Ronald M. George State Office Complex/ Earl Warren Building (402)

350 MacAllister Street, San Francisco, CA 94104

Facility Condition Assessment

September 2015

Prepared for the State of California Department of General Services

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EXECUTIVE SUMMARY

BACKGROUND

This Facility Condition Assessment (FCA), prepared by EMG Corporation (EMG) in collaboration with the Department of General Services (DGS) Real Estate Services Division (RESD) and the consulting team of Hellmuth, Obata & Kassabaum, Inc. (HOK), is a component of a comprehensive long-range strategic asset management plan for DGS's portfolio of general-purpose office buildings. The goal is to determine the best course of action to address DGS's general-purpose office buildings' infrastructure deficiencies and space needs with a focus on controlling long-term costs.

The DGS portfolio comprises nearly 17 million gross square feet (GSF) of state-owned office facilities statewide, contained within 54 general-purpose state-owned office building sites. The FCA inventories and evaluates each of the DGS general purpose office buildings to benchmark current condition and establish a replacement value. This FCA assesses the infrastructure conditions for the Ronald M. George State Office Complex / Earl Warren Building (402).

The assessment methodology identifies infrastructure systems and components requiring immediate repair or replacement based on their useful life expectancy. In addition, the FCA projects the capital funding needs over a ten-year lifecycle horizon period of 2015 to 2024. The assessments evaluate envelope, structure, plumbing, heating, air conditioning, energy and lighting controls, electrical, data/communications, elevators, fire protection and suppression, security, and utility capacity and systems. The replacement value is determined by multiplying the existing building square footage (SF) by the cost per SF to construct a new, similar building on a similar site.

OBJECTIVE

The objective of the FCA is to identify the capital reserves for infrastructure lifecycle repair/replacement needs over the ten-year lifecycle. The FCA projections will become the basis for the Facility Condition Index (FCI). The FCI is the ratio of immediate repair costs or capital reserve needs to the current replacement value of the existing building. The FCI is a key performance indicator that is used to objectively quantify and evaluate the current condition of a building and can be used to compare the relative condition of the subject building with other buildings within the same portfolio and as a trending matrix for infrastructure "health" over time.

The Ronald M. George State Office Complex / Earl Warren Building (402) FCI ratio will be incorporated as a comparative factor in the overall DGS portfolio analysis, enabling DGS to accurately rank and prioritize building repair/replacement needs in the long-range strategic plan.

SCOPE OF ASSESSMENT

The EMG evaluation team, comprised of engineers and architects, visited the Ronald M. George State Office Complex / Earl Warren Building (402) on February 12, 2015. The evaluation team reviewed available engineering studies and construction documents to familiarize themselves with the physical conditions. The evaluation team conducted a walk-through of the building to observe building systems and components, identify physical deficiencies, and formulate recommendations to remedy any deficiencies.

SURVEY FINDINGS

One of the major goals of the FCA is to calculate the FCI, which gives an indication of a building's overall condition. Two FCI ratios are calculated and presented – Current Year and Ten-Year. The Current Year FCI is the ratio of Immediate Repair Costs to the building's Current Replacement Value. Similarly, the Ten-Year FCI is the ratio of anticipated Capital Reserve Needs over the next ten years to the Current Replacement Value.

The values are based on a scale from 0-100 percent. A lower FCI ratio indicates that the building's infrastructure is in "Good" condition. Based on industry standards, a "Good" condition building will have an FCI ratio at or below five percent. A "Fair" condition building will have an FCI ratio between five and ten percent. A "Poor" condition building will have an FCI ratio between 10 and 65 percent. A building with an FCI ratio exceeding 65 percent is considered "Very Poor" and is a candidate for replacement or divestment.

The table below represents summary-level findings for the FCA. The deficiencies identified in this assessment can be combined with potential new construction requirements to develop an overall strategy that can serve as the basis for a portfolio-wide capital improvement funding strategy. Key findings from the assessment include:

Key Finding	Metric
Current Replacement Value	$90,476,119
Immediate Repair Costs (12 months)	$2,213,912
1-5 Year Capital Needs	$7,069,826
6-10 Year Capital Needs	$552,016
Total 10-Year Capital Reserve Needs	$9,835,754

$$\text{FCI} = \frac{\text{Immediate Repair Costs or Ten-Year Capital Reserve Needs}}{\text{Current Replacement Value of Building}}$$

Current Year FCI

$$\text{Current FCI} = \frac{\$2,213,912}{\$90,476,119}$$

Ten-Year FCI

$$\text{Ten-Year FCI} = \frac{\$9,835,754}{\$90,476,119}$$

Current Year FCI	Ten-Year FCI
2.45 %= *Good Condition*	**10.87 %= *Poor Condition***

The major issues contributing to the Immediate Repair Costs and the Current Year FCI ratio are summarized below:

- Plumbing fixture improvements to conserve water are recommended.
- Installing Direct Digital Controls (DDC) for the heating and cooling system is recommended.
- Repair of the exterior steps to improve the appearance of the building are recommended.

Further detail on the specific costs that make up the Immediate Repair Costs can be found in the cost tables in the appendices.

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INTRODUCTION

BUILDING BACKGROUND

Originally known as the San Francisco Civic Center, the Ronald M. George State Office Complex was renamed in 2010 by Governor Schwarzenegger after the state's 27th Chief Justice Ronald M George. The complex consists of two buildings located on the same block; the Earl Warren Building and Hiram W. Johnson State Office Building. The two buildings are connected by a common vestibule and house over 200 pieces of art. The complex is located in close proximity to the Bay Area Rapid Transit (BART) Civic Center Station, San Francisco Main Library, San Francisco City Hall, Billy Graham Civic Auditorium, Hastings College of Law, and United States Federal Building.

The complex sits on a 2.59 acre parcel and includes a below-ground 50 space controlled access parking facility. Total occupant capacity for the complex exceeds 2,000 people.

Jurisdictionally, the complex falls under the responsibility of the San Francisco State Building Authority (a Joint Powers Authority) entity between the state and City of San Francisco. This entity was formed as part of the lease revenue bonds issued to build the Hiram W. Johnson Building and to renovate the historic Earl Warren building in 1998 at a cost of $340,555,000. The lease revenue bonds are scheduled for payoff in December 2021.

There are 13 different agencies as tenants in the complex, including the Judicial Council, Department of Justice, the Supreme Court and the Department of Industrial Relations.

Earl Warren Building:

The Earl Warren Building at 350 McAllister Street represents the northern boundary of San Francisco's beaux-arts Civic Center. The slightly curved 1922 beaux-arts building is listed on the National Register of Historic Places. The original building was designed by Bliss and Faville of San Francisco. Due to earthquake safety concerns following the 1989 Loma Prieta earthquake, an extensive renovation by Architect Skidmore Owings and Merrill was completed in 1998.

The building's six-story facade features granite and terra-cotta masonry and is done in the beaux-arts architectural style. Inside, the courtroom for the Supreme Court is paneled in oak and features a coffered ceiling and a skylight. The 1998 renovation preserved many original features including original crown molding, doors, and hardware.

The Earl Warren Building houses the California State Supreme Court and the First District Court of Appeals. The gross area is 234,000 SF with a net usable 158,271 SF. The ratio of gross area to net usable is 67.5 percent.

The complex's overall gross area is 1,178,500 SF with 870,965 net usable SF. The ratio between gross area and net usable is 80.8 percent. The occupant capacity is 2,084.

BUILDING DESCRIPTION

The building structural system is steel framed beam and concrete shear walls with spread concrete footings. The primary hipped roof is finished with slate shingles and the rear wings are flat with conventional built-up membranes.

The exterior walls are finished with granite and terra cotta masonry and accented with artistic design shapes and window arches.

Interior walls are painted drywall and plaster, ceramic tile, wood paneling, granite, and artistic murals. Floor finishes include carpet, terrazzo, vinyl composition tiles, sheet vinyl, and ceramic tiles. Ceilings are suspended acoustical tiles, painted drywall, and coffered dome.

The facility is served by two traction passenger elevators and one freight elevator that access all six floors.

Domestic hot water is provided to the restrooms and break-room areas by electric water heaters located in the janitor's closets.

Heating and cooling are provided by sharing three cooling towers on the rooftop of the Hiram W. Johnson building. Three air handling units (AHUs) are located on the 6th floor, two servicing the 6th floor with chilled water cooling and perimeter reheat variable air volume (VAV) boxes, and one AHU for building make-up air. The basement through 5th floor utilize 200 fan coils units (FCUs) with chilled water cooling and electric coils for heating and one fan for building make-up air.

Life Safety Systems include fire sprinklers, hydrants, smoke detectors, fire alarms, and fire extinguishers.

The building covers nearly the entire site and the only landscaping is perimeter planters. Landscaped areas are irrigated by an in-ground spray sprinkler system.

There is no onsite parking. The sidewalks throughout the property are constructed of cast-in-place concrete. Cast-in-place concrete steps with metal handrails are located at grade changes.

Project Statistics

Item	Description
Project Name	Ronald M. George State Office Complex / Earl Warren Building
Building ID	402
Property Type	Administration
Year Built	1922
Number of Stories	6
Occupied	Yes
Land Area (acres)	0.86
Gross Square Feet (GSF)	190,400

FACILITY CONDITION ASSESSMENT

The goal of the FCA is to gather the data necessary to understand the existing building's condition, identify strategies to meet the building's lifecycle needs, and create the foundation for a long-range strategic plan.

COMPONENTS OF THE FCA

Current conditions analysis

The current condition analysis identifies the existing building's immediate requirements, including deferred maintenance, recommended discretionary improvements, and code non-compliance issues.

Anticipated building reserve analysis

The anticipated building reserve analysis projects the ongoing degradation of the building's components and costs associated with the reserve or replacement of these components as they reach the end of their useful lives.

Funding needs analysis

The funding needs analysis results in a summary report of deferred maintenance and systems reserve funding needs.

CALCULATION OF FUNDING NEEDS

Calculating probable funding needs involves identifying and quantifying the building's infrastructure systems or components that require immediate or future action over their lifecycle horizon. Funding needs are segregated into two categories, Immediate Repair Costs and Capital Reserve Needs. A Replacement Value is calculated and a Remaining Useful Life Estimate is determined as well as Opinions of Probable Cost in order to establish the FCI. The terms are defined as follows:

Immediate Repair Costs

Immediate Repair Costs are Opinions of Probable Cost that require immediate action as a result of: (1) material existing or potentially unsafe conditions, (2) material building or fire code violations, or (3) conditions that, if left un-remedied, have the potential to result in, or contribute to, critical element or system failure within **one year** that will likely result in a significant escalation of its remedial cost. Immediate Repair Costs are items which require action within year one.

Capital Reserve Needs

Capital Reserve Needs are recurring probable expenditures, which are not considered operation or maintenance expenses, that should be budgeted annually. In general, Capital Reserve Needs are reasonably predictable both in terms of frequency and cost. However, Capital Reserve Needs may also include components or systems that have an indeterminable life but nonetheless have a potential liability for failure within a ten-year period. The Capital Reserve Needs presented in the FCA represent average industry costs as of 2015, without inflation. The Ten-Year Expenditure Forecast table in Appendix G includes inflation by assuming a five percent annual inflation rate on Total Capital Needs by year.

Current Replacement Value

Current Replacement Value is determined by multiplying the existing building's SF by the Cost per SF to construct a new, similar building on a similar site. Current Replacement Value is not an appraised or market value for the purposes of a property sale. To estimate the cost per SF, EMG referenced Marshall & Swift's *Marshall Valuation Service*. This building cost data index is an industry standard, adjusted annually, and relied upon by the insurance industry, as well as other agencies and organizations. Cost per SF is calculated by adjusting Marshall & Swift's unit cost for a Government Office Building to account for factors related to building systems, class of construction, and location to reflect the estimated cost of construction at the subject building site.

Remaining Useful Life

Remaining Useful Life (RUL) estimate is based upon site observations, research, and judgment, along with reference to Expected Useful Life (EUL) tables from various industry sources. A sample copy of

the EUL table is included in the appendices. EMG estimates when a system or component will likely need replacement based on a visual review of the current condition and the RUL estimate. Exposure to the elements, quality of installation, extent of use, and quality and amount of preventive maintenance exercised are factors that impact the effective age of a system or component. As a result, a system or component might have an effective age that is greater or less than its actual chronological age. The RUL of a system or component equals the EUL less its effective age.

Opinions of Probable Cost

Opinions of Probable Cost are estimates for individual repair or replacement and are a key consideration of this engagement. These estimates may be based on invoice or bid documents provided by the owner or building manager, cost estimates developed by construction resources (such as R.S. Means), or EMG's experience with similar properties, city cost indexes, and projections of economic conditions. Where quantities cannot be derived from building plans, lump sum costs or allowances are utilized.

Opinions of Probable Cost should only be construed as preliminary, order-of-magnitude budgets. Actual costs will likely vary from EMG's estimates depending on type and design of suggested remedy, quality of materials and installation, manufacturer and type of equipment or system selected, field conditions, whether a physical deficiency is repaired or replaced in whole, phasing of the work (if applicable), quality of contractor, market conditions, and whether competitive pricing is solicited. ASTM E2018-08[1] recognizes that certain Opinions of Probable Cost cannot be developed within the scope of an FCA without further study. Instances where a visual inspection is not possible and further study is recommended, EMG provides a cost estimate of the additional study in the FCA.

Facility Condition Index

The FCI gives an indication of a building's overall state of condition. The values are based on a 0-100 percent scale. The Current Year FCI is the ratio of Immediate Repair Costs to Current Replacement Value. The Ten-Year FCI is the ratio of Capital Reserve Needs (2015 – 2024) to Current Replacement Value. The Ten-Year FCI is calculated using uninflated 2015 dollars because the year of project implementation is likely unknown or subject to change. Since both the repair/replacement costs and Current Replacement Value will increase at the same inflation rate, the impacts of inflation do not significantly affect the FCI ratio.

SCOPE OF ASSESSMENT

The evaluation team conducted a walk-through survey of Ronald M. George State Office Complex / Earl Warren Building (402) on February 12, 2015. The survey included analysis and observation of the

[1] ASTM 2018-08 is the national guideline for preparing a Facility Condition Assessment published by the American Society for the Testing of Materials.

building's interior and exterior, including the roofs. The evaluation team interviewed the building maintenance staff to inquire about the subject property's previous repairs and replacements and their costs, level of preventive maintenance exercised, pending repairs and improvements, and frequency of repairs and replacements. Opinions were developed based on the site evaluation, interviews with relevant maintenance providers and facilities managers, and previous experience with comparable properties. The evaluation team questioned those knowledgeable of the subject property's physical condition and operation (or knowledgeable of similar systems) to gain comparative information to use in evaluation of the subject property. In addition, the building staff provided documents and information to the evaluation team that were relevant to the subject property's physical improvements, extent, and type of use and assisted the team in identifying potential discrepancies between reported information and observed conditions.

The evaluation team made a visual assessment for compliance with the American with Disabilities Act (ADA) Accessibility Guidelines and the California Title 24 disabled access requirements. Items determined to be out of compliance are included in the repair/replacement costs. The assessments did not include detailed measurements to determine compliance under the regulations.

The data collected in the FCA are the basis of the projected ten-year Capital Reserve Needs. The goals of the FCA are:

- Benchmark current building condition with recommended corrections for deficiencies to establish the Immediate Repair Costs.
- Estimate life expectancy of various building systems and components to establish the Capital Reserve Needs for infrastructure lifecycle repair/replacement for the ten-year assessment period from 2015 to 2024.
- Provide estimates for corrections for Immediate Repairs Costs and projections for Capital Reserve Needs for lifecycle component replacement within the ten-year projection timeframe.
- Serve as a guide for future replacement, repairs, and improvements and assist DGS in prioritizing its capital budget and expenditures across its real estate portfolio.

PRIORITY RANKING

The recorded existing conditions, identified problems and deficiencies, documented corrective action, and quantities of recommended repairs and/or replacements are documented during the assessment process. Data are collected and entered directly into the assessment and capital planning database using tablet computers. Based on the discussions with the client and industry standards, a Priority Ranking is calculated for each cost observation. The Priority Ranking calculation is a function of four key categories.

PRIORITY RANKING CATEGORIES

Building Mission Ranking

A building can be ranked on a scale of one to ten based on conversations with the client regarding the importance of each building to the overall mission of the building. The properties reviewed during this assessment are all general-purpose office buildings and for the purposes of this study are all ranked the same for Building Mission.

Remaining Useful Life Ranking

The EUL projection of the component is calibrated against the RUL as estimated by the field assessor. This ratio is then utilized as a factor in the priority ranking. An RUL of zero years is given the highest priority and always results in ranking the component as Priority 1.

Asset Component Category

Each material or system (asset) evaluated is assigned a unique Uniformat code. The Uniformat designation is then associated with a ranking based on the overall importance to the operation of the building. An asset that is related to the building envelope, e.g. roof, window, or exterior siding, is assigned a higher ranking than a component such a flooring, carpeting, or other finish material.

Functional Asset Categories

The cost associated with each asset or component evaluated is assigned to a category to include: Code Compliance, Facility Operations, Environmental Factors, Facility Functionality, and Integrity of the Facility. The Asset Categories are given a ranking based on their relative importance. For example, Code Compliance is ranked higher than Maintenance.

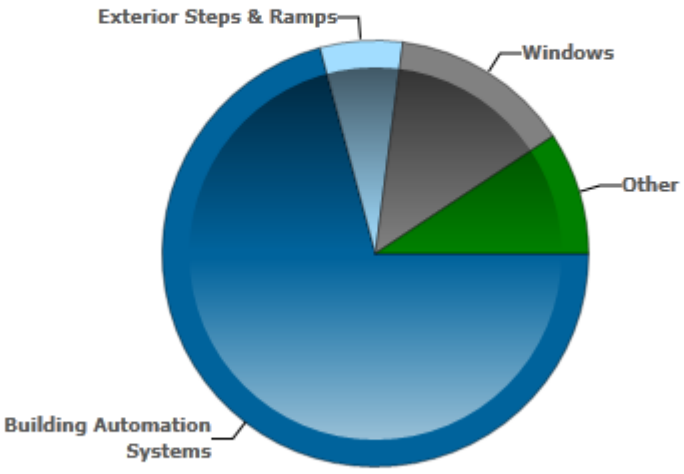
PRIORITY RATIO

The four categories above are assigned a numerical value and the values are multiplied together for each cost observation. The resulting number is then assigned a priority by the capital planning software with the lower range assigned Priority 1 and the higher range of numbers assigned among Priority 2, Priority 3, and Priority 4. Priority 5 is reserved for code issues that were permitted by the code at the time of construction but would be required only if a major renovation or code compliance project were to be undertaken.

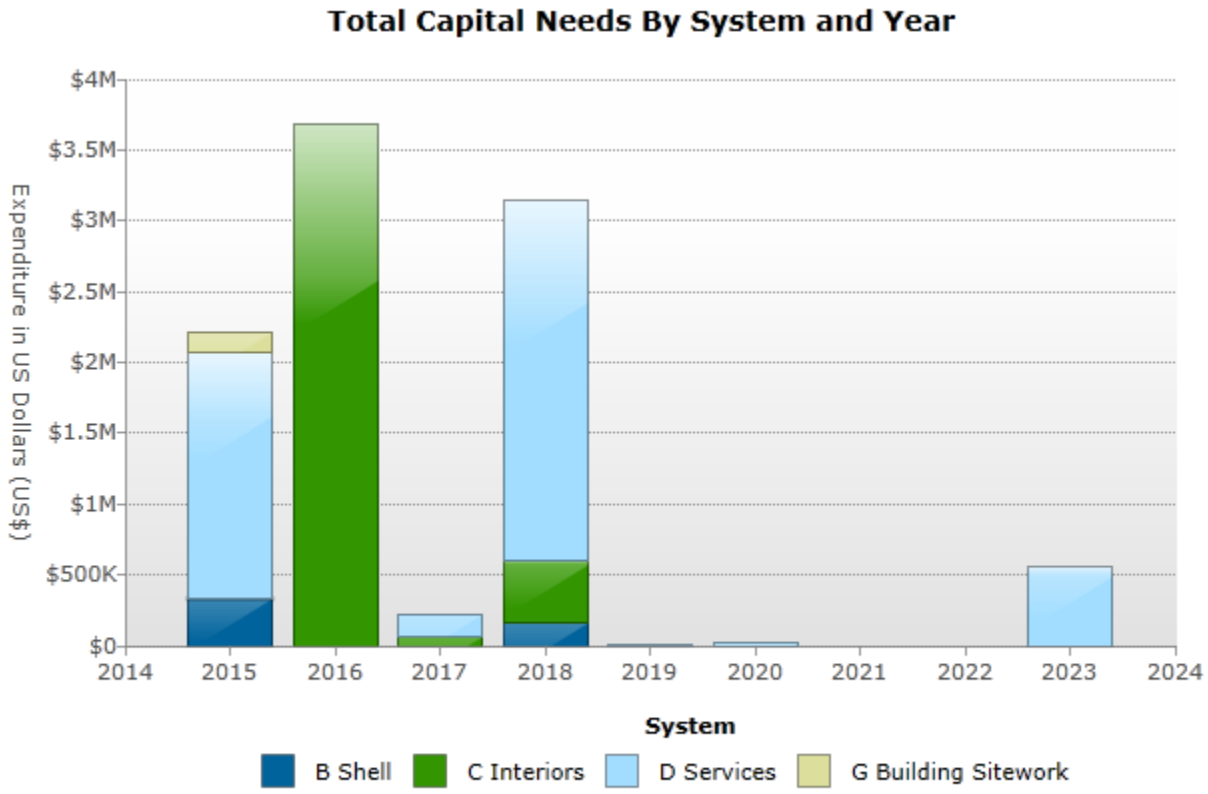
The physical condition of building systems and related components are typically defined as being in one of four conditions: Good, Fair, Poor, or Very Poor, or a combination thereof. For the purposes of this report, the following definitions are used:

Condition	Definition
Good	In new or well-maintained condition, with no visual evidence of wear, soiling, or other deficiencies.
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.
Very Poor	Subjected to hard or long-term wear. Has reached the end of its useful or serviceable life. Renewal is now necessary.

Distribution of Immediate Needs by Building System



Level	Building System	Estimated Cost
B1012	Upper Floors Construction	$25,366
B2021	Windows	$302,126
B3021	Glazed Roof Openings	$5,614
C1035	Identifying Devices	$3,794
D2011	Water Closets	$78,240
D2012	Urinals	$29,288
D2013	Lavatories	$60,041
D3068	Building Automation Systems	$1,567,677
D5092	Emergency Light & Power Systems	$3,500
G5020	Exterior Steps & Ramps	$138,265
	Total	**$2,213,912**



	Building System							
Year	A Sub-Structure	B Shell	C Interiors	D Services	E Equip. & Furnishings	F Spec. Const. & Demolition	G Bldg. Site Work	Total
2015	$0	$333,106	$3,794	$1,738,747	$0	$0	$138,265	**$2,213,912**
2016	$0	$0	$3,684,993	$0	$0	$0	$0	**$3,684,993**
2017	$0	$0	$62,615	$156,029	$0	$0	$0	**$218,644**
2018	$0	$167,532	$436,616	$2,541,343	$0	$0	$0	**$3,145,491**
2019	$0	$0	$0	$5,818	$0	$0	$0	**$5,818**
2020	$0	$0	$0	$14,880	$0	$0	$0	**$14,880**
2023	$0	$0	$0	$552,016	$0	$0	$0	**$552,016**
Total	**$0**	**$500,638**	**$4,188,018**	**$5,008,832**	**$0**	**$0**	**$138,265**	**$9,835,754**

CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as $90,476,119 for the Ronald M. George State Office Complex / Earl Warren Building Building (402). The Current Replacement Value is the existing building SF multiplied by the Cost per SF to construct a new, similar building. As noted previously, the basis of the Cost per SF amount is the Marshall & Swift Cost Valuation system. A copy of the cost calculation is included in Appendix H of this report.

Building Area	Cost/SF	Current Replacement Value
190,400 GSF	$475	$90,476,119

FACILITY CONDITION INDEX

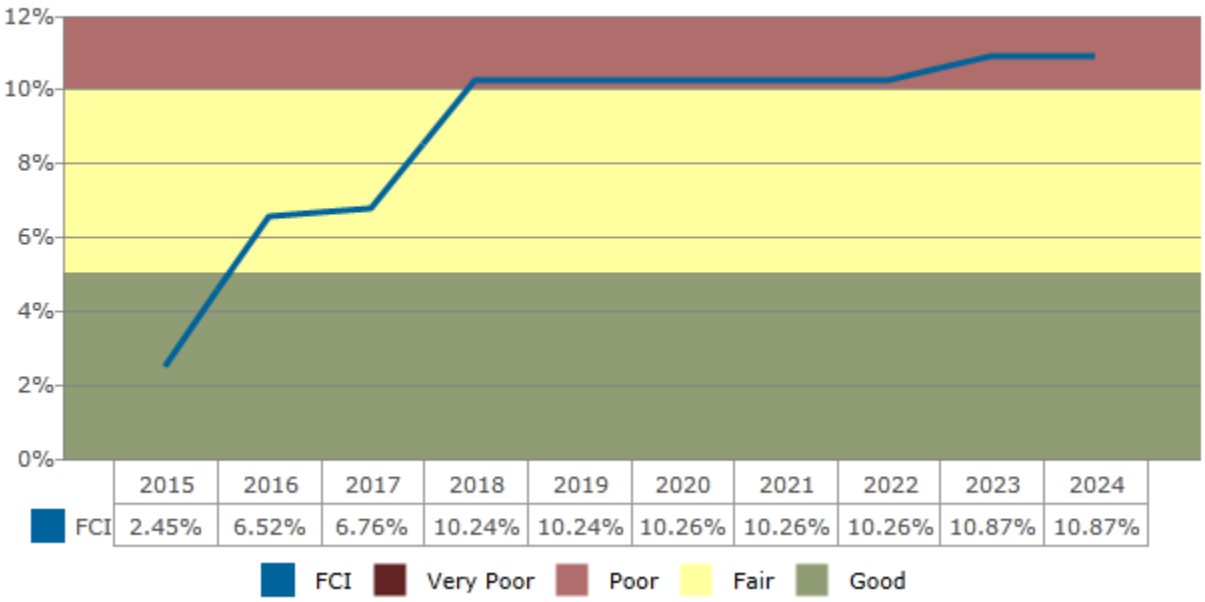
The FCI[1] is an indication of a building's current and future overall condition. According to industry standards an FCI ratio of 65 percent, or the "rule of two-thirds," is the threshold for identifying potential candidates for replacement or divestment.[2] Once the FCI ratio reaches 65 percent, or roughly two-thirds of the Current Replacement Value of the estimated cost to replace a building, it may not be prudent to continue to fund repairs. In cases where aggressive facilities planning is expected to be necessary, this threshold may be adjusted to address more pressing needs.

Condition	Definition	Value
Good	In new or well-maintained condition, with no visual evidence of wear, soiling or other deficiencies.	0% to 5%
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.	Greater than 5% to 10%
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life.	Greater than 10% to 65%
Very Poor	Subjected to hard or long-term wear. Has reached the end of its useful or serviceable life. Renewal is now necessary.	Greater than 65%

[2] Sean C. Rush (1991). Managing the Facilities Portfolio: a Practical Approach to Institutional Facility Renewal and Deferred Maintenance. National Association of College and University Business Officers. pp. 26–66. ISBN 978-0-915164-59-2.

The chart below indicates the cumulative effects of the FCI ratio over the ten-year study period assuming the required funds are NOT provided to address the identified repairs and replacements for each year.

Cumulative Effects of FCI over the Study Period



APPENDICES

APPENDIX A: ACCESSIBILITY ISSUES

Item	Description
C3005 ADA Renovations	C3005 ADA Renovations
Condition	Fair
Qty / UOM	24 / EA
RUL (years)	1
Location	All restrooms

APPENDIX B: GENERAL ASSESSMENT INFORMATION

A Substructure Systems

A10 FOUNDATIONS

Item	Description
A1012 Column Foundations & Pile Caps	A1012 Structural concrete, in place, pile cap over 10 CY
Condition	Good
Qty / UOM	150 / CY
RUL (years)	53
Location	Foundation

OBSERVATIONS/COMMENTS:

No further action is required.

B Shell Systems

B10 SUPERSTRUCTURE

Item	Description
B1012 Upper Floors Construction	B1012 Crack Repair Epoxy Injection
Condition	Poor
Qty / UOM	250 / LF
RUL (years)	0
Location	Roof Attic

OBSERVATIONS/COMMENTS:

Several concrete floor cracks are noted in the attic. Repair is recommended by the use of epoxy injections.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B1012	B1019 Repair Crack Epoxy Injection	250.0 - LF	101.5	OP - Maintenance	Priority 1	2015	25,366

COST SUMMARY:

Type	Year	Total Expenditures
B10 Superstructure	2015	$25,366

B20 EXTERIOR ENCLOSURE

Item	Description
B2011 Exterior Wall Construction	B2011 Terra Cotta Masonry / Granite
Condition	Fair
Qty / UOM	1,150 / LF
RUL (years)	10
Location	Exterior Walls
Parapets	Yes

OBSERVATIONS/COMMENTS:

No further action required.

Item	Description
B2021 Windows	B2021 Historic Wood Windows
Condition	Fair
Qty / UOM	500 / EA
RUL (years)	0
Location	All Floors
Window Type	Double Hung
Windows Material	Wood
Windows Glazing	Single Glazed
Window Operation	Manual

OBSERVATIONS/COMMENTS:

There are approximately 500 historical wooden windows from the original construction, according to management staff. Windows require caulk sealant and painting due to normal deterioration.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2021	Replace B2021 Historic Wood Windows	500.0 - EA	604.3	OP - Maintenance	Priority 1	2015	302,126

Item	Description
B2031 Glazed Doors & Entrances	B2031 Glazed Entrance Doors
Condition	Good
Qty / UOM	3 / EA
RUL (years)	10
Location	Lobby
Door Hardware	Push Plate
Door Operation	Manual
Glass Type	Tempered Glass
Door Frame	Wood Framed
Door Use	Entrance

OBSERVATIONS/COMMENTS:

No further action is recommended.

COST SUMMARY:

Type	Year	Total Expenditures
B20 Exterior Enclosure	2015	$302,126

B30 ROOFING

Item	Description
B3011 Roof Finishes	B3011 Slate Shingle Roof
Condition	Good
Qty / UOM	374 / SQ
RUL (years)	33
Location	Roof
Insulation	None
Flashings and Trim	Metal
Roof Eaves and Soffits	Yes
Roof Drainage	Internal Building Piping
Roof Warranty	Unknown

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
B3011 Roof Finishes	B3011 Built-Up Roofing
Condition	Fair
Qty / UOM	90 / SQ
RUL (years)	3
Location	Rear Wings

OBSERVATIONS/COMMENTS:

The flat roof sections at the rear wings are traditional built-up systems with gravel slag. Based on RUL (RUL) and condition, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B3011	Replace B3011 Built-Up Roofing	90.0 - SQ	1861.5	IN - Beyond Rated Life	Priority 2	2018	167,532

Item	Description
B3021 Glazed Roof Openings	B3021 Glass Skylights
Condition	Fair
Qty / UOM	85 / SF
RUL (years)	0
Location	Roof
Roof Opening Operation	Fixed

OBSERVATIONS/COMMENTS:

There are two skylights on the north side adjacent to the light court. Based on RUL and condition, repair of the skylights is recommended in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B3021	B3021 Repair Glass Skylights	85.0 - SF	66.0	IN - Beyond Rated Life	Priority 1	2015	5,614

COST SUMMARY:

Type	Year	Total Expenditures
B30 Roofing	2015	$5,614
B30 Roofing	2018	$167,532

C Interiors Systems

C10 Interior Construction

Item	Description
C1021 Interior Doors	C1021 Interior Doors Refinish
Condition	Fair
Qty / UOM	252 / EA
RUL (years)	0
Location	All Floors

OBSERVATIONS/COMMENTS:

Based on RUL, refinishing of door frames and wood trim is anticipated in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1021	C1021 Refinish door frames and trims	252.0 - EA	151.3	IN - Appearance	Priority 3	2016	38,123

Item	Description
C1035 Identifying Devices	C1035 Directional Signage
Condition	Fair
Qty / UOM	12 / EA
RUL (years)	0
Location	All Floors

OBSERVATIONS/COMMENTS:

Directional signage is required at the fire exit stairs at the corridor ends of each floor. The installation of ADA signage is also required in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1035	Replace C1035 Directional Signage	12.0 - EA	316.2	CC - Life Safety	Priority 1	2015	3,794

COST SUMMARY:

Type	Year	Total Expenditures
C10 Interior Construction	2015	$3,794
C10 Interior Construction	2016	$38,123

C20 STAIRS

Item	Description
C2011 Regular Stairs	C2011 Fire Exit Stairs
Condition	Good
Qty / UOM	4,150 / SF
RUL (years)	13
Location	Stairs
Stairs Frame	Concrete
Stair Riser	Closed
Stair Treads	Concrete-Filled/Metal Pan
Stair Railings	Metal
Stair Soffit Finishes	Plaster
Stair Handrail Finishes	Painted

OBSERVATIONS/COMMENTS:

There are two fire exit stairs with concrete flooring which were renovated in 1998. Two additional stairs are located adjacent to the elevators with terrazzo flooring. The stairs were constructed in 1922 and renovated in 1998. Repair of the stair treads is anticipated in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C2011	C2011 Repair fire exit stairs floor	992.0 - SF	63.1	OP - Maintenance	Priority 3	2017	62,615

COST SUMMARY:

Type	Year	Total Expenditures
C20 Stairs	2017	$62,615

C30 INTERIOR FINISHES

Item	Description
C3005 ADA Renovations	C3005 ADA Renovations
Condition	Fair
Qty / UOM	24 / EA
RUL (years)	1
Location	All restrooms

OBSERVATIONS/COMMENTS:

All restrooms were constructed in 1922 and renovated in 1998. There is an access barrier removal project in the bidding process for upgrading all restrooms to meet current California Title 24 accessibility.

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Wall Finishes - Elevator Lobby
Condition	Fair
Qty / UOM	8,250 / SF
RUL (years)	1
Location	All Floors

OBSERVATIONS/COMMENTS:

The elevator lobbies are finished with painted gypsum board walls and ceilings, and terrazzo flooring. Based on RUL, painting of the walls and ceilings is anticipated in the reserve period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3012	Repaint C3012 Elevator Lobby Walls	8,250.0 - SF	3.1	IN - Appearance	Priority 3	2016	25,575

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Paint Interior Walls, Drywall
Condition	Fair
Qty / UOM	156,580 / SF
RUL (years)	1
Location	All Floors

OBSERVATIONS/COMMENTS:

Based on RUL, repainting of the interior walls will be required in the reserve period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3012	C3012 Repaint interior walls	156,580.0 - SF	3.1	IN - Appearance	Priority 3	2016	485,398

Item	Description
C3024 Flooring	C3020 Ceramic Floor Tile
Condition	Fair
Qty / UOM	190 / CSF
RUL (years)	13
Location	Restrooms

OBSERVATIONS/COMMENTS:

No further action required.

Item	Description
C3024 Flooring	C3024 Vinyl Tile Flooring
Condition	Fair
Qty / UOM	1,665 / SY
RUL (years)	3
Location	Various corridors

OBSERVATIONS/COMMENTS:

Based on condition and RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3024	Replace C3024 Vinyl Tile Flooring	1,665.0 - SY	125.8	IN - Appearance	Priority 3	2018	209,424

Item	Description
C3024 Flooring	C3024 Terrazzo Flooring
Condition	Fair
Qty / UOM	12,650 / SF
RUL (years)	1
Location	Lobby
Floor Toppings	Light Weight Concrete

OBSERVATIONS/COMMENTS:

The south portion of the building is dated and the terrazzo flooring has many cracks. Based on RUL, replacement of the terrazzo flooring is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3024	Replace C3024 Terrazzo Flooring	12,650.0 - SF	36.1	IN - Appearance	Priority 3	2016	456,546

Item	Description
C3024 Flooring	C3024 Sheet Vinyl
Condition	Fair
Qty / UOM	1,110 / SY
RUL (years)	3
Location	Various corridors

OBSERVATIONS/COMMENTS:

Based on condition and RUL, vinyl sheet flooring is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3024	Replace C3024 Sheet Vinyl	1,110.0 - SY	204.7	IN - Appearance	Priority 3	2018	227,192

Item	Description
C3025 Carpeting	C3225 Carpet Tiles
Condition	Fair
Qty / UOM	1,905 / SY
RUL (years)	1
Location	All Floors
Floor Toppings	Light Weight Concrete

OBSERVATIONS/COMMENTS:

Various office area floors are covered with carpet tiles. Replacement in the reserve term is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3025	Replace C3225 Carpet Tiles	1,905.0 - SY	131.1	IN - Appearance	Priority 3	2016	249,760

Item	Description
C3025 Carpeting	C3020 Carpet, Standard Commercial
Condition	Fair
Qty / UOM	10,600 / SY
RUL (years)	1
Location	All Floors

OBSERVATIONS/COMMENTS:

Various office and corridor area floors are covered with carpet. Replacement in the reserve term is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3025	Replace C3020 Carpet, Standard Commercial	10,600.0 - SY	96.6	IN - Appearance	Priority 3	2016	1,024,019

Item	Description
C3031 Ceiling Finishes	C3030 Painted Drywall Ceilings
Condition	Fair
Qty / UOM	47,600 / SF
RUL (years)	1
Location	All restrooms

OBSERVATIONS/COMMENTS:

Based on the RUL and observed conditions, painting of the ceilings is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3031	Repaint C3030 Painted Drywall Ceilings	47,600.0 - SF	4.5	IN - Appearance	Priority 3	2016	216,028

Item	Description
C3031 Ceiling Finishes	C3033 Coffered Dome Ceiling
Condition	Good
Qty / UOM	3,600 / SF
RUL (years)	13
Location	Court Room

OBSERVATIONS/COMMENTS:

No further action required.

Item	Description
C3032 Suspended Ceilings	C3032 Acoustical Ceiling Tile
Condition	Fair
Qty / UOM	990 / CSF
RUL (years)	1
Location	All Floors

OBSERVATIONS/COMMENTS:

Based on RUL and condition, replacement is anticipated in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3032	Replace C3032 Acoustical Ceiling Tile	990.0 - CSF	1201.6	IN - Appearance	Priority 3	2016	1,189,544

COST SUMMARY:

Type	Year	Total Expenditures
C30 Interior Finishes	2016	$3,646,871
C30 Interior Finishes	2018	$436,616

D Services Systems

D10 CONVEYING SYSTEMS

Item	Description
D1011 Passenger Elevators	D1011 Traction Elevator Machinery and Controls
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	3
Location	Elevators 1-2

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendices, detailing the anticipated modernization costs included in this report. These include the consultant's suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D1011	Replace D1011 Traction Elevator Machinery and Controls	2.0 - EA	275300.0	IN - Reliability	Priority 2	2018	550,600

Item	Description
D1012 Freight Elevators	D1012 Freight Elevator, 4500 Lbs
Condition	Good
Qty / UOM	1 / EA
RUL (years)	3
Location	Elevator 3

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendices, detailing the anticipated modernization costs included in this report. These include the consultant's suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D1012	Replace D1012 Freight Elevator, 4500 Lbs	1.0 - EA	270300.0	IN - Beyond Rated Life	Priority 2	2018	270,300

COST SUMMARY:

Type	Year	Total Expenditures
D10 Conveying Systems	2018	$820,900

D20 PLUMBING

Item	Description
D2011 Water Closets	D2011 Commercial Grade Water Closet, 1.6 GPF Unit
Condition	Fair - Good
Qty / UOM	60 / EA
RUL (years)	14
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

Manual flush valves were observed on the vast majority of plumbing fixtures. Automatic flush valves are recommended to improve sanitation.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2011	D2011 Install automatic flush valves on toilets	60.0 - EA	1304.0	OP - Energy	Priority 2	2015	78,240

Item	Description
D2012 Urinals	D2012 Urinal
Condition	Fair - Good
Qty / UOM	12 / EA
RUL (years)	17
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

Manual flush valves were observed on the vast majority of plumbing fixtures. Automatic flush valves are recommended to improve sanitation.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2012	D2012 Install automatic flush valves on urinals	12.0 - EA	2440.7	OP - Energy	Priority 2	2015	29,288

Item	Description
D2013 Lavatories	D2013 Counter Top Sink and Faucet
Condition	Fair - Good
Qty / UOM	36 / EA
RUL (years)	17
Location	Restrooms

OBSERVATIONS/COMMENTS:

Manual faucets were observed on the vast majority of plumbing fixtures. Automatic faucets with sensors are recommended to improve sanitation and for water conservation.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2013	D2013 Install automatic faucets with motion sensors	36.0 - EA	1667.8	OP - Energy	Priority 2	2015	60,041

Item	Description
D2023 Domestic Water Supply Equipment	D2023 Domestic Water Booster Pump Station
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	3
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The boiler room has a domestic water booster pump station with three pumps. It was installed in 1998. The booster pumps are approaching the end of their useful life. Replacement in the reserve term is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2023	Replace D2023 Domestic Water Booster Pump Station	1.0 - EA	33700.8	IN - Beyond Rated Life	Priority 3	2018	33,701

COST SUMMARY:

Type	Year	Total Expenditures
D20 Plumbing	2015	$167,569
D20 Plumbing	2018	$33,701

D30 HVAC

Energy Supply	
Item	**Description**
Fuel Oil Type	N/A
Fuel Gas Type	Natural Gas
Solid Fuel Type	N/A
District Heat Type	District Steam
District Cooling Type	Site Physical Plant Chilled Water
Solar Thermal	N/A
Fuel Tank Type	N/A
Fuel Tank Size (gallons)	N/A
Fuel Tank Location	NA
Gas Meter Location	East side
Electrical Meter Location	East side
Water Meter Location	East side

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Chilled Water Circulation Pumps 20 HP
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	3
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The 15-hp chilled water distribution pumps and associated motors appear to be original and approaching the end of their useful life. Replacement in the reserve term is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3022	Replace D3022 HVAC Chilled Water Circulation Pumps 20 HP	2.0 - EA	26054.9	IN - Beyond Rated Life	Priority 2	2018	52,110

Item	Description
D3023 Auxiliary Equipment	D3023 Condensate Return System
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The condensate return station is heavily rusted and has some torn insulation. Replacement is anticipated in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3023	Replace D3023 Condensate Return System	1.0 - EA	17336.2	IN - Beyond Rated Life	Priority 2	2017	17,336

Item	Description
D3031.1 Chillers	D3031 Chiller, Water Cooled
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	3
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The main chillers are approaching the end of their useful life. Replacement is anticipated in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3031	Replace D3031 Chiller, Water Cooled	2.0 - EA	695640.0	IN - Beyond Rated Life	Priority 2	2018	1,391,280

Item	Description
D3041.1 Air Handling Units	D3041 Fan Coil units
Condition	Fair - Good
Qty / UOM	280 / TN
RUL (years)	13
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Floors one through five are cooled with fan coil units with electric coil heat. Floor six has variable air volume (VAV) boxes with hot water reheat. No further action is recommended.

Item	Description
D3041.1 Air Handling Units	D3041 Interior AHU
Condition	Fair
Qty / UOM	3 / EA
RUL (years)	2
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by three interior air handling units which feed VAV boxes located on the sixth floor. The units are approaching the end of their useful lives. Replacement is anticipated in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3041	Replace D3041 Interior AHU	3.0 - EA	35811.5	OP - Maintenance	Priority 2	2017	107,435
D3041	D3041 Replace fan motors	3.0 - EA	4960.0	IN - Beyond Rated Life	Priority 3	2020	14,880

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan
Condition	Fair - Good
Qty / UOM	8 / EA
RUL (years)	3
Location	Rooftop

OBSERVATIONS/COMMENTS:

Most of the exhaust fans appear to be in working condition. Replacement in the reserve term is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3042	Replace D3042 Exhaust Fan	8.0 - EA	3450.4	IN - Beyond Rated Life	Priority 2	2018	27,603

Item	Description
D3043 Steam Distribution Systems	D2022 Domestic Water Heat Exchanger
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	4
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The steam-to-domestic water heat exchanger appears to be original and approaching the end of its useful life. Replacement is anticipated in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3043	Replace D2022 Domestic Water Heat Exchanger	1.0 - EA	5818.1	IN - Beyond Rated Life	Priority 3	2019	5,818

Item	Description
D3043 Steam Distribution Systems	D3043 HVAC Heating Water Heat Exchanger
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The steam-to-heating water heat exchanger appears to be original and approaching the end of its useful life. Replacement is anticipated in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3043	Replace D3043 HVAC Heating Water Heat Exchanger	1.0 - EA	31257.8	IN - Beyond Rated Life	Priority 2	2017	31,258

Item	Description
D3052 Package Units	D3052 Computer/Sever Room AC
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	3
Location	Computer/Server Room

OBSERVATIONS/COMMENTS:

The main server room has one dedicated air conditioning unit with chilled water from the central plant. Replacement in the reserve term is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3052	Replace D3052 Computer/Sever Room AC	1.0 - EA	18440.8	IN - Beyond Rated Life	Priority 2	2018	18,441

Item	Description
D3063 Heating/Cooling Air Handling Units	D3063 Variable Frequency Drive
Condition	Fair - Good
Qty / UOM	10 / EA
RUL (years)	3
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

EMG recommends adding variable frequency drives (VFDs) to motors over 5-hp for improved efficiency, performance, and control.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3063	D3063 Add VFD's to 20 hp motors	10.0 - EA	19730.9	IN - Beyond Rated Life	Priority 2	2018	197,309

Item	Description
D3068 Building Automation Systems	D3068 Replace Pneumatic HVAC Controls
Condition	Poor
Qty / UOM	190,400 / SF
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

A portion of the control system is an antiquated pneumatic system relying on simple two-input controllers. Replacement with a direct digital control (DDC) system is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3068	Replace D3068 Replace Pneumatic HVAC Controls	190,400.0 - SF	8.2	IN - Beyond Rated Life	Priority 1	2015	1,567,677

COST SUMMARY:

Type	Year	Total Expenditures
D30 HVAC	2015	$1,567,677
D30 HVAC	2017	$156,029
D30 HVAC	2018	$1,686,742
D30 HVAC	2019	$5,818
D30 HVAC	2020	$14,880

D40 Fire Protection Systems

Fire and Life Safety System	
Item	**Description**
Fire Alarm System Components Present	
Smoke detectors	Yes
Pull stations	Yes
Audible alarms	Yes
Strobe lights	Yes
Central fire alarm panel	Yes
Annunciator panel	Yes
Smoke Detectors Power Supply	N/A
Carbon Monoxide Detectors	N/A
Heat Detector	Yes
Central Fire Alarm Panel Location	Electrical Room
Annunciator Panel Location	Security Room
Fire Extinguishers	Yes
Fire Extinguisher Inspection Date	N/A
Distance to Nearest Fire Hydrant (ft)	50
Illuminated Exit Signs	Yes
Kitchen Suppression Systems	N/A
Halon Gas Systems	N/A
Smoke Evacuation Systems	Yes
Fire-rated Stairwells	Yes
Fire-rated Stairwell Finish	Drywall
Stairwell Discharge	Corridors
Stairwell Pressurized	No
Fire-Rated Doors Observed	Yes
Location of Fire-Rated Doors	Stairwells
Fire Alarm Service Company	N/A
Date of Last Fire Alarm Service	N/A
Are the individual office unit fire alarm systems monitored?	N/A
Are the common area fire alarm systems monitored?	N/A
Types of Common Areas Monitored	N/A
Fire Alarm Monitoring Company	N/A

Item	Description
D4011 Sprinkler Water Supply	D4011 Sprinkler Heads
Condition	Fair - Good
Qty / UOM	190,400 / SF
RUL (years)	8
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Based on age, replacement of the sprinkler heads is anticipated in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D4011	Replace D4011 Sprinkler Heads	190,400.0 - SF	2.2	CC - Life Safety	Priority 3	2023	422,383

Item	Description
D4012 Sprinkler Pumping Equipment	D4012 Sprinkler Fire Pumping Equipment
Condition	Good
Qty / UOM	1 / EA
RUL (years)	8
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The fire pump has a single 200-hp motor at 1000 gpm with a spare motor on hand. A jockey pump is also installed to maintain sprinkler pipe pressure. Replacement is anticipated in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D4012	Replace D4012 Sprinkler Fire Pumping Equipment	1.0 - EA	129632.5	CC - Life Safety	Priority 3	2023	129,633

COST SUMMARY:

Type	Year	Total Expenditures
D40 Fire Protection Systems	2023	$552,016

D50 ELECTRICAL SYSTEMS

Item	Description
D5012 Low Tension Service & Dist.	D5010 Breaker Panel 225 Amps
Condition	Good
Qty / UOM	39 / EA
RUL (years)	13
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
D5012 Low Tension Service & Dist.	D5010 Switchgear, Mainframe, 1500Amps
Condition	Fair - Good
Qty / UOM	3 / EA
RUL (years)	22
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The main utility feed is located in the adjacent Hiram Johnson building. From there, three 2000 amp/12.5 kva feeds are routed into this building, and into three separate switchgears with transformers. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel 800 Amps
Condition	Fair - Good
Qty / UOM	20 / EA
RUL (years)	13
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer
Condition	Fair - Good
Qty / UOM	7 / EA
RUL (years)	13
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

The vast majority of the step-down transformers are estimated to have been installed in 1997. No further action is recommended.

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Transfer Switch-not enabled
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Rooftop

OBSERVATIONS/COMMENTS:

The transfer switch associated with the emergency generator is reported to be functioning but decommissioned. The newer 1.5 megawatt generator in the adjacent Hiram Johnson building handles emergency power for both buildings. No further action is recommended.

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Generator 100 kW-Not Enabled
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Rooftop

OBSERVATIONS/COMMENTS:

The emergency generator is reported to be functioning but decommissioned. A newer 1.5 megawatt generator in the adjacent Hiram Johnson building handles emergency power for both buildings. The generator is tested monthly. Installing a secondary containment barrier for the day tank is recommended in the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D5092	D5092 Add/improve secondary containment for day tank	1.0 - EA	3500.0	EN - Air/ Water Quality	Priority 1	2015	3,500

COST SUMMARY:

Type	Year	Total Expenditures
D50 Electrical Systems	2015	$3,500

G Building Sitework Systems

G20 Site Improvements

Site Information	
Item	**Description**
Main Ingress and Egress	350 McAllister Street (Non ADA)
Access from	N
Additional Entrances	455 Golden Gate Ave (ADA)
Access from	S
Parking Count: Open lot	0
Parking Count: Sheltered by carports	0
Parking Count: Private garages	0
Parking Count: Subterranean garage	0
Parking Count: Freestanding parking structure	0
Number of ADA Compliant Spaces	0
Number of ADA Compliant Spaces for Vans	0
Method of obtaining parking count	Physical count
Property Identification Sign-Primary	Monument Sign
Property Identification Sign- Secondary	N/A
Illuminated Identification Signage	N/A
Building Identification Sign	Yes
Illuminated Sign	N/A
Location of Property ID Sign	Main entrance drive
Trees Present	Yes
Shrubs Present	Yes
Grasses Present	No
Flower beds Present	Yes
Decorative Rocks Present	No
Lava Rocks Present	No
Ponds Present	No
Fountains Present	No
Topography	Flat

Item	Description
G2031 Paving & Surfacing	G2031 Concrete Pavement
Condition	Good
Qty / UOM	950 / SF
RUL (years)	10
Location	Site

OBSERVATIONS/COMMENTS:

No further action is recommended.

Item	Description
G2053 Top Soil and Planting Beds	G2053 Landscaping
Condition	Good
Qty / UOM	1,850 / SF
RUL (years)	10
Location	Site

OBSERVATIONS/COMMENTS:

The perimeter landscaping consists of stone planters and grade level plantings of hedges, flowers, and mature trees. Low level ornamental metal fencing borders the planters along walkways. No further action is required.

G50 EXTERIOR STEPS & RAMPS

Item	Description
G5020 Exterior Steps & Ramps	G5020 Exterior Steps at Entrance
Condition	Fair
Qty / UOM	1,800 / SF
RUL (years)	0
Location	Site

OBSERVATIONS/COMMENTS:

The nine sets of exterior steps date back to 1922. Repair is required due to minor settlement and open joints.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
G5020	G5020 Repair Exterior Steps	1,800.0 - SF	76.8	IN - Beyond Rated Life	Priority 1	2015	138,265

COST SUMMARY:

Type	Year	Total Expenditures
G50 Exterior Steps & Ramps	2015	$138,265

The weather at the time of the assessment was:

Item	Description
Approximate Outdoor Temperature (degrees F)	64
Weather Conditions	Cloudy
Snow Covering Ground	No
Wind Conditions	Little to no wind

The documentation provided at the time of the assessment is as:

Item	Description
Site Plan Reviewed	Yes
Floor Plan Reviewed	Yes
Construction Drawings Reviewed	Yes
Termite Inspection Report Reviewed	No
Boiler Certificates Reviewed	No
Document Year Built Information Obtained From	DGS - Project Manager

APPENDIX C: CERTIFICATION

EMG has completed a FCA of the subject property listed on the cover page. The FCA was performed at the Client's request using methods and procedures consistent with good commercial and customary practice conforming with ASTM E2018-08, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. Within this Property Condition Report (PCR), EMG's reference to the Client follows the ASTM guide's definition of User, that is, the party that retains EMG for the preparation of a baseline FCA of the subject property.

This report is exclusively for the use and benefit of the Client identified on the first page of this report. The purpose for which this report shall be used shall be limited to the use as stated in the contract between the client and EMG.

The opinions EMG expresses in this report were formed utilizing the degree of skill and care ordinarily exercised by any prudent architect or engineer in the same community under similar circumstances. EMG assumes no responsibility or liability for the accuracy of information contained within this report that has been obtained from the Client or the Client's representatives, from other interested parties, or from the public domain. The conclusions presented represent EMG's professional judgment based on information obtained during the course of this assignment. EMG's evaluations, analyses, and opinions are not representations regarding the building design, structural soundness, or actual value of the property. Factual information regarding operations, conditions, and test data provided by the Client or the Client's representative has been assumed to be correct and complete. The conclusions presented within this report are based on the data provided, observations made, and conditions that existed specifically on the date of the assessment. EMG certifies that EMG has no undisclosed interest in the subject property, that EMG's relationship with the Client is at arms-length, and that EMG's employment and compensation are not contingent upon the findings or estimated costs to remedy any noted deficiencies due to deferred maintenance and/or any noted component or system replacements.

EMG's FCA cannot wholly eliminate the uncertainty regarding the presence of physical deficiencies and/or the performance of a subject property's building systems. Preparation of a FCA in accordance with ASTM E2018-08 is intended to reduce, but not eliminate, the uncertainty regarding the potential for component or system failure and to reduce the potential that such component or system failure may not be initially observed. This FCA was prepared recognizing the inherent subjective nature of EMG's opinions as to such issues as workmanship, quality of original installation, and estimating the remaining useful life of any given component or system. It should be understood that EMG's suggested remedy may be determined under time constraints or may be formed without the aid of engineering calculations, testing, exploratory probing, the removal of materials, or design. Furthermore, there may be other alternate or more appropriate schemes or methods to remedy the noted physical deficiencies. EMG's opinions are generally formed without detailed knowledge from individuals familiar with the performance of noted components or systems.

Any questions regarding this report should be directed to the Program Manager.

Prepared By: Djahan Nabili, Field Observer

Reviewed By: 

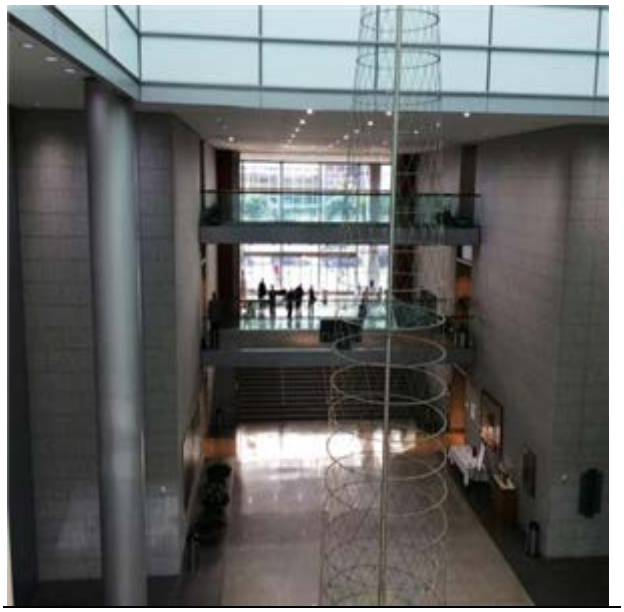
Matt Anderson, Program Manager

APPENDIX D: PHOTOS

:- Front Entrance

:- East End

:- Rear Looking East



:- Main Entrance Lobby

B1012 Crack Repair Epoxy Injection

B2011 Terra Cotta Masonry / Granite

B2021 Historic Wood Windows

B2021 Historic Wood Windows

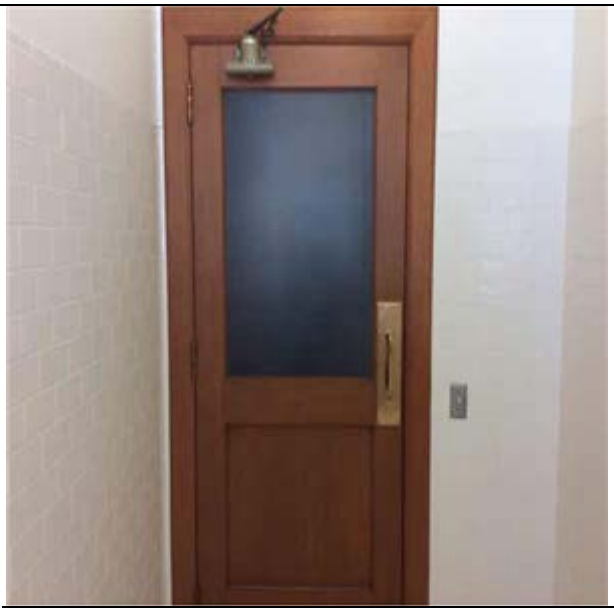
B2031 Glazed Entrance Doors

B3011 Built-Up Roofing

B3011 Slate Shingle Roof

B3011 Slate Shingle Roof

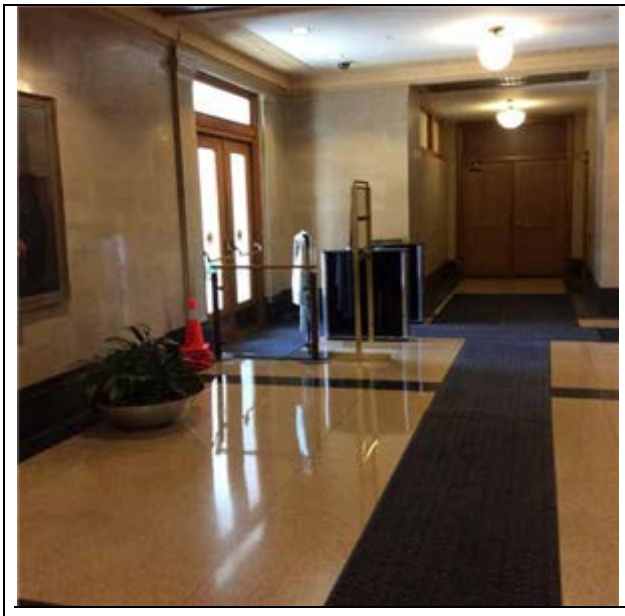
B3021 Glass Skylights



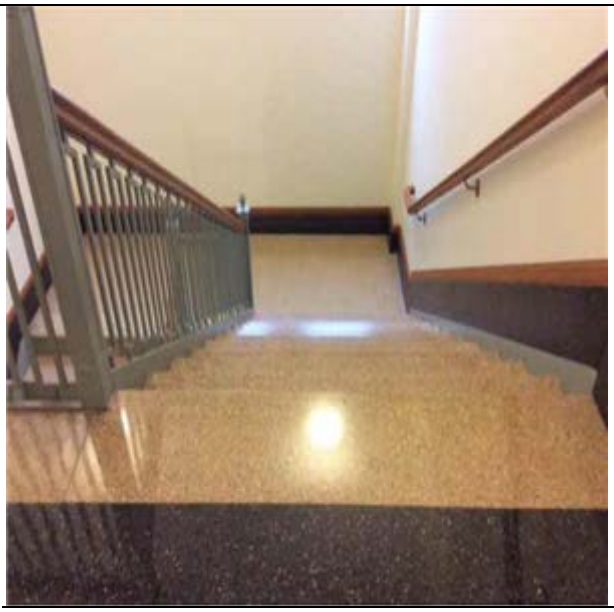
C1021 Interior Doors Refinish

C1021 Interior Doors Refinish

C1035 Directional Signage



C1035 Directional Signage



C2011 Fire Exit Stairs

C2011 Fire Exit Stairs

C3005 ADA Renovations

C3005 ADA Renovations

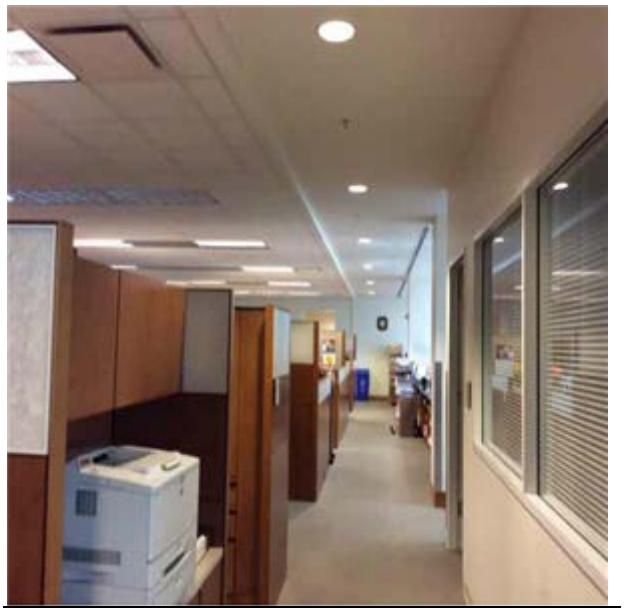
C3005 ADA Renovations

C3012 Paint Interior Walls, Drywall

C3012 Wall Finishes - Elevator Lobby

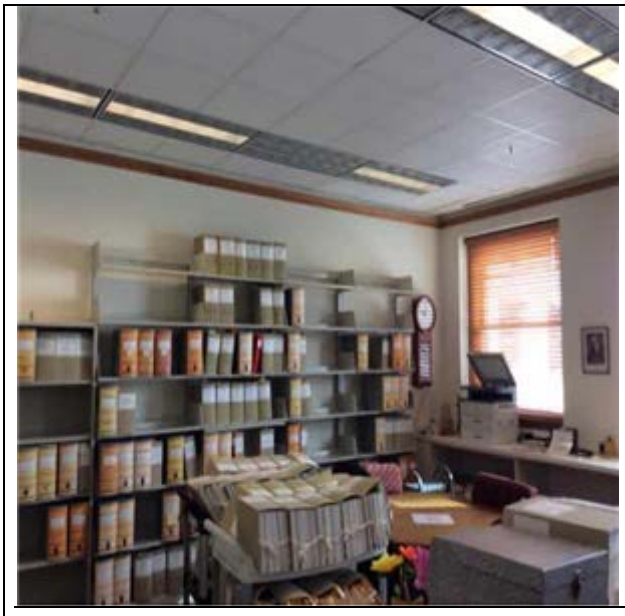
C3024 Terrazzo Flooring

C3024 Terrazzo Flooring



C3225 Carpet Tiles

C3032 Acoustical Ceiling Tile



C3032 Acoustical Ceiling Tile

D1011 Traction Elevator Machinery and Controls

D1011 Traction Elevator Machinery and Controls

D1011 Traction Elevator Machinery and Controls

D1011 Traction Elevator Machinery and Controls

D1012 Freight Elevator, 4500 Lbs

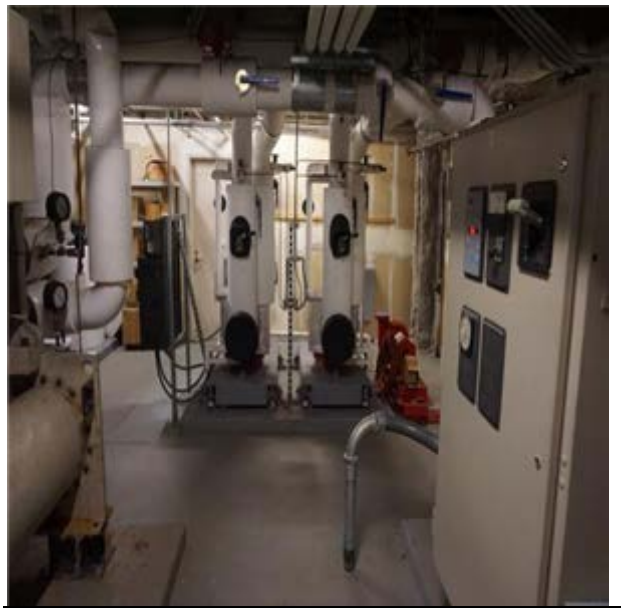
D2011 Commercial Grade Water Closet, 1.6 GPF Unit

D2012 Urinal

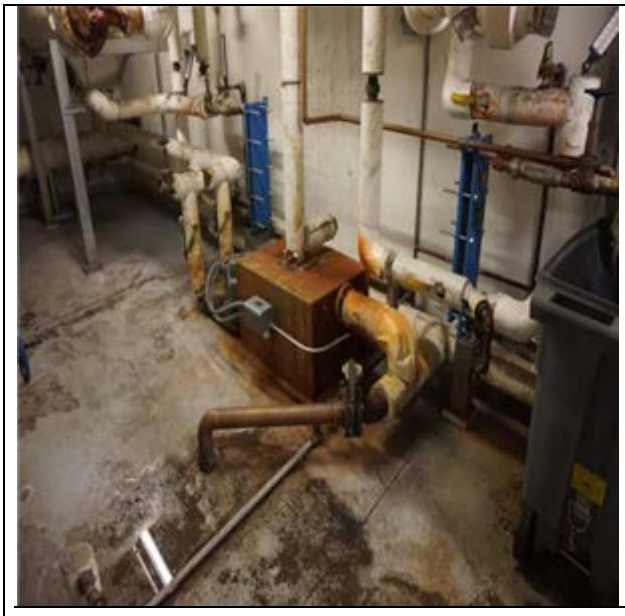
D2013 Counter Top Sink and Faucet

D2023 Domestic Water Booster Pump Station

D3022 HVAC Chilled Water Circulation Pumps 20 HP



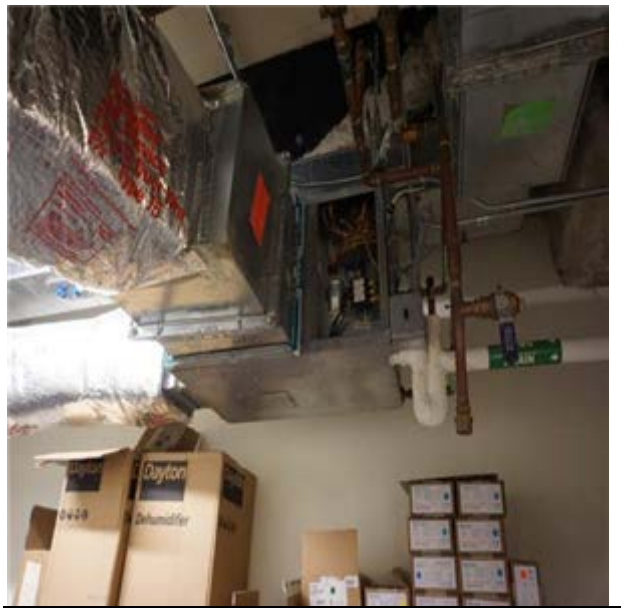
D3022 HVAC Chilled Water Circulation Pumps 20 HP



D3023 Condensate Return System

D3031 Chiller, Water Cooled

D3041 Fan Coil units



D3041 Fan Coil units

D3041 Interior AHU

D3041 Interior AHU

D3042 Exhaust Fan

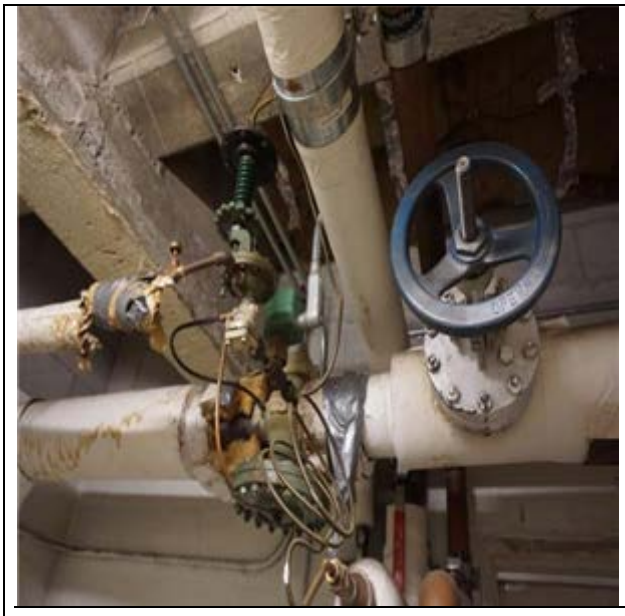
D3042 Exhaust Fan

D2022 Domestic Water Heat Exchanger

D3043 HVAC Heating Water Heat Exchanger

D3052 Computer/Sever Room AC

D3063 Variable Frequency Drive



D3068 Replace Pneumatic HVAC Controls

D5012 Secondary Dry Transformer

D5010 Switchgear, Mainframe, 1500Amps

D5010 Switchgear, Mainframe, 1500Amps

D5012 Breaker Panel 800 Amps

D5092 Emergency Generator 100 kW-Not Enabled

D5092 Emergency Transfer Switch-not enabled

G2031 Concrete Pavement

G2031 Concrete Pavement

G2053 Landscaping

G2053 Landscaping

G5020 Exterior Steps at Entrance

APPENDIX E: TERMINOLOGY AND ABBREVIATIONS

TERMINOLOGY and ABBREVIATIONS	
Actual Knowledge	Information or observations known first hand by EMG.
ADA	The Americans with Disabilities Act
AHU	Air Handling Unit
Ancillary Structures	Structures that are not the primary improvements of the Property but which may have been constructed to provide support uses.
ASTM	American Society for Testing and Materials
Baseline	A minimum scope level of observation, inquiry, research, documentation review, and cost estimating for conducting a Property Condition Assessment as normally conducted by EMG.
BOMA	Building Owners & Managers Association
Building	Referring to the primary building or buildings on the Property, which are within the scope of the FCA.
Building Codes	A compilation of rules adopted by the municipal, county and/or state governments having jurisdiction over the Property that govern the property's design &/or construction of buildings.
Building Department Records	Information concerning the Property's compliance with applicable Building, Fire and Zoning Codes that is readily available for use by EMG within the time frame required for production of the Property Condition Assessment.
Building Systems	Interacting or interdependent components that comprise a building such as structural, roofing, side wall, plumbing, HVAC, water, sanitary sewer and electrical systems.
BUR	Built Up Roof
CBC	California Building Code
Component	A piece of equipment or element in its entirety that is part of a system.
CFM	Cubic Feet per Minute, usually referring to air flow in a heating or cooling system.
Dangerous or Adverse Conditions	Situations which may pose a threat or possible injury to the Project Manager, or those situations which may require the use of special protective clothing, safety equipment, access equipment, or any precautionary measures.
Deferred Maintenance	Deficiencies that result from postponed maintenance, or repairs that have been put off until a later time and that require repair or replacement to an acceptable condition relative to the age of the system or property.
DHW	Domestic Hot Water
DDC	Direct Digital Controls, for HVAC systems
Dismantle	To take apart; disassemble; tear down any component, device or piece of equipment that is bolted, screwed, secured, or fastened by other means.
DWV	Drainage Waste Ventilation
EPDM	Ethylene propylene diene terpolymer, a single ply roofing material, usually black
EIFS	Exterior Insulation and Finish System
EMS	Energy Management System
Engineering	Analysis or design work requiring extensive formal education, preparation and experience in the use of mathematics, chemistry, physics, and the engineering sciences as provided by a Professional Engineer licensed to practice engineering by any state of the 50 states.
Expected Useful Life (EUL)	The average amount of time in years that a system or component is estimated to function when installed new.

TERMINOLOGY and ABBREVIATIONS	
FEMA	Federal Emergency Management Agency
Fire Department Records	Information generated or acquired by the Fire Department having jurisdiction over the Property, and that is readily available to EMG within the time frame required for production of the FCA.
FIRM	Flood Insurance Rate Maps
FM	Factory Mutual
FRT	Fire Retardant Treated
Guide	A series of options or instructions that do not recommend a specific course of action.
HP	Horse Power, a unit of measure for pumps and motors.
HVAC	Heating, Ventilating & Air Conditioning
IAQ	Indoor Air Quality
Immediate Repairs	Physical deficiencies that require immediate action as a result of: (i) existing or potentially material unsafe conditions, (ii) significant negative conditions impacting tenancy/marketability, (iii) material building code violations, or (iv) poor or deteriorated condition of critical element or system, or (v) a condition that if left "as is", with an extensive delay in addressing same, has the potential to result in or contribute to critical element or system failure within one (1) year.
Interviews	Interrogatory with those knowledgeable about the Property.
kVA	Kilo Volt Amps, a measurement used for electrical devices where Amps is the plural of Amperage, a measure of electrical force.
kW	One thousand Watts, a measure of electrical output.
Material	Having significant importance or great consequence to the asset's intended use or physical condition.
MEP	Mechanical, Electrical, and Plumbing
NFPA	National Fire Protection Association
Observations	The results of the Project Manager's Walk-through Survey.
Observe	The act of conducting a visual, unaided survey of items, systems or conditions that are readily accessible and easily visible on a given day as a result of the Project Manager's walk-through.
Obvious	That which is plain or evident; a condition that is readily accessible and can be easily seen by the Project Manager as a result of his Walk-through without the removal of materials, moving of chattel, or the aid of any instrument, device, or equipment.
Owner	The entity holding the deed to the Property that is the subject of the FCA.
Physical Deficiency	Patent, conspicuous defects, or significant deferred maintenance of the Property's material systems, components, or equipment as observed during the Project Manager's Walk-through Survey. Material systems, components, or equipment that are approaching, have realized, or have exceeded their typical Expected Useful Life (EUL); or, that have exceeded their useful life result of abuse, excessive wear and tear, exposure to the elements, or lack of proper or adequate maintenance. This definition specifically excludes deficiencies that may be remedied with routine maintenance, miscellaneous repairs, normal operating maintenance, and conditions that do not present a material deficiency to the Property.
PVC	Poly Vinyl Chloride

TERMINOLOGY and ABBREVIATIONS	
Practically Reviewable	Information that is practically reviewable means that the information is provided by the source in a manner and form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of irrelevant data.
Practice	A definitive procedure for performing one or more specific operations or functions that does not produce a test result.
Primary Improvements	The site and building improvements that are of fundamental importance with respect to the Property.
Project Manager	The individual Professional Engineer, Contractor, or Registered Architect having a general, well rounded knowledge of all pertinent site and building systems and components that conducts the on site visit and walk-through observation.
Property	The site and building improvements, which are specifically within the scope of the FCA to be prepared in accordance with the agreement between the Client and EMG.
Readily Accessible	Those areas of the Property that are promptly made available for observation by the Project Manager without the removal of materials or chattel, or the aid of any instrument, device, or equipment at the time of the Walk-through Survey.
Reasonably Ascertainable	Information that is publicly available, provided to EMG's offices from either its source or an information research/retrieval concern, practically reviewable, and available at a nominal cost for either retrieval, reproduction or forwarding.
Recreational Facilities	Spas, saunas, steam baths, swimming pools, tennis courts, playground equipment, and other exercise, entertainment, or athletic facilities.
Remaining Useful Life (RUL)	The consultant's professional opinion of the number of years before a system or component will require replacement or reconditioning. The estimate is based upon observation, available maintenance records, and accepted EUL's for similar items or systems. Inclement weather, exposure to the elements, demand on the system, quality of installation, extent of use, and the degree and quality of preventive maintenance exercised are all factors that could impact the RUL of a system or component. As a result, a system or component may have an effective age greater or less than its actual age. The RUL may be greater or less than its Expected Useful Life (EUL) less actual age.
Replacement Costs	Costs to replace the system or component "in kind" based on Invoices or Bid Documents provided by the current owner or the client, construction costs developed by construction resources such as *Means* and *Dodge*, EMG's experience with past costs for similar properties, or the current owner's historical incurred costs.
RTU	Rooftop Unit
Shut-Down	Equipment or systems that are not operating at the time of the Project Manager's Walk-through Survey. Equipment or systems may be considered shutdown if it is not in operation as a result of seasonal temperatures.
Significant	Important, material, and/or serious.
Site Visit	The visit to the property by EMG's Project Manager including walk-through visual observations of the Property, interviews of available project personnel and tenants (if appropriate), review of available documents and interviews of available municipal personnel at municipal offices, all in accordance with the agreement for the Property Condition Assessment.

TERMINOLOGY and ABBREVIATIONS	
Specialty Consultants	Practitioners in the fields of engineering, architecture; or, building system mechanics, specialized service personnel or other specialized individuals that have experience in the maintenance and repair of a particular building component, equipment, or system that have acquired detailed, specialized knowledge in the design, assessment, operation, repair, or installation of the particular component, equipment, or system.
Structural Component	A component of the building, which supports non-variable forces or weights (dead loads) and variable forces or weights (live loads).
Suggested Remedy	A preliminary opinion as to a course of action to remedy or repair a physical deficiency. There may be alternate methods that may be more commensurate with the Client's requirements. Further investigation might make other schemes more appropriate or the suggested remedy unworkable. The suggested remedy may be to conduct further research or testing, or to employee Specialty Consultants to gain a better understanding of the cause, extent of a deficiency (whether observed or highly probable), and the appropriate remedy.
Survey	Observations as the result of a walk-through scan or reconnaissance to obtain information by EMG of the Property's readily accessible and easily visible components or systems.
System	A combination of interacting or interdependent components assembled to carry out one or more functions.
Technically Exhaustive	The use of measurements, instruments, testing, calculations, exploratory probing or discover, and/or other means to discover and/or troubleshoot Physical Deficiencies, develop scientific or Engineering findings, conclusions, and recommendations.
Term	Reserve Term: The number of years that Capital Reserves are projected for as specified in the Expenditure Forecast.
TPO	Thermoplastic polyolefin, a white single ply roofing material, usually white
Timely Access	Entry provided to the Project Manager at the time of his site visit.
UST	Underground Storage Tank
Walk-through Survey	The Project Manager's site visit of the Property consisting of his visual reconnaissance and scan of readily accessible and easily visible components and systems. This definition connotes that such a survey should not be considered in depth, and is to be conducted without the aid of special protective clothing, exploratory probing, removal of materials, testing, or the use of special equipment such as ladders, scaffolding, binoculars, moisture meters, air flow meters, or metering/testing equipment or devices of any kind. It is literally the Project Manager's walk of the Property and observations.

APPENDIX F: BUILDING FACT SHEET

S.F. CIVIC CENTER RONALD M. GEORGE COMPLEX FACT SHEET

350 McAllister Street and 455 Golden Gate
San Francisco
San Francisco County
Category 4 - Low Priority - Constructed in Last 20 Years, Special Repairs and Maintenance

BUILDING INFORMATION

- Age: 91 years (the Earl Warren building was originally completed in 1922) Renovation of Warren and construction of Hiram W. Johnson building completed in 1998 (15 years)
- Size:* 6 story Earl Warren-California Supreme Court Building
  and 14 story Hiram Johnson Office Building
  1,079,100 GSF 739,589 NUSF 741,757 Assigned SF
  2.59 Acre Parcel
  50 parking spaces
  Capacity - 2,084 occupants
- Financial: San Francisco State Building Authority (a Joint Powers Authority)

  Lease-Revenue Bonds 1996 Series A and 2005 Series A - Refinance due December 2021
  Original bond $340,555,000 - Balance as of 6/30/12 $175,700,000.

  IRR Rate - $4.50/month per SF, FY 2013-14 (DGS Price Book)
  $4.40/month per SF, FY 2014-15 (Proposed DGS Price Book)

  SPI Structure #: 4703
  Real Property #: 680
  BPM #: 402
- LEED Status: Certified LEED-EB Gold, 2009
- Tenants: 12 Agencies, large tenants include Judicial Council (AOC) (218,500 SF), Department of Justice (135,383 SF), Department of Industrial Relations (111,151 SF) and the Supreme Court (98,155 SF)

COMPLETED STUDIES AND SIGNIFICANT FINDINGS

A. 2010 American Disability Act Accessibility Compliance Survey

Both buildings were found to largely comply with the Americans with Disabilities Act. However, some non-accessible external and internal features were identified requiring major alterations including exterior path of travel issues such as reconfiguring the 455 Golden Gate Avenue entrance, and correcting stair violations at 350 McAllister Street entrance. Interior items included 4 exits and all stairs, and restroom doors as well as signage.

B. 2010 Marx/Okubo Property Condition Assessment (For Sale-Leaseback)

Earl Warren Building: Due to the building's recent renovation/retrofit in 1998, no immediate or 1-3 year period repair/replacement items were noted other than minor handrail installations. In the 4-6 year range, modernization of the two passenger elevators was recommended.

Hiram W. Johnson Building: Because the building was constructed in 1998, no immediate repair/replacement project were identified. In the 1-3 year period, minor repair was identified for the cooling tower concrete deck, although more significant projects related to access compliance/upgrades were identified for both buildings. For the 4-6 year period, minor projects related to system software/hardware upgrades and concrete-related waterproofing were identified.

C. 2012 Access Compliance Conceptual Budget/Evaluation

In follow up to the 2010 American Disability Act Accessibility Compliance Survey this report provides the Conceptual Cost and Path of Travel Plans. ADA upgrade plans are under review by the DSA with anticipated approval by Feb 2014 as part of the Statewide ADA/POT project BCP. Total estimated cost for the work is $3,238,184, with construction estimated to begin late FY 13-14.

ADDITIONAL BUILDING ISSUES

Priority should be given to the Water Treatment System upgrade project to prevent release of any chemicals and comply with environmental requirements.

* Source: Statewide Property Inventory

CURRENT UTILIZATION PROJECTS

- BCDC moved into 20,000 SF of DIR's former 10th Floor space in Dec. 2013
- The CPUC moved into vacant Judicial Council of CA (Courts) 7th Floor space (@ 38,500 SF) on a 2+ year temporary space agreement while the Governor Edmund G. "Pat" Brown / CPUC building is undergoing a major MSF replacement project.
- DIR has successfully restacked its 9th and 10th floors and took over the former DFEHC space (2,960 SF) on the 10th floor with staff from its 8th Floor Human Resources program in Fall of 2013.
- DHCS and DOR have both submitted CRUISE Requests to AMB requesting to backfill the Court's 7th Floor space in late 2015

RECENTLY COMPLETED PROJECTS

Cost

TBD

ACTIVE PROJECTS

Cost

TBD

PLANNED SPECIAL REPAIRS BY FISCAL YEAR

Estimated Cost

TBD

DGS STRATEGY: Continue to operate/maintain the building as-is through the special repair/maintenance process; no capital outlay work required for this building at this time.

APPENDIX G: COST TABLES

10 YEAR EXPENDITURE FORECAST

Ronald M. George State Office Complex / Earl Warren Building
350 McAllister Street
San Francisco

Useful Life[1]: Estimated Useful Life / Remaining Useful Life

Plan Type[2]: **OP:** Operations; **CC:** Code Compliance; **EN:** Environmental; **FN:** Functionality; **IN:** Integrity

Legend: Deferred; Scheduled

Element #	Component Description	Asset	Location	Action	EUL (Yrs)	RUL (Yrs)	Qty.	Unit of Meas.	Unit Cost	Plan Type	Priority[3]	2015 Year 0	2016 Year 1	2017 Year 2	2018 Year 3	2019 Year 4	2020 Year 5	2021 Year 6	2022 Year 7	2023 Year 8	2024 Year 9	Total - Deferred	Total - Scheduled
A. SUBSTRUCTURE																							
Substructure Subtotal												$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
B. SHELL																							
B10	**SUPERSTRUCTURE**																						
B1012	B1012 Upper Floors Construction	B1012 Crack Repair Epoxy Injection	Roof Attic	B1019 Repair Crack Epoxy Injection	20	0	250.00	LF	$101.47	OP - Maintenance	Priority 1	$25,366	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,366	$0
B20	**EXTERIOR ENCLOSURE**																						
B2021	Historic Wood Window Patch, and Paint	B2021 Historic Wood Windows	All Floors	Replace B2021 Historic Wood Windows	10	0	500.00	EA	$604.25	OP - Maintenance	Priority 1	$302,126	$0	$0	$0	$0	$0	$0	$0	$0	$0	$302,126	$0
B30	**ROOFING**																						
B3011	Built-Up Roofing, Total Roof	B3011 Built-Up Roofing	Rear Wings	Replace B3011 Built-Up Roofing	20	3	90.00	SQ	$1,861.46	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$167,532	$0	$0	$0	$0	$0	$0	$0	$167,532
B3021	Glass Skylight	B3021 Glass Skylights	Roof	B3021 Repair Glass Skylights	30	0	85.00	SF	$66.04	IN - Beyond Rated Life	Priority 1	$5,614	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,614	$0
Shell Subtotal												**$333,106**	**$0**	**$0**	**$167,532**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$333,106**	**$167,532**
C. INTERIORS																							
C10	**INTERIOR CONSTRUCTION**																						
C1021	Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware	C1021 Interior Doors Refinish	All Floors	C1021 Refinish door frames and trims	0	1	252.00	EA	$151.28	IN - Appearance	Priority 3	$0	$38,123	$0	$0	$0	$0	$0	$0	$0	$0	$0	$38,123
C1035	Directional Signage	C1035 Directional Signage	All Floors	Replace C1035 Directional Signage	10	0	12.00	EA	$316.20	CC - Life Safety	Priority 1	$3,794	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,794	$0
C20	**STAIRS**																						
C2011	Concrete Stairs	C2011 Fire Exit Stairs	Stairs	C2011 Repair fire exit stairs floor	10	2	992.00	SF	$63.12	OP - Maintenance	Priority 3	$0	$0	$62,615	$0	$0	$0	$0	$0	$0	$0	$0	$62,615
C30	**INTERIOR FINISHES**																						
C3012	Paint Interior Walls, Drywall	C3012 Paint Interior Walls, Drywall	All Floors	C3012 Repaint interior walls	10	1	156,580.00	SF	$3.10	IN - Appearance	Priority 3	$0	$485,398	$0	$0	$0	$0	$0	$0	$0	$0	$0	$485,398
C3012	Paint Interior Walls, Drywall	C3012 Wall Finishes - Elevator Lobby	All Floors	Repaint C3012 Elevator Lobby Walls	10	1	8,250.00	SF	$3.10	IN - Appearance	Priority 3	$0	$25,575	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,575
C3024	Vinyl Tile	C3024 Vinyl Tile Flooring	Various corridors	Replace C3024 Vinyl Tile Flooring	20	3	1,665.00	SY	$125.78	IN - Appearance	Priority 3	$0	$0	$0	$209,424	$0	$0	$0	$0	$0	$0	$0	$209,424
C3024	Sheet Vinyl	C3024 Sheet Vinyl	Various corridors	Replace C3024 Sheet Vinyl	20	3	1,110.00	SY	$204.68	IN - Appearance	Priority 3	$0	$0	$0	$227,192	$0	$0	$0	$0	$0	$0	$0	$227,192
C3024	Terrazzo	C3024 Terrazzo Flooring	Lobby	Replace C3024 Terrazzo Flooring	50	1	12,650.00	SF	$36.09	IN - Appearance	Priority 3	$0	$456,546	$0	$0	$0	$0	$0	$0	$0	$0	$0	$456,546
C3025	Carpet, Standard Commercial, Medium Traffic	C3020 Carpet, Standard Commercial	All Floors	Replace C3020 Carpet, Standard Commercial	10	1	10,600.00	SY	$96.61	IN - Appearance	Priority 3	$0	$1,024,019	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,024,019
C3025	Carpet Tiles - Deluxe	C3225 Carpet Tiles	All Floors	Replace C3225 Carpet Tiles	10	1	1,905.00	SY	$131.11	IN - Appearance	Priority 3	$0	$249,760	$0	$0	$0	$0	$0	$0	$0	$0	$0	$249,760
C3031	Drywall – Painted Finished Ceilings	C3030 Painted Drywall Ceilings	All restrooms	Repaint C3030 Painted Drywall Ceilings	10	1	47,600.00	SF	$4.54	IN - Appearance	Priority 3	$0	$216,028	$0	$0	$0	$0	$0	$0	$0	$0	$0	$216,028
C3032	Acoustical Tile With Exposed Grid System	C3032 Acoustical Ceiling Tile	All Floors	Replace C3032 Acoustical Ceiling Tile	20	1	990.00	CSF	$1,201.56	IN - Appearance	Priority 3	$0	$1,189,544	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,189,544
Interiors Subtotal												**$3,794**	**$3,684,993**	**$62,615**	**$436,616**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$3,794**	**$4,184,224**
D. SERVICES																							
D10	**CONVEYING SYSTEMS**																						
D1011	Traction Elevator Machinery and Controls	D1011 Traction Elevator Machinery and Controls	Elevators 1-2	Replace D1011 Traction Elevator Machinery and Controls	30	3	2.00	EA	$275,300.00	IN - Reliability	Priority 2	$0	$0	$0	$550,600	$0	$0	$0	$0	$0	$0	$0	$550,600
D1012	Traction Geared Elevator - Low Rise	D1012 Freight Elevator, 4500 Lbs	Elevator 3	Replace D1012 Freight Elevator, 4500 Lbs	25	3	1.00	EA	$270,300.00	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$270,300	$0	$0	$0	$0	$0	$0	$0	$270,300
D20	**PLUMBING**																						
D2011	Commercial Grade Water Closet With 1.6 Gpf Unit	D2011 Commercial Grade Water Closet, 1.6 GPF Unit	Throughout Facility	D2011 Install automatic flush valves on toilets	0	0	60.00	EA	$1,304.00	OP - Energy	Priority 2	$78,240	$0	$0	$0	$0	$0	$0	$0	$0	$0	$78,240	$0
D2012	Urinal	D2012 Urinal	Throughout Facility	D2012 Install automatic flush valves on urinals	0	0	12.00	EA	$2,440.70	OP - Energy	Priority 2	$29,288	$0	$0	$0	$0	$0	$0	$0	$0	$0	$29,288	$0
D2013	China Wall Hung Lavatory and Faucet	D2013 Counter Top Sink and Faucet	Restrooms	D2013 Install automatic faucets with motion sensors	0	0	36.00	EA	$1,667.80	OP - Energy	Priority 2	$60,041	$0	$0	$0	$0	$0	$0	$0	$0	$0	$60,041	$0
D2023	Hydronic Circulating Pump, 5 HP	D2023 Domestic Water Booster Pump Station	Boiler Room	Replace D2023 Domestic Water Booster Pump Station	20	3	1.00	EA	$33,700.80	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$33,701	$0	$0	$0	$0	$0	$0	$0	$33,701
D30	**HVAC**																						
D3022.1	Base-mounted circulating pumps (500 GPM, 20 HP)	D3022 HVAC Chilled Water Circulation Pumps 20 HP	Boiler Room	Replace D3022 HVAC Chilled Water Circulation Pumps 20 HP	20	3	2.00	EA	$26,054.88	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$52,110	$0	$0	$0	$0	$0	$0	$0	$52,110
D3023	Condensate return system (SIMPLEX PUMP, FLOAT SWITCH, 3/4 HP, 15 GPM)	D3023 Condensate Return System	Boiler Room	Replace D3023 Condensate Return System	20	2	1.00	EA	$17,336.19	IN - Beyond Rated Life	Priority 2	$0	$0	$17,336	$0	$0	$0	$0	$0	$0	$0	$0	$17,336
D3031.1	Chiller, Water Cooled, Centrifugal, 400 Ton	D3031 Chiller, Water Cooled	Boiler Room	Replace D3031 Chiller, Water Cooled	30	3	2.00	EA	$695,640.00	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$1,391,280	$0	$0	$0	$0	$0	$0	$0	$1,391,280
D3041.1	Air Handler 18,000-20,000 CFM	D3041 Interior AHU	Utility Areas/Closets	D3041 Replace fan motors	0	5	3.00	EA	$4,960.00	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$14,880	$0	$0	$0	$0	$0	$14,880
	Air Handler 18,000-20,000 CFM	D3041 Interior AHU	Utility Areas/Closets	Replace D3041 Interior AHU	15	2	3.00	EA	$35,811.55	OP - Maintenance	Priority 2	$0	$0	$107,435	$0	$0	$0	$0	$0	$0	$0	$0	$107,435
D3042	Exhaust Fan 2000 CFM	D3042 Exhaust Fan	Rooftop	Replace D3042 Exhaust Fan	20	3	8.00	EA	$3,450.37	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$27,603	$0	$0	$0	$0	$0	$0	$0	$27,603
D3043	Multi-pass shell and tube (Cast iron heads, 40 to 180 deg., steam 10 psi, 96 GPM)	D3043 HVAC Heating Water Heat Exchanger	Boiler Room	Replace D3043 HVAC Heating Water Heat Exchanger	30	2	1.00	EA	$31,257.80	IN - Beyond Rated Life	Priority 2	$0	$0	$31,258	$0	$0	$0	$0	$0	$0	$0	$0	$31,258
D3043	Heat Exchanger	D2022 Domestic Water Heat Exchanger	Boiler Room	Replace D2022 Domestic Water Heat Exchanger	30	4	1.00	EA	$5,818.08	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$5,818	$0	$0	$0	$0	$0	$0	$5,818
D3052	Air Conditioner, Dx Package (Liebert) 5-Ton	D3052 Computer/Sever Room AC	Computer/Server Room	Replace D3052 Computer/Sever Room AC	20	3	1.00	EA	$18,440.78	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$18,441	$0	$0	$0	$0	$0	$0	$0	$18,441
D3063	Variable Frequency Drive, 20 HP Motor	D3063 Variable Frequency Drive	Throughout Facility	D3063 Add VFD's to 20 hp motors	20	3	10.00	EA	$19,730.88	IN - Beyond Rated Life	Priority 2	$0	$0	$0	$197,309	$0	$0	$0	$0	$0	$0	$0	$197,309
D3068	Direct Digital Controls (DDC) Basic	D3068 Replace Pneumatic HVAC Controls	Throughout Facility	Replace D3068 Replace Pneumatic HVAC Controls	20	0	190,400.00	SF	$8.23	IN - Beyond Rated Life	Priority 1	$1,567,677	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,567,677	$0
D40	**FIRE PROTECTION SYSTEMS**																						
D4011	Sprinkler Head	D4011 Sprinkler Heads	Throughout Facility	Replace D4011 Sprinkler Heads	25	8	190,400.00	SF	$2.22	CC - Life Safety	Priority 3	$0	$0	$0	$0	$0	$0	$0	$0	$422,383	$0	$0	$422,383
D4012	Fire Pump Electric 1000 Gpm	D4012 Sprinkler Fire Pumping Equipment	Boiler Room	Replace D4012 Sprinkler Fire Pumping Equipment	25	8	1.00	EA	$129,632.53	CC - Life Safety	Priority 3	$0	$0	$0	$0	$0	$0	$0	$0	$129,633	$0	$0	$129,633
D50	**ELECTRICAL SYSTEMS**																						
D5092	Diesel Generator 100 kW	D5092 Emergency Generator 100 kW-Not Enabled	Rooftop	D5092 Add/improve secondary containment for day tank	0	0	1.00	EA	$3,500.00	EN - Air/ Water Quality	Priority 1	$3,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,500	$0
Services Subtotal												**$1,738,747**	**$0**	**$156,029**	**$2,541,343**	**$5,818**	**$14,880**	**$0**	**$0**	**$552,016**	**$0**	**$1,738,747**	**$3,270,086**
E. EQUIPMENT & FURNISHING																							
Equipment & Furnishing Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
F. SPECIAL CONSTRUCTION AND DEMOLITION																							
Special Construction And Demolition Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
G. BUILDING SITEWORK																							
G50	**EXTERIOR STEPS & RAMPS**																						
G5020	G5020 Exterior Steps & Ramps	G5020 Exterior Steps at Entrance	Site	G5020 Repair Exterior Steps	25	0	1,800.00	SF	$76.81	IN - Beyond Rated Life	Priority 1	$138,265	$0	$0	$0	$0	$0	$0	$0	$0	$0	$138,265	$0

Element #	Component Description	Asset	Location	Action	EUL (Yrs)	RUL (Yrs)	Qty.	Unit of Meas.	Unit Cost	Plan Type	Priority[2]	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total - Deferred	Total - Scheduled
												Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9		
Building Sitework Subtotal												$138,265	$0	$0	$0	$0	$0	$0	$0	$0	$0	$138,265	$0
Z. GENERAL																							
General Subtotal												$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Expenditure Totals per Year	$2,213,912	$3,684,993	$218,644	$3,145,491	$5,818	$14,880	$0	$0	$552,016	$0	$2,213,912	$7,621,841
Total Cost (Inflated @ 5% per Yr.)	$2,213,912	$3,869,243	$241,055	$3,641,299	$7,072	$18,991	$0	$0	$815,579	$0	Total *	$9,835,754

* - Present Value Currency

Footnotes

1 Detailed descriptions for Useful Life and Plan Type can be found in the Appendices of the Facility Condition

2 Detailed Descriptions of the Priorities can be found in the Appendices of the Facility Condition Assessment

Current Repl.Value $90,476,119

APPENDIX H: SUPPORTING DOCUMENTATION

Expected Useful Life (EUL) Table	
SITE SYSTEM ITEMS	
ROADWAYS/ PARKING/ WALKWAYS	
Asphalt pavement	25
Asphalt seal coat	5
Concrete pavement	50
Curbing, asphalt	25
Curbing, concrete	50
Parking, stall striping	5
Parking, gravel surfaced	15
Security gate- rolling gate	10
Security gate- lift arm	10
Sidewalk, asphalt	25
Sidewalk, brick paver	30
Sidewalk, concrete	50
STORM SEWER, DRAINAGE AND EROSION CONTROL	
Catch basins, inlets, culverts	50
Earthwork, grading and erosion control	50
Storm drain lines	40
LANDSCAPING, TOPOGRAPHY AND FENCING	
Fencing, chain-link (4' height)	40
Fencing, dumpster enclosure (wood)	12
Fencing, Tennis Court (10' height)-Chain link	40
Fencing, wood privacy (6' height)	15
Fencing, wrought iron (4-6' height and decorative)	50
Fencing, concrete masonry unit (CMU)	30
Irrigation System	30
Retaining walls, 80 lb block type	50
Retaining walls, concrete masonry unit (CMU) with brick face	40
Fencing, PVC (6' height)	25
Retaining walls, timber (railroad tie)	25
SITE SYSTEM ITEMS	
GENERAL SITE IMPROVEMENTS	
Lighting (pole mounted)	25
Mail kiosk	10
Pool deck	15
Pool/ spa plaster liner	8
Signage, monument	20
Signage, roadway/ parking	10
Tennis court / basketball court surface (paint markings)	5

GENERAL SITE IMPROVEMENTS	
Tennis court Surface (acrylic emulsion)	10
Tot-lot (playground equipment)	10
SITE SANITARY AND WATER	
Domestic Hot Water (DHW) - supply / return	30
Lift station	50
Sanitary lines	50
Sanitary treatment	40
Water main	40
Water supply lines	50
Water tower	50
SITE MECHANICAL / ELECTRICAL	
Compactors	15
Dumpsters	10
Electrical distribution center	40
Electric main	40
Emergency Generator	25
Gas lines	40
Gas main	40
Heating supply/ return	40
Power distribution	40
Transformer	30
BUILDING ARCHITECTURAL ITEMS	
Wood Decks	20
Storage Sheds	30
Carports	40
Garages	50
Basement Stairs	50
Building mounted exterior lighting	10
Building mounted High Intensity Discharge (HID) lighting	10
Bulkhead	10
Canopy, concrete	50
Canopy, wood / metal	40
Ceilings, open or exterior	30
Chimney	40
Common area doors, interior (solid wood/ metal clad)	30
Common area floors, ceramic / quarry tile, terrazzo	50+
Common area floors, wood (strip or parquet)	30
Common area floors, resilient tile or sheet	15
Common area floors, carpet	8
Common area floors, concrete	50+

BUILDING ARCHITECTURAL ITEMS	
Common area railing	20
Common area ceiling, concrete	50+
Common area ceiling, acoustic tile (drop ceiling),	15
Common area countertop and sink	20
Common area dishwasher	15
Common area disposal	5
Common area kitchen cabinets, wood	15
Common area wall coverings	15
Caps, copings (aluminum/ terra-cotta) - Parapet	25
Exterior common door, aluminum and glass	30
Exterior common door, solid core wood or metal clad	25
Exterior stairs, wood	15
Exterior stairs, metal pan- concrete filled	30
Exterior stairs, concrete	50
Exterior unit door, solid wood/ metal clad	25
EXTERIOR CLADDING	
Aluminum Siding	40
Brick or block	40
Brownstone or stone veneer	40
Exterior Insulation Finishing Systems (EIFS)	20
Glass block	40
Granite block	40
Metal/ glass curtain wall	30
Precast concrete panel (tilt-up)	40
Vinyl siding	25
Wood shingle/ clapboard/ plywood, stucco, composite wood	20
Cement-board siding (Hardi-plank)/ non integral color	45
Fire Escapes	40
Foundations	50+
Roof hatch	30
Roof skylight	30
Insulation, wall	50+
Interior lighting	15
Interior railings	20
Mail facility, interior	20
Parapet wall,	50+
Penthouse	50
Railing, roof	25

INTERIORS	
Public bathroom accessories	7
Public bathroom fixtures	15
Refrigerator, common area	10
BUILDING ARCHTECTURAL ITEMS	
ROOF COVERINGS	
Built-up roof - Ethylene Propylene Diene Monomer (EPDM) / Thermoplastic Polyolefin (TPO)	20
Asphalt shingle (3-tab)	20
Wood shingles (cedar shake)	25
Slate, clay, concrete tile	40
Metal	40
Roof drainage exterior (gutter/ downspout)	10
Roof drainage interior (drain covers)	30
Roof structure	50+
Slab	50+
Service door	25
Soffits (wood/ stucco)	20
Soffits (aluminum or vinyl)	25
Stair structures	50+
Storm/ screen doors	7
Storm/ screen windows	10
Waterproofing (foundations)	50+
Windows (frames and glazing), vinyl or aluminum	30
Wood floor frame	50+
BOILER ROOM EQUIPMENT	
Blowdown and Water Treatment	25
Boiler Room Pipe Insulation	Included in boiler
Boiler Room Piping	Included in boiler
Boiler Room Valves	15
Boiler Temperature Controls	Included in boiler
Oil-fired, sectional	22
Gas/ dual fuel, sectional	25
Oil/ gas/ dual fired, low MBH	30
BOILERS	
Oil/ gas/ dual fired, high MBH	40
Gas fired atmospheric	25
Electric	20

BUILDING HEATING WATER TEMPERATURE CONTROLS	
Common area	15
Buzzer/Intercom, central panel	20
Central Unit Exhaust, roof mounted	15
Chilled Water Distribution	50+
Chilling Plant	15
Cooling Tower	25
Combustion Air, Duct with fixed louvers	30
Combustion Air, Motor louver and duct	25
CONDENSATE, FEEDWATER, WATER	
Feedwater only (hydronic)	10
Cooling Tower	25
DHW Circulating Pumps	by size
Tank only, dedicated fuel	10
Exchanger in storage tank	15
Exchanger in boiler	15
External tankless	15
Instantaneous (tankless type)	10
Domestic Hot Water Storage Tanks, Small (up to 150 gallons)	15
Domestic Hot Water Storage Tanks, Large (over 150 gallons)	15
Domestic Cold Water Pumps	15
ELECTRICAL & ELEVATOR	
Electrical Switchgear	50+
Electrical Wiring	30
Elevator, Controller, dispatcher	15
Elevator, Cab	15
Elevator, Machinery	30
Elevator, Shaft-way Doors	20
Elevator, Shaft-way Hoist rails, cables, traveling	25
Elevator, Shaft-way Hydraulic piston and leveling	25
EMERGENCY ALARM AND FIRE PROTECTION	
Call station	10
Emergency Generator	25
Emergency Lights	8
Evaporative Cooler	15
Fire Extinguisher	10
Fire Pumps	20
Fire Suppression	50+
Flue Exhaust	w/boiler
Free Standing Chimney	50+
Fuel Oil Storage	25

EMERGENCY ALARM AND FIRE PROTECTION	
Fuel Transfer System	25
Gas Distribution	50+
Heat Sensors	15
Heat Exchanger	35
Heating Risers and Distribution	50+
MECHANICAL – ELECTRIC – PLUMBING ITEMS	
Heating Water Circulating Pumps	by size
Heating Water Controller	15
Hot and Cold Water Distribution	50
HVAC	
Pad/ roof condenser	20
A/C window unit or through wall	10
Fan coil unit, electric	20
Fan coil unit, hydronic	30
Furnace (electric heat with A/C)	20
Furnace (electric heat with A/C)	20
Furnace (gas heat with A/C)	20
Packaged terminal air conditioner (PTAC)	15
Packaged HVAC (roof top units)	20
Heat pump condensing component	20
Heater, electric baseboard	25
Heater, wall mounted electric or gas	20
Hydronic heat/ electric A/C	20
Line Dryers	15
Master TV System	10
Motorized Valves	12
Outdoor Temperature Sensor	10
Pneumatic lines and Controls	30
POWER VENTILATOR	
Purchased Steam Supply Station	50+
Sanitary Waste and Vent System	50+
Sewage Ejectors	50
Smoke and Fire Detection System, central panel	15
Solar Hot Water	20
SUMP PUMP	
Commercial Sump Pump	15
Water Softening and Filtration	15
Water Tower	50+

PLAN TYPE DEFINITION

Within the report text a Plan Type is assigned to the various cost categories. The following is a brief description of the Plan Types that may be used in the report.

Code Compliance (CC)

- Accessibility: Conditions that are not in conformance with the American Disabilities Act Accessibility Guidelines
- Building Code: Conditions that are not in conformance with the Building codes
- Life Safety: Conditions that are not in conformance with the NFPA 101 Life Safety Code

Operations (OP)

- Energy: Conditions that adversely affect energy use or will decrease water or energy usage
- Maintenance: Components or systems that can usually be accomplished by the current maintenance staff
- Security: Conditions that compromise the protection of the asset or its occupants

Environmental (EN)

- Air/ Water Quality: Conditions that affect air or water quality
- Asbestos: Reported or suspected asbestos-containing material(ACM)
- Lead: Reported lead based paint
- PCB: Reported PCB containing equipment

Functionality (FN)

- Mission: Components which do not meet the mission of the organization
- Modernization: Conditions that need to be upgraded in appearance or function
- Plant Adaptation: Components or systems that must change to fit a new or adapted use
- Obsolescence: Components or systems that are or are becoming obsolete
- Capacity: Components or system which cannot meet demand load

Integrity (IN)

- Appearance: Problems with the material or system appearance that are not functional in nature
- Reliability: Components or systems which cannot be depended on to function as designed
- Beyond Rated Life: A component or system that has exceeded its rated life

Estimate of Structures Cost Using Marshall Cost Systems

Earl Warren

Site Calculation

Estimate of Unusual Land Improvements Cost (Estimators Data Cost Base):

Description	Cost	Estimated $/ SF	Unusual Land Total
			$0
Total			$0

Estimate of Unusual Land Improvements Cost (Estimators Cost Data Base):

Estimate of Structure Cost :

Building Type	Cost per SF	Number of SF	Building TypeTotal
Main Building	$380.15	190,400	$72,380,895
	$0.00	0	$0
	$0.00	0	$0
	$0.00	0	$0
	$0.00	0	$0
	Total	190,400	$72,380,895

Estimate of Adjustments for Fees:

Description	% increase
Soft Costs	25.00%
	0.00%
	0.00%

Total Fees/ Interest included in Marshall System 25.00%

Total Structure Estimate:

Description	Unit	Fee Adjust	Adjusted Totals
Main Building	$72,380,895	25.00%	$90,476,119
	$0	25.00%	$0
	$0	25.00%	$0
	$0	25.00%	$0
	$0	25.00%	$0
Cost Per SF	**$475.19**	**Total Estimate**	**$90,476,119**

ADA Checklist

Property Name: Earl Warren
Date: 02/12/2015
Project Number: 111326.14R-037.305

EMG Abbreviated Accessibility Checklist					
	Building History	**Yes**	**No**	**N/A**	**Comments**
1.	Has the management previously completed an ADA review?	✓			October 2014
2.	Have any ADA improvements been made to the property?	✓			
3.	Does a Barrier Removal Plan exist for the property?		✓		
4.	Has the Barrier Removal Plan been reviewed/approved by an arms-length third party such as an engineering firm, architectural firm, building department, other agencies, etc.?	✓			The Access Barrier plans are in Bid Processing, Construction will start summer of 2015
5.	Has building ownership or management received any ADA related complaints that have not been resolved?		✓		
6.	Is any litigation pending related to ADA issues?			✓	
	Parking	**Yes**	**No**	**N/A**	**Comments**
1.	Are there sufficient parking spaces with respect to the total number of reported spaces?	✓			There are 50 parking stalls in Hiram W. Johnson including one ADA stall
2.	Are there sufficient van-accessible parking spaces available (96" wide/ 96" aisle for van)?			✓	
3.	Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading "Van Accessible" at van spaces?	✓			
4.	Is there at least one accessible route provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones, if provided, and public streets and sidewalks?	✓			
5.	Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs?	✓			

EMG Abbreviated Accessibility Checklist					
	Parking (cont.)	**Yes**	**No**	**N/A**	**Comments**
6.	Does signage exist directing you to accessible parking and an accessible building entrance?	✓			
	Ramps	**Yes**	**No**	**N/A**	**Comments**
1.	If there is a ramp from parking to an accessible building entrance, does it meet slope requirements? (1:12)			✓	
2.	Are ramps longer than 6 ft complete with railings on both sides?	✓			There is a ramp at Southside
3.	Is the width between railings at least 36 inches?			✓	
4.	Is there a level landing for every 30 ft horizontal length of ramp, at the top and at the bottom of ramps and switchbacks?	✓			Does not meet ADA requirement
	Entrances/Exits	**Yes**	**No**	**N/A**	**Comments**
1.	Is the main accessible entrance doorway at least 32 inches wide?	✓			
2.	If the main entrance is inaccessible, are there alternate accessible entrances?	✓			
3.	Can the alternate accessible entrance be used independently?	✓			
4.	Is the door hardware easy to operate (lever/push type hardware, no twisting required, and not higher than 48 inches above the floor)?	✓			
5.	Are main entry doors other than revolving door available?		✓		
6.	If there are two main doors in series, is the minimum space between the doors 48 inches plus the width of any door swinging into the space?	✓			
	Paths of Travel	**Yes**	**No**	**N/A**	**Comments**
1.	Is the main path of travel free of obstruction and wide enough for a wheelchair (at least 36 inches wide)?	✓			
2.	Does a visual scan of the main path reveal any obstacles (phones, fountains, etc.) that protrude more than 4 inches into walkways or corridors?		✓		
3.	Are floor surfaces firm, stable, and slip resistant (carpets wheelchair friendly)?	✓			
4.	Is at least one wheelchair-accessible public telephone available?			✓	
5.	Are wheelchair-accessible facilities (toilet rooms, exits, etc.) identified with signage?	✓			
6.	Is there a path of travel that does not require the use of stairs?	✓			

EMG Abbreviated Accessibility Checklist					
	Paths of Travel (cont.)	**Yes**	**No**	**N/A**	**Comments**
7.	If audible fire alarms are present, are visual alarms (strobe light alarms) also installed in all common areas?	✓			
	Elevators	**Yes**	**No**	**N/A**	**Comments**
1.	Do the call buttons have visual signals to indicate when a call is registered and answered?	✓			
2.	Are there visual and audible signals inside cars indicating floor change?	✓			
3.	Are there standard raised and Braille marking on both jambs of each host way entrance?	✓			
4.	Do elevator doors have a reopening device that will stop and reopen a car door if an object or a person obstructs the door?	✓			
5.	Do elevator lobbies have visual and audible indicators of car arrival?	✓			
6.	Does the elevator interior provide sufficient wheelchair turning area (51″ x 68″)?	✓			
7.	Are elevator controls low enough to be reached from a wheelchair (48 inches front approach/54 inches side approach)?	✓			
8.	Are elevator control buttons designated by Braille and by raised standard alphabet characters (mounted to the left of the button)?	✓			
9.	If a two-way emergency communication system is provided within the elevator cab, is it usable without voice communication?	✓			
	Restrooms	**Yes**	**No**	**N/A**	**Comments**
1.	Are common area public restrooms located on an accessible route?	✓			
2.	Are pull handles push/pull or lever type?	✓			
3.	Are there audible and visual fire alarm devices in the toilet rooms?	✓			
4.	Are corridor access doors wheelchair-accessible (at least 32 inches wide)?	✓			
5.	Are public restrooms large enough to accommodate a wheelchair turnaround (60″ turning diameter)?	✓			
6.	In unisex toilet rooms, are there safety alarms with pull cords?			✓	
7.	Are stall doors wheelchair accessible (at least 32″ wide)?	✓			
8.	Are grab bars provided in toilet stalls?	✓			

EMG Abbreviated Accessibility Checklist					
	Restrooms (cont.)	**Yes**	**No**	**N/A**	**Comments**
9.	Are sinks provided with clearance for a wheelchair to roll under (29″ clearance)?	✓			
10.	Are sink handles operable with one hand without grasping, pinching or twisting?	✓			
11.	Are exposed pipes under sink sufficiently insulated against contact?	✓			
12.	Are soap dispensers, towel, etc. reachable (48″ from floor for frontal approach, 54″ for side approach)?	✓			
13.	Is the base of the mirror no more than 40″ from the floor?	✓			

APPENDIX I: PRE-SURVEY QUESTIONNAIRE

Property Condition Assessment: Pre-Survey Questionnaire

This questionnaire should be completed by someone knowledgeable about the subject property. The completed form should be presented to EMG's Field Observer on the day of the site visit. If the form is not completed, EMG's Project Manager will require additional time during the on-site visit with such a knowledgeable person in order to complete the questionnaire. During the site visit, EMG's Field Observer may ask for details associated with selected questions. This questionnaire will be utilized as an exhibit in EMG's final Property Condition Report.

Name of person completing questionnaire: Samuel Flores

Building name: Earl Warren/Hiram W. Johnson Building (402)

What is your association with this property? Office building Manager III

What is the length of your association with this property? 6 months

Phone number: 415-703-4100

Please provide information about inspections relating to the following items

Inspections	Date Last Inspected	List Name & Contact for Maintenance Contractor, if any.
1. Elevators	Monthly Maintenance only	Thysssen Krupp
2. HVAC, Mechanical, Electric, Plumbing	Monthy Maintenance	HVAC, Mechanical Honeywell, Enovity
3. Life-Safety/Fire	Monthy Maintenance	Siemens
4. Roofs	N/A	Unkown

5. List any major capital improvements within the last three years.

Cooling Towers

6. Are there any other major capital expenditures planned in the near term?

ESCO Project ADA Project Skylight Project

7. What is the age of the roof(s)?

18 years

8. What building systems (HVAC, roof, interior/exterior finishes, paving etc.) are the responsibilities of contractors to repair or replace?

ESCO Project will address HAVC System, Lighting issue at the RMGSOC, and improve energy savings

Mark the column corresponding to the appropriate response. Please provide additional details in the Comments column, or backup documentation for any Yes responses. Note: N/A indicates "Not Applicable", Unk indicates "Unknown"

Question	Y	N	N/A	Unk	Comments
9. Are there any unresolved building, or fire code issues?	**x**				Talk a Phone in the stair well not working condition in the process of repair.
10. Are there any "down" or unusable units?		**x**			
11. Are there any problems with erosion, storm-water drainage or areas of paving that do not drain?	**x**				Cooling tower condensate lines showing erosion issues

Question	Y	N	N/A	Unk	Comments
12. Is the property served by a private water well?		x			
13. Is the property served by a private septic system or other waste treatment systems?		x			
14. Are there any problems with foundations or structures?	x				350 entrance stairs showing movment/ shifting
15. Is there any water infiltration in basements or crawl spaces?	x				west side of building water inrudion into basement area
16. Are there any wall, or window leaks?	x				Skylight west side leaking Breezy way eastside 10 floor leaking
17. Are there any roof leaks?	x				350 east side of building leaking
18. Is the roofing covered by a warranty or bond?				x	
19. Are there any poorly insulated areas?				x	
20. Is Fire Retardant Treated (FRT) plywood used?				x	
21. Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used?		x			
22. Are there any problems with the utilities, such as inadequate capacities?		x			
23. Are there any problems with the landscape irrigation systems?		x			
24. Has a termite/wood boring insect inspection been performed within the last year?				x	
25. Do any of the HVAC systems use R-11, 12, or 22 refrigerants?	x				R-22 Krack uint in 3rd floor computor room
26. Has any part of the property ever contained visible suspect mold growth?	x				5th floor hs sign of mold in the procees of Remediation
27. Is there a mold Operations and Maintenance Plan?	x				in the process, working with e-shop on getting a program in place.
28. Have there been indoor air quality or mold related complaints from tenants?		x			

Question	Y	N	N/A	Unk	Comments
29. Is polybutylene piping used?		x			
30. Are there any plumbing leaks or water pressure problems?		x			
31. Are there any leaks or pressure problems with natural gas service?		x			
32. Does any part of the electrical system use aluminum wiring?		x			
33. Are there transformers inside the building?	x				
34. Do any Commercial units have less than 200-Amp service?				x	
35. Are there any recalled fire sprinkler heads (Star, GEM, Central, Omega)?		x			
36. Is there any pending litigation concerning the property?				x	
37. Has the State previously completed an ADA or 'Title 24 review?	x				
38. Have any ADA or Title 24 improvements been made to the property?		x			process has began to implement ADA
39. Does a Barrier Removal Plan exist for the property?	x				
40. Has the Barrier Removal Plan been approved by a credentialed third party?				x	
41. Have there been any ADA or Title 24 related complaints?		x			
42. Have there been any complaints about the elevators or wait times?	x				Wait time and break down off equipment
43. Are there any problems with exterior lighting?		x			
44. Are there any other significant issues/hazards with the property?	x				City of San Francisco trees are blocking camera views and steel grates around tree base coming a trip hazard
45. Are there any unresolved construction defects at the property?	x				Landscape issue in front of 455 Golden Gate flower bed have been abanden, causeing leaks into building. Creating eye sore for front of building

APPENDIX J: ELEVATOR REPORT

Elevator Assessment

Building 402 – Ronald M. George
455 Golden Gate
San Francisco, CA

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Elevator Consulting Associates, Inc. – 103 Soukup Ct., Folsom, CA 95630
O: 916-983-1035 – C: 916-337-3572 – F: 916-983-1028
sean.colgan@elevatorconsultingassociates.com

Appendix A – Elevator Equipment Summary

The following chart provides an "at a glance" summary of all of the elevator equipment at the subject property.

Bank/Elevator Description	Elevator Number	Speed	Capacity	Floors Served	Date of Original Install	Date of Last Mod	Next Mod Due	Elevator Type	Machine/ Power Unit Manuf.	Motor Control	Control Manuf.	Door Size/ Style	Door Equip. Manuf.
Elevators 1-2 (Duplex – ID# 30280, 30323)	1	500 fpm	2,500 pounds	B, 1-6	1955	1998	2-4 years	Overhead Gearless Traction	Otis	Generator	Northern	50"x 84" Side Opening	ECI
	2	500 fpm	2,500 pounds	B, 1-6	1955	1998	2-4 years	Overhead Gearless Traction	Otis	Generator	Northern	50"x 84" Side Opening	ECI
Elevator 3 (Simplex – ID# 114113)	3	350 fpm	4,500 pounds	B, 1-6	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	54"x 84" Side Opening	ECI
Elevators 4-7 (Group – ID# 114114-114117)	4	350 fpm	3,500 pounds	1-8	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	42"x 84" Center Opening	ECI
	5	350 fpm	3,500 pounds	1-8	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	42"x 84" Center Opening	ECI
	6	350 fpm	3,500 pounds	1-8	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	42"x 84" Center Opening	ECI
	7	350 fpm	3,500 pounds	1-8	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	42"x 84" Center Opening	ECI
Elevators 8-11 (Group – ID# 114118-114121)	8	450 fpm	3,500 pounds	1, 2, 8-14	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	42"x 84" Center Opening	ECI
	9	450 fpm	3,500 pounds	1, 2, 8-14	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	42"x 84" Center Opening	ECI
	10	450 fpm	3,500 pounds	1, 2, 8-14	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	42"x 84" Center Opening	ECI
	11	450 fpm	3,500 pounds	1, 2, 8-14	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	42"x 84" Center Opening	ECI
Elevator 12 (Simplex – ID# 114122)	12	350 fpm	4,500 pounds	B, 1-14, PH	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	52"x 84" Side Opening	ECI
Elevator 13 (Simplex – ID# 114123)	13	350 fpm	2,000 pounds	B, 1-6	1998	N/A	2-4 years	Overhead Geared Traction	Northern	VVVF	Northern	36"x 84" Side Opening	ECI
Elevators 14, 15, 17 (Three Simplex Units – ID# 114124, 114125, 114127)	14	125 fpm	3,500 pounds	B, 1, G(R), 2	1998	N/A	2-4 years	Inground Hydraulic	US Elevator	EM Starter	Northern	42"x 84" Center Opening	GAL
	15	125 fpm	3,500 pounds	B, 1, G(R), 2	1998	N/A	2-4 years	Inground Hydraulic	US Elevator	EM Starter	Northern	42"x 84" Center Opening	GAL
	17	125 fpm	3,500 pounds	1-2	1998	N/A	2-4 years	Inground Hydraulic	US Elevator	EM Starter	Northern	42"x 84" Center Opening	GAL

Appendix A – Elevator Equipment Summary

Elevator Number	State Inspection Date	State Inspection Status	5-Year Test Date	5-Year Test Status	Annual Test Date	Annual Test Status	Fire Service Testing Logs	Machine Room Maintenance Logs	Overall Level of Maintenance	Modernization Priority
1	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
2	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
3	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
4	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
5	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
6	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
7	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
8	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
9	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
10	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
11	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
12	1/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
13	2/2014	Just Expired	Not Required	Not Required	Not Required	Not Required	Current	Current	Average	High
14	2/2014	Just Expired	2/2012	Current	Not Required	Not Required	Current	Current	Average	High
15	2/2014	Just Expired	2/2012	Current	Not Required	Not Required	Current	Current	Average	High
17	2/2014	Just Expired	2/2012	Current	Not Required	Not Required	Current	Current	Average	High

Appendix B – Repair Items

The following chart details items that must be scheduled for repair prior to the end of the current maintenance contract. Contractor shall provide a schedule to Owner and Consultant within two weeks of receipt of this report.

Building 402 – Ronald M. George				
Current Items			These Columns For Use by Contractor and in Future ECA Visits	
Item #	Item Description	Units Affected	Item Complete	Comments
1	Hoist ropes have heavy rouge – change ropes	7, 10		

Appendix C – Maintenance Corrections

The following chart details minor maintenance items (cleaning, lubrication, adjustments, etc.) which should be addressed to the greatest extent possible prior to the building walkthroughs for the elevator maintenance bid process, projected to take place the first two weeks of April, 2015.

Building 402 – Ronald M. George				
Current Items			These Columns For Use by Contractor and in Future ECA Visits	
Item #	**Item Description**	**Units Affected**	**Item Complete**	**Comments**
1	Brakes are squeaking – service brakes	1-2		
2	Provide rope tag on machine room shackles	1-2		
3	Monitor high bar on commutator	1		
4	Clean machine room	1-3, 14, 15, 17		
5	Paint machine room floor	1-2		
6	Place state ID# on disconnects	1-2		
7	Clean carbon from generator end bell	1-2		
8	Clean tops of cars	1-2		
9	Adjust cabs – hitting fascia	1-2, 4-11		
10	Clean pits	1-2, 12, 13, 17		
11	Hoist ropes have some rouge - monitor	4-6		
12	Clean machine bed plates	4-7		
13	Sweep pits	4-11		
14	Remove ladder from pit	4-5		
15	Clean oil from hoist machines and monitor leaks	8-11		
16	Clean rope filings from floor	10-11		
17	Clean rouge from machine	10		
18	Remove used parts from bottom of controller	8		
19	Adjust grab on hall rollers	8-11		
20	Mark unit numbers on pit equipment	8-11		
21	Clean top sheave – dusty	12		
22	Seal machine leaks	12		
23	Clean overhead sheave area	12		
24	Clean oil from trough under shaft	12		
25	Machine oil has leaked onto machine room floor under secondary room - clean	12		

Appendix C – Maintenance Corrections - Continued

Building 402 – Ronald M. George				
Current Items			These Columns For Use by Contractor and in Future ECA Visits	
Item #	Item Description	Units Affected	Item Complete	Comments
26	Clean and lubricate hall door closer	12		
27	Clean top of car	12		
28	Fan not running in cab – turn on or repair	12		
29	Remove paper from controller	13		
30	Clean interior of controller	13		
31	Move plastic away from computer	13		
32	Properly dispose of old parts	13		
33	Clean hall door hardware	13		
34	Properly store old parts in machine room	14, 17		
35	Clean fuzz from door hardware	14-15		

Appendix D – Owner's Maintenance Items

The following items are not part of your elevator contract, and thus are typically corrected by building engineering or another non-elevator sub-contractor. ECA is happy to discuss any of these items at any time. Please feel free to call or e-mail Matt Ensley or Sean Colgan with any questions you may have.

Sean Colgan: 916-337-3572 – sean.colgan@elevatorconsultingassociates.com

Matt Ensley: 213-247-8992 – matt.ensley@elevatorconsultingassociates.com

Building 402 – Ronald M. George				
Current Items			These Columns For Use by University and in Future ECA Visits	
Item #	Item Description	Units Affected	Item Complete	Comments
1	The annual inspection certificates in the elevators have expired. If new certificates have been received, post in elevators as soon as possible.	All		
2	Properly label machine room door – "Elevator Equipment Room – Authorized Personnel Only"	All		
3	Properly label pit door	8-11		

Appendix E – Modernization Recommendation

It is commonly held in the industry that elevator equipment should be modernized every 20-25 years. While this is a valid generalization, the actual time for modernization can vary greatly from property to property, depending on the type of equipment installed, its age, the level of usage, etc. In this case, your equipment was installed/modernized in 1998 (17 years ago). However, the installed controls were manufactured by Northern, a division of ThyssenKrupp that no longer makes elevator controls. So all support for these controls is through ThyssenKrupp, and there are some maintainability issues for other contractors. Also, a major component of the elevator controls, the drive system, is by Baldor, a company that stopped making elevator drives about 10 years ago. Therefore, there are no new drives available, and very few refurbished drives for purchase. There are a few places that will repair drives, but the results of those repairs are very hit-and-miss (we give repairs about a 50/50 chance of working). Further, when a drive is pulled for repair, it can be 2-3 weeks before it is back and running (the drive has to be shipped to Washington or another location for repair). It is possible to upgrade the controls to a Magnetek drive or another drive that is still commercially available, but this is a complicated process that would take several weeks and roughly $20,000, as the upgrade would not be covered under a standard maintenance contract. In short, there is some risk related to these drives which will become more and more likely to result in cost/downtime as the equipment continues to age. The equipment is otherwise not too bad, so there is some life left, but our recommendation is to begin budgeting for modernization of these elevators to bring in more serviceable control systems. At this time, we are recommending modernization in the 2-4 year window.

The following table shows the scope of the modernization based on our current observations. Note that the scope may change slightly by the time the elevators are modernized based on the condition of the equipment at that time, changes in code or ADA, etc.

Elevator Modernization Plan		
Item	**Elevator(s)**	**Action**
Elevator Control	All	New Solid State
Motor Control (Drive)	Traction	New
Solid State Starter	Hydraulic	New
Dispatching	New	Standard
Battery Lowering Operation	Hydraulic	New
Traction Machine	Traction	Refurbish
Secondary/Deflector Sheaves	Traction	Refurbish
Hoist Motor	Geared Traction	New
Power Unit	Hydraulic	New
Governor	Traction	Refurbish
Hoist Ropes	Traction	Replace only if needed due to measured size
Car Safety	Traction	Retain
Load Weighing Operation	Traction	New
Car Button Station	All	New

Car Position Indicator	All	New
In-Car Communication (ADA Phone)	All	New
Car/Hall Lanterns	All	New
Hall Button Stations	All	New
Alarm Bells	All	New
Hoistway Limits	All	New
Wiring	All	New
Car Guides	All	Refurbish
Counterweight Guides	Traction	Refurbish
Counterweight	Traction	Retain
Guide Rails	All	Retain
Door Operation	All	New Closed Loop
Car and Hall Door Equipment	All	New/Refurbish as needed
Door Restrictor	All	New
Door Detector Edge	All	New
Pit Switch	All	New
Pit Springs/Buffers	All	Retain
Piston and Casing	Hydraulic	Retain
Earthquake Operation	Traction	New
Protection Against Ascending Car Overspeed and Unintended Car Movement (Rope Gripper)	Traction	New
Compliance with then-current elevator code	All	Included
Compliance with ADA	All	Included
Cab Interiors	All	Optional

The breakdown of modernization costs is as follows:

Elevators 1-2: $225,000 per elevator - $450,000 total
Elevator 3: $225,000
Elevators 4-7: $225,000 per elevator - $900,000 total
Elevators 8-11: $235,000 per elevator: $940,000 total
Elevator 12: $250,000
Elevator 13: $225,000
Elevators 14-15: $115,000 per elevator - $230,000 total
Elevator 17: $100,000

The total recommended budget for the elevator portion of this modernization without cab interiors is $3,320,000. If you choose to refurbish the cab interiors (floors, side and back walls and ceiling), we would recommend a budget of $425,000 ($25,000 per elevator). This budget assumes fairly standard finishes for the cab interiors. If you feel that you may want custom or “better than average” cabs, you may wish to add a contingency of 20% to this budget.

Please note that the given budget is in 2015 dollars. For each year after 2015 that the modernization is budgeted, we recommend adding 5-7% to our budget numbers. This is to account both for increases in union labor and also for continued recovery in the elevator modernization market, which has been on the upswing for the past few years.

Not included in the above is work by other trades. When an elevator modernization occurs, it often precipitates the requirement for work in other related areas, either due to code changes since installation, different requirements for the new control systems, desired changes in look of the systems, etc. The most common required work is electrical work (new or modified disconnects in the machine room, increase in lighting, etc.), fire and life safety work (addition of smoke detectors in elevator areas, addition or removal of sprinklers, etc.), general contracting (modifications for access to machine areas, cutting and patching for new fixtures, etc.) and potentially other areas. It is difficult for ECA to provide accurate budgets at this time, as our expertise is in the area of elevators and not necessarily in these other areas. However, we can estimate in this case that the required work by other trades will be roughly $250,000. We think this is a fairly conservative estimate and, combined with our other budgets should provide you a placeholder to allocate the proper funds (we don't want this work to be a surprise for you down the road).

Finally, as the State typically employs an elevator consultant for assistance with elevator modernization projects, we would recommend adding $75,000 to the budget for that purpose.

The total budget for the recommended modernization project is $3,645,000. This includes the elevator contractor's portion of the work, work by other trades, and elevator consulting. It does not include cab interior refurbishment, which would add $425,000 to the total project cost.

We would be happy to discuss this modernization recommendation or any other aspect of this report at any time. Please contact Sean Colgan at 916-337-3572, or by email at sean.colgan@elevatorconsultingassociates.com.

Prepared by

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111326.14R-037.305

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