

## Department of Public Works

*Dennis K. W. Lee, P.E., Director*

The Department of Public Works handles a broad range of areas. They include 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. The department undertakes all other public works projects, except for matters relating to parks and recreation and water supply.

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

### TOTAL DPW BUDGET FY 2001-2002

<u>Division</u>	<u>Total Budget</u>
Administration	643,448
Beautification	66,000
Engineering	1,693,461
Building	4,079,347
Highways	9,421,415
Flood Control	153,939
Traffic	3,838,555
Fuel Tax Projects	3,269,000
Automotive	1,945,573
<b>TOTAL</b>	<b>25,110,738</b>

### TOTAL DPW EMPLOYEES As of 6/30/02 By Division

<u>Division</u>	<u>Total Employees</u>
Administration	21
Engineering	34
Building	67
Highways	180
Traffic	33
Automotive	28
<b>TOTAL</b>	<b>363</b>

## **AUTOMOTIVE DIVISION – Walter R. Lucas, Automotive Equipment Superintendent**

The Automotive Division is a support service responsible for the repair and maintenance of all vehicles and equipment of the county except such equipment as may be more practically maintained by the department having control thereof, as determined by the director of Public Works. The division furnishes parts, accessories, gasoline, diesel, lubricants and tires.

Our goals and objectives are to continue to maintain the fleet of vehicles and equipment so the employees of the county will always have safe operable vehicles to use. We would like to reduce our repair order backlog by 5 per month.

One of the challenges for this year was that of maintaining the fleet of vehicles and equipment with minimum manpower and financial resources. We were tasked and challenged with the responsibility of keeping the vehicles and equipment in safe operating condition with minimum staffing and a requested reduced budget from management to balance the fiscal year.

## **BUILDING DIVISION – Stanley Takemura, P.E., Division Chief**

### **Major Functions**

1. Administration – Provides overall administration of the division, reviews the adoption of new codes and policies, renders decisions on code issues. Monitors division finances and manpower needs.
2. Inspection - Receives, reviews, issues and provides inspections for building, plumbing and electrical permits to assure compliance with code requirements. Collects fees for permits issued.
3. Design & Construction – Involved in the planning, maintenance, design, bidding, and construction of County owned building facilities. Assists other county agencies with CIP and maintenance programming. Assigns house numbers to all new and existing buildings.
4. Repair & Maintenance – Provides for the maintenance and repair of existing County buildings. In-house personnel undertakes assignments involving carpentry, plumbing, electrical, and painting work. Provides back-up janitorial services for the County Building and the Lagoon Center County offices. Provides delivery of mail between agencies in the County Building and Lagoon Center.

## **Highlights/Activities**

Reviewed and processed:   3,497 building permits  
  2,697 plumbing permits  
  3,349 electrical permits  
  60 sign permits

Conducted:    20,750 building, plumbing and electrical inspections

Total Valuation of permitted construction: \$ 530,749,501.00

### Major County Building Projects Overseen:

East Hawaii Police Detention Center	\$ 4,271,791.00
Keaukaha Gymnasium Complex	\$ 4,056,000.00
Kona Hwy. Garage & Storage	\$ 243,000.00
Ahalanui Beach Park Phase II	\$ 275,733.00
Police Sub-Station – Waiakea Uka Gym	\$ 64,977.00

### Major County Building Projects Overseen:

Mt. View Gym Module Bldg. Complex	\$ 199,673.00
Access Improvements to Aunty Sally	\$ 91,700.00
Kaleohano's Luau House	
W.H. Shipman Park Accessibility Improvements	\$ 356,669.00
Waiakea Waena Playground Accessibility Improvements	\$ 222,217.00

### ADA Compliance Projects:

West Hawai'i Pahala Community Center.	\$ 194,300.00
Total	\$ 9,976,060.00

## **ENGINEERING DIVISION – Galen Kuba, P.E., Division Chief**

The Engineering Division's main responsibility is to plan, design, review, and construct road, bridge and flood control facilities. The division also implements and enforces applicable regulatory requirements of Chapter 10, Hawaii County Code (HCC), grading, grubbing, stockpiling, Chapter 22, HCC, work within county right-of-way, and Chapter 27, HCC, flood control. The division reviews subdivision, ohana, variance and change of zone applications.

The \$10 million Mohouli Street Extension project, our first new major street since the completion of the Komohana Street Extension in 1967, was completed and opened on April 15, 2002. The extension provides a direct link between Hilo and lower Kaumana by passing Waianuenue Avenue.

Construction of the Puainako Street Extension project is continuing and is still scheduled for completion in 2004. The current construction cost is \$30 million.

All major flood damage work has been completed or is now under construction. Current cost of repairs caused by the November 2000 flood now totals \$8.7 million. Major flood damage repair work that has yet to be started includes repairs to the Waiakea, Pahala and Alenaio Flood Controls and bridge repairs in Pahala. The Waiakea and Pahala Flood Control repairs are in the process of being contracted by U.S. Army Corps of Engineers. The Alenaio Stream repairs, sponsored by the Natural Resources Conservation Service, are ready to go upon receipt of required federal permits. The bridge repair project in Pahala is being designed by a consultant.

To minimize impacts of future flooding in Hawaii County, the Federal Emergency Management Agency is in the process of be revising flood (FIRM) maps in the Waiakea area. We have also entered into cooperative agreements with the U.S. Army Corps of Engineers to develop new flood control projects for the Waiakea, Palai and the Keopu-Hienaloli Streams.

Our surveying section has completed 54 survey projects and requests and is assisting in land acquisition for project construction.

Project activities include completion of 26 construction projects valued at \$18.4 million, six projects under construction valued at \$26.1 million, and the administration of 16 consultant contracts valued at \$9.6 million.

Regulatory Activities - Reviewed, approved, and inspected 626 permits for driveways, work within County rights-of-way, grading, grubbing and stockpiling. Reviewed and approved 125 subdivision applications, 252 construction plans, 18 ohana applications and inspected 42 subdivisions.

## **Exhibit A - Project Activities**

### Project Construction Completed

	<b><u>Contract Cost</u></b>	<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
Mamalahoa Highway (Ahualoa) Resurfacing	386,135	Grace Pacific Corp.
Mohouli Street Extension	9,551,209	M. Sonomura Contr. Co. Inc.
Honomu Bridge Replacement	2,083,000	Hawaiian Dredging Const. Co.
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)	1,537,436	T&T Electric, Inc.

Lanikaula/Manono Intersection Traffic Signal Impt's	2,000,764	Jas. W. Glover, Ltd.
Puloku Street Flood Repairs	25,189	Big Island Paving
Piihonua Road Flood Repairs	149,449	Isemoto Construction
Pacific Paradise Mountain View Manor Flood Repairs	37,113	Island 66 Contracting
Akolea Place Flood Repairs	148,409	Central Construction
Uhaloa Road Flood Repairs	69,400	Site Engineering
Alawaena Street Flood Repairs	92,735	Loeffler Construction
Aiona Road Flood Repairs	69,983	Ed Higa
North Road (Wood Valley) Waiakaloa Gulch Ford - Site 2	71,059	Herman Ludwig
North Road (Wood Valley) Bridge Repair - Site 3	23,900	Herman Ludwig
North Road (Wood Valley) Makakupu Gulch Ford - Site 4	117,370	Ludwig Construction
Center Rd. (Wood Valley) Makakupu Ford & Culv.- Site 5	40,528	Herman Ludwig
South Road (Wood Valley) Bridge – Site 6	13,640	Ed Higa
Lyman Springs Road Culvert Flood Repairs	123,980	Ludwig Construction
Debris Removal and Disposal for Hilo Bayfront		
Soccerfields (West of Kumu Street) and Repairs to		
Alenaio Canal – Scour Pond	295,165	James Ishii
Alenaio Stream by Komohana Street Flood Repairs	17,096	Ed Higa
Onomea Camp Road Bridge Replacement	499,151	Island 66, LLC
<b>TOTAL</b>	<b>18,442,449</b>	

Projects Bid/Awarded/Under Construction

	<u>Contract</u> <u>Cost</u>	<u>Contractor</u>
ADA Phase I, Part A	571,000	Willocks Construction, Corp.
Oshiro, Kalopa/Aliipali & Kaumoali Bridge Replacement	2,050,000	M. Sonomura Contr. Co. Inc.
South Kopua Road Improvements Phase II	338,551	Willocks Construction, Corp
Puainako Street Extension	21,965,881	Goodfellow Brothers, Inc.
Kaiwiki Road Culvert Flood Repairs	298,600	Ludwig Construction
Flood Damage Repairs to Various Hilo Roads	863,436	Willocks Construction, Corp.
<b>TOTAL</b>	<b>26,087,468</b>	

Consultant Design (On-going/New)

	<u>Contract</u> <u>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/Mamalahoa Bridge Replacement	110,000	Wes Segawa & Associates
Kalapana Road Realignment and Resurfacing	390,274	SSFM Engineering Inc.
Kalopa/Mamalahoa 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.
Mamalahoa 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/Mamalahoa 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
Puainako Street Widening	1,774,900	Okahara & Associates
<b>TOTAL</b>	<b>9,649,953</b>	

## **TRAFFIC DIVISION – Casey K. Yanagihara, P.E., Division Chief**

The Traffic Division is responsible for all activities necessary to install, operate and maintain street lights, traffic signals, and traffic signs and markings on the County highway system.

### **Activities**

- Administration - Provide overall management of the division's three operating functions in the administrative and technical aspects of the various traffic programs. The administrative aspect includes budgeting, resolving complaints, maintaining Traffic Division's personnel and traffic records, obtaining Federal funds, training personnel and educating the users of County highways. The technical aspects include reviewing plans and specifications, investigating complaints, completing studies and reports, and recommending improvements in the various operating functions.
- Street lights and Traffic Signals – design, install, operate and maintain street lights and traffic signals and continue the design and implementation of energy and fuel conservation programs.
- Traffic Signs and Markings – install and maintain traffic control signs and pavement markings.
- Parking Meters – not funded.

### **Accomplishments**

- Administration
  - Investigated 139 complaints of requests for repairs, improvements, studies, etc.
  - Processed 90 road closure permit applications.
  - Reviewed 117 preliminary and final plans, including traffic impact studies.
- Street Lights

Operated and maintained 8,791 street lights (8,215 energized and 576 not energized). Included in these counts are 783 State highway lights, 656 DHHL lights and 89 bridge and parking lot lights.

Completed 2,244 street light maintenance work orders.

Processed 203 joint pole applications with HELCO/Verizon.

Investigated 26 requests for new street lights.

- Traffic Signals

Operated and maintained 50 traffic signal systems (one of which is presently not in operation), two embedded flashing lights and nine flashing beacon light systems on County highways.

Operated and/or maintained 33 traffic signal systems and 25 beacon light systems on State highways.

Operated and maintained one traffic signal system for DHHL.

Received and resolved 740 traffic signal trouble calls.

- Traffic Signs and Markings

Fabricated 2,436 new traffic signs; installed 2,094 traffic signs; installed 910 sign supports.

Painted 120 miles of pavement markings; installed 5,602 raised pavement markers.

Completed 1,281 work orders, trouble calls, police reports and sign deficiency reports.

- Parking Meters - not funded.

Nearly all parking meter zones were eliminated by Ordinance number 00-89, effective August 21, 2000.

<u>Project Construction Completed</u>	<u>Contract Cost</u>	<u>Contractor</u>
Traffic Education Program, Pedestrian Safety Awareness Program, "HOT DOT" Program, Infant Restraint Program	\$20,745	Jacqueline Murai
Embedded Flashing Lights Installed at Alii Drive/Kahakai Road, North Kona		Staff
Upgrade Kaleiopapa Underground Electrical System, North Kona	\$82,012.25 (Fuel Tax)	Staff/DeRego's Service
Restripe Hwy. 132, from State Highway to Pohoiki Road Junction, Puna	\$57,503.75	Central Striping Service, Inc.
Restripe Hwy. 11 & Walua Road, North Kona	\$20,656.90	Central Striping Service, Inc.

Restripe Hwy. 11, Old Mamalahoa Hwy., & Walua Road, North Kona	\$37,541.85	Central Striping Service, Inc.
Striping work, Aupuni Street, South Hilo	\$3,984.15	Central Striping Service, Inc.
Restripe Pauahi Street, South Hilo	\$8,119.45	Central Striping Service, Inc.
Lanikaula Street/Manono Street Traffic Signal Installation, South Hilo	Federal Aid	Jas W. Glover, Ltd.
Konawaena Elementary School Traffic Signal Installation, South Kona	DAGS	Wasa Electrical Service, Inc.
Mohouli Street Extension, South Hilo		M. Sonomura Contracting Co., Inc.
Kanoiehua Avenue/Kahaopea Street Traffic Signal Installation, South Hilo	DOT	Jas W. Glover, Ltd.
Downtown Hilo Traffic Signal Upgrades - 9 Intersections, South Hilo	Federal Aid	Staff/T&T Electric, Inc.
Hwy. 130 at Kalapana Road Traffic Signal Installation, Puna	DOT	T&T Electric, Inc.
Hwy. 11 at Kamehameha School Traffic Signal Installation, Puna		T&T Electric, Inc.
Aloha Kona Drive, P-15, Underground Repair, North Kona	\$10,680.00	DeRego's Service Staff
Timing and Optimization/Coordination of Traffic Signal: Mohouli at Kaumana Mohouli at Komohana Mohouli at Kinoole Mohouli at Kilauea		
Speed Hump Installation and Restriping Royal Poinciana Drive, North Kona	\$9,722.40	Staff/Central Striping Service, Inc.

<u>Projects Underway</u>	<u>Contract Cost</u>	<u>Contractor</u>
Kawailani/Ainaola/Pohakulani Traffic Signal Design, South Hilo		Okahara & Associates, Inc.
Puainako Street Extension, Puainako Street/Komohana Street Traffic Signals, South Hilo		Goodfellow Bros., Inc.
Kinoole Street/Kilauea Avenue Corridor Traffic Signal Upgrade, South Hilo		Staff
Green LED Traffic Signal Conversions, Island-Wide		Staff
Test & Evaluate Traffic Signal Wireless Detectors at Kaumana at Lele		Staff
Queen Kaahumanu Highway/Police Station Road Traffic Signal Design, North Kona		Staff/State Highways
Queen Kaahumanu Highway/Waikoloa Road Traffic Signal Design, South Kohala		Staff/State Highways
Queen Kaahumanu Highway/Waikoloa Beach Drive Traffic Signal Design, South Kohala		Staff/State Highways
Kuakini Highway Traffic Signal Upgrades, North Kona		Akinaka & Associates, Inc.
Mamalahoa Highway/Napoopoo Road Traffic Signal Design, South Kona		SSFM International, Inc.
Underground Street Light Improvements Design, South Kohala		Staff
Underground Street Light Improvements Design, South Hilo		Staff
Kau Beacon Lights		State Highways
Downtown Hilo Traffic Signal Coordination, South Hilo		Staff
Kanoiehua Avenue Traffic Signal Coordination,		Staff

South Hilo	
Convert Flashing Beacon Lights to Type 170 Controllers, Island-Wide	Staff
Kamehameha Avenue/Waianuenue Avenue/Bayfront Highway Traffic Signal Phasing Improvements, South Hilo	Staff
Traffic Signal Spread Spectrum Closed Loop System Improvements: Downtown Hilo Mohouli at Kaumana Mohouli at Komohana Kanoelehua Corridor	Staff

**HIGHWAYS DIVISION – Stanley Nakasone, Highway Maintenance  
Superintendent**

The Highway Maintenance Division is responsible for maintaining over 900 miles of roads in nine maintenance districts.

Activities include cutting grass; maintaining road shoulders; trimming trees and overhang; repairing and patching potholes; installing and replacing guardrails; repairing and maintaining bridges; cleaning and maintaining culvert and drainage systems; constructing sidewalks, retaining walls and headwalls; continuing with in-house resurfacing projects; establishing safety programs and conducting training; responding to emergency callouts caused by accidents, hazardous material spills and natural events such as fires, storms, etc.; responding to complaints from the public; and assisting other departments as needed.

Maintained 903.72 miles of roads:

South Hilo	276.08 miles
North Hilo	33.94 miles
Hamakua	67.84 miles
North Kohala	27.86 miles
South Kohala	99.86 miles
North Kona	122.92 miles
South Kona	26.63 miles
Ka'u	60.60 miles
Puna	187.99 miles

Resurfaced or paved 7.65 miles of various County roads using in-house personnel:

South Hilo	.55 miles	(2 roads)
North Hilo/Hamakua	3.86 miles	(6 roads)
North/South Kohala	--	
North/South Kona	3.24 miles	(10 roads)

Ka'u --  
Puna --

Projects were on hold for a period of time due to discussions of possible fuel tax funding for Puainako Street Extension.

Completed new Kona Road Baseyard Office in Honalo. Office will serve as West Hawaii Civil Defense Command Post as necessary.

Coordinated construction of Kalapana Lava Viewing Road. Assisted with the manning of a command post, barricades and road blocks.

Assisted in removal of trees that blocked Wailoa Stream. Waipio Valley Homes Protection Project coordinated with National Resources Conservation Service (NRCS).

Completed major cleaning of Keopu Heights Subdivision flood channel in the North Kona District.

Continued in-house resurfacing program. Program continues to be well received by communities islandwide.

Continued in-house work for November 2000 flood-related projects.

Continued to assist various departments and agencies through work order requests. For example, assisted with various Parks & Recreation projects including Hawaiian Beaches Park, Pahoa Swimming Pool, Hilo Race Track and Hilo Bayfront Soccer Field.

Continued to respond to various emergency callouts caused by accidents, hazardous material spills, and other natural events (fires, storms, etc.).

Continued the construction of sidewalks, retaining walls and headwalls, installation or replacement of guardrails, culverts and other drainage facilities, and monitored tree trimming islandwide.

**PUBLIC WORKS EXPENDITURES FY 2001-2002**

DIVISION	GENERAL FUND	HIGHWAY FUND	BEAUTIFICATION FUND	TOTAL
Administration	501,198		43,587	544,785
Automotive	1,776,523			1,776,523
Building	3,261,984			3,261,984
Engineering	1,452,925			1,452,925
Highway Maint.	164,397	8,167,537		8,331,934
Fuel Tax Projects		3,412,404		3,412,404
Traffic		3,198,656		3,198,656
TOTALS	7,157,027	14,778,597	43,587	21,979,211

**SUMMARY**  
**POSITIONS IN DEPARTMENT OF PUBLIC WORKS**

FY 2001-2002

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	5	21
Automotive	1			3	3	17	24	4	28
Building	2	3	5	27	1	19	57	10	67
Engineering	2	12		18			32	2	34
Highway Maint.	1	2		8	11	120	142	38	180
Traffic	1	2		7	2	17	29	4	33
<b>TOTALS</b>	<b>13</b>	<b>21</b>	<b>5</b>	<b>71</b>	<b>17</b>	<b>173</b>	<b>300</b>	<b>63</b>	<b>363</b>

COUNTY OF HAWAII  
DEPARTMENT OF PUBLIC WORKS – BUILDING DIVISION  
SUMMARY OF PRIVATE/PUBLIC/COMMERCIAL CONSTRUCTION  
FY 2001 - 2002

DISTRICTS	UNITS	COMMERCIAL PERMITS	CONSTRUCTION VALUATION	FEES	UNITS	RESIDENTIAL PERMITS	CONSTRUCTION VALUATION	FEES	PUBLIC PERMITS	CONSTRUCTION VALUATION	FEES
PUNA	1	59	66,446,986	208,119.50	264	556	27,805,040	125,928.50	11	938,162	3,949.00
SOUTH HILO	0	8102	9,090,931	44,430.50	136	422	22,560.852	90,877.00	72	19,773,995	41,123.50
NORTH HILO	0	4	725,000	2,830.00	20	36	2,044,632	8,660.00	2	2,073,640	6,632.00
HAMAKUA	0	5	40-9,083	2,088.50	30	87	4,253,807	19,208.50	8	533,402	1,833.00
NORTH KOHALA	0	7	312,580	1,955.00	53	125	13,031,807	36,112.50	17	537,334	2,721.00
SOUTH KOHALA	0	46	11,259,500	41,779.50	426	447	96,620,222	217,795.50	12	400,498	2,418.50
NORTH KONA	0	125	19,015,390	75,305.00	510	1,041	143,193,283	381,599.00	15	4,067,239	14,422.00
SOUTH KONA	0	12	860,600	4,041.00	60	178	9,413,708	36,531.00	13	501,062	2,765.50
KAU	0	13	486,589	3,833.50	43	90	4,050,074	18,639.00	2	611,000	2,243.00
TOTALS	1	373	108,606,659	384,382.50	1,542	2,982	322,973,425	935,311.00	142	29,436,332	78,107.50