

Office of the City Auditor



City and County of Honolulu
State of Hawai`i

Report to the Mayor and the City Council of Honolulu

Audit of the Department of Design and Construction's Implementation of the City's Capital Improvement Program, Resolution 22-233

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A Report to the Mayor and the City Council of Honolulu

Submitted by

THE CITY AUDITOR
CITY AND COUNTY
OF HONOLULU
STATE OF HAWAI'I

Report No. 23-03 November 2023



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November 1, 2023

The Honorable Tommy Waters, Chair and Members Honolulu City Council 530 South King Street, Room 202 Honolulu, Hawai'i 96813

Dear Chair Waters and Councilmembers:

Attached is a copy of our audit report, *Audit of the Department of Design and Construction's Implementation of the City's Capital Improvement Program.* This audit was conducted pursuant to Resolution 22-233, which was adopted on November 2, 2022. In the resolution, the City Council requested information to better understand the City's implementation process of capital improvement projects. The audit objectives were to:

- 1. Determine whether the City's implementation of the Capital Improvement Program as overseen by the Department of Design and Construction is operating effectively;
- 2. Identify potential barriers that may contribute to delays in project implementation; and
- 3. Provide recommendations as appropriate.

Background

In adopting Resolution 22-233, the Honolulu City Council expressed concerns related to the timeliness and cost-effectiveness of the implementation of the Capital Improvement Program (CIP).

The Department of Design and Construction (DDC) is the central city agency responsible for administering the City's CIP. The department's mission is to support planning and provide land acquisition, design, construction, and inspection for public facilities of the City and County of Honolulu. This is consistent with the Honolulu City Charter mandate to direct and perform the project planning, engineering, design, and construction of public facilities.

The CIP process consists of four phases: 1) budget preparation, 2) consultant procurement and contracting, 3) design, and 4) construction. We found that the process involves many city agencies and each has a responsibility for ensuring that city construction projects are built in a timely and cost effective manner. For purposes of this audit, we focused primarily on the construction phase, which is under DDC's jurisdiction.

Honolulu City Council November 1, 2023 Page 2 of 2

Audit Results

We found that DDC does not centrally prioritize or monitor ongoing CIP projects, often leading to project delays. In our judgmental sample of projects, the average project time from budget approval to completed construction was almost 5 years. We also found that the completion of project close-out tasks in our sample took just as long, on average, as the construction period itself, and DDC did not meet its own internal metrics for completing projects on time.

Additionally, we found that during the construction process, staff are not consistently adhering to the department's construction policies and documented procedures, leading to more delays in different phases of the process. Most notably, the process of reviewing and approving project change orders during the construction phase is experiencing major delays across all approving agencies, and DDC does not consistently monitor or expedite the progress of approvals.

Finally, we found that the high rate of turnover of project managers within the department has led to existing, and sometimes unqualified, staff taking on additional responsibilities as project managers, which has impacted project closeout timelines. The department's efforts at recent job fairs to attract qualified candidates have been hindered by uncompetitive salaries compared to the private sector. There is a growing number of staff eligible for retirement, including those in key positions that, if left unfilled, will result in further delayed projects and increased workloads for existing staff.

The audit report makes 6 recommendations to improve the department's oversight of the CIP process. DDC and the Managing Director expressed agreement with some audit findings and recommendations, with concerns. We did not make any significant amendments to the audit report as a result of management's response, but provided clarifying comments in the Management Response section of the report and made technical, non-substantive changes for purposes of accuracy, clarity, and style.

We would like to express our appreciation for the cooperation and assistance provided us by the staff and administrators from DDC, as well as other departmental staff we contacted during the course of this audit. We are available to meet with you and your staff to discuss this report and to provide more information. If you have any questions, please call me at Ext. 8-3134.

Sincerely,

Arushi Kumar City Auditor

Arushi Kumar

c: Rick Blangiardi, Mayor
Michael D. Formby, Managing Director
Krishna Jayaram, Deputy Managing Director
Haku Milles, Director, Department of Design and Construction
Andrew Kawano, Director, Department of Budget and Fiscal Services

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Chapter 1

On November 2, 2022, the Honolulu City Council adopted Resolution 22-233, requesting the City Auditor to conduct an *Audit of the Department of Design and Construction's Implementation of the City's Capital Improvement Program.* The council stated that timely and cost-effective implementation of the Capital Improvement Program is critical to maintaining the city's infrastructure, accommodating growth, enhancing public health and safety, and improving the quality of life for Honolulu residents and communities. The council requested information to better understand the city's implementation process of capital improvement projects and that the audit 1) uncover any deficiencies in the process and 2) provide recommendations for improving outcomes and timely completion of city capital improvement projects.

Background of the Department of Design and Construction

The Department of Design and Construction (DDC) is the central agency responsible for administering the city's Capital Improvement Program (CIP). The department's mission is to support planning and provide land acquisition, design, construction, and inspection for public facilities of the City and County of Honolulu. This is consistent with the Revised Charter of the City and County of Honolulu mandate to direct and perform project planning, engineering, design, and construction of public facilities.

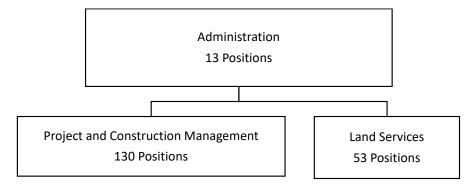
The department's goals are to:

- Be fiscally responsible;
- Coordinate with users, consultants, and other agencies to manage projects from project planning through construction;
- Provide valuable engineering expertise and advice to all city agency planning;
- Analyze and embrace new engineering and construction innovations to continuously improve the city's quality of service; and
- Promote professional development within the department through training, education, and leadership.

In FY 2022, DDC's appropriated operating expenditures totaled \$17.9 million, estimated revenues totaled \$1.2 million, and authorized staffing totaled 196 full-time equivalents. The department consists of three operating functions:

- 1. Administration: Provides personnel management, and CIP and Operating Budget preparation;
- 2. Project and Construction Management: Oversees CIP activities related to city facilities, such as roads, bridges, and buildings; and
- 3. Land Services: Conducts land surveys, titles searches, appraisals, negotiations, and acquisition of real property and easements for city projects.

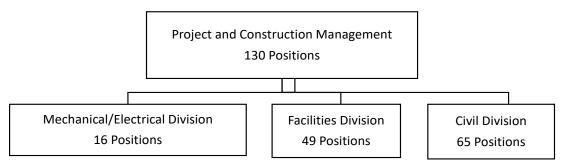
Exhibit 1.1
Organizational Chart – Department of Design and Construction, FY 2022, Full-Time Equivalent Positions



Source: City and County of Honolulu, the Executive Program and Budget FY 2023

The operating function pertinent to our audit is the Project and Construction Management function. In FY 2022, Project and Construction Management appropriated operating expenditures were \$12.6 million. Our review consisted of all three divisions in Project and Construction Management, shown in Exhibit 1.2.

Exhibit 1.2
Organizational Chart – Project and Construction Management Divisions, Full-Time Equivalent Positions



Sources: Department of Design and Construction and Office of the City Auditor

Mechanical/Electrical Division

The Mechanical/Electrical Division plans, designs, and manages construction of roadway lighting projects; provides electrical and mechanical upgrades to existing facilities, including lighting retrofits and air-conditioning upgrades; and manages and develops long-range planning of energy conservation projects with other city agencies and their respective facilities. In addition, this division manages, coordinates, and designs the mechanical and electrical improvement projects for plumbing, fire sprinklers, air conditioning, underground fuel storage tanks, energy conservation, photovoltaic systems, and indoor electrical, lighting, fire alarm, and public address systems. See Exhibit 1.3 for division staffing.

Exhibit 1.3

Mechanical/Electrical Division Staff Count, January 1, 2023

Position	Authorized	Vacant
Building Construction Inspector	1	
Drafting Tech VI	1	1
Electrical Engineer III	1	
Electrical Engineer V	3	
Electrical Engineer VI	2	
Engineering Student Intern II	1	
Mechanical Engineer III	1	1
Mechanical Engineer V	1	1
Program Administrator	1	
Secretary III	1	
Sr. Clerk-Typist	1	
Street Lighting Inspector I	1	1
Street Lighting Inspector III	1	

Source: Department of Design and Construction

Facilities Division

The Facilities Division implements CIP projects on behalf of other city agencies. Projects include upgrades or improvements to city recreational facilities; refurbishing or building major municipal and civic buildings, police stations, fire stations, ambulance units, and city corporation yards; the design of new park facilities; rehabilitation and upgrades to existing park facilities; and overall space planning, moving, and relocation for all city agencies. The Facilities Division is also responsible for the design and construction of capital improvements for the Honolulu Zoo, city golf courses, and the Blaisdell Center. See Exhibit 1.4 for division staffing.

Exhibit 1.4 Facilities Division Staff Count, January 1, 2023

Position	Authorized	Vacant
Architect III	1	
Architect IV	1	
Architect V	6	
Architect VI	1	1
Architectural Draft Tech III	2	1
Assistant Chief of Facilities Division	1	
Assistant Building Construction Inspector	1	1
Building Construction Inspector	5	1
Chief of Facilities Division	1	
Civil Engineer IV	2	2
Civil Engineer V	7	3
Civil Engineer VI	3	1
Clerk Typist	1	1
Design and Construction Branch Chief	2	2
Drafting Tech V	1	
Landscape Architect II	1	1
Planner IV	1	1
Secretary II	2	
Secretary III	1	
Sr. Clerk-Typist	2	1
Sr. Building Construction Inspector	4	
Supervising Building Construction Inspector	2	1
Supervising Project Manager	1	

Source: Department of Design and Construction

Civil Division

The Civil Division plans, designs, and constructs CIP-funded projects related to infrastructure of facilities within public rights-of-way, including: streets and highways; drainage and flood control systems; bridges; and other public works structures. Responsibilities include project planning, engineering studies, alternative analysis, preparing environmental documents, processing permit applications, preparation of plans, specifications, and estimates for construction, and administration of consultant and construction contracts. In addition, the Civil Division oversees the soil/materials testing laboratory. See Exhibit 1.5 for division staffing.

Exhibit 1.5 Civil Division Staff Count, January 1, 2023

Position	Authorized	Vacant
Assistant Construction Inspector	2	1
Chief Control Engineer	1	1
Civil Engineer III	3	
Civil Engineer V	18	5
Civil Engineer VI	5	
Civil Engineer VII	1	
Civil Engineer VIIII	1	
Construction Inspector	6	2
Design & Construction Branch Chief	3	2
Draft Tech V	1	
Secretary II	2	
Secretary III	1	
Soil & Material Test Tech III	3	
Soil & Material Test Tech IV	1	
Sr. Clerk-Typist	3	1
Sr. Construction Inspector	9	1
Structural Engineer V	2	
Structural Engineer VI	1	
Supervising Construction Inspector	2	1

Source: Department of Design and Construction

The total operating expenditures for Project and Construction Management has increased 26 percent from the previous fiscal year and 11 percent in the last five fiscal years. See Exhibit 1.6 for FY 2018 – FY 2022 operating expenditures by division.

Exhibit 1.6
Operating Expenditures for Project Management Construction Function, FY 2018-2022

		Operating Expenditures by Division			
	Total Operating Expenditures for Project and Construction Management (\$ millions)	Mechanical/ Electrical (\$ millions)	Facilities (\$ millions)	Civil (\$ millions)	
FY 2018	\$11.3	\$1.1	\$4.2	\$6.0	
FY 2019	\$10.9	\$1.0	\$3.7	\$6.2	
FY 2020	\$11.9	\$1.2	\$4.3	\$6.4	
FY 2021*	\$10.0	\$1.0	\$4.2	\$4.8	
FY 2022	\$12.6	\$0.98	\$3.8	\$7.8	
Change from last year	26%	-7%	-9%	62%	
Change over last 5 years	11%	-12%	-9%	30%	

^{*}No federal funds for Bridge Inspection Expended/Administration in FY 2021 reduced the operating budget by 10%.

Sources: Department of Design and Construction, FY 2019 Service Efforts and Accomplishments Report, and Department of Budget and Fiscal Services.

The value of CIP projects completed for the past five fiscal years has increased by 77 percent from \$53.4 million to \$94.7 million, and this past fiscal year it increased 50 percent from \$63.3 million. Exhibit 1.7 shows the total projects and value of projects completed.

Exhibit 1.7
Total Projects and Value of Projects Completed

	Total CIP Projects Completed**	Value of CIP Projects Completed (\$ millions)**
FY 2018	55	\$53.4
FY 2019	77	\$102.0
FY 2020	70	\$141.0
FY 2021	84	\$63.3
FY 2022	72	\$94.7
Change from last year	-14%	50%
Change over last 5 years	31%	77%

^{**}Completed projects and value is approximate pending final closeout of project.

Sources: Department of Design and Construction, FY 2019 Service Efforts and Accomplishments Report, and Department of Budget and Fiscal Services

Capital Improvement Program Process

The CIP process is made up of the following four phases:

1) Budget Preparation

By February of each year, city agencies provide a proposed departmental budget for the upcoming fiscal year to the Department of Budget and Fiscal Services (BFS) for incorporation into the mayor's budget submittal to the city council. The proposed budgets include CIP budgets that have been prioritized city-wide based on agency, departmental, and specifically, DDC resources. The annual DDC budget preparation includes stakeholders from DDC Administration; DDC Mechanical/Electrical, Facilities, Civil, and Land Divisions; and DDC's operating agencies¹. See Appendix A for the annual capital budget cycle process flowchart.

DDC's operating agencies include Department of Facility Maintenance, Department of Parks and Recreation, Department of Enterprise Services, Honolulu Fire Department, Honolulu Police Department, Department of Transportation Services, and Department of Information Technology, and others, if CIP projects are proposed.

2) Consultant Procurement and Contracting

For each fiscal year, DDC prepares an advertisement for professional services required by DDC and other city departments that use DDC's list of qualified consultants. The BFS Purchasing Division provides guidelines, criteria, and procedures for the annual notice. See Appendix B for consultant qualifications. DDC reviews the submittals received and prepares and maintains lists of Qualified Service Providers (QSP) in various service categories to accomplish planning, design, and construction management of capital improvement projects and provide specialized expertise as needed. DDC Administration and all divisions, BFS, and other agencies that use DDC's lists of QSPs are responsible for this phase.

3) Design

DDC contracts with design consultants for the design of capital improvement projects. The design process is executed as efficiently as possible and documented properly. Errors, omissions, delays, and conflicts are minimized. See Appendix C for design procedures. DDC Administration, Civil Division, Facilities Division, and Mechanical/Electrical Division are responsible for this phase.

4) Construction

Once a design is approved, the BFS Purchasing Division executes the construction contract and DDC issues a Notice to Proceed (NTP) with construction of capital improvement projects. The construction process is executed as efficiently as possible and documented properly, and delays and conflicts are minimized. The responsibility for this phase is upon DDC Administration; Mechanical/Electrical, Facilities, and Civil Divisions; and BFS. The DDC Director has authority as the Officer in Charge for the construction contracts. See Appendix D on the construction process flowchart.

Prior OCA Audits

The Office of the City Auditor has conducted three prior audits related to CIP projects and DDC, described below. However, no prior audit findings or recommendations were directly relevant to the objectives in this audit.

- Report No. 20-04, Audit of the Department of Parks and Recreation's Expenditures and Maintenance Priorities, June 2020
 - This audit was conducted pursuant to Resolution 19-91, CD1, adopted by the city council on June 5, 2019. The audit found that the Department of Parks and Recreation (DPR) does not track CIP financial data and lacks awareness of CIP project status. Additionally, there was limited accountability for DPR CIP projects that were funded, but not completed. The audit report made nine recommendations to help increase transparency in park resource allocation.
- Report No. 15-03, Audit of the Funds Appropriated for Bicycle Projects, April 2015
 - This audit was conducted pursuant to Resolution 10-297, adopted by the city council on November 22, 2010. The audit found that improved program administration was needed to meet the city charter and O'ahu Bike Plan goals, objectives, and priorities, including better coordination of bike activities, plans, and projects among the many departments and divisions involved. The audit made 14 recommendations.
- Report No. 08-01, Audit of the City's Planning, Design, and Construction of Skateboard Park Facilities, July 2008
 - This audit was conducted pursuant to Resolution 06-373, adopted by the city council on January 24, 2007. The audit found that DDC employed the design-build method for the construction of the Banzai Skateboard Park to encourage innovation, but failed to provide sufficient contractor oversight to provide

reasonable assurance of the project's timely and cost-effective completion. Additionally, DDC's inadequate planning of the park as a standalone facility on undeveloped land contributed to project delays, additional costs, and the completion of a skateboard park without essential support facilities. The report made five recommendations. As of our Audit Recommendation Status Report in May 2011, Report No. 11-04, all five recommendations were in-process.

Audit Objectives, Scope and Methodology

This audit was conducted pursuant to city council Resolution 22-233, requesting the City Auditor to conduct an audit of the Department of Design and Construction's Implementation of the City's Capital Improvement Program.

The Audit Objectives were to:

- 1. Determine whether the city's implementation of the Capital Improvement Program as overseen by the Department of Design and Construction is operating effectively;
- 2. Identify potential barriers that may contribute to delays in project implementation; and
- 3. Provide recommendations as appropriate.

Specifically, we focused on the construction phase of the CIP to determine whether DDC is managing the process in a timely and cost-effective way. We reviewed and analyzed department policies, procedures, and other applicable city policies. The audit team prepared questionnaires for DDC administrators, interviewed DDC staff, and analyzed project performance data and statistics for the five-year period FY 2018 – FY 2022.

We used the FY 2018 through FY 2022 Completed Construction Projects performance data to select a judgmental sample of projects to review. From the 342 total projects, we selected 12 completed construction projects to have a representation of client agencies and council-initiated projects across all three divisions: eight from Facilities Division, two from Civil Division, and two from Mechanical/Electrical Division. We selected these projects based on available time and resources in which to complete our audit. We analyzed the 12 projects to determine the length of the

construction process from start to finish. We also reviewed 32 change orders and 144 invoices that were pertinent to the 12 sample projects. Finally, we analyzed the department's internal review controls.

DDC utilizes an internal database software program called FileMaker Pro 8 (FMP) to collect, store, analyze, and retrieve information and data for projects managed by or of interest to DDC. The FMP DDC CIP Project Database was developed and is maintained by the Program Coordination Branch. We assessed this system and reliability of its data. The audit team also conducted surveys of client agencies to gather feedback on DDC's project performance.

This audit was performed in accordance with generally accepted government auditing standards (GAGAS) from December 2022 to October 2023. Those standards require that auditors plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for findings and conclusions based on our audit objectives. We believe that the evidence obtained in this audit provides a reasonable basis for our findings and conclusions based on our audit objectives.

Audit Results

We found that DDC does not centrally prioritize or monitor ongoing CIP projects, often leading to project delays. In our sample, the average time from budget approval to completed construction was almost five years. We also found that the completion of project close-out tasks in our sample took just as long, on average, as the construction period itself, and DDC did not meet its own internal metrics for completing projects on time.

Additionally, we found that during the construction process, staff are not consistently adhering to the department's construction policies and documented procedures, leading to more delays in different phases of the process. Most notably, the process of reviewing and approving project change orders is experiencing major delays across all approving agencies, and DDC does not consistently monitor this process.

Finally, we found that the high rate of turnover of project managers within the department has led to existing, and sometimes unqualified, staff taking on additional responsibilities as project managers, which has impacted project closeout timelines. The department's efforts at recent job fairs to attract qualified candidates have been hindered by uncompetitive salaries compared to the private sector. There is a growing number of eligible staff retiring, including in key positions, which, if left unfilled, will result in further delayed projects and increased workloads for existing staff.

Issues for Future Consideration

Due to the limited time and resources we had to complete this audit, we focused our scope primarily on the construction phase of the CIP process and DDC's specific roles and responsibilities, as described above. However, during our preliminary background research, we found that there are significant delays in every phase of the CIP process, including those that DDC has limited control over. The department works with numerous agencies, including the Department of Budget and Fiscal Services and the Department of Planning and Permitting, and in order to more thoroughly review the CIP process for inefficiencies and causes of delays, these departments may merit a more detailed review due to their function and relevance to the CIP process. Some of the issues that may be reviewed include, but are not limited to:

- Internal control procedures and methods;
- The effect of timelines and approval roles and responsibilities; and
- Delays in obtaining the necessary project permits.

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Chapter 2

DDC Does Not Centrally Monitor or Prioritize Ongoing Capital Projects, Leading to Project Delays and Unmet Performance Goals

In our sample review, with data that was available for 4 out of 12 projects, we found that the average time from project budget approval to construction completion was 1,810 days, or almost five years. One project in particular was completed 537 days after the scheduled completion date and has remained open for an additional 996 days since completion. The city has policies for prioritizing CIP projects during the budgeting process. Policies also assign responsibility for prioritization changes throughout the process between city administration, the Department of Design and Construction, and client agencies. However, we found that DDC expects client agencies to monitor and prioritize their ongoing CIP projects, while client agencies expect more guidance from DDC, leading to a lack of monitoring and prioritization overall. In addition to this lack of accountability, client agencies feel there is a lack of transparency for CIP projects that are experiencing delays. DDC did not meet its performance metrics for project completion from FY 2018 to FY 2020. Due to the lack of transparency and prioritization of CIP projects, projects are not consistently monitored and are delayed in multiple phases.

CIP Projects
Consistently
Experience Delays
in Implementation
and Construction

We found that the average time from project budget approval to construction completion was 1,810 days, or nearly five years, for 4 out of the 12 projects in our judgmental sample. Overall, the time from budget approval to construction completion ranged from 4.1 years to nearly seven years. We were unable to determine budget approval dates for eight projects. See Exhibit 2.1 for the timelines for each project.

Exhibit 2.1

Budget Approval to Construction Completion Dates

Project	Budget Approval*	Budget Approval to Construction Completion (# of days)	Budget Approval to Construction Completion (# of years)
A	6/20/2016	1,674	4.6
В	6/22/2015	2,501	6.9
С	6/20/2016	1,510	4.1
D	Unknown	N/A	N/A
E	Unknown	N/A	N/A
F	Unknown	N/A	N/A
G	Unknown	N/A	N/A
Н	6/22/2015	1,553	4.3
ı	Unknown	N/A	N/A
J	Unknown	N/A	N/A
K	Unknown	N/A	N/A
L	Unknown	N/A	N/A

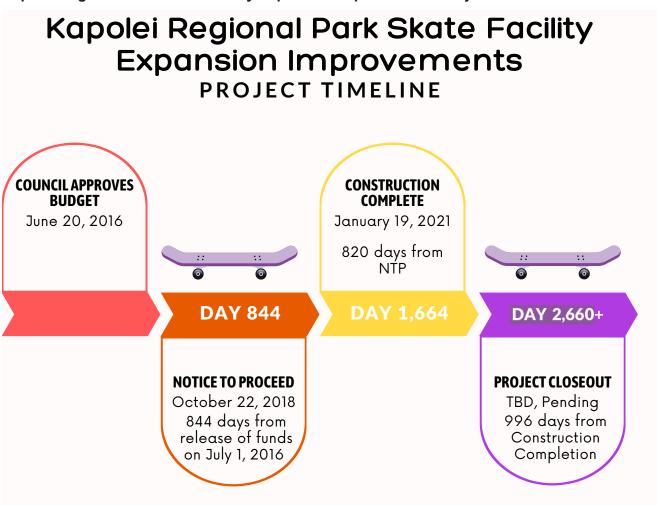
^{*}Budget approval is when the city council approves construction funds via an adopted budget. This is not the start of the construction phase. Annual budgets become effective on the first day of each fiscal year, which is July 1st.

Sources: Department of Design and Construction, City's Docushare, Office of the City Auditor

The department explained that several processes occur between budget approval and execution of a construction contract, many of which DDC has no control over. The department further notes that it becomes responsible for construction only when the Notice to Proceed (NTP) is issued, and construction is considered completed when the project is turned over to the operating agency.

Although prioritizing capital projects is evident during the budgeting process, DDC lacks procedures and guidance for prioritizing projects during the project construction phase, which may contribute to projects delays. From our sample, we identified one council-initiated project, the Kapolei Regional Park Skate Facility Expansion Improvements project that experienced significant delays. Exhibit 2.2 shows the project timeline in detail.

Exhibit 2.2
Kapolei Regional Park Skate Facility Expansion Improvements Project Timeline



Sources: Department of Design and Construction and Office of the City Auditor

This project, which was approved in July 2016, was scheduled to be completed and fully operational by August 2019. However, just the first phase of the project, issuance of NTP with construction, took 844 days, or over two years. According to DDC, once a project has received budget approval, the department has two years to encumber the funds, meaning they need to enter into a construction contract by that time. In our review, that process actually takes an average of 255 days, or less than one year. According to DDC, this project was a design-build contract for which the design and obtaining the permits took the contractor a long time to complete. Project construction was finally completed on January 19, 2021, 537 days after the scheduled completion date. As of October 2023, the project remains open, pending closeout procedures. Specifically, the final contractor evaluation is pending and contributing to delays of nearly three years in project closeout.

DDC's lack of transparency and collaboration with client agencies contributes to CIP projects delays During our interviews with the department's division chiefs, we found that DDC does not determine the priority of ongoing projects. According to staff, client agencies, which are other city departments, are responsible for the long-range planning for their facilities and developing the preliminary project scope, including prioritization of CIP projects. However, we conducted surveys of client agencies that worked with DDC and found that they believed that DDC is in charge of prioritizing construction projects based on DDC's expertise in design completion, staff resources, and other regulatory requirements. We also found that client agencies felt that there is a lack of communication and transparency from DDC regarding reasons why projects are being delayed.

In previous audits, we identified areas that needed improvement between DDC and client agencies relating to capital projects. For example:

- In one audit, DDC and a client agency were unable to quantify or identify the total capital costs related to projects and were unable to track, monitor, and expend funds before they lapsed or expired.
- In another audit, we found a similar instance where the client agency could not provide actual expenditure information for its CIP expenditures, and DDC could not provide the expenditure information either.

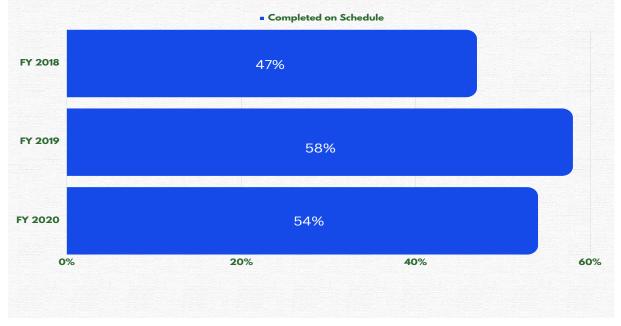
 We specifically found delays in council-initiated CIP projects, as well as council initiated projects that were never started. According to DDC, these projects are not started or completed for various reasons. Overall, the department admits to having a disconnect with council on the implementation of CIP projects.

Based on DDC documents, we learned that the department provides monthly status reports to most client agencies. According to DDC, the client agencies often bring up their concerns and issues with projects at these meetings. However, many client agencies reported that these monthly meetings just provide a high level status or summary of projects, and concerns about individual projects are not resolved. Therefore, additional project-specific meetings may be warranted.

The Department
Did Not Meet its
Performance
Goals For Project
Completion From
FY 2018 to FY 2020

From FY 2018 to FY 2020, the department developed performance metrics to increase the percentage of projects completed on schedule. The overall goal was to complete at least 80 percent of projects on schedule per year. However, the department did not meet its goal in any of the three years. The exhibit below details the department's performance from FY 2018 to FY 2020.

Exhibit 2.3
Performance Metric Results FY 2018 to FY 2020



Source: City and County of Honolulu Executive Operating Program and Budgets FY 2021-FY 2022

After FY 2020, the department no longer tracked or utilized this performance metric.

The department is not completing project closeout tasks in a timely manner According to DDC policy, construction close out procedures should be completed within 365 days. In our sample of 12 projects reviewed, only 3 projects, or 25 percent, were closed out within 365 days. For the remaining 9 projects, the department took more than 365 days. Exhibit 2.5 below details project close out calculations.

Exhibit 2.4
Days of Close-Out

Project Sample Review	Days to Construct Project*	Year Equivalency	Days to Close out Project*	Year Equivalency	Closed within 365 days
Α	820		Pending on Final		
	020	2.2	Contractor Evaluation	N/A	No
B	725	2.0	857	2.3	No
C	558	1.5	418	1.1	No
D	503	1.4	270	0.7	Yes
Е	382	1.0	1110	3.0	No
F	385	1.1	616	1.7	No
G	779	2.1	455	1.2	No
Н	720	2.0	319	0.9	Yes
1	729	2.0	642	1.8	No
J	535	1.5	525	1.4	No
K	394	1.1	941	2.6	No
L	599	1.6	280	0.8	Yes
Average	594	1.6	585	1.6	

^{*} The days from NTP (start of construction) to finish (end of construction)

Source: Office of the City Auditor

The average time it took to close out a project in our sample was 585 days, just a few days shorter than the average time of 594 days to construct the project. For four of the projects, the closeout phase took longer than actual construction. Successful construction contract closeout is defined by timeliness and execution. When work has been completed, final retainage is released and the general contractor can be paid.

According to an article by the Project Management Institute¹, project closing is the combination of the:

- 1. Assurance that all the work has been completed;
- 2. Assurance that all agreed upon project management have been executed; and
- 3. Formal recognition that a project is completed.

The closeout phase comes after the construction of CIP projects is complete, and it involves assembling and finalizing all documentation related to the project. The actual time spent on the closeout work may be slightly less than construction work, but many DDC projects still remain pending in the closeout phase for over a year and a half.

According to the department, project managers are solely responsible for project closeout, and it is a process based on the manager's judgment of reasonable timeframes. Best practices for government project funds management emphasize the importance of promptly closing out projects because that facilitates sound internal and funds control.² Timely closeout provides reasonable assurance that the documentation is completed accurately and that those familiar with the project complete final documentation. Additionally, questions or issues may be discussed in a timely manner before facts are forgotten or confused. Finally, there is less risk of documentation being lost.

The department explained that for construction projects, many contractors take a long time to turn in required documents. Additionally, the city's only financial leverage in these situations is a 2.5 percent retainage on the construction contract, whereas general contractors typically have a 10 percent retainage.

The department's policies and procedures clearly outline the required deliverable documents for closing out projects, as stated in the Standard Operating Procedure Construction #27 – Construction Contract Close out. Types of closeout documents include: Memorandum to BFS Director – *Completion of Construction Contract*, Final pay estimate, Payment release from surety, Third party letters, Certificate of Vendor Compliance, and Contract Administration Verification Report.

Aziz, E. E. (2015). Project Closing: The Small Process Group with Big Impact. Paper Presented at PMI® Global Congress 2015—EMEA, London, England. Newtown Square, PA: Project Management Institute.

² U.S Department of Transportation Federal Highway Administration, Project Funds Management Guide

However, the procedures do not provide specific timelines for collecting documents, nor do they include oversight or follow-up measures to ensure timely responses from responsible parties.

In our review of specific closeout tasks, we found that staff are required to complete a *Contract Administration Verification Report* as instructed by BFS for record-keeping purposes. However, we found this report to be duplicative, as the information it requests is already gathered in other documents; this may cause an administrative burden for project managers to complete duplicative documents.

We also confirmed with staff that there is no set deadline for closing out projects, and it appears that this process is based on individual staff judgment of what they consider is a reasonable timeframe. This may be due to resource constraints and a lack of authority to expedite the project-close out process. The department has steps to initiate a closeout, but there needs to be improvement in accelerating closeout processes and follow-up. Without clear guidance from department management on closeout timelines, projects will continue to remain open and documentation may become unreliable.

Chapter 3

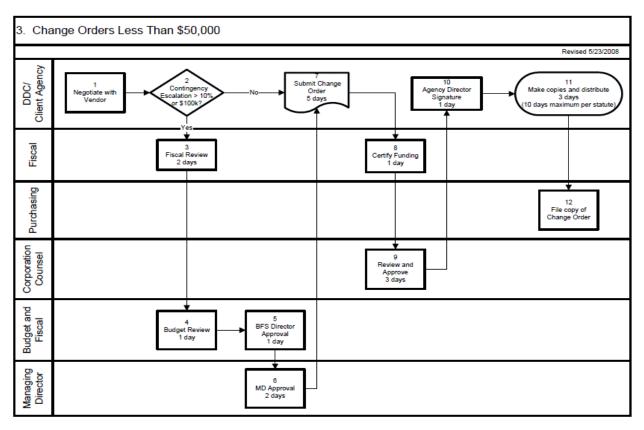
Department Staff Do Not Consistently Adhere to Standard Operating Procedures, Which Contributes to Delays in Construction

We found that there is a discrepancy between the Department of Design and Construction's (DDC) written standard operating procedures and actual staff performance. There are significant delays in the review and approval process for change orders among all designated agencies, and the department lacks effective monitoring processes. Additionally, the staff are not consistently adhering to other DDC policies during the construction process.

There Are Significant Delays and Cost Increases in the Change Order Review and Approval Process During construction, changes to the proposed material types, material quantities, or construction procedures, and associated costs, can occur for a variety of reasons. DDC's standard operating procedures provide guidance and processes for executing and approving construction change orders. We reviewed the timeliness of change order approval from the agencies and the department.

Exhibits 3.1 and 3.2 flowcharts detail the change order approval process for amounts less than or greater than \$50,000. Note that Department of Budget and Fiscal Services (BFS) signature is not required for change orders less than \$50,000.

Exhibit 3.1 Change Order Approval Process: Less than \$50,000



DDC SOP CONSTRUCTION 13 ATTACHMENT 3

Source: Department of Design and Construction Standard Operating Procedures # 13

Change Orders \$50,000 or More Revised 5/23/2008 Client Agency Submit Change gency Directo ies and distribu 3 days Negotiate with Vendor Signature 1 day 5 days \$100 0 days maximum per statut Certify Fundi 1 day 2 days Purchasing File copy of Approve Change Order Corporation Counsel 11 Budget and Fiscal BFS Directo BFS Directo Review and Approval 1 day 1 day Approve 1 day **Janaging** Director 6 MD Approval 2 days

Exhibit 3.2 Change Order Approval Process: Greater than \$50,000

DDC SOP CONSTRUCTION 13 ATTACHMENT 3

Source: Department of Design and Construction Standard Operating Procedures # 13

In reviewing the flowcharts provided by DDC, we calculated that the change order process should take approximately 19 work days to get approvals from agencies if a change order is less than \$50,000, and 21 work days for change orders greater than \$50,000.

In our review of 32 change orders, we found that it takes an average of 32 calendar days for change order approval from all agencies, regardless if the changes are less than or greater than \$50,000. As shown in Exhibit 3.3, project D had six change orders with a combined 214 days in review time, delaying the project by over three months. In another example, project E had one change order with 65 calendar days in review time, causing a month and a half delay. We conclude that projects that have between three and five change orders can experience delays of up to three months due to the additional review time.

Exhibit 3.3 Change Order Time

Projects*	Change Orders	Total Calendar Days in Review**	Less Than \$50,000 + >19 days	Greater Than \$50,000 + >21 days	Additional Days Needed	Total Days Delay
_	,					
B	1	34	Yes	-	15	00
	2	20	Yes	-	1	39
	3	33	-	Yes	12	
	4	30	Yes	-	11	
D	1	40	Yes	-	21	
	2	34	Yes	-	15	
	3	29	Yes	-	10	100
	4	43	Yes	-	24	
	5	27	Yes	-	8	
-	6	41	Yes	-	22	
	-					
Е	1	65	_	Yes	44	44
	'	05	_	163		77
_						
F	1	47	Yes	-	28	76
-	2	34	Yes	-	15	70
	3	51	Yes	-	32	
	4	20	Yes	-	1	
Н	1	31	Yes		12	
	2	52	Yes	-	33	
-	3	22	Yes	-	3	74
	4	29	Yes	-	<u>3</u> 10	
	5	35	Yes	-	16	
	5	35	res	-	10	
I	1	31	-	Yes	10	
	2	27	Yes	-	8	
	3	56	Yes	-	37	55
J	1-3	89	-	Yes	68	
	4	1	-	-	-	68
K	1	20	_	_	_	
	2	22	Yes	-	3	26
	3	42	Yes	-	23	
_	4	18	-	-	-	
-	т	10				
L	1	16	_	_	_	_
	l I	10	_	· -	-	ı -

^{*}Projects A, C, and G did not have any change orders

^{**}The total days in review in our analysis included non-working days.

We also found that there are consistent delays by specific agencies to review and approve change orders. For example, in our sample:

- We found that 26 change orders took longer than the one-day allotment for BFS Fiscal Officer review before being sent to Corporation Counsel, taking an average of 18 days.
- We found that eight change orders had an average of eight days for Corporation Counsel review before sending to the department's director, greater than the three-day expectation.

While there are formal documentation requirements for initiating a change order and timelines for approval, on average, project change orders exceed the time allotted for approval by the designated agencies. In our review, we did not find evidence that DDC monitored or followed-up with agencies on approval status. While awaiting change order approval, the construction projects will not proceed. However, there could still be advancement in other areas of administrative documentation tasks.

We acknowledge that with change orders needing approval from multiple agencies, change order management can be a complex issue. DDC management explained that oftentimes unforeseen circumstances in other agencies hold up the process, but proactive follow-up by DDC staff with those agencies could expedite approval and ensure smooth project execution. There needs to be greater responsibility, oversight, and follow-up of change orders by DDC to ensure the projects are not delayed. When change orders are approved on time, it enables the projects to continue moving forward.

Change order prices for some projects are greater than the recommended amount

The 32 change orders we reviewed had a total cost of \$789,341. Best practices recommend that for major projects, the change order costs should typically amount to 10 to 15 percent of the original contract value¹. The average change order cost for our projects was 5.7 percent of contract value. However, 2 projects had change order costs exceeding 15 percent of the contract value.

¹ Ramos, D. (2022). Construction Change Orders: Process and Best practices for Project success.

Exhibit 3.4 Change Order Costs

Project*	Original Project Cost	Number of Change Orders	Total Price of Change Orders	Adjusted Price with Change Orders	Price Change Percentage
В	\$869,754	4	\$146,606	\$1,016,360	17%
D	\$987,400	6	\$62,417	\$1,049,817	6%
E	\$1,260,543	1	- \$64,950**	\$1,195,593**	-5%
F	\$1,262,430	4	\$62,925	\$1,325,355	5%
Н	\$3,126,672	5	\$116,939	\$3,243,611	4%
1	\$2,079,000	3	\$134,734	\$2,213,734	6%
J	\$899,897	4	\$251,567	\$1,151,464	28%
К	\$1,191,422	4	\$79,103	\$1,270,525	7%
L	\$1,316,700	1	\$-	\$1,236,736***	0%
Total	\$12,993,818	32	\$789,341	\$13,703,195	

^{*}Projects A, C, and G did not have any change orders

Sources: Department of Design and Construction Close-Out Memorandums and Contract Change Order Documentations

DDC staff explained that Project B change orders were related to 1) changes in labor, materials, and equipment for specified finishes; 2) installing additional stainless steel; 3) reimbursing contractors for equipment that was not available at time of bid; and 4) electrical services rerouted due to conflicts with existing underground telephone vault. This particular project had a change order cost of nearly \$150,000.

For Project J, change orders were related to 1) removing trees and reinforcing cavity location; 2) localizing net system; 3) revising Shotcrete quantities; and 4) additional clearing and scaffolding to complete an installation. These change orders had a

^{**}Change order was credited to the contract (Credit amount of remaining equipment from scope of work and other changes in labor, materials, and equipment)

^{***}Per the Construction Close out Memorandum, there was an unused balance to lapse of \$79,964

significant impact on the overall cost of this project, at a price of \$251,567, or nearly 28 percent of the original project cost.

To ensure that these change orders were justified, the department was able to provide supporting documentations. In order to complete the change orders at a lower cost, the department has the option to put change orders out for a separate, competitive bid. However, the department explained how re-bidding process could delay projects further by months or even years.

An Invoice Was Paid Without Formal Approval

We reviewed 144 invoices related to our sample projects. We found one invoice that was paid without formal approval. We question if the invoice amount of \$24,381 was accurately charged, which was recorded in the payment accounts database.

We asked department staff why this invoice was still paid despite not being approved. Staff commented that the Division Chief, alone, is authorized to sign and approve, but found that this conflicts with the written standard operating procedure.

Based on the department's Standard Operating Procedure Construction #16 – Construction Contract Invoice Processing, all invoices are approved by both the Division Chief and DDC Director before being forwarded to BFS Construction and Maintenance Fiscal for payment. Therefore, invoice approval requires two authorizations. According to invoice best practices, everyone involved should understand and follow the documented approval workflow, including adding a secondary approver^{2,3}.

While it's possible that this one payment was overlooked by the department and BFS, we emphasize that the department should ensure that all payments, regardless of their amount, are authorized consistently and properly to prevent any errors and omissions.

² Beanworks, Q. a. P. B. (2023). Accounts Payable Best Practices: Invoice Approval Process. *ERP Software Blog*.

³ Girsch-Bock, M. (2023). Invoice Approval Best Practices. *Planergy Software*.

One Project Had an Incomplete Project Turnover Memorandum

As part of the close out process, upon completion of a project, DDC transfers responsibility for facility maintenance and all related documentation to the operating agency. The purpose is to provide smooth, efficient, and complete turnover of projects from the department to the agency that will operate and maintain the new facility.

During our review of 12 projects, in one project, a project turnover memorandum was incomplete and not signed by the appropriate department head. However, we did find complete sets of other related documents (i.e. record drawings, warranty agreements, final letters) required for facility operating and maintenance.

Per DDC's Standard Operating Procedure, #30 – Project Turnover to Operating Agency, this memorandum serves as a confirmation that the project has been completed in accordance with the project plans and specifications. The responsible division staff must review and approve before handing documents to the operating agency. Although other information was available, we found a lack of confirmation of review and approval in this instance.

Contractor Performance Evaluations are Not Consistently Completed in a Timely Manner

During the close out process, DDC is required to conduct meaningful performance evaluations of construction contractors. The purpose of these evaluations is to provide an official evaluative record, on both positive and negative terms, of the project contractor. It also alerts contractors of any deficiencies found and to assist in the evaluation of bids for future projects.

During our review of 12 projects, we found one instance of an incomplete performance evaluation of a construction contractor. We asked management why a performance evaluation was not performed in this instance. Management explained that the worker in charge of the project retired and was unable to close out this section in a timely manner. DDC acknowledged that the lack of staffing contributed to the omission, and instead, the contractor's past performance was relied upon.

According to the response, under this circumstance, it was deemed unnecessary to conduct a performance evaluation for this particular contractor since they had received favorable reviews on other projects in the past. However, it is important that even for repeat contractors, a performance evaluation should be completed as it can provide new insights that were not previously considered. The evaluations may also be considered by other departments, such as BFS, in awarding future contracts.

Finally, we learned during staff interviews that there is no deadline for completing performance evaluation; staff are just encouraged to complete evaluations as soon as possible. We confirmed in Standard Operating Procedure Construction #32 – Construction Contractor Evaluation, that there is no deadline. However, best practices from Contractor Safety, EHS Management, suggest that evaluations are essential, not only to meet industry standards and close out projects but also to provide valuable insights for future bidding processes⁴.

Jkumar (September 2022). How to Conduct Contractor Performance Evaluations. *EHS Daily Advisor*.

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Chapter 4

Due to Department Vacancies and Increasing Retirements in Key Management Positions, CIP Projects are Backlogged and Exceeding Project Manager Capacities

The Department of Design and Construction (DDC) is unable to attract qualified candidates, despite its effort at recent job fairs, primarily due to uncompetitive salaries compared to the private sector. In addition, the number of staff eligible to retire from the department will continue to increase for the next few years. Many of these upcoming retirements are for key management positions. If they remain unfilled, workloads for existing staff will continue to increase, the total number of projects DDC can complete will decrease, and projects could be delayed even longer. We found that there is high turnover of project managers in DDC and remaining staff are being asked to go beyond their job description and existing workload to act as project managers. The average number of projects completed by project managers ranges from 1.6 to 6.6 projects annually, while the number of outstanding and in-process projects range from 14 to 76 projects. This workload exceeds current project manager capacities.

Key Positions in DDC Remain Vacant Due to the Lack of Qualified Candidates

Over the last five years, the department has lost more staff than it has been able to replace. Key positions have gone vacant for years due to lack of qualified candidates. As of January 1, 2023, the department's overall vacancy rate was 27 percent, with 52 out of 194 full-time equivalent positions vacant. Exhibit 4.1 details some of these vacancies.

Exhibit 4.1 Department of Design and Construction Key Position Vacancies, January 1, 2023

	Vacant	Authorized
Civil Engineer V and higher	9	35
Mechanical Engineer III and V	2	2
Landscape Architect II	1	1
Design and Construction Branch Chief	4	5

The city has been unable to attract qualified engineers

According to department managers, DDC participated in recent job fairs to recruit engineers and project managers. However, the Mechanical/Electrical Division did not receive any applications. Most job applicants are looking for entry-level positions or did not have the necessary skills for engineering or technical roles required by the city. Additionally, city civil engineer salaries are not competitive with private sector civil engineer salaries.

The salary range for a private sector civil engineer is \$70,396 to \$186,700. Initially, the difference between a City and County of Honolulu salary versus the private sector salary is less than \$19,000, but as employees gain more experience, the salary difference rapidly increases to more than \$96,000. The highest amount the city can offer is \$90,252. Exhibit 4.2 depicts this comparison.

Exhibit 4.2
Civil Engineer Salary Range – City and County of Honolulu,
FY 2022 vs. Private Sector

	City & County of Honolulu	Private Sector	Difference
Minimum	\$51,444	\$70,396	\$18,952
Maximum	\$90,252	\$186,700	\$96,448

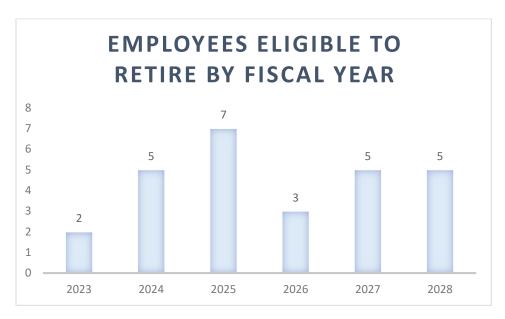
Sources: Department of Design and Construction and Office of the City Auditor

The department acknowledged that addressing this pay differential is both a short and long term priority, and it plans to work with the city administration to increase pay, be competitive to private industry, attract eligible candidates, and fill vacancies.

The Number of DDC Staff Eligible For Retirement is Increasing, Including Those in Key Positions

Between FY 2023 and FY 2025, the number of DDC staff eligible for retirement is expected to increase each year. See Exhibit 4.3 for the number of staff eligible to retire each year from FY 2023 through FY 2028.

Exhibit 4.3
Employees Eligible to Retire by Fiscal Year



Source: Department of Design and Construction

Additionally, by 2027, nine employees who are Civil Engineers V and above will be eligible to retire. One of these employees is a Division Chief.

Exhibit 4.4 Civil Engineers Eligible to Retire

	Position	Year Eligible to Retire
1	Civil Engineer V	2027
2	Civil Engineer V	2027
3	Civil Engineer V	2025
4	Civil Engineer V	2025
5	Civil Engineer V	2024
6	Civil Engineer VI	2027
7	Civil Engineer VI	2017
8	Civil Engineer VII	2026
9	Civil Engineer VIII	2024

According to management, a short-term priority for the department is filling vacant positions which include engineers, architects, inspectors, and clerical staff. Priorities also include developing and training new and existing staff for vacant and anticipated vacant leadership roles. Long-term priorities for the department include filing vacancies over the next five years, as more than half of the staff is anticipated to leave through retirement.

In instances where large numbers of government employees are eligible to retire, best practices in succession planning include strategies such as:

- Developing an integrated approach to succession management especially with positions in an organization that are more critical than others. A successful succession plan should place a high priority on planning for a smooth change in such positions;
- Continually assessing potential employee turnover through regular career planning discussions and an ongoing performance review process that assists in assessing potential turnover;
- Providing a formal, written succession plan as a framework for succession initiatives;
- Developing written policies and procedures to facilitate knowledge transfer;
- Developing leadership skills of junior staff;
- Encouraging personal and professional development activities;
- Designing better recruitment and retention practices;
- Giving consideration to relevant collective bargaining agreements and how the agreements fit with the overall succession plan; and
- Considering non-traditional hiring strategies.

Finally, if early retirement programs are offered, they should be done in conjunction with a succession plan. According to the department, they are currently coordinating with the Department of Human Resources on a staffing and succession plan. Although there is evidence of staffing and succession forms, the department has yet to formalize and utilize them.

If DDC continues to have difficulty filling its vacancies, CIP projects will likely experience continued delays and remain outstanding in the closeout phase. Current staff will need to take on more responsibilities, even those outside of their job descriptions.

Unlicensed Civil Engineers Are Acting as Project Managers to Cover for Vacancies During our review, three out of nine senior level project manager positions from our sample of projects reviewed became vacant. To cover for these vacancies, the department used unlicensed engineers as project managers. Although one such employee had both the design skills and construction experiences to take on a role that would normally be handled by a licensed engineer, the city specifically requires that senior level positions be registered professionals with the State of Hawai'i. The department explained that project managers work under the supervision of supervising project managers, who are required to be licensed. However, because these projects are large and complex, most unlicensed project managers may still not have the capacity to close out projects timely even if they were supervised. However, according to DDC staff, without using such staff, project documentation awaiting closeout may be delayed even longer.

Government Finance Officers Association Best Practices: Key Issues in Succession Planning

The average number of completed projects per project manager ranged from 1.6 to 6.6 projects. The number of in-process projects ranged from 14 to 66 projects. For all of the project managers, the average number of completed projects is far less than the number of projects in-process. The number of outstanding projects in-process far exceeds the average capacity of project managers. Additionally, project manager workloads will likely increase as newer projects are added. According to DDC staff, the high number of vacancies imposes a heavy workload on existing staff, while also limiting the number of projects the department can handle overall. Staff are asked to take on more responsibilities than their current job descriptions, which can help with professional growth, but is also challenging.

Exhibit 4.5
Project Manager Workloads, FY 2018 to FY 2023

Project Manager	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Pending (awaiting closeout)	In- Process	Average # of Completed Projects
Α	0	0	2	2	4	4	1	29	2.4
В	0	1	1	2	7	0	1	18	2.2
C	0	1	1	0	5	1	1	14	1.6
D	0	4	5	2	9	6	19	76	5.2
E	2	4	2	4	5	2	9	66	3.8
F	3	13	4	4	6	3	8	39	6.6

Sources: Department of Design and Construction and Office of the City Auditor Analysis

Chapter 5

Conclusions and Recommendations

In order to oversee the city's Capital Improvement Program (CIP), the Department of Design and Construction (DDC) has developed policies and procedures to complete the construction phase of projects. However, we found areas where the processes can be improved to ensure timely project completion.

First, the department expects client agencies to monitor and prioritize their ongoing projects, while some client agencies expect the same from the department. This leads to a lack of overall monitoring and prioritization. Client agencies also report a lack of accountability and transparency from DDC on CIP projects that experience delays. In addition, the department is not meeting its performance goals for completion from FY 2018 to FY 2020. In our sample of projects, the average time it took to close out a project was 585 days, just a few days shorter than the average time of 594 days to construct a project.

Additionally, the department should have better oversight and monitoring of the change order approval process during the construction phase to further avoid project delays. In our review of 32 change orders, we found that it took an average of 32 calendar days to get a change order approved from all required agencies, which is longer than current policies. Projects that have between three and five change orders can experience delays of up to three months due to the additional review time.

Department staff are also not consistently adhering to the department's standard operating procedures for the construction process. Specifically, there is insufficient monitoring of reviews and approvals of certain documents throughout the process, such as change orders. The department should also identify an appropriate time frame for conducting performance evaluations of construction contractors. This will enable the Department of Budget and Fiscal Services to consider timely and relevant evaluations when awarding future contracts.

Finally, there is high turnover of project managers in the department, and remaining staff are being asked to go beyond their jobs description and existing workloads to serve as project managers. The department should prioritize personnel management to ensure a sufficient and qualified workforce to complete their work. Specifically, they should enhance recruitment efforts in conjunction with city administration to

attract qualified employees who can effectively manage construction projects and ensure timely completion. It is also crucial for DDC to formalize and implement retirement, staffing, and succession plans to ensure uninterrupted project operations and smooth project transitions.

In every phase of the CIP process, including those that DDC has limited to no control over, we found considerable delays. The department collaborates with many other city agencies, and these agencies may require a more thorough review in order to identify additional inefficiencies and delays in the CIP process. Issues that may be considered include internal control procedures, the effect of timelines, roles, and duties, and delays in the permit application process.

Recommendations

We recommend that the Department of Design and Construction should:

- Provide additional information in ongoing quarterly CIP reports issued to the city council that includes more details about the status of ALL open projects, particularly councilinitiated CIP projects;
- 2. Amend the change order process to track or monitor the progress and set realistic timelines and expectations for receiving approvals by all agencies;
- Establish better communication and transparency with client departments by ensuring that ongoing monthly meetings are tailored to specific department's needs and concerns;
- 4. Develop strategies for expediting the project close-out process;
- 5. Expedite the development of its staffing and succession planning; and
- 6. In coordination with city administration, city council, and Department of Human Resources, reduce staff vacancies by 10 percent by the end of FY 2026.

Management Response

In response to a draft of this audit report, DDC expressed partial agreement with the audit findings and recommendations. We acknowledge that we are not subject matter experts in the areas of design and construction, and restate that our findings and recommendations address deficiencies in the general areas of policies, procedures, and operations. We stand by our audit findings and recommendations and provide the following clarifying comments based on their management response.

We acknowledge that during the change order process, the department does not have control over the workload or priorities of employees of other agencies. However, delays in change order approval contribute to overall construction delays, which continue to negatively impact the CIP process. We urge the department to explore and consider alternatives to the current process that will give them more oversight and authority to expedite approvals and reduce the overall time to complete construction.

Additionally, the department commented that they strive to provide full and transparent monthly status reports and open communication with client agencies. We agree that DDC conducts monthly meetings, but restate that there is a disconnect between DDC and client agency responsibilities for project tracking and prioritization. Specifically, client agencies responded to our survey with complaints about a lack of DDC communication and transparency. We encourage the department to continue gathering feedback directly from client agencies to clarify roles and responsibilities and increase transparency and effectiveness of monthly meetings. We also agree with the department's statement that the project closeout process does not materially contribute to the construction progress of capital improvement projects, and we understand the tradeoffs the department must make with limited resources. However, by not completing closeout in a timely manner, the department is not following best practices for project management. We encourage the department to explore alternatives to complete closeout more promptly without straining existing resources.

Finally, as described in our audit methodology, we selected a judgmental, non-statistical sample of 12 completed construction projects to review and analyze the construction phase in more detail. These projects were selected to represent a range of Administration- and Council-initiated projects across the three DDC divisions with varying costs and client agencies. While our sample was not intended to be representative of the universe of completed projects, we believe our review sufficiently identifies areas for improvement.

We agree with the department's assessment that staff were fully responsive and transparent to our requests for information and access to documentation. We are also encouraged by the department's initiatives and hope they will result in meaningful improvements to the CIP process. We did not make any significant amendments to the audit report as a result of management's response, but made technical, non-substantive changes for purposes of accuracy, clarity, and style. A copy of the management's full response can be found on page 43.

DEPARTMENT OF DESIGN AND CONSTRUCTION KA 'OIHANA HAKULAU A ME KE KĀPILI CITY AND COUNTY OF HONOLULU

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RICK BLANGIARDI MAYOR MEIA



HAKU MILLES, P.E. DIRECTOR

BRYAN GALLAGHER, P.E. DEPUTY DIRECTOR HOPE PO'O

October 25, 2023

Ms. Arushi Kumar City Auditor 1001 Kamokila Boulevard, Suite 216 Kapolei, Hawai'i 96707

Dear Ms. Kumar:

SUBJECT: Response to draft Audit of the Department of Design and Construction's Implementation of the City's Capital Improvement Program

Thank you for the opportunity to submit a response to the confidential draft report titled "Audit of the Department of Design and Construction's Implementation of the City's Capital Improvement Program (CIP)" prepared by your office.

We concur with your conclusion that "In every phase of the CIP process, including those that DDC has limited to no control over, we found considerable delays. The department collaborates with many other city agencies, and these agencies may require a more thorough review in order to identify additional inefficiencies and causes of delays in the CIP process."

We also concur with the recommendations that DDC should, "Expedite the development of its staffing and succession planning," and "In coordination with city administration, city council, and DHR, reduce staff vacancies by 10 percent by the end of FY 2026." Filling vacancies and improving succession planning are high priorities for DDC, and we are striving to reduce staff vacancies by 10 percent or more as soon as possible. However, while DDC is working with DHR to raise certain City pay scales and revamp City hiring procedures, the large number of staff near or at retirement age presents major challenges for DDC in the immediate future.

We recognize that the City Auditor has limited resources and was constrained in their ability to perform a comprehensive audit of the City's CIP processes. Nevertheless, we are hopeful this audit will lead to an improved awareness of the Citywide improvements that are needed to increase efficiency of the City's overall CIP processes.

Ms. Arushi Kumar October 25, 2023 Page 2

As experienced project managers and engineers, DDC respectfully offers its preference that a meaningful audit of the City's CIP process be conducted on a Citywide basis by persons with knowledge and experience in the design and construction industry and with knowledge of municipal government project and engineering processes, procedures and constraints.

Unfortunately, from our perspective, the City Auditor's limited resources compromised the auditor's ability to fully understand the CIP budgeting process and DDC's design and construction processes, challenges, and constraints. To provide a fully informed audit, it is critical to DDC that the Auditor understand these processes. DDC was fully responsive and transparent to the Auditor's requests for information and access to documents, providing them with reports, files, operating procedures, and flowcharts which explain the processes. DDC management also met with the Auditor's staff to explain the processes. However, the draft report suggests the Auditor was unable to process some of the information DDC provided and found deficiencies in the absence of a fully developed objective basis for the findings.

Several examples are provided as follows:

- In Chapter 1 under the section titled, "Capital Improvement Program Process," the report states that, "Once design is approved, DDC issues a Notice to Proceed (NTP) and contracts with construction contractors for construction of capital improvement projects." However, DDC's standard operating procedure, to which the Auditor was provided full access, clearly indicates that a Notice to Proceed is issued only after the construction contract has been executed by the BFS Purchasing Division.
- Recommendation 2 encourages DDC to, "Amend the change order process to track or monitor the progress and set realistic timelines and expectations for receiving approvals by all agencies." In fact, DDC's project managers track the processing of most change orders using the Contract Routing Slip eform. Also, DDC's project managers contact the next person in the change order approval process for status updates. However, DDC's project managers simply do not have control over the workload or priorities of employees of other departments.
- Recommendation 3 encourages DDC to, "Establish better communication and transparency with client departments by ensuring that ongoing monthly meetings are tailored to specific department's needs and concerns." In fact, DDC strives to provide full and transparent monthly status reports as well as open communication with the client agencies. Sample monthly status reports that are distributed to the client agencies were provided to the Auditor in December 2022, and sample agenda for meetings that DDC holds monthly with each of DES, DPR, HFD, HPD, DTS, DFM, and HESD to discuss on-going CIP projects were provided to the Auditor in January 2023. DDC would welcome additional

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recommendations on how DDC can better communicate with our client agencies. It should be noted that the topics and agendas for each of the agencies is tailored to meet the needs of the agencies. In some cases, the agencies submit the draft agenda for each meeting ahead of time. This allows DDC to provide them answers before the meeting to allow for more complete discussions.

- Recommendation 4 encourages DDC to, "Develop strategies for expediting the
 project close-out process." DDC explained to the Auditor that project closeout is
 essentially a paperwork and documentation procedure that occurs after
 construction is complete and does not materially contribute to construction of the
 capital improvement that benefits the public. Because DDC is short staffed, such
 activities necessarily receive lower priority than activities that are essential to
 construction progress. In this context it is suggested that DDC could pursue one
 or more of the following options to address this recommendation:
 - 1. Defer work on new projects to divert staff to working on closing out completed projects.
 - 2. Pursue cure letters and termination of construction contracts when the contractor is slow in submitting the documents required for closing out the contract. This would require more staff resources, which would impact work on new projects.
 - 3. Pursue changes to state law to increase the retention in construction contracts to a rate in the range of 5 to 10 percent, which is typical of construction industry retention rates. This would provide economic pressure on the contractor to complete the contract close-out tasks faster.

DDC feels that it is unrepresentative for the Auditor to base audit findings on 12 projects out of the 352 provided without clear explanation as to how the 12 projects were chosen. The Auditor's statements throughout the audit that "DDC does not monitor ongoing projects... lacks accountability.... lacks transparency.... does not prioritize their projects... and has 'unqualified staff" are misleading and unsupported conclusions of DDC operations.

Other significant concerns with the content and conclusions of the draft report were clearly documented in our responses to the draft report with our highlighted responses and comments embedded directly into the report.

While we value the independent assessment function of the City Auditor's office, we have an expectation that all available facts and information will be considered before opinions regarding DDC operations are summarily expressed in a final report. We are

Ms. Arushi Kumar October 25, 2023 Page 4

hopeful that you will use this response to address the issues raised prior to issuing the final report.

Sincerely,

Haku Milles, P.E., LEED AP

Director

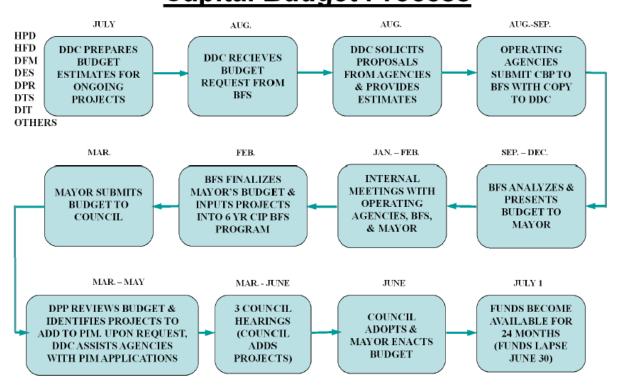
APPROVED:

Michael D. Formby

Managing Director

Appendix A Annual Capital Budget Cycle Process Flowchart

Department of Design and Construction Capital Budget Process



- 1. July: The Department of Design and Construction (DDC) prepares six-year funding requirements for ongoing projects and programs.
- 2. July-August: The Department of Budget and Fiscal Services (BFS) requests all city agencies to submit their budget proposals for the coming fiscal year. The memo includes budget threshold guidelines for the agencies.
- 3. August: DDC solicits budget proposals from operating agencies by memorandum.
- August: DDC meets with individual operating agencies (if needed) to discuss initial budget proposals and make required adjustments.
- 5. August-September: Operating agencies submit capital budget packages to BFS.
- 6. September-December: BFS Director and deputy review with the operating agencies and finalize program for mayor's review.
- 7. January-February: Mayor reviews six-year capital budget.
- 8. February: BFS makes adjustments based on discussions and enters data into BFS budget database.
- 9. March: Mayor submits proposed budget to council.
- 10. March-April: The Department of Planning and Permitting (DPP) reviews budget package and notifies DDC or operating agency of projects that need to be added to the Public Infrastructure Map (PIM).
- 11. March-May: DDC or operating agencies submit PIM applications to DPP for all identified projects. DPP prefers receipt of all applications before the end of May, as map revisions need to be approved by council prior to budget approval.

- 12. March-June: Operating agencies present budget proposals to the Honolulu City Council Budget Committee at a Special Budget Briefing and respond to verbal questions with assistance from DDC and BFS, as needed. DDC receives written questions from council in the form of budget communications. Written responses are prepared and submitted to Council with assistance from operating agencies and BFS.
- 13. March-June: Council proposes and adopts Council Draft 1, proposes and adopts Council Draft 2, and finally proposes and adopts Floor Draft 1. DDC provides comments on new projects inserted into the Council drafts, such as adequacy of staffing and proposed funding, as appropriate.
- 14. May-June: DDC and the operating agencies support DPP application for PIM revisions at Council Planning Committee meetings. Council approves or rejects proposed PIM revisions referenced from the Planning Committee.
- 15. June: Council passes the budget ordinance for the coming fiscal year.
- 16. July 1: Funds become available for budget implementation for a period of 24 months. Funds not encumbered within 24 months are lapsed.
- 17. July: DDC designates authority or funds to operating agencies to implement specific projects, if required by the Revised Charter of the City and County of Honolulu or the Budget Ordinance.

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Appendix B

Consultant Qualifications and Procurement

Request for Qualifications

The Department of Design and Construction (DDC) shall provide to the Department of Budget and Fiscal Services (BFS) Purchasing for publication on their website a request for consultant Statement of Qualifications (SOQ) before the beginning of each fiscal year. The advertisement specifies SOQ submittal requirements, including general application, instructions, required documents, and submittal formant. In addition, DDC provides current forms that might be needed for submittal, such as a Service Category Checklist that applicants use to indicate the categories they are interested in qualifying for, and a Resubmittal Request Form.

Review of Statements of Qualifications

The DDC Director designates a Review Committee (RC), consisting of at least 3 people with sufficient education, training, and licenses or credentials to assess consultant qualifications for the various service categories. The RC members are selected to ensure impartiality and independence of the committee members, and may include individuals from outside the city, if needed. The list of proposed RC members is submitted to the Chief Procurement Officer (BFS Director) for approval prior to convening. The submittal also includes a signed affidavit of each RC member's attestation requirements. Upon approval and after the SOQ submittal deadline, the RC reviews and evaluates all submittals received by the deadline and other pertinent information and prepares a list of Qualified Service Providers for each service category.

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Appendix C Design Procedure Overview

The Department of Design and Construction (DDC) project manager (PM) during the design phase (as opposed to the construction phase) shall be very familiar with the consultant contract and shall apply the contract requirements consistently throughout the design phase, with emphasis on schedule production and adherence. The PM uses a Design Phase Checklist to identify and track various project requirements, including permits, approvals, and other design issues. Through the process, the PM also performs designate tasks as needed.

In the intermediate design submittal stage, submittals must be reviewed by the PM relative to project requirements and contract scope of work. The consultant is expected to address comments in writing the timeliness of submittals shall be documented. The PM is responsible for explaining any project delays, whether during the consultant's work or during city review. Any other submittal review by others within DDC, the project operating agency for concurrence that the design satisfies their project expectations, and other city and non-city agencies shall be coordinated by the PM as required. The PM is responsible for taking appropriate action as needed to ensure reviews do not result in project delays.

In the final design and agency approval stage, the PM confirms that final design submittal meets all contract requirements and all agency approvals have been obtained prior to bid package and processing. A bid package is prepared, reviewed, and completed during final design to ensure all documentation and approvals are in place. The PM also uses the Best Management Practices Plan Reviewer Checklist to document review of the bid package for compliance with city permits requirements, the city's current Storm Water Management Program Plan, and with project specific National Pollutant Discharge Elimination System permit requirements as applicable.

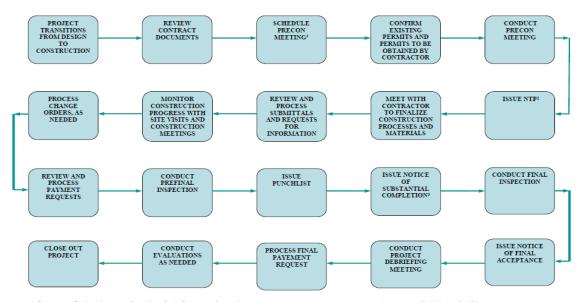
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Appendix D

Construction Process Flowchart

Department of Design and Construction

Construction Process



1. Include Department of Facility Maintenance – Storm Water Quality Branch in notification of preconstruction meeting (or separate environmental compliance meeting, if held) for benefit of 3" party inspection program.

2. When indicated by project time and sile constraints, two separate notices to proceed (NTPs) might be issued: one for the contractor to purchase equipment and malaristal and a second for on-sile construction activities.

3. A letter of substantial completion might be issued after the pre-final inspection has been completed, or it may be opsopred until after the final inspection, if punch-list terms are substantial.

Project-specific variations to the construction process might result in procedures that differ from those shown on the flow chart process. Two variations are indicated by footnotes on the flowchart, but other variations in sequence or other methods of accomplishing the required results may be appropriate for some projects. The construction process is typically not as rigidly linear, but the flowchart serves as a general process guide. A design-to-construction hand-off checklist is also used first by the design project manager to identify the project-specific documents that are handed off and then by the construction manager to review and confirm receipt of the required documents.

Items in the checklist include reviews and approvals by the State of Hawai'i and the City and County of Honolulu, land documents, additional parks and recreation permits (if needed), description of projects, specific issues, funding amounts, and other management evaluations.

Appendix E

Honolulu City Council Resolution 22-233



22-233No.

RESOLUTION

DIRECTING THE CITY AUDITOR TO CONDUCT A PERFORMANCE AUDIT OF THE IMPLEMENTATION OF THE CITY'S CAPITAL IMPROVEMENT PROGRAM BY THE DEPARTMENT OF DESIGN AND CONSTRUCTION.

WHEREAS, the Capital Improvement Program of the City and County of Honolulu ("City") is submitted to the City Council ("Council") by the Mayor through proposed annual budget ordinances and is approved and adopted with or without amendments by the Council; and

WHEREAS, the Capital Improvement Program and annual capital budget ordinance fund the City's long- and medium-term infrastructure projects, including, but not limited to, roads, bridges, drainage, flood control, earth stabilization, and facilities supporting park, fire, police, emergency, civic, enterprise, and medical examiner operations; and

WHEREAS, Section 6-503 of the Revised Charter of the City and County of Honolulu 1973 (Amended 2017 Edition), as amended, establishes that the Department of Design and Construction ("DDC") and its Director shall:

- "(a) In consultation with the respective departments, direct and perform the project planning, engineering, design, and construction of city facilities, except to the extent such duties and functions are reserved to other departments under this charter.
- (b) Advise and assist the respective departments on matters related to the planning, engineering, design, construction, improvement, repair, renovation, and maintenance of city facilities under their jurisdiction.
- (c) Manage and develop long-range planning of energy conservation projects at city facilities in cooperation with the respective departments"; and

WHEREAS, the DDC is the central agency responsible for the execution of the City's Capital Improvement Program; and

WHEREAS, the Council approved the DDC's proposed Fiscal Year 2023 budget request, including 197 positions and \$22,911,981 in operating funding to implement its responsibilities; and



22-23 3

RESOLUTION

WHEREAS, for Fiscal Year 2023, the Council approved over \$240,000,000 in funding for projects under the purview of DDC in Ordinance 22-14, the annual capital budget; and

WHEREAS, the Council hopes to better understand the process of City implementation of capital improvement projects, from the creation of the request for proposals or solicitation for bids, to the hiring of a contractor, the execution of the contract, project management and oversight, and the completion of the project; and

WHEREAS, the Council wishes to uncover any deficiencies in the process, determine what variables create delays in project implementation, and assist the DDC and City Administration in improving outcomes and timely completion of City capital improvement projects; and

WHEREAS, the Council finds that timely and cost-effective implementation of the Capital Improvement Program is critical to maintaining the City's infrastructure, accommodating growth, enhancing public health and safety, and improving the quality of life for Honolulu residents and communities; now, therefore.

BE IT RESOLVED by the Council of the City and County of Honolulu that the City Auditor is directed to conduct a performance audit of the Department of Design and Construction's implementation of the City's Capital Improvement Program; and

BE IT FURTHER RESOLVED that the City Auditor is requested to complete the performance audit no later than one calendar year after the adoption of this resolution in accordance with Section 3-114.2, Revised Charter of the City and County of Honolulu 1973 (Amended 2017 Edition), as amended; and

BE IT FURTHER RESOLVED that a copy of the completed audit report be filed with the City Clerk as a public record; and



22 - 233No.

RESOLUTION

BE IT FINALLY RESOLVED that copies of this resolution be transmitted to the Mayor, the Managing Director, the Director of Design and Construction, and the City Auditor.

	INTRODUCED BY:
	A CO
	100g Vehr
DATE OF INTRODUCTION:	
SEP 2.7.2022	
Honolulu, Hawai'i	Councilmembers

CITY COUNCIL CITY AND COUNTY OF HONOLULU HONOLULU, HAWAII CERTIFICATE

RESOLUTION 22-233

Introduced:

09/27/22

BRANDON ELEFANTE Ву:

TOMMY WATERS

Committee: ZONING AND PLANNING (ZP)

Title:

DIRECTING THE CITY AUDITOR TO CONDUCT A PERFORMANCE AUDIT OF THE IMPLEMENTATION OF THE CITY'S CAPITAL IMPROVEMENT PROGRAM BY THE DEPARTMENT OF DESIGN AND CONSTRUCTION.

Voting Legend: * = Aye w/Reservations

09/27/22	INTRO	Introduced.
10/20/22	ZP	Reported out for adoption.
		CR-290
		4 AYES: CORDERO, ELEFANTE, KIA'ĀINA, SAY
11/02/22	CCL	Committee report and Resolution were adopted.
		9 AYES: CORDERO, ELEFANTE, FUKUNAGA, KIA'ĀINA, SAY, TSUNEYOSHI, TULBA, TUPOLA, WATERS

I hereby certify that the above is a true record of action by the Council of the City and County of Honolulu on this RESOLUTION.

ASHI, CITY CLERK

TOMMY WATERS, CHAIR AND PRESIDING OFFICER