed in early 2002 this building will house the Department of Public Works Administrative, Building and Engineering divisions, the Real Property Tax Office, the Parks & Recreation Administrative Office, the Civil Service Department, the Planning Department and the Treasury Division.

## **ENGINEERING DIVISION**

### Highlights/Activities

The Komohana Street Bridge was constructed at a cost of \$4.8 million. The construction was funded entirely by the Federal Highway Administration (FHWA). Due to the importance of the bridge, the project was fast-tracked and the road was opened up to traffic just two months after the start of construction.

In addition, we have been collaborating with the FHWA, the Army Corps of Engineers, the Federal Emergency Management Agency (FEMA) and the Natural Resources Conservation Service in the repair of other flood-related damage totaling approximately \$11.5 million.

The \$9.6 million Mohouli Street Extension project, our first new major street since the Komohana Street Extension completed in 1967, is nearing completion. The \$22 million Puainako Street Extension project has started and is scheduled for completion in 2004.

Our surveying section has completed 64 survey projects and requests, and is assisting in land acquisition for project construction.

Project activities include completion of 14 construction projects valued at \$16.2 million, 14 projects under construction valued at \$41.7 million, and the administration of 17 consultant contracts valued at \$9.8 million.

Regulatory Activities -- Reviewed, approved, and inspected 1,024 permits for driveways, work within County rights-of-way, grading, grubbing and stockpiling. Reviewed and approved 160 subdivision applications, 107 construction plans, 9 ohana applications and inspected 47 subdivisions.

#### Project Activities

<u>Project Construction Completed</u>	<u>Contract Cost</u>	<u>Contractor</u>
Lindsey Road Improvements	1,210,693	Goodfellow Brothers, Inc.
Kapiolani Street/Ululani Street Reconstruction	1,350,276	Jas. W. Glover, Ltd.
Mamalaho Highway (Kamamalu to Lindsey)	5,896,803	Goodfellow Brothers, Inc.
Mamalaho Highway Improvements	737,854	Jas. W. Glover, Ltd.
Removal of Arch. Barriers - Kam (Pauahi to Ponahawai)	411,645	Site Engineering Inc.
Kaumana Drive Curve Improvements	244,284	Willocks Const. Corp.
Waikoloa Road Shoulder Improvements	1,034,160	Sun Industries, Inc.
Komohana Street/Alenaio Stream Bridge Replacement	4,860,617	Hawaiian Dredging Const. Co.
Waiakea Stream BMP	65,300	Ed Higa General Contracting
Paniolo Drive Sidewalk Improvements	183,299	Bolton, Inc.
Heahea/Palai Stream Flood Repairs	2,800	MB Welding
Mauna Kai Street Culvert Flood Repairs	17,185	Loeffler Construction
Flood Debris Removal From Hilo Streams	117,741	Island 66, LLC
Flood Debris Removal From Olaa Stream	35,700	Excavation Tech
TOTAL	16,168,357	

<u>Projects Bid/Awarded/Under Construction</u>	<u>Contract Cost</u>	<u>Contractor</u>
Kuauli Road Flood Repairs	29,524	Loeffler Construction
Hoaka Road Bridge Flood Repairs	21,520	Ed Higa
Wilder Road Flood Repairs	9,620	Ed Higa
Mamalaho Highway (Ahualoa) Resurfacing	386,135	Grace Pacific Corp.
Mohouli Street Extension	9,551,209	M. Sonomura Contr. Co. Inc.
Oshiro, Kalopa/Aliipali & Kaumoali Bridge Replacement	2,050,000	M. Sonomura Contr. Co. Inc.
Honomu Bridge Replacement	2,083,000	Hawaiian Dredging Const. Co.
Onomea Camp Road Bridge Replacement	403,130	Island 66, LLC
South Kopua Road Improvements Phase II	338,551	Willocks Construction Corp
Inoino Gulch Bridge Replacement	934,800	Kaikor Construction Asso., Inc.
Flood Debris Removal From Ka'u Streams	94,274	Site Engineering Inc.
Traffic Signal Upgrade (Downtown Hilo)	1,642,864	T&T Electric, Inc.
Puainako Street Extension	21,965,881	Goodfellow Brothers, Inc.
Lanikaula/Manono Intersection Traffic Signal Impt's	2,198,000	Jas. W. Glover, Ltd.
<u>Consultant Design (On-going/New)</u>	<u>Contract Cost</u>	<u>Engineer/Designer</u>
Ainaola/Kawailani/Iwalani Traffic Signals	386,196	Okahara & Associates
Alii Drive Culvert Replacement	185,664	Kai Hawaii Inc.
Kaahakini/Mamalaho Bridge Replacement	110,000	Wes Segawa & Associates
Kalapana Road Realignment and Resurfacing	390,274	SSFM Engineering Inc.
Kalopa/Mamalaho Bridge Replacement	101,000	Wilson Okamoto
Lako Street Extension	280,000	Hilo Engineering
ADA Curb Cut Compliance, Part 1	311,800	Inaba Engineering Inc.
ADA Curb Cut Compliance, Part 2	544,749	Imata & Associates, Inc.
Mamalaho Highway (Hualalai Intersection North)	138,200	Inaba Engineering, Inc.
Kuakini Highway Improvements	750,000	Akinaka & Assoc.
Alii Highway	3,733,378	R.M. Towill
Mohouli Improvements	374,718	Okahara & Associates
Waikaalulu/Mamalaho Bridge Replacement	101,000	Wilson Okamoto
FHWA Flood Damage Repairs	240,000	Wesley Segawa & Assoc. Inc.
Upper Palai Stream FEMA Firm Update	228,074	URS Corporation Inc
NRCS Channel Repairs	170,000	Inaba Engineering, Inc.
Puainako Street Widening	1,774,900	Okahara & Associates
TOTAL	9,819,953	

## **HIGHWAY MAINTENANCE DIVISION**

### **Highlights/Activities**

Maintained 861.16 miles of roads:

South Hilo	271.27 miles
North Hilo	27.46 miles
Hamakua	65.75 miles
North Kohala	27.46 miles
South Kohala	81.37 miles
North Kona	115.74 miles
South Kona	26.04 miles
Ka'u	60.15 miles
Puna	185.92 miles

Resurfaced or paved 44.94 miles of various County roads using in-house personnel (FEMA work included):

South Hilo	3.36 miles
North Hilo/Hamakua	3.45 miles
North/South Kohala	5.35 miles
North/South Kona	4.48 miles
Ka'u	3.30 miles
Puna	25.00 miles (18.9 miles for FEMA work)

All districts worked diligently to repair and restore roadway infrastructure damages caused by the November 1-2, 2000 flooding.. Received an award of recognition from the American Public Works Association for construction of an 11-1/2 mile State Route 11 bypass road in Ka'u.

Assisted with various Parks & Recreation projects including Hawaiian Beaches Park, Hilo Bayfront Soccer Field Complex, Laaloa Park, and Equestrian Center.

Responded to various emergency call-outs due to accidents, hazardous material spills, and other natural events (fires, storms, etc.). Constructed sidewalks and walkways, installed guardrails, constructed retaining walls and headwalls, and installed culverts and other drainage facilities islandwide.

### **Highlights/Activities**

Four 75-cubic yard refuse trailers were refurbished and completely re-painted. By performing this type of maintenance, the life of the trailers will be extended and the vehicles will remain in good operational condition.

Listed below are the trailers that were repainted:

<u>Month</u>	<u>County ID</u>	<u>Year</u>	<u>Model</u>
Jun 01	CH2240	1995	Hardee Trailer
Apr 01	CH2132	1991	Brothers Trailer
Mar 01	CH2177	1996	Brothers Trailer
Oct 00	CH2126	1991	Brothers Trailer

The County received a new Caterpillar Model 826G Compactor in October 2000 to supplement two 1991 Caterpillar D-8-N bulldozers at the Hilo landfill. The compactor is used to reach a higher density in compacted refuse, in an effort to extend the active life of the landfill. Signed lease contracts for one new dozer, two new truck tractors, and six new refuse trailers for equipment delivery next fiscal year.

The table below shows the amount of solid waste taken from 21 County transfer stations, and by commercial haulers and residents to the Hilo and West Hawaii landfills respectively for the past five fiscal years. The figures are in tons. The “Other” category represents solid waste taken by commercial haulers and residents to either landfill.

<u>East Hawaii Fiscal Year</u>				<u>West Hawaii Transfer</u>	<u>Other</u>	<u>Total</u>
	<u>Transfer</u>	<u>Other</u>	<u>Total</u>			
2000-2001	33,302	38,021	71,323	35,757	56,745	92,502
1999-2000	30,397	32,259	62,656	33,184	54,147	87,331
1998-1999	31,303	30,756	62,059	31,665	52,692	84,357
1997-1998	31,343	34,716	66,059	30,633	47,864	78,497
1996-1997	29,747	31,257	61,004	29,552	46,836	76,388

Contracted with a consultant to update our Integrated Solid Waste Management Plan for the County of Hawaii. This State-mandated document will be used to guide the division in administering islandwide refuse and maximizing diversion of recyclable products to end markets.

Re-submitted the necessary application documents to the State Department of Health for renewal of the South Hilo landfill’s operating permit.

Contracted with a consultant for fire monitoring and suppression at the closed Kailua landfill. The County has a contract with a vendor to mulch the greenwaste in both the East and West side of the island. During this fiscal year, 4,864 tons of green waste was mulched in the East Hawaii and 4,086 tons of green waste was mulched in West Hawaii. This amounts to a total of 8,950 tons of green waste diverted from the landfills.

The County has a contract with a Honolulu vendor to remove hazardous waste from the island. The hazardous waste material pickup is conducted twice a year from both the Hilo and Kona areas. Approximately 43,000 pounds of hazardous material was removed from the Hilo area and 28,000 from the Kona area for this current year. The hazardous material was shipped off-island to the state of Washington for disposal in a special waste landfill.

Continued with the Diversion Grants program for paper and other waste and glass to sustain and expand the recycling efforts on this island. A total of 1,920,038 pounds of glass were

diverted from the landfills. The reimbursement rate has been increased from 8 cents a pound to 12 cents a pound for the next fiscal year to entice the vendors to divert more glass from the landfill.

The Division also, re-specified the size of the cover material used at the Hilo Landfill. Although more expensive per unit price, the new cover material is of a smaller size, covers refuse easier, is more readily compacted, and saves airspace volume at the landfill. Less cover material is required, thereby saving airspace volume and extending the active life of the landfill.

The Abandoned Vehicle Program falls under the management of the Solid Waste Division.

During this fiscal year, 6,930 tons of abandoned vehicles were removed from the Hilo area and 4,740 tons were removed from the Kona area. The total of 11,670 tons were shipped to Honolulu for processing.

Also, during this fiscal year, 694 tons of cut tires were disposed of.

## **TRAFFIC DIVISION**

### **Highlights/Activities**

#### **Administration**

Investigated 142 complaints of requests for repairs, improvements, studies, etc.  
Processed 80 road-closure permit applications.  
Reviewed 91 preliminary and final plans, including impact studies.

#### **Street Lights**

Operated and maintained 8,684 street lights (8,008 energized and 676 not energized).  
Included in these counts are 777 State highway lights,  
444 DHHL lights and 89 bridge and parking lot lights.

Completed 2,210 street light maintenance work orders.

Processed 168 final joint pole applications with HELCO/HTCO.

Investigated 63 requests for new street lights.

#### **Traffic Signals**

Operated and maintained 50 traffic signal systems, one embedded flashing light and 9 flashing light systems on County highways.  
Operated and/or maintained 33 (2 under construction) traffic signal systems and 25 flashing light systems on State highways.

Operated and maintained 1 traffic signal system for DHHL.

Received and resolved 928 traffic signal trouble calls with a minimum of delay.

#### Traffic Signs and Markings

Fabricated 2,617 new traffic signs; installed 2,245 traffic signs; installed 770 sign supports.

Painted 136 miles of pavement markings; installed 10,027 raised pavement markers.

Completed 1,431 work orders, trouble calls, police reports and sign deficiency reports.

Parking Meters - not funded.

Nearly all parking meter zones were eliminated by Ordinance number 0089, effective August 21, 2000.

#### Project Construction Completed

	<u>Contract Cost</u>	<u>Contractor</u>
Traffic Education Program, Pedestrian Safety Awareness Program, "HOT DOT" Program, Infant Restraint Program	\$20,250	Jacqueline Murai
Kamehameha/Pauahi Traffic Signal/Street Light Upgrade	\$37,791	DPW Engr & Staff
S. Kohala, Waikoloa, Upgrade of Direct Buried Cables (Lua-Kula St. & Paniolo Ave.)	\$25,336 (Fuel Tax)	DeRego
Keaau Pahoa-Keaau Kula Signal Turn On	DOT	Able Electric
Hilo Hospital Embedded Flashing Lights	\$10,000	Staff
Makaala-Kanoelehua Right Turn Overlap		Staff
Loop Detector Installation Lindsey Road		JK Electric
Restripe Pahoa-Kapoho Road	\$105,536 (FuelTax/ County)	Central Striping Service Inc
Repaired/Replaced Flood Damaged Equipment:		
Kawili/Kapiolani		Staff
Kamehameha/Pauahi		Staff
Kinoole/Kawili		Staff
Ainaola/Haihai		Staff
Completed detour signs for Pahala after November flood		Staff
Completed detour signs and traffic signal modifications for Komohana St. after November flood		Staff

<u>Projects Underway</u>	<u>Contract Cost</u>	<u>Contractor</u>
Lanikaula/Manono Signals Installation	Federal Aid	Glover
Konawaena Elementary Signals Installation	DAGS	Wasa Electric
Kawailani/Ainaola/Pohakulani Signals (Design)		Okahara & Associates
Mohouli Extension		M. Sonomura
Kanoelehua/Kahaopea Turn On	DOT	Staff
Puainako Extension	DOT	Goodfellow Brothers
Downtown Traffic Signal Upgrade – 9 Intersections	Federal Aid	T & T Electric/Staff
Alii Dr/Kahakai Rd Embedded Flashing Lights		Staff
Kinoole/Kilauea Corridor Signal Upgrade		Staff
Restripe Downtown Hilo-Phase 2	\$105,160 (Fuel Tax/ County)	Apply-A-Line Inc
Restripe Kaumana Dr – Ainako Ave to 8 Mile Marker	\$58,147	Apply-A-Line Inc
Green LED Traffic Signal Conversions		Staff
Test & Evaluate Wireless Detectors		
Pahoa/Kalapana Rd Traffic Signals	DOT	T&T Electric
Hwy 11 @ Kamehameha School		T&T Electric
Pedestrian Education Program		J. Murai
Optimization/Coordination of Traffic Signals		Staff
Install UPS for Signals		Staff

## **WASTEWATER DIVISION**

### **Highlights/Activities**

Subdivided and transferred ownership of the Old Hilo STP to the University of Hawaii and assisted in preliminary development of the Pacific Aquaculture and Coastal Resources Center.

Expanded the Kealakehe Wastewater Treatment Plant to include a 40 acre buffer zone, and initiated planning for constructed wetlands on the site to upgrade effluent quality, create habitat for endangered birds, and provide recreational opportunities for the public.

Initiated program to reduce infiltration into sewer system and reduced flows by over 10%.

Completed renovations to Wailuku and Wailoa Sewage Pump Stations.

Completed construction of Waiakea Houselots and Paukaa Collector Sewer projects. Continued coordination with Corporation Counsel to reduce seriously delinquent accounts.

## PROJECT ACTIVITIES – FISCAL YEAR 2000-2001

<u>Construction Completed</u>	Contract Cost
Paukaa Community Collector Sewer	\$ 1,920,750
Waiakea Houseslots Collector Sewer Ph II	\$ 4,863,265
Old Hilo STP – Digester Tank & Pua SPS Cleaning	\$ 292,302
Wailuku SPS Rehab	\$ 521,991
Wailoa SPS Modifications	<u>\$ 808,704</u>
	\$ 8,407,012
<u>Construction In Progress</u>	
Pahoehoe Sewage Pump Station	\$ 2,435,358
Banyan Drive SPS Rehab	\$ 388,500
Hilo WWTP – Repair Secondary Clarifier #1 63,337	\$
Hilo WWTP – Repair Secondary Clarifier #2 & #3	\$ 179,732
FEMA Hazard Mitigation	\$ 193,204
Kealakehe Effluent Reuse Ph I	<u>\$ 646,271</u>
	\$3,906,402
<u>Design Completed</u>	
Kaumana Gardens Collector Sewer	\$ 299,500
Kealakehe Effluent Reuse Master Plan and Ph I Construction	\$ 355,000
Kailua-Kona Southern Zone Sewerage System	<u>\$ 837,419</u>
	\$1,491,919
<u>Design in Progress</u>	
Puueo Community Collector Sewer	\$ 196,400
Ainako Aina-Nani Collector Sewer	\$ 300,000
Wailoa Sewage Force Main Replacement	\$ 150,000
Kulaimano WWTP UV Disinfection Upgrade	\$ 24,200
Waiakea Mill Pond Sewer Easement Improvement	\$ 31,325
Hilo Biotower Pump Replacement	\$ 12,100
Wailoa SPS Modification Project	\$ 28,300
Hilo WWTP Comprehensive Facility Review	<u>\$ 325,257</u>
	\$1,067,582

PUBLIC WORKS EXPENDITURES FY 2000-2001

	GENERAL	HIGHWAY	SEWER	SOLID	VEHICLE	PARKING	BEAUTI-	
	FUND	FUND	FUND	WASTE	DISPOSAL	METER	FICATION	
DIVISION	FUND	FUND	FUND	FUND	FUND	FUND	FUND	TOTAL
Administration	616,893						23,499	640,392
Automotive	1,764,763							1,764,763
Building	2,890,300							2,890,300
Engineering	597,338							597,338
Highway Maint.	288,661	11,410,322						11,698,983
Fuel Tax Projects		3,073,289						3,073,289
Environmental Management	477							477
Solid Waste				9,141,522	522,764			9,664,286
Traffic		2,642,862				0		2,642,862
Wastewater			5,001,827					5,001,827
<b>TOTALS</b>	<b>6,158,432</b>	<b>17,126,473</b>	<b>5,001,827</b>	<b>9,141,522</b>	<b>522,764</b>	<b>0</b>	<b>23,499</b>	<b>37,974,517</b>

SUMMARY  
 POSITIONS IN DEPARTMENT OF PUBLIC WORKS  
 FY 2000-2001

DIVISIONS	ADMIN EM'S & EXCLUDED	PROF BU 13	WHITE COLLAR SUPERV BU 04	WHITE COLLAR NON-SUPERV BU 03	BLUE COLLAR SUPERVI BU 02	BLUE COLLAR NON-SUPERV BU 01	TOTALS PERMANENT POSITIONS	TEMPORARY	TOTAL POSITIONS
Administration	6	2		8			16		16
Automotive	1			3	3	17	24	2	26
Building	2	3	5	27	1	19	57	6	63
Engineering	2	11		18			31		31
Highway Maint.	1	3		8	11	120	143	31	174
Traffic	1	2		7	2	15	27	1	28
Environmental Management	2						2		2
Solid Waste	1	1	1	6	3	45.75	57.75	9	66.75
Wastewater	1	5		5	5	33	49	4	53
<b>TOTALS</b>	<b>17</b>	<b>27</b>	<b>6</b>	<b>82</b>	<b>25</b>	<b>249.75</b>	<b>406.75</b>	<b>53</b>	<b>459.75</b>

