Justice Building (075)

4949 Broadway, Sacramento, CA 95820

Facility Condition Assessment

June 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 Justice Building (075).

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 Justice Building (075) 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 Justice Building (075) on December 3 & 4, 2014. 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	$122,639,203
Immediate Repair Costs (12 months)	$17,816,144
1-5 Year Capital Needs	$5,745,258
6-10 Year Capital Needs	$1,718,740
Total 10-Year Capital Reserve Needs	$25,280,142

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

Current Year FCI

$$\text{Current FCI} = \frac{\$17,816,144}{\$122,639,203}$$

Ten-Year FCI

$$\text{Ten-Year FCI} = \frac{\$25,280,142}{\$122,639,203}$$

Current Year FCI	Ten-Year FCI
14.53 %= *Poor Condition*	**20.61 %= *Poor Condition***

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

- The roof is original and beginning to deteriorate. The roof drain lines are rusting and leaking.
- Windows show rust and corrosion. The sealant and paint are failing on the aluminum frame windows. Some windows are leaking.
- Carpet tile throughout the building is soiled, worn, and loose.
- Chilled water and air handling systems in the oldest part of the complex are original equipment, and have exceeded their expected useful life.
- Areas of the parking lot flood during heavy rains.

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

The Justice Building (075) was designed by Marquis Associates of San Francisco and constructed in two phases starting in 1980. The single-tenant facility was built for, and has been continuously occupied by, the Department of Justice (DOJ) since 1982.

The facility is located in the suburban Oak Park neighborhood at 4949 Broadway Avenue in the city of Sacramento. The Justice Building (075) complex is comprised of 13 separate structures that are interconnected by an interior cross-corridor system and interior courtyards. The complex includes general-purpose office space, cafeteria, specialty labs, and a data center. The Law Enforcement and Criminal Labs provide forensic services for a variety of criminal proceedings. The Hawkins Data Center houses the Law Enforcement Database for the State of California.

Infrastructure system reliability is essential due to the complex's mission critical computer and communication systems functions. The building must maintain a continuous and reliable electrical and HVAC system to sustain programmatic needs, with an emphasis on security. The DOJ security unit is staffed full time with police officers. All employees are required to pass a criminal background check to obtain a building ID badge. The building is not open to the public and visitors and vendors must be escorted at all times.

The gross area of the building is 335,427 GSF with a usable area of 300,603 SF. The ratio of usable area to gross building area is 89.6 percent. The occupant capacity is 1,672. The facility has 837 parking spaces in an on-site surface parking lot for visitors and employees.

BUILDING DESCRIPTION

The building foundation consists of a reinforced concrete slab-on-grade. The building structural system is a reinforced concrete superstructure with concrete topped metal floor decks. The roof structure is flat and covered with a single-ply membrane.

The exterior walls are finished with exposed raw concrete, painted concrete, and painted stucco.

The building interior has painted drywall walls. The floor finishes consist of ceramic tile, commercial carpet tiles, and vinyl composition tiles. The ceilings are finished with acoustic tiles.

The facility is served by four hydraulic passenger elevators.

Heating and cooling are provided by a central system with boilers, chillers, and cooling towers.

Life safety systems include fire sprinklers, hydrants, smoke detectors, alarms, extinguishers, and dry standpipes. Additional safety systems include an FM200 waterless fire suppression system in data rooms and other sensitive areas.

The landscaping consists of trees, shrubs, and lawn areas. Landscaped areas are irrigated by an in-ground overhead spray sprinkler system.

The employee and visitor parking areas are paved with asphalt. The service vehicle parking area is gravel. All of the parking stalls are located in open lots. The sidewalks throughout the property are constructed of cast-in-place concrete.

Project Statistics

Item	Description
Project Name	Justice Building
Building ID	075
Property Type	Administration
Year Built	1981
Number of Stories	2
Occupied	Yes
Land Area (acres)	23.85
Gross Square Feet (GSF)	335,427

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

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

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 Justice Building (075) on December 3 & 4, 2014. The survey included analysis and observation of the 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

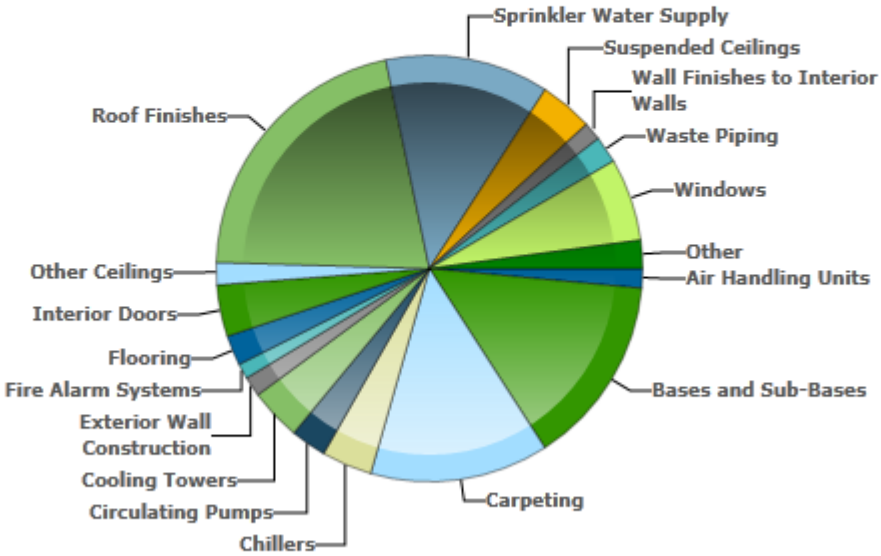
The four categories above are assigned a numerical value and the values are multiplied together for each cost observation. The resulting number is then assigned a priority by the capital planning software with

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:

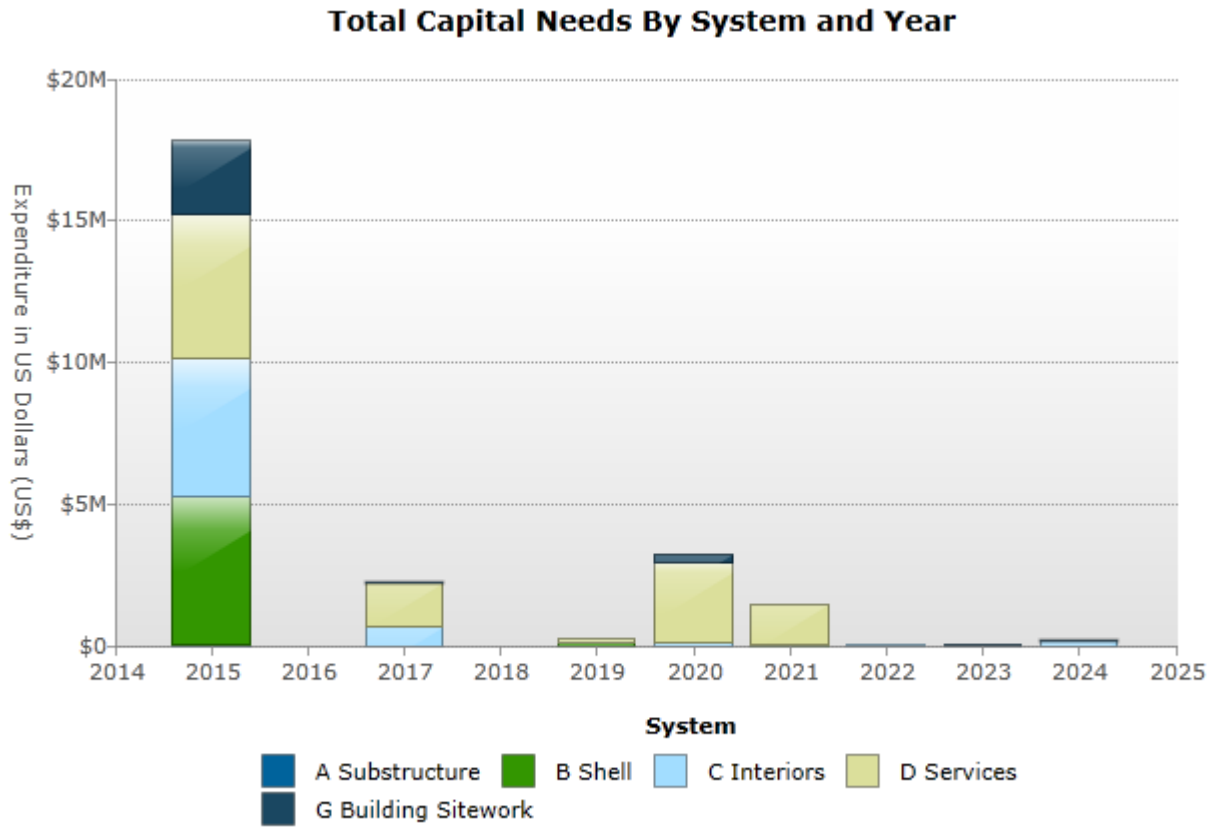
Condition	Definition
Good	In new or well-maintained condition, with no visual evidence of wear, soiling, or other deficiencies.
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable 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
A1032	Structural Slab on Grade	$12,400
B2011	Exterior Wall Construction	$270,477
B2014	Exterior Sun Control Devices	$91,066
B2021	Windows	$1,117,641
B3011	Roof Finishes	$3,785,642
B3014	Flashings & Trim	$2,604
C1021	Interior Doors	$696,880
C2011	Regular Stairs	$68,498
C3012	Wall Finishes to Interior Walls	$245,272
C3024	Flooring	$406,529
C3025	Carpeting	$2,415,140
C3032	Suspended Ceilings	$720,936
C3033	Other Ceilings	$301,320
D1011	Passenger Elevators	$105,924

Level	Building System	Estimated Cost
D2018	Drinking Fountains and Coolers	$42,055
D2023	Domestic Water Supply Equipment	$57,717
D2031	Waste Piping	$361,500
D3022	Circulating Pumps	$482,000
D3031	Chillers	$682,992
D3031	Cooling Towers	$698,372
D3041	Air Handling Units	$263,584
D4011	Sprinkler Water Supply	$2,214,381
D5037	Fire Alarm Systems	$205,688
G2021	Bases and Sub-Bases	$2,567,526
	Total	**$17,816,144**



	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	$12,400	$5,267,430	$4,854,575	$5,114,214	$0	$0	$2,567,526	**$17,816,144**
2017	$0	$0	$696,880	$1,543,337	$0	$0	$9,985	**$2,250,202**
2019	$0	$97,649	$0	$170,738	$0	$0	$0	**$268,387**
2020	$0	$0	$120,032	$2,782,006	$0	$0	$324,632	**$3,226,670**
2021	$0	$37,360	$0	$1,391,280	$0	$0	$0	**$1,428,640**
2022	$0	$0	$46,426	$0	$0	$0	$0	**$46,426**
2023	$0	$0	$0	$0	$0	$0	$65,472	**$65,472**
2024	$0	$0	$168,218	$0	$0	$0	$9,985	**$178,203**
Total	**$12,400**	**$5,402,439**	**$5,886,131**	**$11,001,574**	**$0**	**$0**	**$2,977,599**	**$25,280,142**

CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as $122,639,203 for the Justice Building Building (075). 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
335,427 GSF	$366	$122,639,203

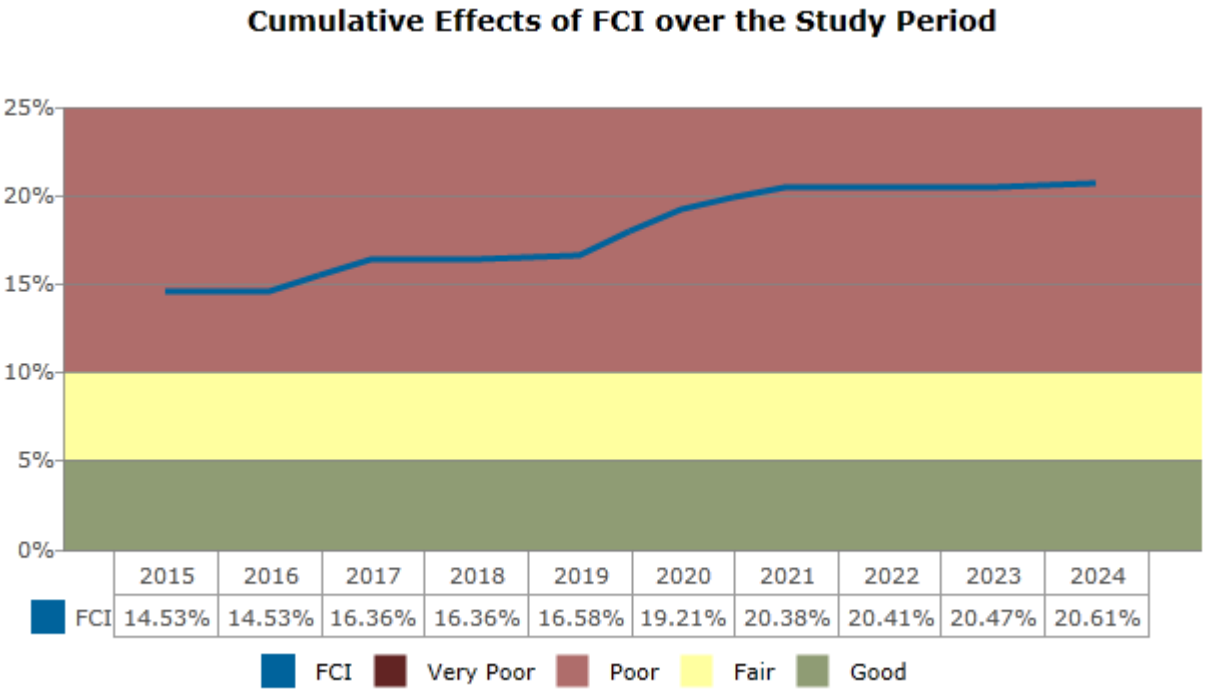
FACILITY CONDITION INDEX

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.

[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.

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%

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.



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APPENDICES

APPENDIX A: ACCESSIBILITY ISSUES

Item	Description
C1021 Interior Doors	Door width increase for ADA compliant door in stud wall
Condition	Fair
Qty / UOM	620 /
RUL (years)	0
Location	Throughout the building

Item	Description
C1021 Interior Doors	C1020 Door width increase for ADA compliant doors
Condition	Fair
Qty / UOM	620 / EA
RUL (years)	2
Location	Throughout the building

Item	Description
C3024 Flooring	C3024 Truncated Domes at Planters
Condition	Poor - Fair
Qty / UOM	27 / LF
RUL (years)	0
Location	Corridor ground level planters

Item	Description
D2018 Drinking Fountains and Coolers	D2018 Drinking Fountain
Condition	Poor
Qty / UOM	12 / EA

Item	Description
RUL (years)	0
Location	Throughout Facility

RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1021	Replace C1020 Door width increase for ADA compliant doors	620.0 - EA	1124.0	CC - Accessibility	Priority 2	2017	696,880
C1021	Replace Door width increase for ADA compliant door in stud wall	620.0 -	1124.0	CC - Accessibility	Priority 1	2015	696,880
C2011	C2011 Install cane barrier at rear of stairs	6.0 - EA	1860.0	CC - Accessibility	Priority 1	2015	11,160
C3024	Replace C3024 Truncated Domes at Planters	27.0 - LF	27.3	CC - Accessibility	Priority 1	2015	737
D2018	Replace D2018 Drinking Fountain	12.0 - EA	3504.6	CC - Accessibility	Priority 1	2015	42,055

COST SUMMARY:

Year	Total Expenditures
2015	$750,832
2017	$696,880

APPENDIX B: GENERAL ASSESSMENT INFORMATION

A Substructure Systems

A10 FOUNDATIONS

Item	Description
A1032 Structural Slab on Grade	A1032 Reinforced Concrete Slab on Grade
Condition	Fair - Good
Qty / UOM	169232 / SF
RUL (years)	30
Location	Buildings A, B, C, D, E, F, G, H, K, L & J

OBSERVATIONS/COMMENTS:

The ground floor slabs show some cracking. Repairs are recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
A1032	A1032 Patch cracked concrete slabs	1.0 - LS	12400.0	OP - Maintenance	Priority 2	2015	12,400

COST SUMMARY:

Type	Year	Total Expenditures
A10 Foundations	2015	$12,400

B Shell Systems

B20 EXTERIOR ENCLOSURE

Item	Description
B2011 Exterior Wall Construction	B2011 Stucco and Lath
Condition	Fair
Qty / UOM	77350 / SF
RUL (years)	35
Location	Buildings A, B, C, D, E, F, G, H, K, L & J

OBSERVATIONS/COMMENTS:

The exterior of the building appears to be telegraphing previous work and patch jobs, and the paint is faded. A complete paint job, with thorough prep work is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2011	B2011 Paint exterior of building	77,350.0 - SF	3.5	IN - Appearance	Priority 1	2015	270,477

Item	Description
B2014 Exterior Sun Control Devices	B2014 Awning, Cloth Overhang
Condition	Fair
Qty / UOM	2400 / SF
RUL (years)	0
Location	Exteriors

OBSERVATIONS/COMMENTS:

Most of the fabric canopies show significant deterioration. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2014	Replace B2014 Awning, Cloth Overhang	2,400.0 - SF	37.9	IN - Reliability	Priority 1	2015	91,066

Item	Description
B2021 Windows	B2021 2' X 3' Aluminum Window Fixed
Condition	Poor - Fair
Qty / UOM	600 / EA
RUL (years)	0
Location	Exterior

OBSERVATIONS/COMMENTS:

The window seals and gaskets are failing. There are some reports of leakage, and the factory applied paint is coming off. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2021	Replace B2021 2' X 3' Aluminum Window Fixed	600.0 - EA	1482.3	IN - Beyond Rated Life	Priority 1	2015	889,407

Item	Description
B2021 Windows	B2021 2' X 3' Steel Frame Window
Condition	Poor
Qty / UOM	150 / EA
RUL (years)	0
Location	Building J

OBSERVATIONS/COMMENTS:

The steel frame windows are corrosion-damaged and maintenance-plagued. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2021	Replace B2021 2' X 3' Steel Frame Window	150.0 - EA	1521.6	IN - Beyond Rated Life	Priority 1	2015	228,233

Item	Description
B2031 Glazed Doors & Entrances	B2030 Steel Double Door with Frame and Hardware
Condition	Fair
Qty / UOM	15 / EA
RUL (years)	4
Location	Buildings A, B, C, D, E, F, G, H, K, L & J

OBSERVATIONS/COMMENTS:

Based on the condition and RUL, replacement within the next five years is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2031	Replace B2030 Steel Double Door with Frame and Hardware	15.0 - EA	6509.9	IN - Beyond Rated Life	Priority 3	2019	97,649

Item	Description
B2031 Glazed Doors & Entrances	B2031 Aluminum Double Doors 4'-0" X 7'-0"
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	15
Location	Both main entries

OBSERVATIONS/COMMENTS:

No action required at this time.

Item	Description
B2039 Other Doors & Entrances	B2039 12' X 14' Steel Roll-Up Door
Condition	Fair
Qty / UOM	4 / EA
RUL (years)	6
Location	Buildings G, K & L

OBSERVATIONS/COMMENTS:

The coiling doors are approaching the end of their expected useful life, and replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B2039	Replace B2039 12' X 14' Steel Roll-Up Door	4.0 - EA	9339.9	IN - Beyond Rated Life	Priority 3	2021	37,360

COST SUMMARY:

Type	Year	Total Expenditures
B20 Exterior Enclosure	2015	$1,479,184
B20 Exterior Enclosure	2019	$97,649
B20 Exterior Enclosure	2021	$37,360

B30 ROOFING

Item	Description
B3011 Roof Finishes	B3012 Traffic Toppings & Paving Membranes
Condition	Fair
Qty / UOM	650 / SF
RUL (years)	0
Location	Patio deck outside of cafeteria

OBSERVATIONS/COMMENTS:

The Café patio deck coating is weathered and in need of re-sealing.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B3011	Re-seal Cafe patio	650.0 - SF	51.6	OP - Maintenance	Priority 1	2015	33,562

Item	Description
B3011 Roof Finishes	B3011 Tpo, Roof 45 Mills, Full Adhered
Condition	Poor - Fair
Qty / UOM	2010 / SQ
RUL (years)	0
Location	Buildings A, B, C, D, E, F, G, H, K, L & J

OBSERVATIONS/COMMENTS:

Standing water, rusting cast iron water drain pipes, and a disintegrating roof surface are causing leakage. Immediate replacement is recommended. Replacement of the metal coping is also recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B3011	Replace B3011 Tpo, Roof 45 Mills, Full Adhered	2,010.0 - SQ	1806.4	IN - Reliability	Priority 1	2015	3,630,779
B3011	B3011 Replace and paint all metal coping	4,800.0 - LF	25.3	IN - Reliability	Priority 1	2015	121,302

Item	Description
B3014 Flashings & Trim	B3014 Metal Barrel Vent Cover
Condition	Fair
Qty / UOM	300 / SF
RUL (years)	20
Location	Roof

OBSERVATIONS/COMMENTS:

The paint on this vent cover is peeling. The structural integrity could be compromised without prompt maintenance.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
B3014	B3014 Scrape and paint metal barrel vent cover	300.0 - SF	8.7	OP - Maintenance	Priority 2	2015	2,604

COST SUMMARY:

Type	Year	Total Expenditures
B30 Roofing	2015	$3,788,246

C Interiors Systems

C10 Interior Construction

Item	Description
C1021 Interior Doors	Door width increase for ADA compliant door in stud wall
Condition	Fair
Qty / UOM	620 /
RUL (years)	0
Location	Throughout the building

OBSERVATIONS/COMMENTS:

Interior doors do not meet ADAAG width requirements. Replacement with wider frame and door is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1021	Replace Door width increase for ADA compliant door in stud wall	620.0 -	1124.0	CC - Accessibility	Priority 1	2015	696,880

Item	Description
C1021 Interior Doors	C1020 Door width increase for ADA compliant doors
Condition	Fair
Qty / UOM	620 / EA
RUL (years)	2
Location	Throughout the building

OBSERVATIONS/COMMENTS:

The interior doors do not meet the ADA width requirements. Replacement with wider frame and door is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1021	Replace C1020 Door width increase for ADA compliant doors	620.0 - EA	1124.0	CC - Accessibility	Priority 2	2017	696,880

Item	Description
C1021 Interior Doors	C1021 Doors with round lite
Condition	Fair
Qty / UOM	70 / EA
RUL (years)	9
Location	Buildings A, B, C, D, E

OBSERVATIONS/COMMENTS:

Based on the estimated RUL, replacement during the assessment term is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1021	Replace C1021 Doors with round lite	70.0 - EA	2403.1	IN - Beyond Rated Life	Priority 4	2024	168,218

Item	Description
C1031 Fabricated Toilet Partitions	C1031 Fabricated Toilet Partitions
Condition	Fair
Qty / UOM	55 / EA
RUL (years)	5
Location	Buildings A, B, C, D E, F, G, H, K, L & J

OBSERVATIONS/COMMENTS:

Based on the estimated RUL and condition, toilet partition replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C1031	Replace C1031 Fabricated Toilet Partitions	55.0 - EA	2182.4	IN - Beyond Rated Life	Priority 4	2020	120,032

COST SUMMARY:

Type	Year	Total Expenditures
C10 Interior Construction	2015	$696,880
C10 Interior Construction	2017	$696,880
C10 Interior Construction	2020	$120,032
C10 Interior Construction	2024	$168,218

C20 STAIRS

Item	Description
C2011 Regular Stairs	C2011 Steel stairs
Condition	Fair
Qty / UOM	11 / EA
RUL (years)	15
Location	Ground Floor at stairs

OBSERVATIONS/COMMENTS:

There are 11 sets of interior steel stairs. Approximately half of the stairs do not have barriers to prevent the visually impaired from walking into the structure. In order to comply with ADA, installation of barriers is recommended. The raised rubber stair treads are badly worn. Replacement is recommended. Paint maintenance is required. See paint cost.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C2011	C2011 Prep and paint steel stairway parts	12,000.0 - SF	3.9	IN - Appearance	Priority 2	2015	46,426
C2011	C2011 Replace raised rubber surfacing on stair treads	11.0 - Each stairway	992.0	CC - Life Safety	Priority 1	2015	10,912
C2011	C2011 Install cane barrier at rear of stairs	6.0 - EA	1860.0	CC - Accessibility	Priority 1	2015	11,160
C2011	C2011 Prep and paint steel stairway parts	12,000.0 - SF	3.9	IN - Appearance	Priority 2	2022	46,426

COST SUMMARY:

Type	Year	Total Expenditures
C20 Stairs	2015	$68,498
C20 Stairs	2022	$46,426

C30 INTERIOR FINISHES

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Drywall - Painted Finished Walls
Condition	Good
Qty / UOM	115000 / SF
RUL (years)	0
Location	Buildings A, B, C, D E, F, G, H, K, L & J

OBSERVATIONS/COMMENTS:

Interior painting as noted.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3012	Replace C3012 Drywall - Painted Finished Walls	115,000.0 - SF	2.1	IN - Appearance	Priority 2	2015	245,272

Item	Description
C3024 Flooring	C3024 Truncated Domes at Planters
Condition	Poor - Fair
Qty / UOM	27 / LF
RUL (years)	0
Location	Corridor ground level planters

OBSERVATIONS/COMMENTS:

There are planters in the corridor areas at ground level. Currently they have no raised curbs and caution tape at the edges. Truncated domes as a cane warning should be installed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3024	Replace C3024 Truncated Domes at Planters	27.0 - LF	27.3	CC - Accessibility	Priority 1	2015	737

Item	Description
C3024 Flooring	C3024 Vinyl Tile
Condition	Fair
Qty / UOM	3000 / SY
RUL (years)	0
Location	Buildings A, B, C, D, E, F, G, H, K, L & J

OBSERVATIONS/COMMENTS:

The vinyl tile is original. Based on its expected useful life, replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3024	Replace C3024 Vinyl Tile	3,000.0 - SY	125.8	IN - Appearance	Priority 2	2015	377,341

Item	Description
C3024 Flooring	C3024 Sheet Vinyl
Condition	Poor
Qty / UOM	166 / SY
RUL (years)	0
Location	Cafe

OBSERVATIONS/COMMENTS:

The sheet vinyl flooring in the Café is worn. Immediate replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3024	Replace C3024 Sheet Vinyl	166.0 - SY	171.4	IN - Appearance	Priority 2	2015	28,451

Item	Description
C3025 Carpeting	C3025 Carpet Tiles - Standard
Condition	Poor - Fair
Qty / UOM	25000 / SY
RUL (years)	0
Location	All carpeted areas

OBSERVATIONS/COMMENTS:

The carpet tiles are generally worn and soiled.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3025	Replace C3025 Carpet Tiles - Standard	25,000.0 - SY	96.6	IN - Appearance	Priority 2	2015	2,415,140

Item	Description
C3032 Suspended Ceilings	C3032 Suspended Ceiling Tiles
Condition	Fair
Qty / UOM	600 / CSF
RUL (years)	0
Location	Buildings A, B, C, D E, F, G, H, K, L & J

OBSERVATIONS/COMMENTS:

Suspended acoustical ceiling tiles appear to be original, with some spot replacements noted. Ceiling tiles that were stained or changing color with age were observed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3032	Replace C3032 Suspended Ceiling Tiles	600.0 - CSF	1201.6	IN - Appearance	Priority 2	2015	720,936

Item	Description
C3033 Other Ceilings	C3033 Glued Acoustic tile
Condition	Fair
Qty / UOM	300 / CSF
RUL (years)	0
Location	Buildings A, B, C, D, E, F, G, H, J, K, & L

OBSERVATIONS/COMMENTS:

The glued ceiling tiles have exceeded their expected useful life, show stains and some physical damage. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
C3033	Replace C3033 Glued Acoustic tile	300.0 - CSF	1004.4	IN - Appearance	Priority 2	2015	301,320

COST SUMMARY:

Type	Year	Total Expenditures
C30 Interior Finishes	2015	$4,089,197

D Services Systems

D10 CONVEYING SYSTEMS

Item	Description
D1011 Passenger Elevators	D1011 Hydraulic Elevators, 3500 LB
Condition	Poor - Fair
Qty / UOM	4 / EA
RUL (years)	5
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Immediate repairs include mending of hydraulic leaks on power unit piping, and adjusting acceleration and deceleration for smooth operation.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D1011	D1011 Code and safety items to all elevators	1.0 - LS	98644.0	CC - Building Code	Priority 1	2015	98,644
D1011	D1011 Mending of hydrailic leaks and adjusting operations.	1.0 - LS	7280.0	OP - Maintenance	Priority 2	2015	7,280

COST SUMMARY:

Type	Year	Total Expenditures
D10 Conveying Systems	2015	$105,924

D20 PLUMBING

Item	Description
D2011 Water Closets	D2011 Commercial Grade Water Closet, 1.6 GPF Unit
Condition	Fair
Qty / UOM	58 / EA
RUL (years)	4
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

Water closets appear to be in functioning condition. Most have automatic flush valves, some have manual valves. Life cycle replacements are expected during the assessment period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2011	Replace D2011 Commercial Grade Water Closet, 1.6 GPF Unit	58.0 - EA	1233.1	IN - Beyond Rated Life	Priority 3	2019	71,523

Item	Description
D2012 Urinals	D2012 Urinal
Condition	Fair
Qty / UOM	21 / EA
RUL (years)	15
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

Urinals are primarily automatic flush, with a few exceptions throughout the building. Installation of automatic flush valves is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2012	D2012 Install automatic flush valves on urinals that have manual valves	10.0 - EA	944.0	OP - Energy	Priority 2	2017	9,440

Item	Description
D2013 Lavatories	D2013 Counter Top Sink and Faucet
Condition	Fair
Qty / UOM	63 / EA
RUL (years)	15
Location	Restrooms

OBSERVATIONS/COMMENTS:

Install automatic faucets with motion sensors where needed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2013	D2013 Install automatic faucets with motion sensors	30.0 - EA	944.0	OP - Energy	Priority 2	2017	28,320

Item	Description
D2018 Drinking Fountains and Coolers	D2018 Drinking Fountain
Condition	Poor
Qty / UOM	12 / EA
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Drinking fountains are ADA non-compliant throughout the building. These should be replaced with ADA compliant models in appropriate configurations.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2018	Replace D2018 Drinking Fountain	12.0 - EA	3504.6	CC - Accessibility	Priority 1	2015	42,055

Item	Description
D2022 Hot Water Service	D2022 Domestic Hot Water Heater - Electric
Condition	Fair
Qty / UOM	32 / EA
RUL (years)	5
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Approximately 32 domestic water heaters are dispersed throughout the building, at or near employee break rooms, janitors' closets and storage areas. Units range in size from 6 gallons to 120 gallons, with most averaging 20 gallons. Based on expected life, lifecycle replacements are anticipated in the next 5 years.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2022	Replace D2022 Domestic Hot Water Heater - Electric	32.0 - EA	1805.4	IN - Beyond Rated Life	Priority 3	2020	57,773

Item	Description
D2023 Domestic Water Supply Equipment	D2023 Hot Water Circulating Pump, 10 HP
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	4
Location	Boiler Room

OBSERVATIONS/COMMENTS:

The domestic hot water pumps are approaching the end of their expected useful life, and should be replaced.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2023	Replace D2023 Hot Water Circulating Pump, 10 HP	2.0 - EA	15906.8	IN - Beyond Rated Life	Priority 3	2019	31,814

Item	Description
D2023 Domestic Water Supply Equipment	D2023 Solar Water Storage Tanks 500 Gallon
Condition	Poor
Qty / UOM	1 / EA
RUL (years)	0
Location	Penthouse

OBSERVATIONS/COMMENTS:

Solar hot water system has been non-functioning and abandoned for some time. Removal is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2023	Replace D2023 Solar Water Storage Tanks 500 Gallon	1.0 - EA	10517.1	FN - Obsolescence	Priority 1	2015	10,517
D2023	D2023 Demolish and remove solar storage tanks, piping and collectors.	1.0 - LS	47200.0	FN - Obsolescence	Priority 1	2015	47,200

Item	Description
D2023 Domestic Water Supply Equipment	D2023 Domestic Water Booster Pump Station
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	4
Location	Boiler Room

OBSERVATIONS/COMMENTS:

Hydronic circulation systems appear to be functionally adequate. Based on expected life, replacement is anticipated in the next few years.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2023	Replace D2023 Domestic Water Booster Pump Station	2.0 - EA	33700.8	IN - Beyond Rated Life	Priority 3	2019	67,402

Item	Description
D2031 Waste Piping	D2031 Cast Iron Pipe 6"
Condition	Poor
Qty / UOM	10000 / LF
RUL (years)	19
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Cast iron sanitary waste piping is original to the building and has caused numerous drainage problems in recent years. Damaged piping should be replaced.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D2031	D2031 Repair roof drainage and underslab piping.	1.0 - LS	361500.0	OP - Maintenance	Priority 2	2015	361,500

COST SUMMARY:

Type	Year	Total Expenditures
D20 Plumbing	2015	$461,272
D20 Plumbing	2017	$37,760
D20 Plumbing	2019	$170,738
D20 Plumbing	2020	$57,773

D30 HVAC

Energy Supply	
Item	**Description**
Fuel Oil Type	N/A
Fuel Gas Type	Natural Gas
Solid Fuel Type	N/A
District Heat Type	N/A
District Cooling Type	N/A
Solar Thermal	N/A
Fuel Tank Type	N/A
Fuel Tank Size (gallons)	N/A
Fuel Tank Location	N/A
Gas Meter Location	N/A
Electrical Meter Location	Electric room
Water Meter Location	Vault in Street

Item	Description
D3021 Boilers	D3020 Water Boiler, Gas 2400 MBH
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	2
Location	Boiler Room

OBSERVATIONS/COMMENTS:

Boilers are original equipment and appear to have been well-maintained. Based on their estimated RUL, the boilers are recommended for replacement during the next few years.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3021	Replace D3020 Water Boiler, Gas 2400 MBH	2.0 - EA	139258.9	OP - Maintenance	Priority 2	2017	278,518

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Chilled Water Circulation Pumps 20 HP
Condition	Poor
Qty / UOM	5 / EA
RUL (years)	0
Location	Chiller Room

OBSERVATIONS/COMMENTS:

The chilled water circulation pumps appear to be at the end of their expected useful life, and should be replaced.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3022	Replace D3022 HVAC Chilled Water Circulation Pumps 20 HP	5.0 - EA	96400.0	IN - Beyond Rated Life	Priority 1	2015	482,000

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Heating Water Circulation Pumps
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	5
Location	Boiler Room

OBSERVATIONS/COMMENTS:

Hydronic circulation systems appear to be functionally adequate. Based on expected useful life, the pumps require replacement.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3022	Replace D3022 HVAC Heating Water Circulation Pumps	2.0 - EA	19837.2	IN - Beyond Rated Life	Priority 3	2020	39,674

Item	Description
D3023 Auxiliary Equipment	D3023 Condensate Return System
Condition	Fair
Qty / UOM	6 / EA
RUL (years)	5
Location	Chiller Room

OBSERVATIONS/COMMENTS:

Hydronic circulation systems appear to be functionally adequate. Replacement is anticipated withinm the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3023	Replace D3023 Condensate Return System	6.0 - EA	17336.2	IN - Beyond Rated Life	Priority 3	2020	104,017

Item	Description
D3031.1 Chillers	D3031 320-ton Chiller
Condition	Poor
Qty / UOM	1 / EA
RUL (years)	0
Location	Chiller Room

OBSERVATIONS/COMMENTS:

The 320-ton chiller is original to Building J and has exceeded its expected useful life. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3031	Replace D3031 320-ton Chiller	1.0 - EA	682992.0	FN - Modernization	Priority 1	2015	682,992

Item	Description
D3031.1 Chillers	D3031 Chiller, Water Cooled, 400 Ton
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	6
Location	Chiller Room

OBSERVATIONS/COMMENTS:

The chillers consist of two 400-ton units; Chiller "B" is a Trane unit; Chiller "C" is a York. They are original to the building. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3031	Replace D3031 Chiller, Water Cooled, 400 Ton	2.0 - EA	695640.0	IN - Beyond Rated Life	Priority 3	2021	1,391,280

Item	Description
D3031.2 Cooling Towers	D3031 Cooling Tower, Galvanized Steel, 400 Ton
Condition	Poor
Qty / UOM	4 / EA
RUL (years)	0
Location	Rooftop

OBSERVATIONS/COMMENTS:

Cooling towers are at the end of their useful life Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3031	Replace D3031 Cooling Tower, Galvanized Steel, 400 Ton	4.0 - EA	174593.0	IN - Beyond Rated Life	Priority 1	2015	698,372

Item	Description
D3032 Direct Expansion Systems	D3032 Air Cooled Refrigeration Condenser
Condition	Fair
Qty / UOM	4 / EA
RUL (years)	5
Location	Rooftop

OBSERVATIONS/COMMENTS:

The data room air handlers are connected to rooftop Leibert units. Condenser replacment is recommended .

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3032	Replace D3032 Air Cooled Refrigeration Condenser	4.0 - EA	44857.4	IN - Beyond Rated Life	Priority 3	2020	179,430

Item	Description
D3041.1 Air Handling Units	D3041 Rooftop AHU 20,000-34,000 CFM
Condition	Fair
Qty / UOM	8 / EA
RUL (years)	15
Location	Penthouse

OBSERVATIONS/COMMENTS:

Air handling units are functionally adequate, with continued routine maintenance.

Item	Description
D3041.1 Air Handling Units	D3041 Return Air Handlers 30,000 CFM
Condition	Fair
Qty / UOM	10 / EA
RUL (years)	10
Location	Throughout the building

OBSERVATIONS/COMMENTS:

Air handling units are functionally adequate with continued routine maintenance.

Item	Description
D3041.1 Air Handling Units	D3041 Rooftop AHU 2,400-13,000 CFM
Condition	Fair
Qty / UOM	8 / EA
RUL (years)	15
Location	Rooftop

OBSERVATIONS/COMMENTS:

Air handling units are functionally adequate with continued routine maintenance.

Item	Description
D3041.1 Air Handling Units	D3041 Central AHU 62,500 CFM
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	0
Location	Rooftop

OBSERVATIONS/COMMENTS:

The oldest (and largest) of the air supply systems on Building J is at the end of its useful life. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3041	Replace D3041 Central AHU 62,500 CFM	1.0 - EA	263584.3	IN - Beyond Rated Life	Priority 1	2015	263,584

Item	Description
D3041.2 Terminal Units VAV	D3041 VAV Boxes
Condition	Fair
Qty / UOM	38 / EA
RUL (years)	15
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The VAV boxes will require routine maintenance during the reserve period.

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 8500 CFM
Condition	Fair
Qty / UOM	8 / EA
RUL (years)	5
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

There are eight nighttime exhaust fans at the ends of the wings of each building. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3042	Replace D3042 Exhaust Fan 8500 CFM	8.0 - EA	7679.9	IN - Beyond Rated Life	Priority 3	2020	61,439

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 2000 CFM
Condition	Fair
Qty / UOM	55 / EA
RUL (years)	5
Location	Rooftop

OBSERVATIONS/COMMENTS:

Exhaust units are functionally adequate. Based on their expected useful life, replacement will be required during the ten-year study period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3042	Replace D3042 Exhaust Fan 2000 CFM	55.0 - EA	3450.4	IN - Beyond Rated Life	Priority 3	2020	189,771

Item	Description
D3052 Package Units	D3052 Computer/Sever Room AC, 5 Tons
Condition	Fair
Qty / UOM	7 / EA
RUL (years)	10
Location	Data Room

OBSERVATIONS/COMMENTS:

The package units will require routine maintenance during the reserve period.

Item	Description
D3063 Heating/Cooling Air Handling Units	D3063 Variable Frequency Drive, 20 HP Motor
Condition	Fair
Qty / UOM	28 / EA
RUL (years)	5
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Variable frequency drives, used in air supply and return as well as hydronic circulation, are dispersed throughout the building and penthouses. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3063	Replace D3063 Variable Frequency Drive, 20 HP Motor	28.0 - EA	19730.9	IN - Beyond Rated Life	Priority 3	2020	552,465

Item	Description
D3068 Building Automation Systems	D3068 DDC Actuators
Condition	Fair
Qty / UOM	335427 / SF
RUL (years)	2
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Building pneumatic controls are failing. Replacement with DDC is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D3068	Replace D3068 DDC Actuators	335,427.0 - SF	2.4	FN - Modernization	Priority 2	2017	805,830

COST SUMMARY:

Type	Year	Total Expenditures
D30 HVAC	2015	$2,126,948
D30 HVAC	2017	$1,084,348
D30 HVAC	2020	$1,126,795
D30 HVAC	2021	$1,391,280

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	No
Central fire alarm panel	Yes
Annunciator panel	No
Smoke Detectors Power Supply	Hardwired Electric
Carbon Monoxide Detectors	No
Heat Detector	No
Central Fire Alarm Panel Location	Security Desk
Annunciator Panel Location	N/A
Fire Extinguishers	Yes
Fire Extinguisher Inspection Date	N/A
Distance to Nearest Fire Hydrant (ft)	150
Illuminated Exit Signs	Yes
Kitchen Suppression Systems	No
Halon Gas Systems	Yes
Smoke Evacuation Systems	No
Fire-rated Stairwells	Yes
Fire-rated Stairwell Finish	N/A
Stairwell Discharge	Exterior of the building at Grade
Stairwell Pressurized	No
Fire-Rated Doors Observed	No
Location of Fire-Rated Doors	N/A
Fire Alarm Service Company	N/A
Date of Last Fire Alarm Service	N/A
Are the individual office unit fire alarm systems monitored?	No
Are the common area fire alarm systems monitored?	No
Types of Common Areas Monitored	N/A
Fire Alarm Monitoring Company	N/A

Item	Description
D4011 Sprinkler Water Supply	D4010 Fire Sprinkler Installation
Condition	Fair
Qty / UOM	255113 / SF
RUL (years)	0
Location	Areas with no existing fire sprinklers

OBSERVATIONS/COMMENTS:

Fire sprinklers should be installed in the areas of the building that do not currently have a fire protection system. Approximately 85 percent of the building is not sprinkled.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D4011	Install D4011 Fire Sprinkler System	255,113.0 - SF	8.7	CC - Life Safety	Priority 1	2015	2,214,381

Item	Description
D4011 Sprinkler Water Supply	D4011 Sprinkler Heads
Condition	Fair
Qty / UOM	50314 / SF
RUL (years)	10
Location	Building areas F and J

OBSERVATIONS/COMMENTS:

Fire sprinkler should be installed in the areas of the building that do not currently have a fire protection system. Approximately 85 percent of the building is not sprinklered.

Item	Description
D4091 Carbon Dioxide Systems	D4091 Local Chemical System - FM200 with Tank
Condition	Good
Qty / UOM	30000 / SF
RUL (years)	10
Location	Data Room

OBSERVATIONS/COMMENTS:

There are approximately 12 FM200 tanks throughout first floor data rooms and other sensitive areas.

COST SUMMARY:

Type	Year	Total Expenditures
D40 Fire Protection Systems	2015	$2,214,381

D50 ELECTRICAL SYSTEMS

Item	Description
D5011 High Tension Service & Dist.	D5011 Main Liquid Transformer 500kVA
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	10
Location	Transformer Room

OBSERVATIONS/COMMENTS:

Transformers appear to be functionally adequate.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Low Tension Service & Dist.
Condition	Fair
Qty / UOM	335427 / SF
RUL (years)	2
Location	Throughout building

OBSERVATIONS/COMMENTS:

Repairs and upgrades to the electrical system are recommended, as related to emergency systems. Provisions should be made for increased generator capacity, emergency lighting, and alarms.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D5012	Replace D5012 Low Tension Service & Dist.	335,427.0 - SF	1.3	IN - Beyond Rated Life	Priority 2	2017	421,229

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel 225 Amps, 30 Circuits
Condition	Fair
Qty / UOM	94 / EA
RUL (years)	10
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

Electrical panels appear to be functionally adequate.

Item	Description
D5012 Low Tension Service & Dist.	D5010 Switchgear, Mainframe, 4000 Amps
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	10
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

Switchgear is periodically tested and appears to be functionally adequate.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 45 kVA
Condition	Fair
Qty / UOM	36 / EA
RUL (years)	15
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

Transformers appear to be functionally adequate.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 75 kVA
Condition	Fair
Qty / UOM	10 / EA
RUL (years)	10
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

Transformers appear to be functionally adequate.

Item	Description
D5022 Lighting Equipment	D5022 Lighting Equipment
Condition	Fair
Qty / UOM	1022 /
RUL (years)	5
Location	Throughout building

OBSERVATIONS/COMMENTS:

Ceiling fixtures are to be replaced in conjunction with ceiling tile replacement.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D5022	Replace D5022 Lighting Equipment	1,022.0 -	401.2	FN - Modernization	Priority 3	2020	410,026

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm Panel
Condition	Poor
Qty / UOM	9 / EA
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Fire alarm panels appear to have exceeded their recommended serviceable life and are in need of replacement.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D5037	Replace D5037 Fire Alarm Panel	9.0 - EA	22854.2	CC - Life Safety	Priority 1	2015	205,688

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm System
Condition	Fair
Qty / UOM	335427 / SF
RUL (years)	5
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Based on the estimated RUL, the fire alarm system should be replaced.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
D5037	Replace D5037 Fire Alarm System	335,427.0 - SF	3.5	CC - Life Safety	Priority 3	2020	1,187,412

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Generator 1300 kW
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Generator Room

OBSERVATIONS/COMMENTS:

The emergency generator is periodically tested and appears to be functionally adequate.

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Transfer Switch
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	10
Location	Generator Room

OBSERVATIONS/COMMENTS:

Transfer switch appears to be functionally adequate.

COST SUMMARY:

Type	Year	Total Expenditures
D50 Electrical Systems	2015	$205,688
D50 Electrical Systems	2017	$421,229
D50 Electrical Systems	2020	$1,597,438

G Building Sitework Systems

G20 Site Improvements

Site Information	
Item	**Description**
Main Ingress and Egress	Broadway
Access from	S
Additional Entrances	50th Street
Access from	E
Parking Count: Open lot	837
Parking Count: Sheltered by carports	N/A
Parking Count: Private garages	N/A
Parking Count: Subterranean garage	N/A
Parking Count: Freestanding parking structure	N/A
Number of ADA Compliant Spaces	20
Number of ADA Compliant Spaces for Vans	1
Method of obtaining parking count	Site plan
Property Identification Sign-Primary	N/A
Property Identification Sign- Secondary	Structure mounted
Illuminated Identification Signage	No
Building Identification Sign	No
Illuminated Sign	No
Location of Property ID Sign	Front elevation of building
Trees Present	Yes
Shrubs Present	Yes
Grasses Present	Yes
Flower beds Present	Yes
Decorative Rocks Present	No
Lava Rocks Present	No
Ponds Present	No
Fountains Present	No
Topography	Gently sloping

Item	Description
G2021 Bases and Sub-Bases	G2021 Asphalt pavement
Condition	Fair
Qty / UOM	42778 / SY
RUL (years)	0
Location	Entire parking lot

OBSERVATIONS/COMMENTS:

In order to stop the flooding of the parking lot, the northern area needs to be regraded. In addition, the complete asphalt pavement system will require milling and overlay. See repair and seal coating costs for interim repairs and maintenance.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
G2021	Mill & overlay	42,778.0 - SY	41.4	IN - Beyond Rated Life	Priority 1	2015	1,771,694
G2021	G2021 Regrade asphalt at areas that are prone to flooding.	50,000.0 - SF	9.4	IN - Reliability	Priority 2	2015	471,200
G2021	G2021 Seal and stripe asphalt	385,000.0 - SF	0.8	OP - Maintenance	Priority 3	2015	324,632
G2021	G2021 Seal and stripe asphalt	385,000.0 - SF	0.8	OP - Maintenance	Priority 3	2020	324,632

Item	Description
G2041 Fences & Gates	G2041Metal Tube Steel Fence
Condition	Fair - Good
Qty / UOM	2580 / LF
RUL (years)	15
Location	Perimeter of property

OBSERVATIONS/COMMENTS:

Regular painting is recommended. Due to normal wear and usage, replacement of the motorized gate openers is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost ($)	Plan Type	Priority	Year	Expenditures ($)
G2041	G2041 Paint fence	2,580.0 - LF	3.9	IN - Appearance	Priority 3	2017	9,985
G2041	G2041 Replace motorized gate openers	3.0 - EA	21824.0	IN - Beyond Rated Life	Priority 4	2023	65,472
G2041	G2041 Paint fence	2,580.0 - LF	3.9	IN - Appearance	Priority 3	2024	9,985

COST SUMMARY:

Type	Year	Total Expenditures
G20 Site Improvements	2015	$2,567,526
G20 Site Improvements	2017	$9,985
G20 Site Improvements	2020	$324,632
G20 Site Improvements	2023	$65,472
G20 Site Improvements	2024	$9,985

The weather at the time of the assessment was:

Item	Description
Approximate Outdoor Temperature (degrees F)	60
Weather Conditions	Cloudy
Snow Covering Ground	No
Wind Conditions	Moderate Winds

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	Construction documents and a sales brochure

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: Kay van der Have, Field Observer

Reviewed By: 

Matt Anderson, Program Manager

APPENDIX D: PHOTOS

:- Partial front elevation

:- Rear entry

:- North side of building G

:- View from parkin glot

B2011 Stucco and Lath :- Exterior walls

B2014 Awning, Cloth Overhang

B2021 2' X 3' Aluminum Window Fixed :- Peeling paint and gasket failure

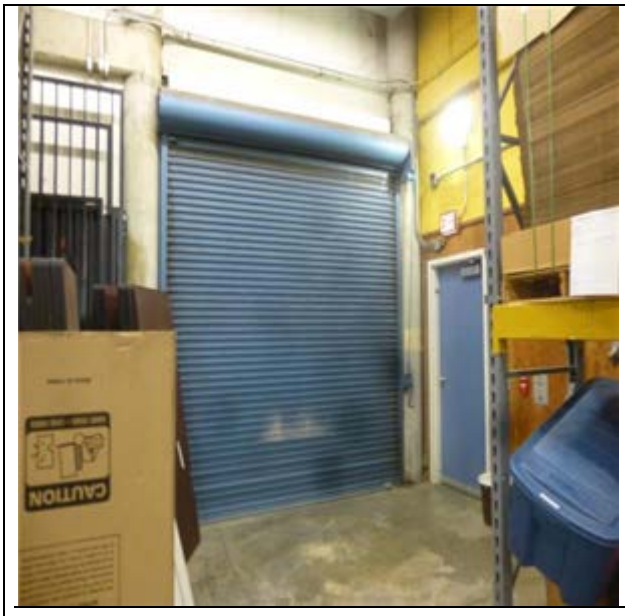
B2021 2' X 3' Aluminum Window Fixed:- Acrylic sheets were installed over the dining room clerestory windows

B2021 2’ X 3’ Steel Frame Window

B2021 2’ X 3’ Steel Frame Window:- Evident corrosion

B2030 Steel Double Door with Frame and Hardware :- Steel doors

B2031 Aluminum Double Doors 4’-0” X 7’-0”



B2039 12’ X 14’ Steel Roll-Up Door

B3011 Tpo, Roof 45 Mills, Full Adhered

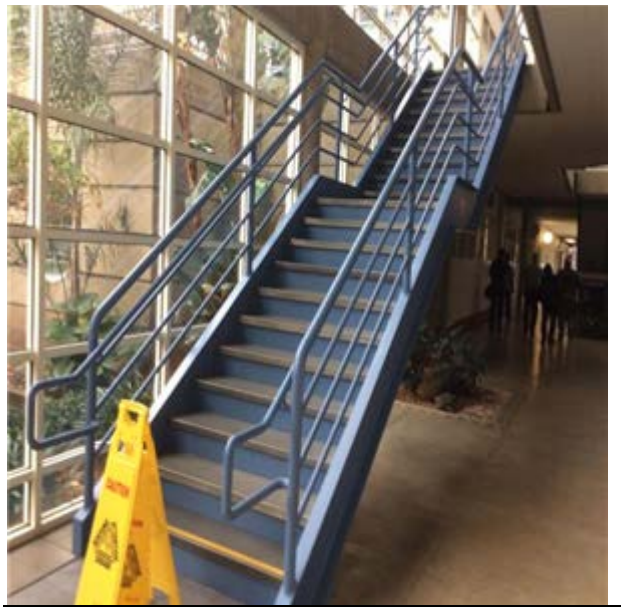
B3011 Tpo, Roof 45 Mills, Full Adhered

B3014 Metal Barrel Vent Cover

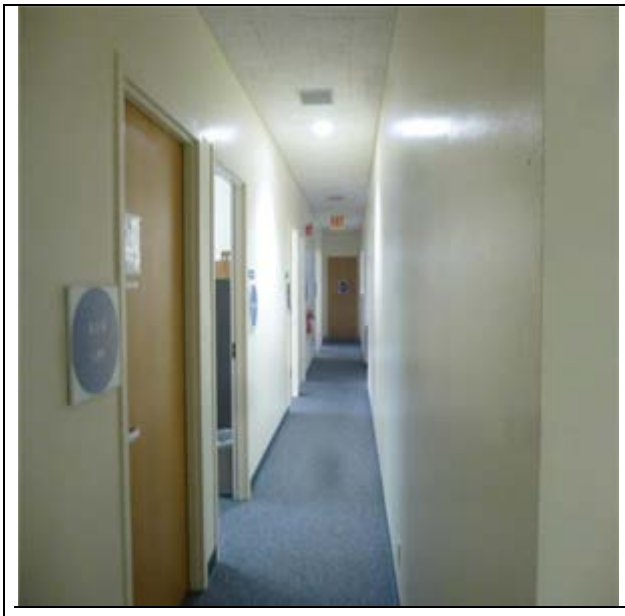
C1021 Doors with round lite

C1031 Fabricated Toilet Partitions

C2011 Steel stairs :- Worn raised rubber treads



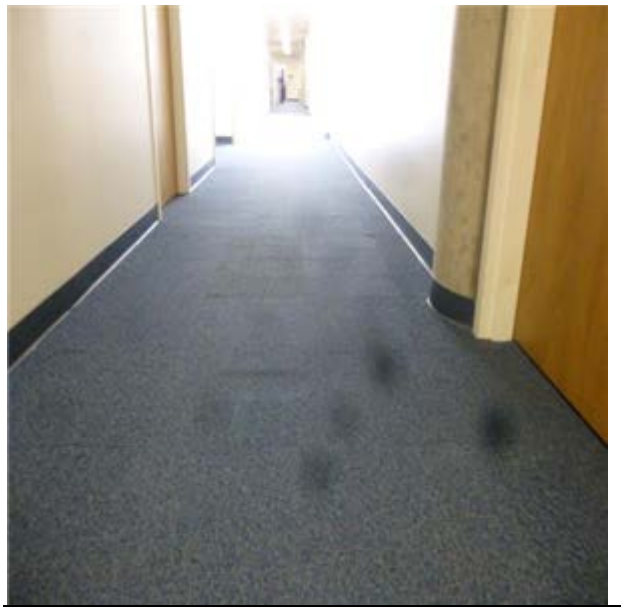
C2011 Steel stairs



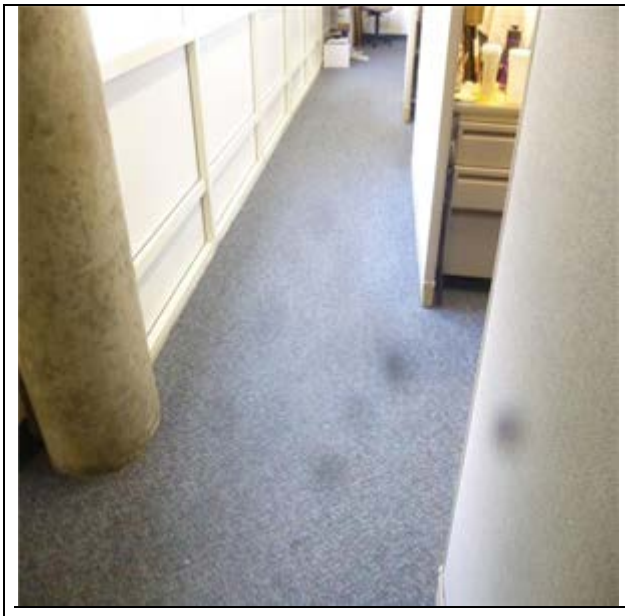
C3012 Drywall - Painted Finished Walls :- Interiors

C3024 Sheet Vinyl

C3024 Vinyl Tile



C3025 Carpet Tiles - Standard



C3025 Carpet Tiles - Standard

C3032 Suspended Ceiling Tiles:- Ceiling tile

C3033 Glued Acoustic tile :- Broken tile

D1011 Hydraulic Elevators, 3500 LB

D2011 Commercial Grade Water Closet, 1.6 GPF Unit :- Men's room Building E.

D2012 Urinal:- Building E Urinals

D2013 Counter Top Sink and Faucet :- Building E Lavatories

D2018 Drinking Fountain:- Building D Drinking Fountain

D2018 Drinking Fountain :- Building B Drinking Fountain.

D2022 Domestic Hot Water Heater – Electric

D2023 Domestic Water Booster Pump Station

D2023 Solar Water Storage Tanks 500 Gallon:- Solar hot water storage tank

D2023 Solar Water Storage Tanks 500 Gallon

D2023 Hot Water Circulating Pump, 10 HP

D3020 Water Boiler, Gas 2400 MBH

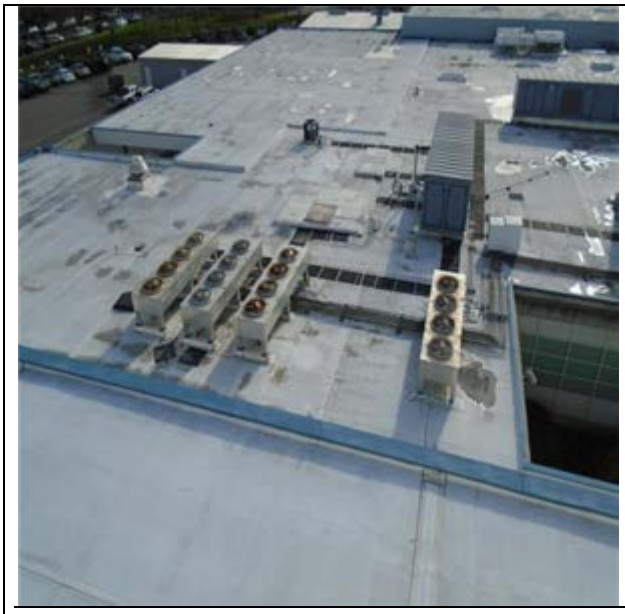
D3022 HVAC Chilled Water Circulation Pumps 20 HP

D3022 HVAC Heating Water Circulation Pumps

D3023 Condensate Return System

D3031 Chiller, Water Cooled, 400 Ton

D3031 Cooling Tower, Galvanized Steel, 400 Ton



D3032 Air Cooled Refrigeration Condenser

D3041 Rooftop AHU 2,400-13,000 CFM

D3041 Rooftop AHU 20,000-34,000 CFM

D3042 Exhaust Fan 8500 CFM:- Building G Night Vent Flush exhaust fan

D3042 Exhaust Fan 2000 CFM

D3052 Computer/Sever Room AC, 5 Tons

D3063 Variable Frequency Drive, 20 HP Motor

D3068 DDC Actuators

D4011 Sprinkler Heads

D4091 Local Chemical System - FM200 with Tank

D5011 Main Liquid Transformer 500kVA

D5012 Secondary Dry Transformer 75 kVA

D5012 Breaker Panel 225 Amps, 30 Circuits

D5010 Switchgear, Mainframe, 4000 Amps

D5012 Secondary Dry Transformer 45 kVA

D5037 Fire Alarm Panel

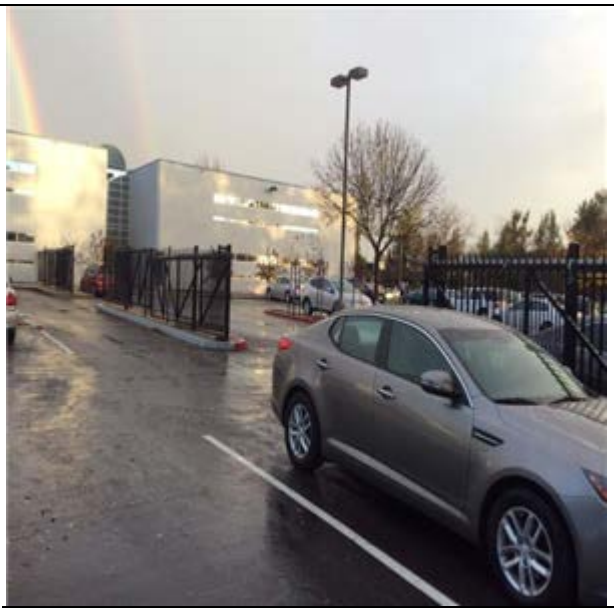
D5037 Fire Alarm System

D5092 Emergency Transfer Switch

D5092 Emergency Generator 1300 kW

G2021 Asphalt pavement:- Flooded area after a minor rain storm

G2021 Asphalt pavement :- Wearing of the markings and pavement cracking



G2041Metal Tube Steel Fence:- Gates in the fence

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.

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APPENDIX F: BUILDING FACT SHEET

JUSTICE BUILDING FACT SHEET

4949 Broadway
Sacramento
Sacramento County
Category 3 - Low Priority, Special Repairs and Maintenance

BUILDING INFORMATION

- Age: 34 years (completed in 1982)
- Size:* 2-story, multiple buildings interconnected with interior cross-corridor system and interior courtyards. The building includes a cafeteria.

  335,427 GSF 300,603 NUSF 300,603 Assigned SF
  23.85 Acre Parcel
  837 surface parking places
  Capacity - 1,672 occupants

- Financial: No Encumbrances
  BRA Rate - $1.64/month per SF, FY 2013-14 (DGS Price Book)
  $1.69/month per SF, FY 2014-15 (Proposed DGS Price Book)

SPI Structure #: 2253
Real Property #: 657
BPM #: 075

- LEED Status: LEED-EB Silver Certification is being pursued.
- Tenants: The Department of Justice is the sole tenant (3 different divisions), houses a significant computer facility for use by all California law enforcement agencies.

COMPLETED STUDIES AND SIGNIFICANT FINDINGS

A. 2006 Infrastructure Study

The study determined that the building is structurally sound, but recommended chiller replacement, architectural upgrades, and mechanical and electrical upgrades.

B. 2009 American Disability Act Accessibility Compliance Survey

The survey revealed areas of inaccessibility including signage, showers, locker rooms, toilet rooms, tactile exit indicator, stair handrail extensions, drinking fountain and security counters, lack of fire strobes and areas of refuge on the second floor, restroom, and exit doors.

C. 2010 Marx/Okubo Property Condition Assessment

This report did not identify any significant items requiring immediate attention. For years 1 through 6, recommendations include repairing and sealing parking surfaces, correcting roof flashing, replacing 2 gas-fired heating boilers, replacing 3 cooling towers, rebuilding the chiller, retrofitting Direct Digital Controls, replacing 4 hydraulic elevator pumping units, replacing the receiving dock roll-up coil door, and addressing disabled accessibility.

D. 2012 Access Compliance Conceptual Budget / Evaluation

In follow up to the 2009 American Disability Act Accessibility Compliance Survey, this report provides the Conceptual Cost and Path of Travel Plans. ADA upgrades have been proposed for this building as part of DGS's ten year ADA Compliance Upgrades and Deferred Special Repairs Program.

ADDITIONAL BUILDING ISSUES

During periods of heavy rain, sheet water flows to a series of catch basins connected to the municipal system, causing an area of the parking lot along the east property line to occasionally flood. Alarm floats have been installed in several catch basins, which alert building security if flooding occurs.

CURRENT UTILIZATION PROJECTS

No utilization projects planned.

RECENTLY COMPLETED PROJECTS — Cost

TBD

ACTIVE PROJECTS — Cost

TBD

* Source: Statewide Property Inventory

APPENDIX G: COST TABLES

10 YEAR EXPENDITURE FORECAST

Justice Building
4949 Broadway
Sacramento

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																							
A10	**FOUNDATIONS**																						
A1032	Reinforced Concrete Slab on Grade	A1032 Reinforced Concrete Slab on Grade	Buildings A, B, C, D, E, F, G, H, K, L & J	A1032 Patch cracked concrete slabs	15	0	1.00	LS	$12,400.00	OP - Maintenance	Priority 2	$12,400	$0	$0	$0	$0	$0	$0	$0	$0	$0	$12,400	$0
Substructure Subtotal												**$12,400**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$12,400**	**$0**
B. SHELL																							
B20	**EXTERIOR ENCLOSURE**																						
B2011	Stucco and Lath	B2011 Stucco and Lath	Buildings A, B, C, D, E, F, G, H, K, L & J	B2011 Paint exterior of building	10	0	77,350.00	SF	$3.50	IN - Appearance	Priority 1	$270,477	$0	$0	$0	$0	$0	$0	$0	$0	$0	$270,477	$0
B2014	Awning, Cloth Overhang	B2014 Awning, Cloth Overhang	Exteriors	Replace B2014 Awning, Cloth Overhang	20	0	2,400.00	SF	$37.94	IN - Reliability	Priority 1	$91,066	$0	$0	$0	$0	$0	$0	$0	$0	$0	$91,066	$0
B2021	2' X 3' Aluminum Window Fixed	B2021 2' X 3' Aluminum Window Fixed	Exterior	Replace B2021 2' X 3' Aluminum Window Fixed	25	0	600.00	EA	$1,482.35	IN - Beyond Rated Life	Priority 1	$889,407	$0	$0	$0	$0	$0	$0	$0	$0	$0	$889,407	$0
B2021	2' X 3' Steel Frame Window	B2021 2' X 3' Steel Frame Window	Building J	Replace B2021 2' X 3' Steel Frame Window	30	0	150.00	EA	$1,521.55	IN - Beyond Rated Life	Priority 1	$228,233	$0	$0	$0	$0	$0	$0	$0	$0	$0	$228,233	$0
B2031	B2031 Glazed Doors & Entrances	B2030 Steel Double Door with Frame and Hardware	Buildings A, B, C, D, E, F, G, H, K, L & J	Replace B2030 Steel Double Door with Frame and Hardware	35	4	15.00	EA	$6,509.93	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$97,649	$0	$0	$0	$0	$0	$0	$97,649
B2039	12' X 12' Steel Roll-Up Door	B2039 12' X 14' Steel Roll-Up Door	Buildings G, K & L	Replace B2039 12' X 14' Steel Roll-Up Door	35	6	4.00	EA	$9,339.94	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$0	$37,360	$0	$0	$0	$0	$37,360
B30	**ROOFING**																						
B3011	B3011 Roof Finishes	B3012 Traffic Toppings & Paving Membranes	Patio deck outside of cafeteria	Re-seal Cafe patio	15	0	650.00	SF	$51.63	OP - Maintenance	Priority 1	$33,562	$0	$0	$0	$0	$0	$0	$0	$0	$0	$33,562	$0
B3011	Tpo, Roof 45 Mills, Full Adhered	B3011 Tpo, Roof 45 Mills, Full Adhered	Buildings A, B, C, D, E, F, G, H, K, L & J	B3011 Replace and paint all metal coping	10	0	4,800.00	LF	$25.27	IN - Reliability	Priority 1	$121,302	$0	$0	$0	$0	$0	$0	$0	$0	$0	$121,302	$0
	Tpo, Roof 45 Mills, Full Adhered	B3011 Tpo, Roof 45 Mills, Full Adhered	Buildings A, B, C, D, E, F, G, H, K, L & J	Replace B3011 Tpo, Roof 45 Mills, Full Adhered	20	0	2,010.00	SQ	$1,806.36	IN - Reliability	Priority 1	$3,630,779	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,630,779	$0
B3014	B3014 Flashings & Trim	B3014 Metal Barrel Vent Cover	Roof	B3014 Scrape and paint metal barrel vent cover	30	0	300.00	SF	$8.68	OP - Maintenance	Priority 2	$2,604	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,604	$0
Shell Subtotal												**$5,267,430**	**$0**	**$0**	**$0**	**$97,649**	**$0**	**$37,360**	**$0**	**$0**	**$0**	**$5,267,430**	**$135,009**
C. INTERIORS																							
C10	**INTERIOR CONSTRUCTION**																						
C1021	C1021 Interior Doors	C1020 Door width increase for ADA compliant doors	Throughout the building	Replace C1020 Door width increase for ADA compliant doors	35	2	620.00	EA	$1,124.00	CC - Accessibility	Priority 2	$0	$0	$696,880	$0	$0	$0	$0	$0	$0	$0	$0	$696,880
C1021	C1021 Interior Doors	Door width increase for ADA compliant door in stud wall	Throughout the building	Replace Door width increase for ADA compliant door in stud wall	35	0	620.00		$1,124.00	CC - Accessibility	Priority 1	$696,880	$0	$0	$0	$0	$0	$0	$0	$0	$0	$696,880	$0
C1021	Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware	C1021 Doors with round lite	Buildings A, B, C, D, E	Replace C1021 Doors with round lite	25	9	70.00	EA	$2,403.12	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$168,218	$0	$168,218
C1031	C1031 Fabricated Toilet Partitions	C1031 Fabricated Toilet Partitions	Buildings A, B, C, D E, F, G, H, K, L & J	Replace C1031 Fabricated Toilet Partitions	20	5	55.00	EA	$2,182.40	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$120,032	$0	$0	$0	$0	$0	$120,032
C20	**STAIRS**																						
C2011	C2011 Regular Stairs	C2011 Steel stairs	Ground Floor at stairs	C2011 Install cane barrier at rear of stairs	0	0	6.00	EA	$1,860.00	CC - Accessibility	Priority 1	$11,160	$0	$0	$0	$0	$0	$0	$0	$0	$0	$11,160	$0
	C2011 Regular Stairs	C2011 Steel stairs	Ground Floor at stairs	C2011 Prep and paint steel stairway parts	7	0	12,000.00	SF	$3.87	IN - Appearance	Priority 2	$46,426	$0	$0	$0	$0	$0	$0	$46,426	$0	$0	$46,426	$46,426
	C2011 Regular Stairs	C2011 Steel stairs	Ground Floor at stairs	C2011 Replace raised rubber surfacing on stair treads	20	0	11.00	Each stairway	$992.00	CC - Life Safety	Priority 1	$10,912	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,912	$0
C30	**INTERIOR FINISHES**																						
C3012	C3012 Wall Finishes to Interior Walls	C3012 Drywall - Painted Finished Walls	Buildings A, B, C, D E, F, G, H, K, L & J	Replace C3012 Drywall - Painted Finished Walls	10	0	115,000.00	SF	$2.13	IN - Appearance	Priority 2	$245,272	$0	$0	$0	$0	$0	$0	$0	$0	$0	$245,272	$0
C3024	Vinyl Tile	C3024 Vinyl Tile	Buildings A, B, C, D, E, F, G, H, K, L & J	Replace C3024 Vinyl Tile	18	0	3,000.00	SY	$125.78	IN - Appearance	Priority 2	$377,341	$0	$0	$0	$0	$0	$0	$0	$0	$0	$377,341	$0
C3024	Sheet Vinyl	C3024 Sheet Vinyl	Cafe	Replace C3024 Sheet Vinyl	15	0	166.00	SY	$171.39	IN - Appearance	Priority 2	$28,451	$0	$0	$0	$0	$0	$0	$0	$0	$0	$28,451	$0
C3024	C3024 Flooring	C3024 Truncated Domes at Planters	Corridor ground level planters	Replace C3024 Truncated Domes at Planters	15	0	27.00	LF	$27.30	CC - Accessibility	Priority 1	$737	$0	$0	$0	$0	$0	$0	$0	$0	$0	$737	$0
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard	All carpeted areas	Replace C3025 Carpet Tiles - Standard	10	0	25,000.00	SY	$96.61	IN - Appearance	Priority 2	$2,415,140	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,415,140	$0
C3032	C3032 Suspended Ceilings	C3032 Suspended Ceiling Tiles	Buildings A, B, C, D E, F, G, H, K, L & J	Replace C3032 Suspended Ceiling Tiles	20	0	600.00	CSF	$1,201.56	IN - Appearance	Priority 2	$720,936	$0	$0	$0	$0	$0	$0	$0	$0	$0	$720,936	$0
C3033	C3033 Other Ceilings	C3033 Glued Acoustic tile	Buildings A, B, C, D, E, F, G, H, J, K, & L	Replace C3033 Glued Acoustic tile	20	0	300.00	CSF	$1,004.40	IN - Appearance	Priority 2	$301,320	$0	$0	$0	$0	$0	$0	$0	$0	$0	$301,320	$0
Interiors Subtotal												**$4,854,575**	**$0**	**$696,880**	**$0**	**$0**	**$120,032**	**$0**	**$46,426**	**$0**	**$168,218**	**$4,854,575**	**$1,031,556**
D. SERVICES																							
D10	**CONVEYING SYSTEMS**																						
D1011	Elevator Hydraulic System, 3,500 Lb Capacity	D1011 Hydraulic Elevators, 3500 LB	Throughout Facility	D1011 Code and safety items to all elevators	15	0	1.00	LS	$98,644.00	CC - Building Code	Priority 1	$98,644	$0	$0	$0	$0	$0	$0	$0	$0	$0	$98,644	$0
	Elevator Hydraulic System, 3,500 Lb Capacity	D1011 Hydraulic Elevators, 3500 LB	Throughout Facility	D1011 Mending of hydrailic leaks and adjusting operations.	0	0	1.00	LS	$7,280.00	OP - Maintenance	Priority 2	$7,280	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,280	$0
D20	**PLUMBING**																						
D2011	Commercial Grade Water Closet With 1.6 Gpf Unit	D2011 Commercial Grade Water Closet, 1.6 GPF Unit	Throughout Facility	Replace D2011 Commercial Grade Water Closet, 1.6 GPF Unit	35	4	58.00	EA	$1,233.15	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$71,523	$0	$0	$0	$0	$0	$0	$71,523
D2012	Urinal	D2012 Urinal	Throughout Facility	D2012 Install automatic flush valves on urinals that have manual valves	15	2	10.00	EA	$944.00	OP - Energy	Priority 2	$0	$0	$9,440	$0	$0	$0	$0	$0	$0	$0	$0	$9,440
D2013	Counter Top Sink and Faucet	D2013 Counter Top Sink and Faucet	Restrooms	D2013 Install automatic faucets with motion sensors	15	2	30.00	EA	$944.00	OP - Energy	Priority 2	$0	$0	$28,320	$0	$0	$0	$0	$0	$0	$0	$0	$28,320
D2018	Drinking Fountain	D2018 Drinking Fountain	Throughout Facility	Replace D2018 Drinking Fountain	10	0	12.00	EA	$3,504.60	CC - Accessibility	Priority 1	$42,055	$0	$0	$0	$0	$0	$0	$0	$0	$0	$42,055	$0
D2022	Domestic Hot Water Heater - Electric	D2022 Domestic Hot Water Heater - Electric	Throughout Facility	Replace D2022 Domestic Hot Water Heater - Electric	15	5	32.00	EA	$1,805.40	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$57,773	$0	$0	$0	$0	$0	$57,773
D2023	Water Storage Tank 500 Gallon	D2023 Solar Water Storage Tanks 500 Gallon	Penthouse	D2023 Demolish and remove solar storage tanks, piping and collectors.	15	0	1.00	LS	$47,200.00	FN - Obsolescence	Priority 1	$47,200	$0	$0	$0	$0	$0	$0	$0	$0	$0	$47,200	$0
	Water Storage Tank 500 Gallon	D2023 Solar Water Storage Tanks 500 Gallon	Penthouse	Replace D2023 Solar Water Storage Tanks 500 Gallon	30	0	1.00	EA	$10,517.06	FN - Obsolescence	Priority 1	$10,517	$0	$0	$0	$0	$0	$0	$0	$0	$0	$10,517	$0
D2023	Hydronic Circulating Pump, 5 HP	D2023 Domestic Water Booster Pump Station	Boiler Room	Replace D2023 Domestic Water Booster Pump Station	20	4	2.00	EA	$33,700.80	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$67,402	$0	$0	$0	$0	$0	$0	$67,402
D2023	Hydronic Circulating Pump, 10 HP	D2023 Hot Water Circulating Pump, 10 HP	Boiler Room	Replace D2023 Hot Water Circulating Pump, 10 HP	20	4	2.00	EA	$15,906.78	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$31,814	$0	$0	$0	$0	$0	$0	$31,814
D2031	Cast Iron Pipe 6"	D2031 Cast Iron Pipe 6"	Throughout Facility	D2031 Repair roof drainage and underslab piping.	15	0	1.00	LS	$361,500.00	OP - Maintenance	Priority 2	$361,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$361,500	$0
D30	**HVAC**																						

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		
D3021	Water Boiler, Gas 2320 to 2840 MBH	D3020 Water Boiler, Gas 2400 MBH	Boiler Room	Replace D3020 Water Boiler, Gas 2400 MBH	30	2	2.00	EA	$139,258.93	OP - Maintenance	Priority 2	$0	$0	$278,518	$0	$0	$0	$0	$0	$0	$0	$0	$278,518
D3022.1	Base-mounted circulating pumps (500 GPM, 20 HP)	D3022 HVAC Chilled Water Circulation Pumps 20 HP	Chiller Room	Replace D3022 HVAC Chilled Water Circulation Pumps 20 HP	20	0	5.00	EA	$96,400.00	IN - Beyond Rated Life	Priority 1	$482,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$482,000	$0
D3022.1	Circulation Pump, 7 to 10 HP	D3022 HVAC Heating Water Circulation Pumps	Boiler Room	Replace D3022 HVAC Heating Water Circulation Pumps	20	5	2.00	EA	$19,837.20	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$39,674	$0	$0	$0	$0	$0	$39,674
D3023	Condensate return system (SIMPLEX PUMP, FLOAT SWITCH, 3/4 HP, 15 GPM)	D3023 Condensate Return System	Chiller Room	Replace D3023 Condensate Return System	20	5	6.00	EA	$17,336.19	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$104,017	$0	$0	$0	$0	$0	$104,017
D3031.1	D3031.1 Chillers	D3031 320-ton Chiller	Chiller Room	Replace D3031 320-ton Chiller	25	0	1.00	EA	$682,992.00	FN - Modernization	Priority 1	$682,992	$0	$0	$0	$0	$0	$0	$0	$0	$0	$682,992	$0
D3031.1	Chiller, Water Cooled, Centrifugal, 400 Ton	D3031 Chiller, Water Cooled, 400 Ton	Chiller Room	Replace D3031 Chiller, Water Cooled, 400 Ton	25	6	2.00	EA	$695,640.00	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$0	$1,391,280	$0	$0	$0	$0	$1,391,280
D3031.2	Cooling Tower, Galvanized Steel, 400 Ton	D3031 Cooling Tower, Galvanized Steel, 400 Ton	Rooftop	Replace D3031 Cooling Tower, Galvanized Steel, 400 Ton	25	0	4.00	EA	$174,592.99	IN - Beyond Rated Life	Priority 1	$698,372	$0	$0	$0	$0	$0	$0	$0	$0	$0	$698,372	$0
D3032	Pad-Mounted Condenser 20-Ton	D3032 Air Cooled Refrigeration Condenser	Rooftop	Replace D3032 Air Cooled Refrigeration Condenser	15	5	4.00	EA	$44,857.40	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$179,430	$0	$0	$0	$0	$0	$179,430
D3041.1	Central Station Ahu 63000 CFM	D3041 Central AHU 62,500 CFM	Rooftop	Replace D3041 Central AHU 62,500 CFM	15	0	1.00	EA	$263,584.32	IN - Beyond Rated Life	Priority 1	$263,584	$0	$0	$0	$0	$0	$0	$0	$0	$0	$263,584	$0
D3042	Exhaust Fan 8500 CFM	D3042 Exhaust Fan 8500 CFM	Throughout Facility	Replace D3042 Exhaust Fan 8500 CFM	20	5	8.00	EA	$7,679.87	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$61,439	$0	$0	$0	$0	$0	$61,439
D3042	Exhaust Fan 2000 CFM	D3042 Exhaust Fan 2000 CFM	Rooftop	Replace D3042 Exhaust Fan 2000 CFM	20	5	55.00	EA	$3,450.37	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$189,771	$0	$0	$0	$0	$0	$189,771
D3063	Variable Frequency Drive, 20 HP Motor	D3063 Variable Frequency Drive, 20 HP Motor	Throughout Facility	Replace D3063 Variable Frequency Drive, 20 HP Motor	20	5	28.00	EA	$19,730.88	IN - Beyond Rated Life	Priority 3	$0	$0	$0	$0	$0	$552,465	$0	$0	$0	$0	$0	$552,465
D3068	Direct Digital Controls (DDC) Extensive	D3068 DDC Actuators	Throughout Facility	Replace D3068 DDC Actuators	20	2	335,427.00	SF	$2.40	FN - Modernization	Priority 2	$0	$0	$805,830	$0	$0	$0	$0	$0	$0	$0	$0	$805,830
D40	**FIRE PROTECTION SYSTEMS**																						
D4011	D4011 Sprinkler Water Supply	D4010 Fire Sprinkler Installation	Areas with no existing fire sprinklers	Install D4011 Fire Sprinkler System	35	0	255,113.00	SF	$8.68	CC - Life Safety	Priority 1	$2,214,381	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,214,381	$0
D50	**ELECTRICAL SYSTEMS**																						
D5012	D5012 Low Tension Service & Dist.	D5012 Low Tension Service & Dist.	Throughout building	Replace D5012 Low Tension Service & Dist.	50	2	335,427.00	SF	$1.26	IN - Beyond Rated Life	Priority 2	$0	$0	$421,229	$0	$0	$0	$0	$0	$0	$0	$0	$421,229
D5022	D5022 Lighting Equipment	D5022 Lighting Equipment	Throughout building	Replace D5022 Lighting Equipment	20	5	1,022.00		$401.20	FN - Modernization	Priority 3	$0	$0	$0	$0	$0	$410,026	$0	$0	$0	$0	$0	$410,026
D5037	Fire Alam System, Install New	D5037 Fire Alarm System	Throughout Facility	Replace D5037 Fire Alarm System	25	5	335,427.00	SF	$3.54	CC - Life Safety	Priority 3	$0	$0	$0	$0	$0	$1,187,412	$0	$0	$0	$0	$0	$1,187,412
D5037	Fire Alarm Panel	D5037 Fire Alarm Panel	Throughout Facility	Replace D5037 Fire Alarm Panel	15	0	9.00	EA	$22,854.24	CC - Life Safety	Priority 1	$205,688	$0	$0	$0	$0	$0	$0	$0	$0	$0	$205,688	$0
Services Subtotal												**$5,114,214**	**$0**	**$1,543,337**	**$0**	**$170,738**	**$2,782,006**	**$1,391,280**	**$0**	**$0**	**$0**	**$5,114,214**	**$5,887,361**
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																							
G20	**SITE IMPROVEMENTS**																						
G2021	G2021 Bases and Sub-Bases	G2021 Asphalt pavement	Entire parking lot	G2021 Regrade asphalt at areas that are prone to flooding.	20	0	50,000.00	SF	$9.42	IN - Reliability	Priority 2	$471,200	$0	$0	$0	$0	$0	$0	$0	$0	$0	$471,200	$0
	G2021 Bases and Sub-Bases	G2021 Asphalt pavement	Entire parking lot	G2021 Seal and stripe asphalt	5	0	385,000.00	SF	$0.84	OP - Maintenance	Priority 3	$324,632	$0	$0	$0	$0	$324,632	$0	$0	$0	$0	$324,632	$324,632
	G2021 Bases and Sub-Bases	G2021 Asphalt pavement	Entire parking lot	Mill & overlay	10	0	42,778.00	SY	$41.42	IN - Beyond Rated Life	Priority 1	$1,771,694	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,771,694	$0
G2041	Metal Tube Steel Fence	G2041Metal Tube Steel Fence	Perimeter of property	G2041 Paint fence	7	2	2,580.00	LF	$3.87	IN - Appearance	Priority 3	$0	$0	$9,985	$0	$0	$0	$0	$0	$0	$9,985	$0	$19,969
	Metal Tube Steel Fence	G2041Metal Tube Steel Fence	Perimeter of property	G2041 Replace motorized gate openers	15	8	3.00	EA	$21,824.00	IN - Beyond Rated Life	Priority 4	$0	$0	$0	$0	$0	$0	$0	$0	$65,472	$0	$0	$65,472
Building Sitework Subtotal												**$2,567,526**	**$0**	**$9,985**	**$0**	**$0**	**$324,632**	**$0**	**$0**	**$65,472**	**$9,985**	**$2,567,526**	**$410,073**
Z. GENERAL																							
General Subtotal												**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Expenditure Totals per Year	**$17,816,144**	**$0**	**$2,250,202**	**$0**	**$268,387**	**$3,226,670**	**$1,428,640**	**$46,426**	**$65,472**	**$178,203**	**$17,816,144**	**$7,463,998**
Total Cost (Inflated @ 5% per Yr.)	**$17,816,144**	**$0**	**$2,480,847**	**$0**	**$326,226**	**$4,118,140**	**$1,914,514**	**$65,325**	**$96,732**	**$276,451**	**Total ***	**$25,280,142**

*** - Present Value Currency**

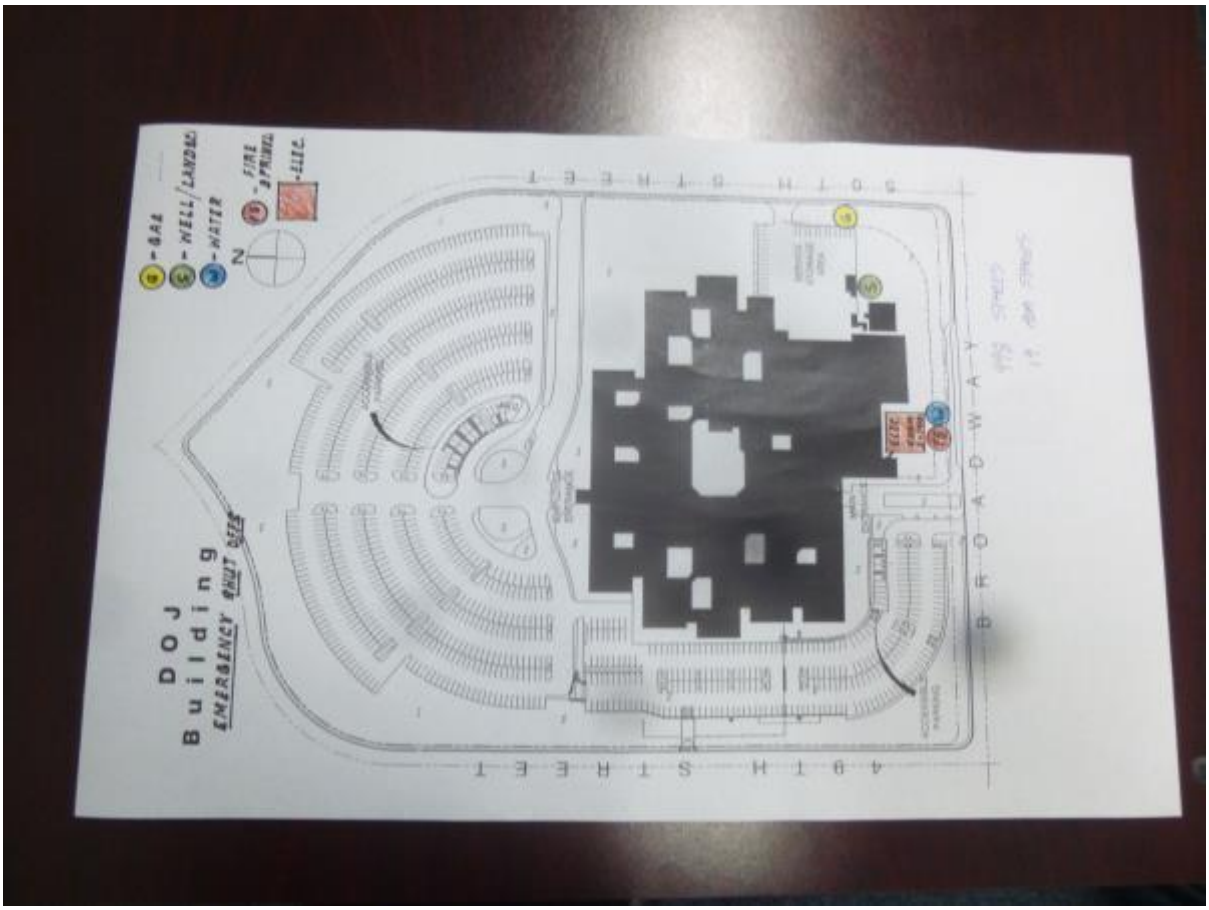
Current Repl. Value $122,639,203

Footnotes

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

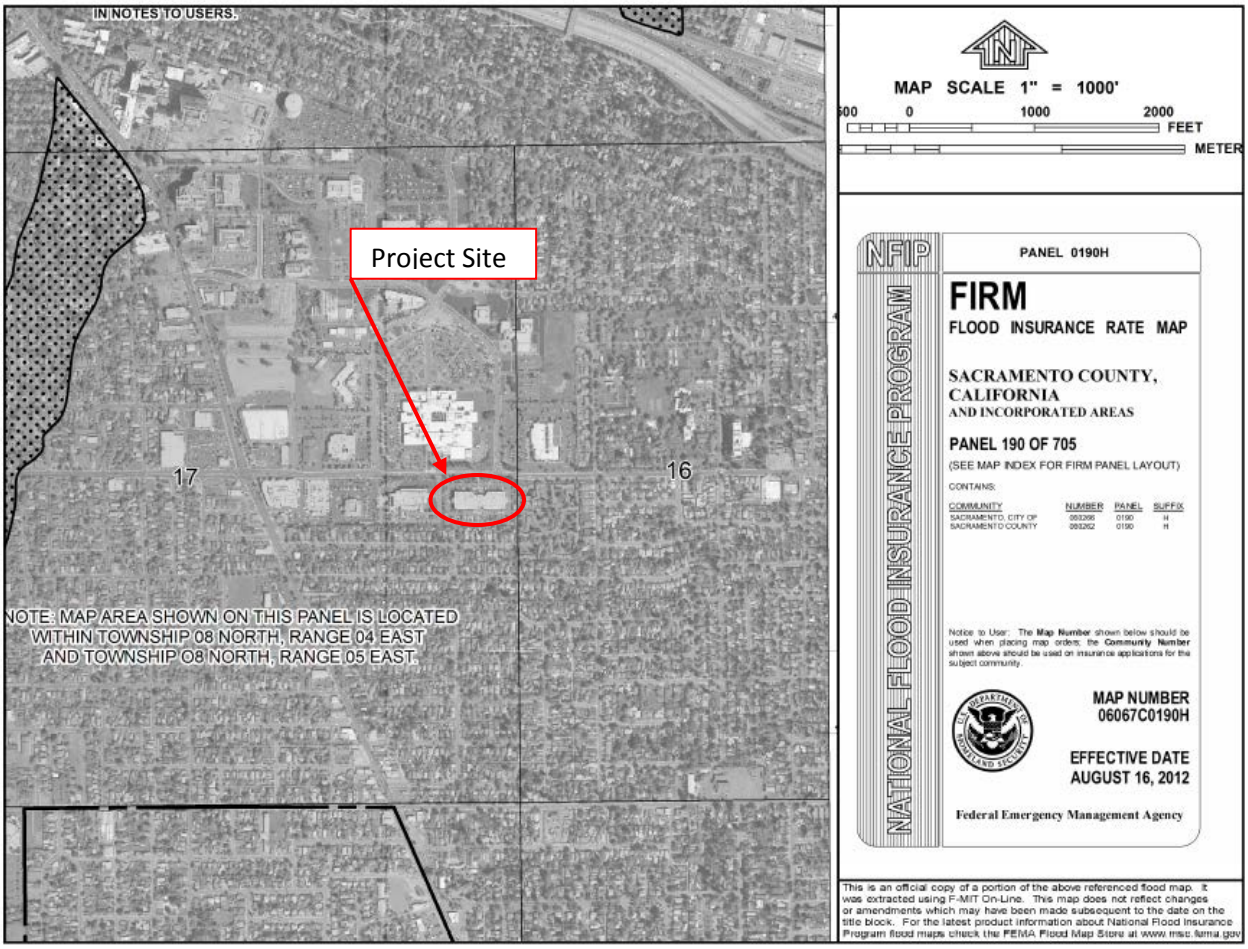
2 Detailed Descriptions of the Priorities can be found in the Appendices of the Facility Condition Assessment

APPENDIX H: SUPPORTING DOCUMENTATION



EMG	**Source:** **The north arrow indicator is an approximation of 0° North.**	**Project Number:** 111326.14R-007.305 **Project Name:** Justice Building
N		**On-Site Date:** December 3 & 4, 2014

Flood Map



EMG	**SOURCE:** **FEMA**	**Project Number:** **111326.14R-007.305**
N		**Project Name:** **Justice Building**
	Not drawn to scale. The north arrow indicator is an approximation of 0° North.	**On-Site Date:** **December 3, 2014**

Estimate of Structures Cost Using Marshall Cost Systems

Justice Building (075)

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	$292.50	335,427	$98,111,362
	$0.00	0	$0
	$0.00	0	$0
	$0.00	0	$0
	$0.00	0	$0
	Total	335,427	$98,111,362

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	$98,111,362	25.00%	$122,639,203
	$0	25.00%	$0
	$0	25.00%	$0
	$0	25.00%	$0
	$0	25.00%	$0
Cost Per SF	**$365.62**	**Total Estimate**	**$122,639,203**

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

ADA Checklist

Property Name: Justice Building
Date: December 3 & 4, 2014
Project Number: 111326.14R-007.305

EMG Abbreviated Accessibility Checklist					
	Building History	**Yes**	**No**	**N/A**	**Comments**
1.	Has the management previously completed an ADA review?	✓			
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.?				It is unknown if the Barrier Removal Plan has been reviewed/approved by an arms-length third party such as an engineering firm, architectural firm, building department, other agencies, etc.
5.	Has building ownership or management received any ADA related complaints that have not been resolved?		✓		According to the POC
6.	Is any litigation pending related to ADA issues?				Unknown
	Parking	**Yes**	**No**	**N/A**	**Comments**
1.	Are there sufficient accessible parking spaces with respect to the total number of reported spaces?		✓		1038 total parking spaces, 20 accessible spaces provided, 22 required
2.	Are there sufficient van-accessible parking spaces available (96” wide/ 96” aisle for van)?	✓			Four van spaces are provided, though they are not compliant, side aisle and signage
3.	Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading “Van Accessible” at van spaces?	✓			Some spaces are marked not all of them
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					
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)			✓	No ramps
2.	Are ramps longer than 6 ft complete with railings on both sides?			✓	No ramps
3.	Is the width between railings at least 36 inches?			✓	No ramps
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?			✓	No ramps
	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?	✓			The exposed structure stairs are not cordoned off.
3.	Are floor surfaces firm, stable, and slip resistant (carpets wheelchair friendly)?	✓			
4.	Is at least one wheelchair-accessible public telephone available?			✓	No public phones availabel
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					
7.	If audible fire alarms are present, are visual alarms (strobe light alarms) also installed in all common areas?	✓	✓		The visual alarms are not located throughout the building
	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?	✓	✓		Not all restrooms have audible and visual alarms
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?			✓	No unisex toilet rooms
7.	Are stall doors wheelchair accessible (at least 32” wide)?	✓			
8.	Are grab bars provided in toilet stalls?	✓			
9.	Are sinks provided with clearance for a wheelchair to roll under (29” clearance)?	✓			

EMG Abbreviated Accessibility Checklist					
10.	Are sink handles operable with one hand without grasping, pinching or twisting?	✓			
11.	Are exposed pipes under sink sufficiently insulated against contact?		✓		No insulation
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: John Dollar

Association with property: Office Building Manager III

Length of association with property: 15 Months

Date Completed: October 14, 2014

Phone Number: 916-227-6949

Building Name: Department of Justic 075

Directions: Please answer all questions to the best of your knowledge and in good faith. Please provide additional details in the Comments column, or backup documentation for any *Yes* responses.

	Inspections	Date Last Inspected	List Name and Contact for Maintenance Contractor, if any.
1	Elevators	4 Elevators Inspected Feb 2014	Annual Operating permits expire March 2015 Maintenance Contractor - Thyssenkrupp 916-376-8700
2	HVAC, Mechanical, Electric, Plumbing	Ongoing monthly PM's	In house Stationary Engineering
3	Life-Safety/Fire	Annual / 5 year	Johnson Controls annual device testing – Sentinel Fire 5 year fire pump flow testing – Standpipe – Hose Stations - Completed July 2014
4	Roofs	Quarterly PM's	Monthly drain – Quarterly condition inspections
	Question		**Response**
5	List any major capital improvement within the last three years.		None. Sale lease back property limited capitol improvements.
6	List any major capital expenditures planned for the next year.		Replacement - Chill Water delivery system – Replacement Chiller A – Upgrade FLS Panel Upgrade – A&E Survey for Elevator Modernization – Pneumatic to DDC Controls/EMS Upgrade (ESCO)
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?	Hawkins Data Center- DOJ – Security Access Card Reader System - DOJ FM 200 fire suppression- SABAH Fire Systems

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

	QUESTION	RESPONSE				COMMENTS
		Y	N	NA	Unk	
9	Are there any unresolved building, or fire code issues?	X				Energy management system obsolete Poorly designed chill water delivery system Pneumatic control actuators need upgrade to DDC
10	Are there any "down" or unusable units?	X				HVAC Equipment abandoned in place on roof
11	Are there any problems with erosion, stormwater drainage or areas of paving that do not drain?	X				North lot below grade Floods in severe rain event
12	Is the property served by a private water well?	X				Landscape only
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			
15	Is there any water infiltration in basements or crawl spaces?		X			
16	Are there any wall, or window leaks?	X				Possible north wall first floor F bldg
17	Are there any roof leaks?	X				Warehouse skylight
18	Is the roofing covered by a warranty or bond?		X			Warranty expired June 30, 2014
19	Are there any poorly insulated areas?	X				Large area of glazing throughout all bldgs
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				SMUD area infrastructure is old- Prone to short outages

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

	QUESTION	RESPONSE				COMMENTS
		Y	N	NA	Unk	
23	Are there any problems with the landscape irrigation systems?	X				Large lawn areas Insufficient sprinkler coverage
24	Has a termite/wood boring insect inspection been performed within the last year?	X				Localized treatment for termites- F bldg. First Floor
25	Do any of the HVAC systems use R-11, 12, or 22 refrigerants?	X				R-11 – Chiller "A" No R – 12 R-22 Small package units
26	Has any part of the property ever contained visible suspect mold growth?	X				North wall bldg. A 1st floor E bldg. 1st floor MRR B bldg. 1st floor WRR
27	Is there a mold Operations and Maintenance Plan?	X				In house Industrial Hygenists (ESHOP)
28	Have there been indoor air quality or mold related complaints from tenants?		X			
29	Is polybutylene piping used?		X			
30	Are there any plumbing leaks or water pressure problems?	X				Roof drain line piping prone to hydrostatic failure during severe rain events
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				Step down transformers common to electrical closets
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		X	
37	Has the the State previously completed an ADA or 'Title 24 review?	X				ADA Upgrades pending – Kickoff meeting Oct 28, 2014.
38	Have any ADA or Title 24 improvements been made to the property?	X				Restrooms Water fountains Auto doors

Mark the column corresponding to the appropriate response. Please provide additional details in the Comments column, or backup documentation for any *Yes* responses. Note: **NA** indicates *"Not Applicable"*, **Unk** indicates *"Unknown"*						
QUESTION		**RESPONSE**				**COMMENTS**
		Y	N	NA	Unk	
39	Does a Barrier Removal Plan exist for the property?	X				
40	Has the Barrier Removal Plan been approved by an arms-length 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			
43	Are there any problems with exterior lighting?		X			
44	Are there any other significant issues/hazards with the property?		X			
45	Are there any unresolved construction defects at the property?	X				Chill water delivery system Obsolete EMS North parking lot below grade

APPENDIX J: ELEVATOR REPORT

ARCHITECTURAL ELEVATOR CONSULTING, LLC

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Section I: Executive Summary

A. Introduction

On December 3, 2014 James Young of Architectural Elevator Consulting, LLC (AEC) surveyed all the vertical transportation systems at the Justice Information Building, 4949 Broadway Street, Sacramento, CA. There are Four (4) hydraulic elevators and a cable driven dumb waiter. All of the cars are passenger elevators. The purpose of the survey was to review the major components, to identify upgrades needed over the next ten years and check for compliance with various codes. In addition to reviewing the major components of the elevators we checked the performance parameters of the equipment and tested safety devices such as door restrictors, electric edges and emergency phones.

The elevators were manufactured and installed by Westinghouse Elevator Company during the original building construction in 1981. The elevators have Westinghouse power units, jacks, controllers, door operators, and door equipment. The power units are equipped with IMO pumps and Maxton valves which are known to be good quality. The signal fixtures in the cars were manufactured by Westinghouse and appear to have been installed during the original installation. The dumbwaiter was manufactured by D.A. Matot, which is known to be the industry leader, however it was not operational.

During our survey we noted that the elevators were being well maintained by ThyssenKrupp Elevator Company with a few areas that need work. Housekeeping in the machine rooms and Car tops needs to be improved. Car and door performance is fair. The performance needs to be adjusted to achieve the designed times and speeds.

B. Elevator Layout

The office building has four single elevators. All of the cars operate as single cars with separate machine rooms. Car 1 is a passenger only car but car 2 is for service and passenger use. Car H also serves as a service car for maintenance personnel. All of the elevators serve both floors, levels 1 & 2. All of the cars are rated at 125 Feet per Minute (FPM) and are designed with fast and efficient center opening doors. The passenger elevators have 3,500 lbs. capacities. The number, speed and size of elevators appear to be adequate for the building. The office building has no underground parking.

Elevator Summary				
Elevator Bank	**Elevator Speed**	**Floors Served**	**Capacity**	**Door Type**
Passenger (Cars B, D, E)	125 FPM	1-2	3,500 lbs.	Center
Passenger & Service(Car H)	125 FPM	1-2	3,500 lbs.	Center
Dumbwaiter	50 FPM	1-2	500 lbs.	Vert.

C. Condition

Most the major components of the elevators were found to be in fair condition. All the cab interiors were dated but in fair condition. Full modernization is recommended with new cab interiors. In ***Section II*** of this report we provide an in-depth review of each of the major components of the elevators with photographs.

D. Maintenance/Performance

The elevators are currently being maintained by ThyssenKrupp Elevator Company. The level of maintenance was good in most areas, but needed some attention in other areas. Oil is leaking some of the power units and the housekeeping for the machine rooms and pits needs to be improved. The performance was observed to be below the designed times and speeds. This needs to be remedied. In ***Appendix C*** of this report we provide a summary of the performance times for each elevator followed by a maintenance deficiency list. We recommend this list be provided to the elevator service provider so they can correct these items.

E. Code Review:

There are several codes affecting existing elevators in the State of California. During our survey we reviewed the elevators for compliance to the following codes; Americans with Disabilities Act (ADA)/California T24, and compliance with the National Elevator Code for Existing Elevators, A17.3.

1. **Americans with Disability Act (ADA)/California T24:** In 1990 the federal government enacted ADA to make public spaces more accessible to disabled persons. California has a few specific accessibility requirements in addition to ADA. All of the elevators meet most ADA and California Title 24 requirements. The sizes of the passenger elevators just misses the requirements for new elevators but meets ADA size requirements for existing elevators, thus no changes in the size are needed. All the cars had proper hall/car lanterns and gongs but all of them were working properly. None of cars had floor passing chimes. ***Appendix A*** provides a complete listing of the ADA/T24 requirements. The following is a list of which items need to be corrected to meet ADA:

    a. Repair or replace inoperative directional gongs and lanterns
    b. Equip all signal fixtures with raise title 24 compliant buttons
    c. Replace jamb braille with braille that meets California Title 24
    d. Hall dwell times are too short- adjust to 5.0 seconds minimum on Car E.
    e. Adjust nudging for cars B & D to 20 second minimum
    f. Install Braille on phones and phone boxes for all cars
    g. Install required in-car position indicators and floor passing chimes or voice announcements

2. **Retro Active Codes for Existing Elevators:** We reviewed the elevators for compliance to A17.3 Code, the national safety code for existing elevators. This code requires all elevators, no matter age or installation date, to meet a minimum level of safety. A17.3 is not adopted in California, thus not required by the State, but highly recommended. A complete check list for this retro-active code is included in ***Appendix B*** of this report. The elevators have been retro-actively upgraded for most of these codes. The following is a list of items missing:

    a. Install pit ladders
    b. All car need keyed in-car stop switches
    c. Install door restrictors on all cars
    d. Install car aprons
    e. Install fire exit sign for cars B, E and H
    f. Install lobby and car top identifying number for all cars
    g. Adjust excessive car door closing pressure for car H

3. **Seismic:** The elevators were installed prior to the State of California adopting seismic standards for hydraulic elevators. None of the elevators have seismic rupture valves, seismic fishplates, machine hold downs, or car retainer brackets. The seismic features will need to be added when the elevators are modernized. If the modernization cannot be scheduled soon, installation of seismic rupture valves should be considered in advance of the modernization.

F. Recommendation:

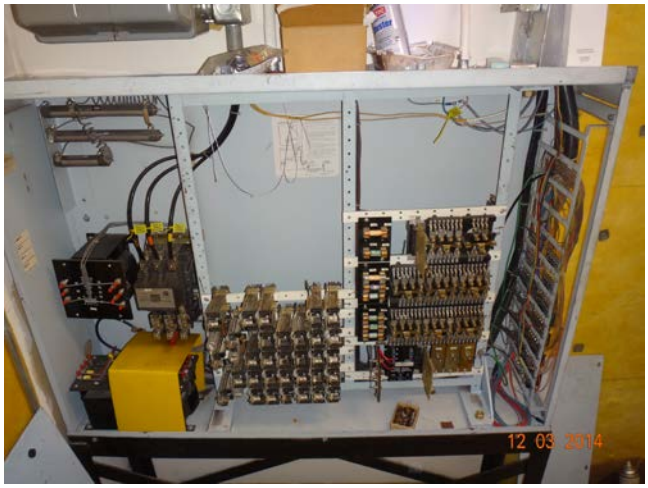
We recommend the elevators be fully modernized in the next 4-6 years. The current performance is below standard. In the meantime some immediate maintenance repairs should commence such as fixing all the oil leaks, cleaning the controllers, and pits. Installing pit ladders, car aprons and door restrictor for all cars should be a priority. Updating the elevators with ADA and Title 24 accessibility items should also be a priority. The dumbwaiter was not running but appeared to have been locked off, thus we recommend the State confirm that it is fully operational.

Section II : Component Review

A. MACHINE ROOM:

Controllers:

The controllers for were manufactured and installed by Westinghouse Elevator company during the original building construction in 1981. The controllers have old relay logic technology that is known to be reliable but have reached the end of their useful lives. If properly maintained the controllers should last another 3 to 5 years with no major updates.



Hydraulic Power Units:

All the elevators have Westinghouse power units equipped with Maxton valves and IMO pumps. The machines were installed in 1981 when the building was erected. The machines are in relatively good condition considering their age. Full modernization is recommended in 3 to 5 years

Pump and valve:

The power units are equipped with Maxton control valves, IMO pumps, and AC electric motors. None of the units have shut off valves in the machine rooms.

B. HOISTWAY:

Hoistway Construction:

The hoistway (elevator shaft) is the main area where the elevators go up and down. The hoistways are mostly built of drywall and some concrete. There are no vents in the shafts.

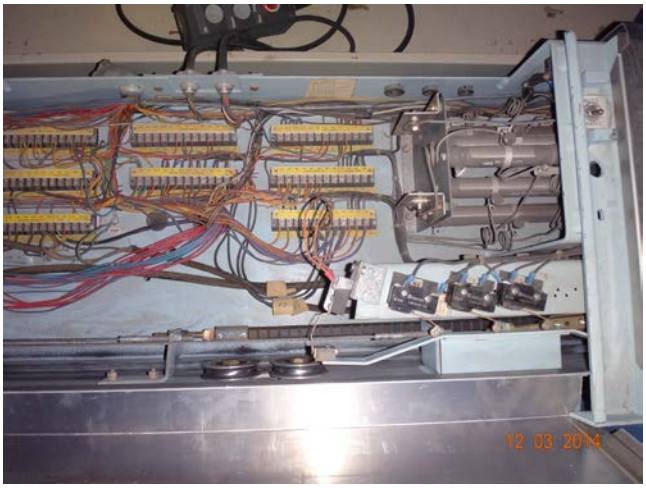
Car Guide Rails:

The car rails are in good condition but do not have seismic fish plates. During the proposed modernization, these could be installed. Upgrading the guide rails to current seismic standards is voluntary.

Pits:

The pits for are poured concrete with sump areas and metal grating. The pits were found to be clean and dry. Some of the jack seals need to be fixed. The pits are equipped with manual shut off valve but no seismic rupture valves were present. Seismic rupture valves will be required as part of the recommended full modernization.

C. CAR TOP:



Door Operator:

The door operators are made by Westinghouse Elevator Company. The door operation was noted to be fair with room for improvement. None of the cars are equipped with door restrictors. Immediate installation is highly recommended, at a minimum during the proposed modernization.

Car Roller/Slide Guides:

On both sides of the elevators and on the top and bottom roller guides keep the elevators riding up and down the steel guide rails. The existing ride quality was fair. These are original equipment and are not equipped with seismic retainer plates. New guide rollers or entire assemblies equipped with seismic retainer plates should be installed during modernization to improve ride quality.

D. SIGNAL FIXTURES:

Car Operating Panels:

All the elevators have the original equipment Car Operating Panels (COP's). These should be replaced during the proposed modernization. The panels are in good condition; even though, the buttons had proper braille and are at the proper height they do not meet Title 24. The aesthetics is poor and the stop switch is not keyed as required by code.

Hall Lanterns:

Hall lanterns inform persons waiting in the hall of which direction the elevator is about to travel in next. ADA requires that the hall lanterns illuminate and sound for the waiting passengers. The existing elevators have hall lanterns for each car. The lanterns have the proper gong for up and down. Some lanterns were inoperative during our survey. None of the cars were equipped with in-car position indicators.

Hall Call Pushbuttons:

At each floor hall call push buttons are located so that users can call the elevator. The hall call stations do not have raised operation buttons which are required by California Title 24. During a modernization the fixtures and fire exit sign will be replaced.

E. CAB INTERIOR:

Wall Finish:

The existing cab interiors are likely original and are in fair condition. The back wall has the code required handrail. The railing heights are in compliance with Title 24 California code.

Ceilings:

The cabs have down light ceilings with incandescent light fixtures. The light fixtures could be updated with energy efficient LED's and/or the entire ceiling could be replaced.

Vertical Transportation

Justice Information - 4949 Broadway

Item No.	Recommendation	Rating	Quantity	Unit	Unit Cost	Immediate Code Items	Immediate - Repair	Years 1-3	Years 4-6	Years 7-10	Totals
1	Install door restrictors for all elevators	1	4	EA	$2,500.00	$10,000					$10,000
2	Replace in-car stop switches with keyed switches	1	4	EA	$300.00	$1,200					$1,200
3	Protect car bottom from fire install steel cladding and 21" car aprons.	1	4	EA	$2,000	$8,000					$8,000
4	Repair hydraulic leaks on power unit piping	2	2	EA	$1,000		$2,000				$2,000
5	Install car identification numbers on car tops	1	4	EA	$250	$1,000					$1,000
6	Adjust accel and decel for smooth operations	2	4	EA	$500.00		$2,000				$2,000
7	New Cab interiors during modernization	4	4	EA	$23,000.00				$92,000		$92,000
8	Complete Modernization(excluding jack replacement)	4	4	EA	$95,000.00				$380,000		$380,000
9	Install raised car and hall buttons, floor passing chimes, and car position indicators.	1	4	EA	$3,000.00	$12,000					$12,000
10	Install seismic rupture valves	1	4	EA	$5,500.00	$22,000					$22,000
11											
12											
	Subtotal					$54,200	$4,000	$0	$472,000	$0	$530,200

1	$54,200	Code and Safety
2	$4,000	Deferred Maintenance & Repair
3	$0	Capital Expenditure
4	$472,000	Modernization / Improvements
5	$530,200	Total

Rating:
1 - Code and Safety
2 - Repair and Maintenance
3 - Capital Expenditure
4 - Modernization / Improvements
5 - Other

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars B,D,E, & H
	GENERAL	
4.10.1	Elevator must comply with ASME A17.1-1990. Freight elevators are not acceptable unless only elevator provided, and is permitted to carry passengers, both public and employees.	Yes
	AUTOMATIC OPERATION	
4.10.2	Elevators must be Automatic.	Yes
4.10.2	Self-leveling to within 1/2 in.	Yes
	HALL CALL BUTTONS	
4.10.3	Buttons centered at 42 in. above the floor.	Yes
4.10.3	Buttons to illuminate when call is entered and extinguish when answered.	Yes
4.10.3	Buttons to be at least 3/4 in. in the smallest dimension.	Yes
4.10.3	Up button located above down button.	Yes
4.10.3	Buttons raised or flushed. **(T24 must be raised)**	**No- recessed**
4.10.3	Objects mounted beneath hall buttons not to project into the lobby more than 4 in.	Yes
	HALL or CAR LANTERNS	
4.10.4	Visible and audible signals at each hoistway entrance to indicate which car is responding to the call.	Yes
4.10.4	Audible signals to sound once for up and twice for “down” or may verbal announcement stating “up” “down.”	Yes
4.10.4	Hall directional lantern centered 72 in. above floor.	Yes
4.10.4	Directional lantern visible elements minimum of 2-½ in. in the smallest dimension.	Yes –**inop Car E**
4.10.4	Directional lanterns must be visible from the vicinity of the hall call button.	Yes
4.10.4	In car lanterns, meeting the requirements above are acceptable in lieu of hall directional lanterns.	Yes
	HOISTWAY ENTRANCES	
4.10.5	Raised and Braille floor designations are required on both door jambs. Permanently applied plates are acceptable. **(T24 must be to the left)**	**No- not to the left**
4.10.5	Centerline of floor designation characters 60 in. above floor.	Yes
4.30.4	Characters must be 2 in. high, raised 1/32 in. upper sans serif (block letters) or simple serif type.	Yes
4.30.4	Grade II Braille to accompany raised characters.	Yes
	DOOR PROTECTIVE & REOPENING DEVICES	
4.10.6	Doors must open and close automatically.	Yes
4.10.6	Non-contact door reopening device at 5 in. and 29 in. above the floor.	Yes-**Car E turned off**

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars B,D,E, & H
4.1.6(3)(c)	If safety edges are provided on existing elevators, the non-contact door reopening devices may be omitted.	Yes
4.10.6	Reopening device to remain operational for at least 20 seconds.	Yes – E & H **No- B & D**
	DOOR AND SIGNAL TIMING	
4.10.7	Minimum acceptable door open time from notification car is answering a hall call until the car doors begin to close: *T=D/(1.5ft/s*, where *T* is the total time in and *D* is the distance from a point in the lobby or corridor 60 in. directly in front of the farthest button controlling that car to centerline of its hoistway door.	Yes
4.10.7	Minimum acceptable notification time 5.0 seconds.	Yes-**except E**
	DOOR DELAY FOR CAR CALLS	
4.10.8	Doors to remain open for a minimum of 3.0 seconds in response to car calls.	Yes
	FLOOR PLAN NEW ELEVATOR	
4.10.9	At least 36" wide door. Side Open Door: Cab must be 5'-8" wide x 4'-3" deep Center Open Door: Cab must be 6'-8" wide by 4'-3" deep	Yes
	FLOOR PLAN EXISTING ELEVATOR	
4.1.6	Minimum of 48" x 48"	Yes
4.10.9	Clearance between car platform sill and edge of hoistway landing sill no greater than 1-¼ in.	Yes- D, E & H **No- B(1 3/8")**
	Handrails Circular Square Dia.____Top of Handrail _____ Height Side Back **(T24 must be 34")**	Yes
	FLOOR SURFACES	
4.10.10	Surfaces to be stable, firm and slip resistant.	Yes
4.5.3	Carpeting if installed must have firm cushion, pad or backing, or no cushion or pad. Carpeting must have level loop, textured loop, level pile texture. Carpeting pile thickness not to exceed 1/2 in. Carpeting must have exposed edges fastened to the floor surface. Exposed edges of carpets must be trimmed.	Yes
	ILLUMINATION LEVELS	
4.10.11	Five foot-candles of illumination to be provided at car controls, platform and at sill.	Yes
	CAR CONTROLS	
4.10.12	Buttons to be at least 3/4 in. in their smallest dimension.	Yes
4.10.12	Buttons must be flush or raised. **(T24 Must be Raised)**	**No-recessed**
4.10.12	Buttons must be designated by raised characters and Braille or symbols complying with ASME A17.1 Rule 210.13.	Yes
4.10.12	Characters must be a minimum of 5/8 in. high, upper case sans (block letters) or simple serif type.	Yes
4.10.12	Grade II Braille to accompany raised character of symbol.	Yes

Appendix A
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		Cars B,D,E, & H
4.10.12	Raised designations must be to the immediate left of the button to which they apply.	Yes
4.10.12	Call button illuminates when call is entered and extinguish when answered.	Yes
4.10.12	Floor buttons must be no higher then 48 in. when located in front return. Buttons must be no higher than 54 in. when a side approach provided.	Yes
4.10.12	Emergency controls, including emergency alarm and emergency stop (if provided) must be grouped at the bottom of the panel and have centerlines no less than 35 in. above the finished floor.	Yes
4.10.12	Controls must be on the front return wall with center-opening doors. They may be on the front return or strike jamb sidewall with side doors.	Yes
	CAR POSITION INDICATORS	
4.10.13	Visual car position indicator must be provided above control panel or over door.	**No**
4.10.13	Car position indicator numerals must be a minimum of 1/2 in. high.	**No**
4.10.13	Audible signal to sound as the car passes or stops at a floor and a corresponding floor designation must illuminate. Audible signal must be at least 20 dB with a frequency no higher than 1,500 Hz.	**No**
4.10.13	A button to activate audible signal only for desired trip may be provided.	N/A
4.10.13	An automatic verbal announcement the floor at which a car stops may be substituted for the audible signal.	N/A
	EMERGENCY COMMUNICATIONS	
4.10.14	If provided, emergency two-way communication systems between the elevator and a point outside the hoistway must comply with ASME A17.1-1990, Rule 211.1.	Yes
4.10.14	The highest operable part must be a maximum of 48 in. from the car floor.	Yes
4.10.14	Emergency communication identification must be provided and located adjacent to the device. Characters must be a minimum of 5/8 in. high raised 1/32 in., upper case serif (block letters) or simple serif type, and accompanied by Grade II Braille.	Yes
4.10.13	If a handset is provided the cord must be at least 29 in. long.	Yes
4.27.4	If located in a closed compartment, the door must be operable with one hand. It must not require tight grasping, pinching or twisting of the wrist. The force required to open the door must not exceed 5 lb/f.	Yes
4.10.13	The system must not require voice communication.	Yes

Appendix "B"

A17.3

Code for Existing Hydraulic Elevators

A17.3		Complies Yes/No
2.1	**HOISTWAYS**	
2.1.1	Hoistway Construction (Enclosed & Fire rated per local code or ANSI/NFPA No. 101)	Yes
2.1.2	Windows in Hoistway Enclosures: (If provided are they guarded properly.)	Yes
2.1.3	Projections in Hoistway (Must be flush and level; Leveling zone +3"./ 60 to 75 deg bevel.)	Yes
2.1.4	Pipes Conveying Gases, Vapors, or Liquids. (If provided must be properly covered & securely fastened.)	Yes
2.2	**MACHINE ROOMS AND MACHINERY SPACES**	
2.2.1	Enclosures – Designated Machine Room (No-non elevator equipment- existing can stay)	Yes
2.2.2	Access to Machine Rooms and Machinery Spaces (A permanent means to the machine room- locked door)	Yes
2.2.3	Lighting (Permanent lighting in all machine rooms)	Yes
2.2.4	Ventilation (Natural or mechanical to avoid overheating)	Yes
2.2.5	Pipes Conveying Gases, Vapors, or liquids (Existing pipes allowed if guarded to prevent discharge)	Yes
2.2.6	Protection From Weather	Yes
2.3	**PITS**	
2.3.1	Access to Pits (Means of access to all pits. If access door provide closer & keys onsite.)	Yes
2.3.2	Drains (Drains connected directly to the sewer are not permitted.)	Yes
2.3.3	Stop Switch (A stop switch shall be provided for every pit. Locate near access, color, etc.)	Yes
	Single Bottom Jack: (If single bottom oil must be monitored and tracked)	Yes
2.4	**CLEARANCES AND RUNBYS**	
2.4.1	Horizontal Car Clearances (Not more then 5" for horizontal doors; 7.5" for vertical doors)	Yes
2.4.2	Bottom Car Clearances (Car shall not strike any equipment when resting on fully compressed buffer.)	Yes
2.4.3	Bottom Car and Counterweight Runby (Shall not exceed 24" for cars; or 36" for cwt.)	Yes
2.4.4	Top Car Clearance (Car does not strike any overhead structure)	Yes
2.4.5	Landing Sill Clearance (At least ½" for side guides; at least ¾" for corner guides. Max cannot exceed 1 ½".)	Yes
2.5	If space below pit is accessible it must meet certain rules.	Yes
2.6	**HOISTWAY ENTRANCES**	
2.6.1	Doors or Gates Required (Passenger Elevators – full width/height – no hand latches.) (Freight Elevators – at least 6-0" gate)	Yes
2.6.2	Closing of Hoistway Doors (Door closers required on cars except swinging portion of horizontal door)	Yes
2.6.3	Hoistway Door Vision Panels (Required on manually operated or self closing doors, location, Size, and type of glass)	N/A
2.6.4	Door Hangers (Prevent jumping, and stops, 4 times load)	Yes
2.6.5	Non-Shearing Astragals (For vertical bi-parting doors only)	N/A
2.6.6	Pull Straps (Must not be more than 6'-6" from floor when open)	N/A
2.6.7	Bottom Guides (gibs must be provided.)	Yes
2.7	**HOISTWAY DOOR LOCKING DEVICES, PARKING, DEVICES, AND ACCESS**	
2.7.1	Hoistway Door or Gate Locking Devices (Mechanical and electrical interlocks required)	Yes
2.7.2	Closed position of Hoistway Doors	Yes
2.7.3	Elevator Parking Device (For cars operated from within car only)	N/A
2.7.4	Access to Hoistway (Hoistway door unlocking devices and access switches)	Yes
2.7.5	Restricted Opening of Hoistway Doors and/or Car Doors on Passenger Elevators (Cannot open more then 4" outside unlocking zone +-18" max.)	**No**
2.7.6	Hoistway Emergency Door Contacts (Positively opened)	Yes
2.8	**POWER OPERATION OF DOORS AND GATES**	

Appendix "B"

A17.3

Code for Existing Hydraulic Elevators

A17.3		Complies Yes/No
2.8.1	Kinetic Energy and Force Limitations for Power-operated Horizontal Sliding Doors. (Shall not exceed 7ft/lbs. with re-opening device, without 2.5ft/lbs.; cannot exceed 30 ft/lbs)	Yes- except H
2.8.2	Reopening Device for Power-Operated Car Doors or Gates (Can be rendered inoperative if less then 2.5ft/lb)	Yes
	Mechanical Equipment	
3.1	Buffers And Bumpers (Car and counterweight buffers are required)	Yes
3.3	**CAR FRAMES AND PLATFORMS**	
3.3.1	Car Platforms (Cover entire area)	Yes
3.3.2	Platform Guards (Aprons) (Vertical face at least 21" A17.3, 60-75deg, withstand 150#)	**No-13"**
3.3.3	Hinged Platform Sills (Must have contacts & prevent operation unless within 2")	N/A
3.3.4	Floating (Movable) Platforms (Prohibited if car can move when door is not closed)	N/A
3.3.5	Protection of Platforms Against Fire (Must be covered with metal or fire resistant mat)	**No-painted wood**
3.4	**CAR ENCLOSURES**	
3.4.1	Car Enclosures (Passenger – total enclosed; Frt maybe perforated, but not by the cwt.; Car top must withstand 300lbs on any 2sqft.)	Yes
	Cab Lining Materials (Must have class 1 rating, flame spread of 25 or less.	Yes
3.4.2	Car Doors and Gates (Must have gate or door and electric contract)	Yes
3.4.3	Location of Car Doors and Gates (Hor, distance not more then 5 ½"., Swing door 4" max., space and site guard requirements.)	Yes
3.4.4	Emergency Exits (Cover hinged, single car blind shaft-every 36', side allowed)	Yes
3.4.5	Car Illumination (At least two lights, 5ftc; frt=2.5ftc; emerg. .2ftc for 4 hrs.)	Yes
3.4.6	Protection of Light Bulbs and Tubes (Guarded or coated to prevent breaks)	Yes
3.7	**CAPACITY AND LOADING**	
3.7.1	Minimum Rated Load for Passenger Elevators (per table 3.7.1)	Yes
3.7.2	Use of Partitions for Reducing Inside Net Platform Area (Partitions must be permanent and symmetrical)	Yes
3.7.3	Min. Rated Load for Freight Elevators (Class A = Not more then ¼ of total cap.; Class B = Motor Veh.; Class C = loading with industrial truck, etc.)	Yes
3.7.4	Capacity Plates (Every car must have one with rated load; Frt : one piece loads, loading and unloading; ¼" high for pass, 1" for frt.)	Yes
3.7.5	Signs on Freight Elevators (NOT A PASS ELEV…etc. ½" high letters)	Yes
3.8 (4.3)	**DRIVING MACHINES AND SHEAVES**	
4.3.1	Connection to Driving Machine (capable of withstanding, without damage, plunger stop)	Yes
4.3.2	Plunger Stop (If greater then 100FPM provide ETS)	Yes
4.3.3	Hydraulic Elevators (In-ground jacks- single vs. double bottom)	Yes
4.4	**Valves, Supply Piping, and Fittings**	
4.4.1	Pump Relief Valve (Between pump & check valve, preset to open at 125% of working pressure, sized to allow proper capacity, must be sealed)	Yes
4.4.2	Check Valve (Will hold the elevator with rated load when pump stops.)	Yes
4.4.3	Mechanically Controlled Operating Valves (These types of valves are prohibited.)	Yes
4.4.4	Supply Piping and Fittings (Must be in sound condition and secured in place.)	Yes
		Yes
	Tanks	
4.5.1	Tanks General Requirements (Must be of adequate size and have an indicator.)	Yes
4.5.2	Pressure Tanks (Tanks subject to collapsing shall be provided with vacuum relief valves., pressure gage, inspectors gage, liquid level detector, hand holes, and manholes.)	Yes
3.9	**TERMINAL STOPPING DEVICES**	
3.9.1	Normal and Terminal Stopping Devices (Locate at upper and lower terminals. If in machine room provide broken rope, tape or chain switch)	Yes
3.10	**OPERATING DEVICES AND CONTROL EQUIP.**	
3.10.1	Types of Operating Devices (Rope or rod devices shall not be used.)	Yes
3.10.2	Car-Switch Operation Elevators	Yes

Appendix "B"

A17.3

Code for Existing Hydraulic Elevators

A17.3		Complies Yes/No
	(If provided must return to stop position if released by hand)	
3.10.3	Top-of-Car Operating Devices (Continuous pressure <150FPM; bet. Crosshead and door.) (not needed on hydro's if less than 15' of travel)	Yes
3.10.4	Electrical Provisions	
	(e) Stop Switch – Top of Car- marked "stop" & "run"	Yes
	(h) Final Terminal Stopping Devices	Yes
	(i) Emergency Terminal Stopping Devices (reduced stroke)	N/A
	(m) Buffer Switches for Oil Buffers (type c safety)	N/A
	(n) Hoistway Door Interlocks or Hoistway Door Contacts	Yes
	(p) Car Door or Gate Electric Contacts	Yes
	(q) Normal Terminal Stopping Devices	Yes
	(r) Car Side Emergency Exit Electric Contact	N/A
	(s) Electric Contacts for Hinged Car Platform Sills	N/A
	(t) In-Car Stop Switch (Must be keyed, if provided)(WAC does not require it to be keyed)	**No-not keyed**
	(u) Emergency Stop Switch (Must be provided for freight cars)	Yes
	(v) Stop Switch in Pit	Yes
	(w) Buffer Switches for Gas Spring Return Oil Buffers	N/A
3.10.5	Power Supply Line Disconnecting Means (Provided w/ overcurrent protection, within site, and numbered)	Yes
3.10.6	Phase Reversal and Failure Protection (Means to prevent starting if out of phase)	Yes
3.10.7	Devices for Making Hoistway Door Interlocks or Electric Contacts, or Car Door or Gate Electric Contacts Inoperative (These devices are prohibited)	Yes
3.10.9	Control and Operating Circuit Requirements (The failure of any single magnetically operated switch)	Yes
	Grounding and Overcurrent: Must comply with 620-61	Yes
3.11	**EMERGENCY OPERATION AND SIGNALING DEVICES**	
3.11.1	Car Emergency Signaling Devices (Audible signal, two-way communication, on emerg. power)	Yes
3.11.2	Operations of Elevators Under Standby (Emergency) Power (If provided must be able to absorb regenerative power)	Yes
3.11.3	Firefighters' Service(A17.1-1987 Rules 211.3 through 211.8- appendix C; phase I and II switches shall be the same in each bldg)	Yes
4.7.3	Anticreep leveling devices	Yes
4.8	Additional Requirements for Counterweighted Hydraulics (Do not require buffers)	N/A
4.9	Additional Requirements for Roped Hydraulic Elevators.	N/A

Appendix "C"

Performance Review and Maintenance Deficiency List

Performance Review:

In this section we provide the results of randomly reviewing 50% or more of the performance of all elevators.

Part A: Definitions

A stopwatch, tachometer, and spring gauge are utilized to measure the performance of each elevator. Original equipment design, national and local codes and other factors govern these times. The following is an explanation of each item that was reviewed.

- Car Door Dwell Time: When an elevator is responding to a car call, the code requires the elevator doors to stay open a minimum of 3.0 seconds. This is to allow ample time for the passengers to exit.
- Hall Call Dwell Time: When an elevator is responding to a hall call, the code requires the elevator doors to stay open a minimum of 5.0 seconds. This is to allow ample time for the passengers to enter the elevator.
- Floor-To-Floor Time: This measures the time that it takes an elevator to go from one floor to the next floor. Door open and close times are calculated into this time to provide a meaningful measurement. The stopwatch is started when the doors start to close and is stopped when the elevator is level at the next floor with the doors ¾ open for center opening doors, and ½ open for side opening doors.
- Door Open Time: The door open time is measured when the doors start to open until they are fully open.
- Door Close Time: The door close time is measured when the doors start to close until they are fully closed.
- Full Speed: Full speed of an elevator is measured in the machine room utilizing a tachometer or in the car using an accelerometer.
- Door Closing Pressure: The force required to prevent the doors from closing. This pressure is measured with a spring gauge.
- Ride Quality: Acceleration, deceleration, side-to-side sway and noise level are evaluated in this section.

On the following page the results of the elevators checked are provided.

Appendix "C"

Performance Review and Maintenance Deficiency List

	PERFORMANCE TIMES	Design	Car B	Car D	Car E	Car H
7.1	Door Open Time	**1.6**	**2.2**	**2.2**	**2.6**	**2.3**
7.2	Door Close Time	**2.4**	2.8	2.5	2.3	2.2
7.3	Floor to Floor Up (18 to 19)	**13.0**	**16.8**	**15.9**	**15.3**	**15.3**
9.6	Floor to Floor Down (19 to 18)	**13.0**	**20.3**	**17.2**	**16.2**	**17.0**
7.5	Full Speed Up	**125 FPM**	138	136	136	132
7.6	Full Speed Down	**125 FPM**	**78**	**97**	**85**	**99**
7.7	Jerk Rate Up	**< 7.0**	**15.1**	**8.7**	**14.1**	**9.2**
7.8	Jerk Rate Down	**< 7.0**	**15.8**	**8.4**	**17.3**	4.2
7.9	Power Closing of Door (Pressure Gauge)	**<30lbs**	25 lbs.	25 lbs.	30 lbs.	**32 lbs.**
7.10	Interrupted Ray	**.5sec**	.1	.6	-	.4
7.11	Car Dwell Time	**3.0**	5.5	8.3	4.0	7.7
7.12	Hall Call Dwell Time	**5.0**	5.4	8.1	**4.0**	7.7
7.13	Hall/Car Lantern Time	**8.0**	7.7	-	6.8	10.4
7.14	Nudging	**20.0**	**17 sec**	**12 sec**	-	>20 sec
7.15	Test Emergency Phone	**Yes**	DNC	DNC	DNC	DNC

	Car B
B.1	Machine room door in not labeled "elevator equipment"
B.2	Remove old parts from inside controller enclosure
B.3	No pit ladder
B.4	Pit is dirty
B.5	Car top is dirty
B.6	Adjust car full speed down to within 3% of design.
B.7	Fix leaks at power unit- piping is leaking below valve
B.8	Floor to floor times are slow and need to be adjusted to meet design times
B.9	Door open time is slow –adjust to meet design time
B.10	Adjust car so to achieve smooth operation- acceleration and deceleration is abrupt (excessive jerk rate)
B.11	Nudging time is too short adjust to 5.0 second minimum
B.12	State number on car top is miss label – Machine room and car top state numbers do not match
	Car D
D.1	Machine room door in not labeled "elevator equipment"

Appendix "C"

Performance Review and Maintenance Deficiency List

D.2	Remove old parts from inside controller enclosure
D.3	Remove oil soaked absorbent pads from MR floor area
D.4	Adjust car full speed down to within 3% of design.
D.5	Floor to floor times are slow and need to be adjusted to meet design times
D.6	Door open time is slow –adjust to meet design time
D.7	Adjust car so to achieve smooth operation- acceleration and deceleration is abrupt (excessive jerk rate)
D.8	Nudging time is too short adjust to 5.0 second minimum
D.9	Hall lantern is inoperative on 2nd floor
D.10	Machine room fire extinguisher expired 12-2014
	Car E
E.1	Machine room door in not labeled "elevator equipment"
E.2	Machine room fire extinguisher expired 12-2014
E.3	Remove old parts from inside controller enclosure
E.4	No pit ladder
E.5	Car top is dirty
E.6	Adjust car full speed down to within 3% of design.
E.7	Fix leaks at power unit- piping is leaking below valve
E.8	Floor to floor times are slow and need to be adjusted to meet design times
E.9	Door open time is slow –adjust to meet design time
E.10	Adjust car so to achieve smooth operation- acceleration and deceleration is abrupt (excessive jerk rate)
E.11	Hall call dwell time is too short adjust to 5.0 second minimum
E.12	Hoistway wall has a few penetration that are not fire sealed
E.13	Turn on the car door protective photo eye
	Car H
H.1	Machine room door in not labeled "elevator equipment"
H.2	Machine room housekeeping needs improvement- organize and store parts and suppies
H.3	Controller cabinet is dirty and needs to be cleaned and all spare parts removed from inside
H.4	Fix oil leak between valve and pump in the machine room
H.5	Adjust car full speed down to within 3% of design.
H.6	Floor to floor times are slow and need to be adjusted to meet design times
H.7	Door open and close time is slow –adjust to meet design time
H.8	Adjust car so to achieve smooth operation- acceleration and deceleration is abrupt (excessive jerk rate)
H.9	Excessive door closing pressure- adjust to less than 30 lbs

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