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TED ALLEN, PE

1149 S. BROADWAY, SUITE 700 LOS ANGELES, CA 90015-2213

http://eng.lacity.org

November 23, 2022

The Honorable Mitch O'Farrell, Chair The Honorable Paul Koretz, Vice Chair The Honorable Paul Krekorian, Member

Energy, Climate Change, Environmental Justice and River Committee Los Angeles City Council

c/o Eric Villanueva Office of the City Clerk Room 395, City Hall Los Angeles, CA 90012

COUNCIL FILE NO. 21-1039: RELATIVE TO DEVELOPING A BUILDING DECARBONIZATION WORK PLAN FOR THE CITY'S EXISTING BUILDING STOCK AND IDENTIFYING CITY FACILITIES FOR NEAR-TERM INSTALLATION OF DISTRIBUTED ENERGY GENERATION SYSTEMS.

Recommendations:

- INSTRUCT the Controller to transfer \$2,407,965 M from the Fiscal Year 2022-2023 Unappropriated Balance (UB) Fund 100/58, Account No. 580370, Renewable Energy to existing accounts in the Bureau of Engineering (BOE) Special Services Fund No. 682, Department No. 50, for potential construction escalation costs for the eight early building decarbonization projects managed by the Bureau of Engineering (BOE).
- 2. Allocate an additional \$250,000 to BOE for the Building Decarbonization Work Plan database maintenance and other related costs
- 3. Approve, for the Department of Recreation and Parks (RAP), a resolution authority for one (1) Senior Admin Clerk with six months salary of \$44,119; and one (1) Senior Systems Analyst I with six months salary of \$68,231. Approve for RAP \$100,000 for 7 RAP Asset Management System (AMS) user licenses for 5 years; \$175,000 for AMS maintenance for 5 years; and \$100,000 for onboarding and modifications for RAP needs of the AMS.

November 23, 2022

Page 2 of 9

4. Approve for the General Services Department (GSD) a resolution authority for one Senior Management Analyst I with six months of salary (\$65,556) and one resolution authority for one Electrician with four months salary (\$34,243). Approve \$32,500 for Office & Admin Expense and Training, and \$80,000 for Transportation Equipment for the purchase of a truck.

- 5. Authorize the City Engineer or designee to make technical corrections to the recommendations in order to effectuate the intent of the City Council.
- 6. Authorize the City Engineer, with concurrence from the Municipal Facilities Committee, to reallocate project funding for the near-term pilot projects, based on further investigations of project costs.

Summary of Requested Funding

Fund	Dept	Appr Unit	Appropriation Description	Amount
682	50	50VVHE	BOE - Estimated Construction Escalation Cost For 8 Early Building Decarbonization Projects	\$2,407,965
682	50	50VVHE	BOE - Building Decarbonization Workplan	\$250,000
302	89	TBD	RAP - Approve resolution authority and transfer six months salary for one (1) Senior Admin Clerk, and one(1) Senior Systems Analyst I	\$112,350
302	89	TBD	RAP – 7 AMS licenses, maintenance and on-boarding for 5 years.	\$375,000
100	40	Account 006010	GSD - Office & Admin Expense and Training	\$32,500
100	40	Account 007340	GSD - Transportation Equipment - Truck	\$80,000
100	40	Account 001010	GSD - Approve resolution authority and transfer six months salary for (1) Senior MA 1 and four months for (1) Electrician	\$99,799
			TOTAL	\$3,357,614

Discussion:

The purpose of this report is to inform the Committee of the status of the funded nearterm pilot projects and to request the allocation of additional funding for other costs related to the decarbonization effort.

November 23, 2022

Page 3 of 9

Bureau of Engineering:

Status of Near-Term Pilot Decarbonization and Distributed Energy Generation Systems Projects and Construction Cost Escalation Request:

On May 27, 2022, City Council approved allocation of \$28,589,000 of UB Renewable funds from Fiscal Year 2021-2022 for funding building decarbonization work for nine (9) City facilities. The selection process of the near-term pilot projects included a consideration of projects with high community value, an initial assessment of project feasibility, special priority to buildings in disadvantaged communities, the potential for additional Los Angeles Department of Water and Power (LADWP) investments, immediate maintenance needs, and solar potential. Of the nine projects approved, BOE is responsible for the project delivery of eight facilities and the Los Angeles Zoo is responsible for delivering the LA Zoo Solar PV System project.

Of the eight facilities BOE is managing, all of the projects have been initiated. Based on the completed site visits and recent construction cost escalation, it is recommended the Council add \$2,407,965 to be used for these eight projects.

Following is the current status of the nine early pilot projects:

	Facility/Project Name	Scope of Work	Project Phase	Current Status
CD 6	Balboa Sports Complex 17015 Burbank Blvd	Electrification + Solar + Energy Storage	BOE: Pre- Design	Project initiated, site visit complete, predesign report in progress.
CD 14	Benjamin Franklin Branch Library 2200 1st St	Partial Electrification +Solar + Energy Storage	BOE: Pre- Design	Project initiated; Task Order Solicitation (TOS) was advertised.
CD 1	Cypress Park Branch Library 1150 Cypress Ave	Electrification + Solar + Energy Storage	BOE: Pre- Design	Project initiated, site visit complete, predesign report in progress.
CD 6	Old Fire Station No. 39 14415 Sylvan St	Electrification + Solar + Energy Storage	BOE: Pre- Design	Project initiated, site visit complete, predesign report in progress.
CD 9	Green Meadows Recreation Center 2201 E Washington Blvd	Electrification + Solar + Energy Storage	BOE: Pre- Design	Project initiated, site visit complete, predesign report in progress.

November 23, 2022

Page 4 of 9

CD 13	Las Palmas Senior Citizen Center 1820 N Las Palmas Ave	Electrification + Solar + Energy Storage	BOE: Design	Project is in the design development phase.
CD 13	Silverlake Branch Library 2411 Glendale Blvd	Electrification	Pre-Design	Project initiated.
CD 2	Valley Plaza Recreation Center 12240 Archwood St	Electrification + Solar + Energy Storage	BOE: Pre-Design	Project initiated, site visit complete, predesign report in progress.
CD 4	LA Zoo Solar PV System 5333 Zoo Drive	Solar + Energy Storage	LADWP: Pre-Design	Project initiated.

Construction Cost Escalation Additional Funding Requested By BOE:

As reported to the Municipal Facilities Committee (MFC) by BOE on July 28, 2022, and forwarded to City Council by the City Administrative Officer on August 8, 2022, (Attachment), BOE has documented the recent escalation in construction costs. The suggested escalation rates as captured in the MFC memo for future estimates are: from July 1, 2022 through June 30, 2023 is 15%; from July 1, 2023 through June 30, 2024 is 12%; and from July 1, 2024 through June 30, 2025 is 9%. Therefore, additional funding is requested in the amount of \$2,407,965 for the eight decarbonization projects under BOE and approved by City Council. Below is a calculation for the additional escalation funding requested, calculated without compounded interest.

Cost Categories	Previously Approved Funding	Additional Escalation Funding
Estimated Construction Cost for eight (8) BOE projects	\$14,164,500	
Previously Estimated Escalation 10% for Fiscal years '22-'23 and '23-'24 (5% per year)	\$1,416,450	
Previously Estimated Fees and Engineering Costs	\$3,709,050	
Fiscal Year '22-'23 Additional Escalation Funding at 10% (to total 15%)		\$1,416,450
Fiscal Year '23-'24 Additional Escalation Funding at 7% (to total 12%)		\$991,515
Additional Funding		\$2,407,965

November 23, 2022

Page 5 of 9

Requested		
Total Current Approved Budget For BOE Projects	\$19,290,000	
Total New Budget		\$21,697,965

Note: The escalation request does not include the LA ZOO Solar PV project.

Status of the BOE Building Decarbonization Workplan:

On May 27, 2022, City Council approved the allocation of \$500,000 of UB Renewable funds to develop a Building Decarbonization Workplan for existing municipal facilities. BOE has since sought the services of a consultant with demonstrated specialty expertise to establish a prioritization methodology for a multi-year Building Decarbonization Workplan that will consist of a set of prioritized year-by-year project lists to most cost-effectively and with the highest impact reduce the City's use of carbon-based fuels in the City's existing buildings. An Electrical Engineering Associate III position for BOE was also funded with \$63,700 from the \$500,000 allocated for the Building Decarbonization Workplan development, with \$436,300 remaining for consultant services.

On June 22, 2022, a Task Order Solicitation was issued to a Pre-Qualified On-call Consultants list. Four proposals were received, reviewed and evaluated by BOE and GSD staff. The recommended consulting team was identified, and the Board Report approval is in process. BOE anticipates issuing a Notice to Proceed (NTP) to the consultant selected in February 2023.

BOE is requesting an additional \$250,000 for additional support services for the Building Decarbonization Workplan to be used over the next five years for potential software maintenance and purchases.

Department of Recreation and Parks:

RAP Decarbonization Positions and Funding Requests:

As indicated in BOE's report to the Energy, Climate Change, Environmental Justice and River Committee dated May 3, 2022, BOE is working closely with RAP and GSD to address the urgency and opportunities of carbon reduction through decarbonizing the City's existing building stock of 1200 facilities. As described previously, BOE will utilize the services of a consultant to develop a Building Decarbonization Workplan that will assess full decarbonization of building systems, evaluate the renewable solar energy generation potential of existing municipal facilities in order to prioritize projects for netenergy metered systems, resiliency generation systems, or grid-connected systems, as well as the reduction of gas-powered appliances.

The Workplan will be generated using City real estate data contained in the City's Asset Management System (AMS), which was obtained in 2017. Although the Department of

November 23, 2022

Page 6 of 9

General services has transitioned to AMS for maintaining their facilities, RAP has not migrated park facility information into AMS. Both staffing and contractual services are needed to obtain and import missing data, including building square footage, year built, and utility usage information. To complete the work, RAP requests new positions to oversee the integration of this data into the system and support ongoing reporting.

RAP Staffing and Contractual Services:

RAP requests a resolution authority for one (1) Senior Admin Clerk with six months salary of \$44,119; and one (1) Senior Systems Analyst I with six months salary of \$68,231. RAP also requests \$100,000 for 7 RAP AMS user licenses for 5 years; \$175,000 for AMS maintenance for 5 years; and \$100,000 for onboarding and modifications for RAP needs of the AMS.

RAP does not have the capacity to absorb the Building Decarbonization Workplan workload and recommends having dedicated positions that will work together to ensure the development of the Workplan and its implementation. Without the dedicated positions, RAP is unable to provide the support necessary for the consultant to complete the initial Workplan project and for ongoing tracking and regular reporting requirements, such as greenhouse gas (GHG) emissions, for the 12-year Workplan. RAP staff support will be critical to creating a prioritization methodology to establish a project list, developing the 12-year Workplan, and augmenting and integrating existing datasets for a centralized method of tracking and reporting on pertinent information and GHG savings for all City facilities.

As part of BOE's Task Order Solicitation for the Building Decarbonization Workplan, the consultant will also be developing a data tracking tool that will either reside within the AMS or connect to the AMS through an interface. This task cannot be completed without extensive analysis and assistance from the dedicated RAP staff.

Department of General Services:

Staffing Requests:

GSD requests six months funding for one resolution Senior Management Analyst I and four months funding for one resolution Electrician for \$34,243 to further support the Decarbonization Work Plan.

GSD's role in the Decarbonization Building Work Plan effort is multifaceted and continues to evolve. The Building Maintenance Division (BMD) is responsible for collecting field data on building systems (i.e. roof, HVAC, appliances, etc) for each of its 600 facilities to ensure BOE and its consultant have accurate information on building systems to develop the 12 Year Workplan and implement it project by project. BMD is also the contact at each facility to facilitate project coordination with tenants and construction. As the BMD is responsible for maintaining these facilities, training is required to transition gas to electric components and any new systems installed, such as solar and battery systems, will require additional staff resources. BMD also manages the department's utility bills through a third party software product called Energy Cap.

November 23, 2022

Page 7 of 9

BMD will be working with GSD's Integrated Asset Services Division (IAS) to procure missing data (such as area built and square footage) and integrate data collected on roofs, HVAC and appliances into the AMS Building Asset Database. IAS will also work with Energy Cap to build an interface to AMS to pull utility information directly through the AMS. IAS will also be working with BOE's consultant to integrate the decarbonization tracking and reporting tool they develop so it can be utilized for reporting on GHG emissions.

GSD's previous staff requests focused on solar Net Energy Meter projects and the associated data collection, training and maintenance of existing solar facilities. With the addition of the new LAPD Solar Array, GSD currently has solar arrays on 14 facilities. GSD initially thought DWP would solely install battery storage systems and thus maintain them, however it's been determined BOE will install the systems on this current round of projects, so it will be up to GSD to maintain these and others going forward. GSD's trade staff has no experience in maintaining battery storage systems and will require training to develop that expertise. Given that the Building Decarbonization Workplan has integrated gas appliance switch outs as part of the overall program, BMD staff will be required to transition to maintaining those from the former gas powered assets. The consultant's report includes a task to outline the maintenance needs, strategies and risks for all the electric, solar and energy storage components installed as part of this program. The assessment will leverage input from commissioning, operations, solar and energy storage industry experts to develop the maintenance needs, strategies and risks for the new equipment.

Electrician

The electrician will facilitate site visits with either LADWP or BOE staff, review electrical load capacity and electrical load panel issues, interact with BOE and LADWP on engineering and construction plans, work with user groups at each facility and evaluate and manage space needs for the project equipment and lay down space for construction. This electrician will establish and conduct the preventive maintenance on the solar arrays and battery storage units. Along with the existing Building Maintenance Supervisor, the electrician will facilitate the transition from any current gas-powered equipment to its electric counterpart, and facilitate the training needed along with new preventive maintenance schedules for the electric equipment in our Asset Management System's Building Maintenance Module.

Senior Management Analyst I

This individual will be GSD's lead on the building decarbonization effort, working in coordination with BOE and LADWP on project coordination, meetings, requests for information and reports. This will include facilitating any requests for GSD from the consultant developing the 12-year Workplan amongst the two divisions involved - Building Maintenance Division (BMD) and the Integrated Asset Services Division (IAS). The Senior MAI will coordinate data development in the field via the building trades – i.e. roofers, electricians, HVAC crews, and ensure that this data is transitioned to the AMS for creation of preventive maintenance work orders for each of the electrified components installed – i.e. solar, battery, HVAC, etc.This position will also be tasked with procurement of any

November 23, 2022

Page 8 of 9

contracts for training and maintenance supplies and equipment, and for safety training for staff related to solar, battery and electrified equipment.

Office and Administrative Expenses and Training, and Transportation Equipment:

Office and Administrative Expense funds will be utilized for start-up costs and supplies for both staff positions, including field equipment that connects to AMS, and primarily for training for electricians on battery storage maintenance programs.

The Transportation funds will be utilized to purchase a truck for the Electrician for field use on maintenance activities.

Respectfully submitted,

Ted Allen, P.E. City Engineer

ENGINEERING

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Tony Royster

General Manager

General Services Department

Jimmy Kim

General Manager
Recreation and Parks

Attachment

TA/DW:jgr

BOX\EXE_Ready for Signature\TSA\Outbox\Archived\2022\Report to Council on Decarbonization\21-1039_Committee Rpt 4.pdf

cc: Mary Hodge, Office of the Mayor
Lauren Faber O'Connor, Office of the Mayor
Marcelino Ascencio, Office of the Mayor
Michael Samulon, Office of the Mayor
Yolanda Chavez, Office of the City Administrative Officer

Council File Number: 21-1039 November 23, 2022 Page 9 of 9

Patty Huber, Office of the City Administrative Officer Sharon Tso, Office of the Chief Legislative Analyst Matias Farfan, Office of the Chief Legislative Analyst David Giron, Council District 13
Aaron Ordower, Council District 2
Teresa Villegas, Board of Public Works
Jimmy Kim, Recreation and Parks
Cathie Santo-Domingo, Recreation and Parks
Tony Royster, Department of General Services
Melody McCormick, Department of General Services
Valerie Melloff, Department of General Services
Deborah Weintraub, Bureau of Engineering
Steven Fierce, Bureau of Engineering
Lorraine Moreno, Bureau of Engineering

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TO	DATE 8/8/22	COUNCIL FILE NO.
Council	0/0/22	
FROM		COUNCIL DISTRICT
Municipal Facilities Committee		

At its meeting held on July 28, 2022, the Municipal Facilities Committee (MFC) approved the recommendation of the attached Bureau of Engineering (BOE) report, as amended to instruct staff to transmit the attached report to Council for informational purposes. The BOE report provides an overview of the inflationary factors impacting capital projects, with a recommendation to work with the Office of the City Administrative Officer to assess potential impact to projects under construction or scheduled for construction award in the current fiscal year, and to develop a funding strategy to address projected shortfalls for impacted projects.

There is a potential future impact on the General Fund to address capital funding shortfalls resulting from current inflationary factors. The program management team will address this potential impact through a funding strategy that would be recommended to MFC through a forthcoming report that would be transmitted to Council for final consideration.

Matthew W. Szabo City Administrative Officer Chair, Municipal Facilities Committee

MWS:LRR:05230011

CITY OF LOS ANGELES

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INTER-DEPARTMENTAL CORRESPONDENCE

Date: 7/28/22

To: Municipal Facilities Committee

From: Deborah Weintraub, AIA, LEEDAP

Chief Deputy City Engineer

Subject: FUNDING FOR CONSTRUCTION COST INFLATION

Recommendations:

1. That the Bureau of Engineering (BOE) work with the office of the City Administrative Officer to develop a funding strategy for projects that are either in construction and/or starting construction in Fiscal Year 2022-23 due to construction cost inflation, and;

2. Reassess market conditions in January 2023 to adjust this strategy accordingly.

Introduction:

The BOE is submitting this report in order to alert our City Hall colleagues of significant price increases we are experiencing in construction cost bids. The construction cost increases have a variety of causes and are extraordinary. In order to deliver committed capital projects to the City residents, the funding allocations for construction projects may need to be augmented.

Background:

Non-residential building inflation between 2011 and 2020 on a national basis was on average 3.7% annually (Zarenski, 2021¹), and 2.4% in California (California Department of General Services). While the pandemic initially decreased construction activity in 2020, in 2021 there was a large increase in demand for construction materials. Unfortunately, this demand was met with serious supply chain challenges, and this resulted in a reduction in the availability of construction materials and higher construction costs.

Between January 2020 to July 2021, prices of all materials and services for new construction performed by contractors has gone up 26.3% on a national average (AGC, August 2021²), and 13% in California (California Department of General Services, 2022). The California Department of General Services also reported that new construction costs in California went up 15.22% from June 2021 to June 2022.

Through 2022, prices for construction materials have continued their ascent and in addition, skilled labor has become even more scarce than previous years. Construction project starts are also being delayed to account for supply chain challenges and labor shortages, and the

¹ Zarenski is a nationally recognized construction economics analyst, author, educator and presenter. Website: https://edzarenski.com/ . Article: https://edzarenski.com/2022/02/11/construction-inflation-2022/

² AGC is an organization of qualified construction contractors and industry related companies dedicated to skill, integrity and responsibility. Website: https://www.agc.org/

time delays and the uncertainty in product pricing are also resulting in higher bids (Engineering News Record, 2021). Contractors are transferring these risks to the Owner at the time of bidding.

Forecast:

Market analysis is showing the construction cost escalation rate in Los Angeles is currently 7.99% per year (Rider Levett Bucknall (RLB), 2022³), however, RLB is using 8.04% per year in their cost estimate calculations, and HNTB⁴ is using 15%.

Below is a summary of some of the other market forces impacting construction costs. As of February 2022, diesel fuel, steel mill products, lumber, plywood, copper, brass, aluminum, plastic, gypsum, concrete, pavement, and roofing have all gone up drastically and forecasts are predicting that prices through 2022 will exceed peak prices of 2021 (Engineering News Record, 2022⁵). Interest rates are set to continue to rise, and the Russia-Ukraine war creates a lot of uncertainty and has market impacts. Supply chain and labor issues continue to cause a backlog of orders and an inventory shortage, indicating a supply-demand imbalance that will result in higher-priced goods and services. The anticipated pace of inflation is not likely to decelerate until 2023, with manufacturers potentially beginning to catch up to demand in late 2022, potentially with supply chains largely unclogged by late-2023 (CBRE, 2022⁶).

³ RLB is a global cost consultant partner and a nationally recognized project management and advisory firm. Website: https://www.rlb.com/americas/. Article: https://s31756.pcdn.co/americas/wp-content/uploads/sites/4/2022/03/City-Market-Insight-LOS-ANGELES-Q1-2022.pdf

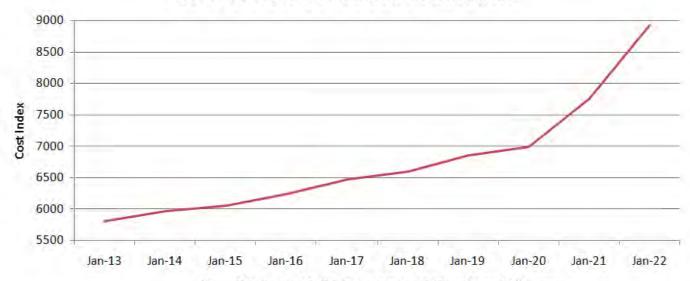
⁴ HNTB is a national engineering consulting company, with a strong presence in Southern California. Website: https://www.hntb.com/

⁵ Engineering News Record is a national magazine that covers the engineering and construction industry. Website: https://www.enr.com/

⁶ CBRE is the world's largest commercial real estate services & investment company. Website: https://www.cbre.com/about-us. Article: https://www.cbre.com/en/insights/reports/2022-fm-cost-trends-report.

Data Analysis:

10-Year New Construction Inflation



*New Construction Inflation has gone up 54% in the past 10 years
Source: Department of General Services California Construction Cost Index (CCCI), 2022

Information graphed by the Bureau of Engineering, June 2022

"The California Construction Cost index is developed based upon Building Cost Index (BCI) cost indices average for San Francisco
and Los Angeles ONLY as produced by Engineering News Record (ENR) and reported in the second issue each month" (DGS).

BOE Bid Results:

In the past couple of years, there has been a wide range of cost changes with a general trend of higher than average cost increases. For example, BOE looked at price escalation data from City bids from 2021 to 2022 for two key construction scopes used on our projects that are typically bid on a unit price basis; concrete sidewalk/driveway and concrete pavement. In the past year the average unit cost of concrete sidewalk/driveway and concrete pavement increased by 79% and 21% respectively. We also found that there was a high variation on the cost changes in AC pavement.

In addition, we looked at 20 Municipal Facility project bids between 2017 to the present. These projects are typically bid on a lump sum basis. Our analysis was to look at the variance between the low bid and City Engineer's Estimate on a project-by-project basis. The average in the variance between the low bid price as compared to the City Engineer Estimate from 2017 through 2021 was that the low bid averaged 5.9% higher than the City Engineer's estimate. In 2022 this number increased dramatically to the low bids averaging 40.68% higher than the City Engineer's Estimate.

BOE Actions:

BOE is in the process of developing a draft cost inflation clause for City construction contracts, which would establish the mechanism for cost adjustments during construction for demonstrated inflationary cost increases and decreases. BOE intends to vet the proposed language with the local construction industry and with our City partners. This will help offset the perceived need by contractors to price risk into their bids.

Additionally, BOE is in the process of revising the suggested inflation rates for project budgeting. Since 2014, BOE suggested using 5% as the inflation rate for all new construction. The below chart is BOE's suggested inflation rates to use for future estimates:

Date	Annual Rate	
July 1, 2022 - June 30, 2023	15%	
July 1, 2023 - June 30, 2024	12%	
July 1, 2024 - June 30, 2025	9%	
July 1, 2025 - June 30, 2026	8%	
July 1, 2026 - June 30, 2027	8%	

The potential recession may cause changes in these inflation rates. Therefore, it is recommended to re-assess these rates in six months.

RL/MA:tt

Box\CMD\Administration\Municipal Facilities Meeting Minutes\MFC Report Construction Inflation

cc: Mary Hodge, Deputy Mayor
Aura Garcia, Board of Public Works
Teresa Villegas, Board of Public Works
Mike Davis, Board of Public Works
Vahid Khorsand, Board of Public Works
Susana Reyes, Board of Public Works.
Gary Lee Moore, Bureau of Engineering
Ted Allen, Bureau of Engineering
Alfred Mata, Bureau of Engineering
Julie Sauter, Bureau of Engineering
Jose Fuentes, Bureau of Engineering
Richard Louie, Bureau of Engineering