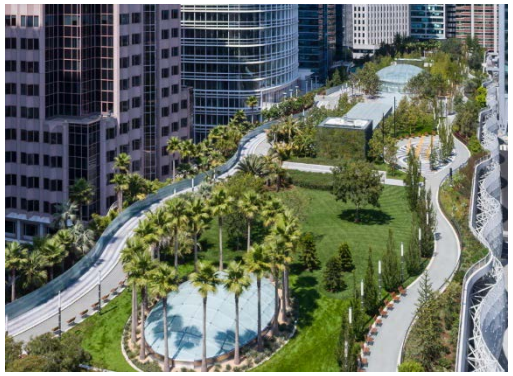


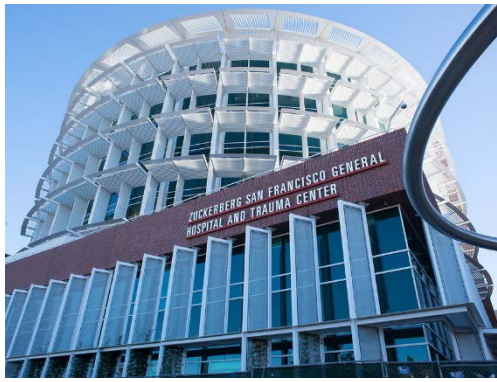

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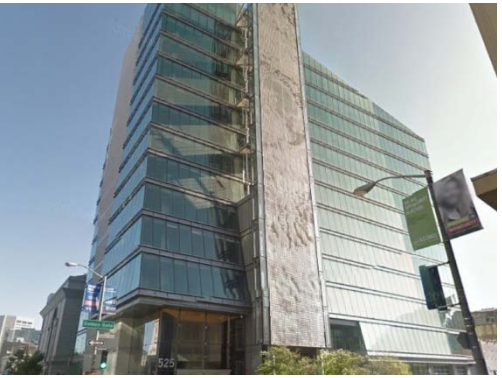
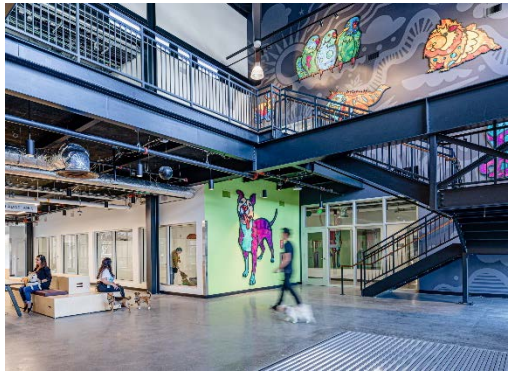
Building Design & Construction

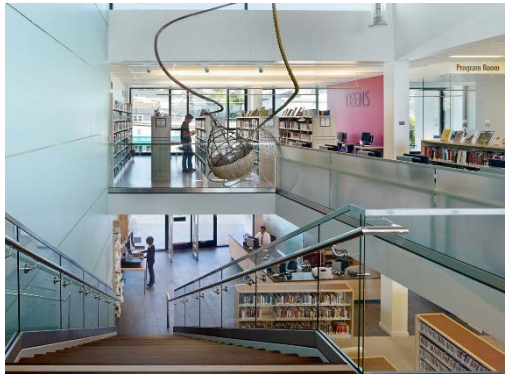
Facilities Systems Renewal Program

Ron Alameida – City Architect and Deputy Director

Presentation to the Capital Planning Committee

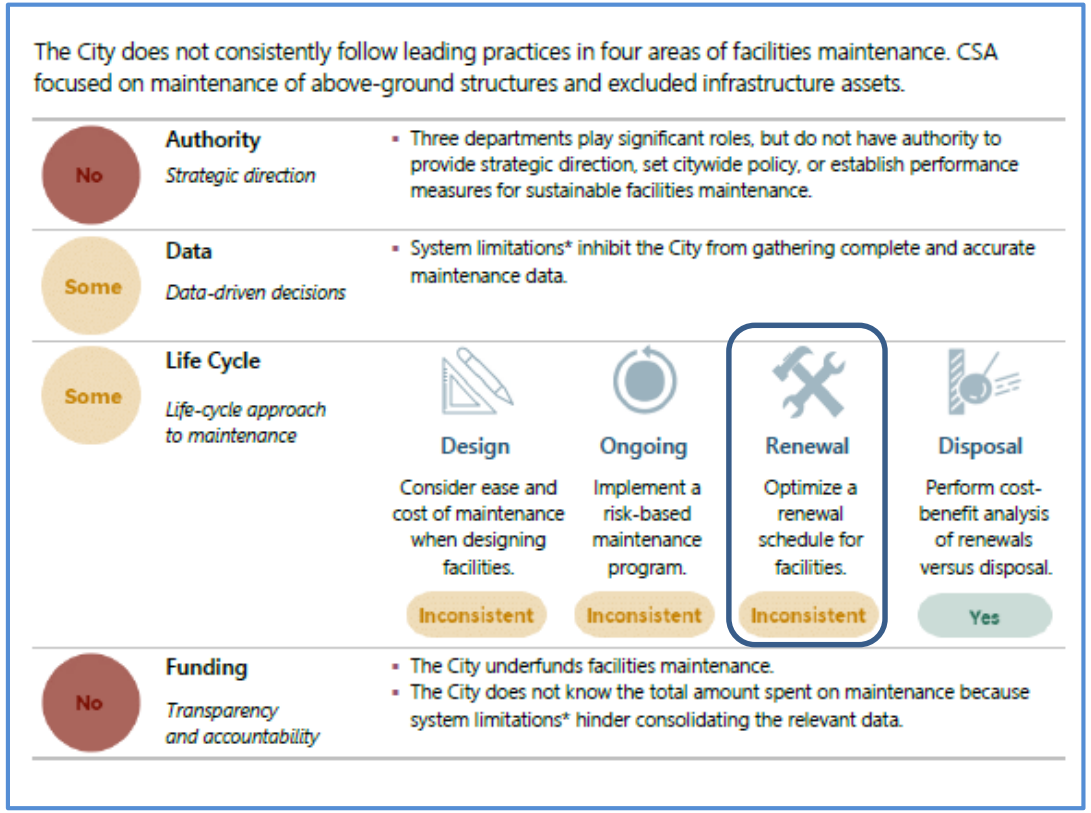
April 17, 2023



Facilities Systems Renewal Program History & Context

- February 2019 – Citywide Facilities Maintenance Audit
  - Renewal only one aspect of Audit Findings
- May 2022 – DPW, RED, & Capital Planning Discussions
- October 2022 – Public Works Facilities Renewal Program Manager Hire



The City does not consistently follow leading practices in four areas of facilities maintenance. CSA focused on maintenance of above-ground structures and excluded infrastructure assets.

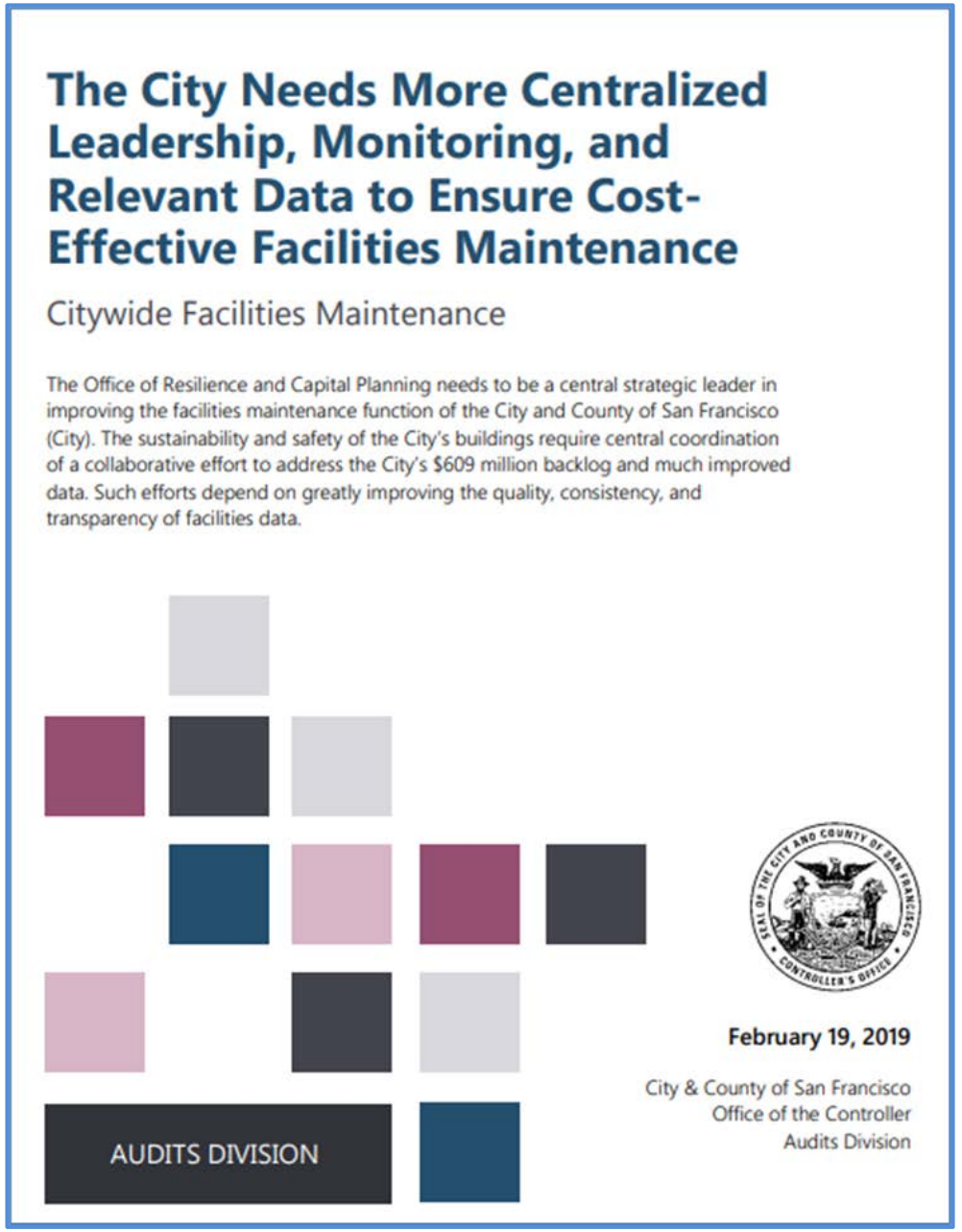
No — **Authority** — *Strategic direction*
- Three departments play significant roles, but do not have authority to provide strategic direction, set citywide policy, or establish performance measures for sustainable facilities maintenance.

Some — **Data** — *Data-driven decisions*
- System limitations* inhibit the City from gathering complete and accurate maintenance data.

Some — **Life Cycle** — *Life-cycle approach to maintenance*

Design	Ongoing	Renewal	Disposal
Consider ease and cost of maintenance when designing facilities.	Implement a risk-based maintenance program.	Optimize a renewal schedule for facilities.	Perform cost-benefit analysis of renewals versus disposal.
Inconsistent	Inconsistent	Inconsistent	Yes

No — **Funding** — *Transparency and accountability*
- The City underfunds facilities maintenance.
- The City does not know the total amount spent on maintenance because system limitations* hinder consolidating the relevant data.



The City Needs More Centralized Leadership, Monitoring, and Relevant Data to Ensure Cost-Effective Facilities Maintenance

Citywide Facilities Maintenance

The Office of Resilience and Capital Planning needs to be a central strategic leader in improving the facilities maintenance function of the City and County of San Francisco (City). The sustainability and safety of the City's buildings require central coordination of a collaborative effort to address the City's $609 million backlog and much improved data. Such efforts depend on greatly improving the quality, consistency, and transparency of facilities data.

February 19, 2019

City & County of San Francisco
Office of the Controller
Audits Division

Facilities Systems Renewal Program – Current Project Delivery Processes

Key Attributes

- Each Project individually designed, constructed and procured under operational department based funding transfers and multiple MOUs leading to protracted interdepartmental negotiations throughout life of Projects
- Each Project under stand-alone contracts separately processed and managed
- Client Based Model Relationship with duplicity of efforts among interdepartmental Project Managers, operational personnel and financial units.
- Generally uses Design Bid Build Delivery method with associated performance risks and variations in project teams / contractors performing the work

Project Scope

Budget

Schedule

Regulations

Facilities Systems Renewal Program – Proposed Project Delivery Processes

Key Attributes

- Aggregate like-projects as practicable to achieve more standardized design and engineering with timelier delivery of more projects and achieve available cost-savings
- Facilities Program Manager to develop systematic and consistent methodology for project prioritization, evaluation, and development.
- Master MOU stipulates the terms and conditions of the program applicable to all departments with the specific department project(s) stipulated as Exhibits to the MOU.
- Generally, pertains only to building system specific projects, e.g., elevators, roofs, MEP systems; delivery modeled after successful ESER Focus Scope Project approach.
- Deliver with “OneSF Delivery Approach” rather than being “Client Department Based”
- OneSF Approach is structured to better align with departmental roles and responsibilities
- Public Works provides accounting of all project expenditures on funding under its management providing uniform reports to each operational department to address scope, schedule and budget parameters for transparency and future forecasting consistency

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Facilities Systems Renewal Program – Opportunities

- Develop a strategic facilities renewal plan for the City's major building equipment/systems
- Better address scoping, designing and procurement of facility systems renewal Projects
  - Strategically group like projects to obtain economy of scale in procurement
  - Achieve consistent design standards and performance criteria
  - Afford efficiencies of staff time and reduction of duplicative efforts
  - Avoid individual departments "bidding against each other"
- Provide for improved funding flow and budget effectiveness
  - Public Works will provide timely, standardized reporting for the purposes of monitoring and tracking all expenditures yielding consistent and reliable data.
  - Streamline funding processes and ensure reliable spend downs of COP and Bond Funds
  - Public Works provides accounting of all project expenditures on funding under its management in one unified manner

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Facilities Systems Renewal Program – Challenges

- Misalignment of Project scoping, scheduling and funding amongst Departments
  - Challenge of multi-departmental project synchronization
- Staffing deficiencies impair Project advancement
- Program is currently only Project Based funded off select COP Projects without overall Program development funding to support Program wide strategic development
- SF Financials and SF Procurement systems (FSP) continues to present impediments to consistent accounting across departments, especially among Chapter 6 Departments
  - Has led to staff intensive processes and reconciliation endeavors
- Systemic Inefficiencies in funding framework
  - Project funding bogged down by redundant and protracted financial transactions between Operational Departments and Project Delivery Department.

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Facilities Systems Renewal Program – Current Status

- Staffed by newly hired Project Manager with Facilities Project Management / Mechanical Engineering Background – Simon Chu
- Currently focused on Elevator Projects to develop Program methodologies
    - 555 7th Street Elevator Modernization
    - Juvenile Probation Department Elevator Upgrade
    - County Jail #2 Elevator Modernization
- Intend to Expand to include more complex Roofing and HVAC Replacement Projects
- Drawing from list of 28 Elevator, Roof & HVAC Projects from 2023 COP Funded Capital Budget –

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Discussion

sfpublicworks.org

Appendix - Facilities Systems Renewal Program – Sample Program Methodology ESER Focus Scope Approach

SCOPE DEFINITION:

- At the earliest stage of project definition, the scope of needs at each facility was identified when BOA and MEP engineers conducted a Condition Assessment. [IDC Structural also conducted seismic studies for highest priority facilities to determine life safety risks and SHR]
- From there, a prioritization process was developed to categorize the final Focused Scope Portfolio projects:
  1. Seismic projects - life safety
  2. Focused Scope projects
     - Prioritization workshops were conducted with client and BOA and a final portfolio of projects was established.
       - Developed matrix of 10 scope categories across all facilities and documented severity of scope conditions in assessment findings
       - Established client priorities: deferred maintenance *must have needs* vs. deferred maintenance *wants*
       - Obtained client sign off on priority projects

ESTABLISH PROJECT PORTFOLIO & BUDGET

- Once defined, an independent estimator provided a construction cost ROM cost for each scope category so that the ***Project Portfolio budgets*** could be established.
  - The matrix was cost loaded with estimator's construction ROMs to establish the cost at each station as well as the cost in each category, which allowed for a ***total cost of needs*** for the program
  - The project portfolio is comprised of the final prioritized projects that went through this prioritization process
  - The project portfolio included total project budgets and a program contingency reserve

Facilities Systems Renewal Program – Project Delivery Approach
ESER Focus Scope Approach

- **Lessons Learned / Conclusions:**
  - Be mindful of Design and Construction Resource strengths and weaknesses. For example. BSR is principally setup as an asset maintenance organization, generally not capital projects delivery. Integrating their work with contractors often is not cost efficient, presents scheduling complications, and amplifies need for administration by BPM and BCM with difficult issues closing out and providing warranties for their work.
  - Engage when possible a single trade scope of work, across all facilities. Allows for a defined schedule, and single contractor [or two] to warranty all or most of the scope category.
  - Develop “focused scope” projects as any other comprehensive renovation project that includes interior and exterior scopes as one single renovation project and touch the facility one time with one warranty.
  - Always assess the remaining life cycle of all rooftop mechanical equipment when doing roof replacements and include the rooftop HVAC scope in one contract document.
  - Further, define the entire envelope of a project in the contract documents and include roof replacement, painting, sealing and repointing, and window/door replacement and sealants. If roof replacement is in the SOW, then include rooftop HVAC units to be replaced in kind.
    - know that gas powered units are likely to remain as such, because electrification may require electrical infrastructure upgrades that the budget does not allow for, and more efficient outside air hvac units may have higher weights and instigate a seismic retrofit
  - Defer developing the final portfolio of projects until project delivery is determined and agreed upon with the client. Break out some projects for single scope category approach if it makes sense, but single scope categories should not drive the development of projects. Most should be comprehensive renovations.

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