



## Department of Justice Office Building (030)

1300 "I" Street, Sacramento, CA 95814

### 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 (RESA) 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 Department of Justice Office Building (030).

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 Department of Justice Office Building (030) 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 Department of Justice Office Building (030) on February 9, 2015. The evaluation team reviewed available engineering studies and construction documents to familiarize themselves with the physical conditions. The evaluation team conducted a walk-through of the building to observe building systems and components, identify physical deficiencies, and formulate recommendations to remedy any deficiencies.

## SURVEY FINDINGS

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

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

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

Key Finding	Metric
Current Replacement Value	\$351,654,250
Immediate Repair Costs (12 months)	\$8,410,009
1-5 Year Capital Needs	\$6,842,604
6-10 Year Capital Needs	\$4,997,813
Total 10-Year Capital Reserve Needs	\$20,250,426

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

**Current Year FCI**

$$\text{Current FCI} = \frac{\$8,410,009}{\$351,654,250}$$

**Ten-Year FCI**

$$\text{Ten-Year FCI} = \frac{\$20,158,643}{\$351,654,250}$$

Current Year FCI	Ten-Year FCI
<b>2.39 % = <i>Good Condition</i></b>	<b>5.75 % = <i>Fair Condition</i></b>

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

- Roof leaks have been reported and observed on the 17th floor, beneath the main roof area. Moisture infiltration has been observed within the lower terrace roofing. It is recommended that the roofing be replaced.
- The building heating and cooling system runs on the original pneumatic control system. There are some direct digital controls (DDC) in limited areas. Most of the system is original to the building. Installation of DDC is recommended.
- The swing staging for window cleaning and exterior façade work does not function properly. The rollers and retraction equipment are dysfunctional.
- The first three levels of the parking garage have water infiltration issues from both vehicular runoff and exterior water infiltration. The original parking surface sealant is at the end of its useful life and should be recoated.

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

Designed and constructed by OPUS Architects and Engineers and completed in 1995, the Department of Justice Office Building (030) sits at the northern edge of Sacramento's central business district at 1300 I Street. The building provides a prominent home for state government functions while making a significant contribution to the community.

The building's image is intended to be historical in reference with a contemporary architectural vocabulary of materials and forms. The massing of the building is in specific response to the city's architectural design guidelines. The building's form is expressed in two 90 foot by 120 foot rectangular "twin towers" with a connecting link between to mitigate the scale of the half-block floor plate.

The pedestrian experience is enhanced at the I Street frontage by the 30-foot building setback and landscape zones adjacent to the building. This provides space for a double row of trees along the primary walkway and has the effect of diminishing the impact of the 17-story building on pedestrians.

The primary tenant of the building is the Department of Justice, which includes the Attorney General, for whom the building is named. The building includes general-purpose open offices, private offices, computer rooms, support areas, and a mechanical penthouse. Building amenities include a cafeteria and integral parking structure with approximately 600 parking spaces.

The Attorney General Building is 560,661 GSF with a net usable area of 315,492 SF. The ratio of net usable to gross building area is 56.3 percent. The occupant capacity is 1,290.

### BUILDING DESCRIPTION

The building structural systems are generally steel superstructures with concrete-topped metal floor decks. The roof structure is flat with single-ply roofing.

The exterior walls are finished with precast concrete panels, polished granite, ribbon windows, and stucco.

The interior walls are painted drywall and vinyl-covered drywall walls. The floor finishes consist of ceramic tiles, commercial carpet tiles, sealed concrete, and vinyl composition tiles. The interior ceilings are finished with acoustic ceiling tiles.

The facility is served by seven traction-type passenger elevators. There is also one freight elevator that services all seventeen floors, including the mezzanine and roof.

Domestic hot water is provided by tank-type electric domestic hot water heaters located throughout the building. The water is distributed to the building by small inline recirculation pumps.

Heating and cooling are provided by a two-pipe system. Heating is provided by gas boilers located in the mechanical penthouse. Cooling is provided by centrifugal chillers located in the mechanical penthouse. The conditioned water is supplied to fan coils around the exterior walls of the building. The heating and cooling systems are controlled by an energy management system.

Most of the electrical infrastructure within the building is original to the building, including the transfer switch, switchgear and panels. Most of the controls are still pneumatic in the building, except for a small office space which has digital controls.

Life safety systems include a wet sprinkler system in the building. The sprinkler heads were upgraded with the fire alarm system. There are fire extinguishers at various locations in the building.

The landscaping consists of trees and shrubs. Landscaped areas are irrigated by an in-ground overhead spray sprinkler system. The parking areas are paved with concrete.

Based on information provided by the construction drawings, parking is provided for 597 cars. Parking stalls are located within the parking structure at levels two through six of the building.

The sidewalks throughout the property are constructed of cast-in-place concrete.

### Project Statistics

Item	Description
Project Name	Department of Justice Office Building
Building ID	030
Property Type	Administration
Year Built	1995
Number of Stories	19
Occupied	Yes
Land Area (acres)	1.45
Gross Square Feet (GSF)	560,661

## 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<sup>1</sup> recognizes that certain Opinions of Probable Cost cannot be developed within the scope of an FCA without further study. Instances where a visual inspection is not possible and further study is recommended, EMG provides a cost estimate of the additional study in the FCA.

### **Facility Condition Index**

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

### **SCOPE OF ASSESSMENT**

The evaluation team conducted a walk-through survey of Department of Justice Office Building (030) on February 9, 2015. 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.

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<sup>1</sup> ASTM 2018-08 is the national guideline for preparing a Facility Condition Assessment published by the American Society for the Testing of Materials.

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 Unifomat code. The Unifomat 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.

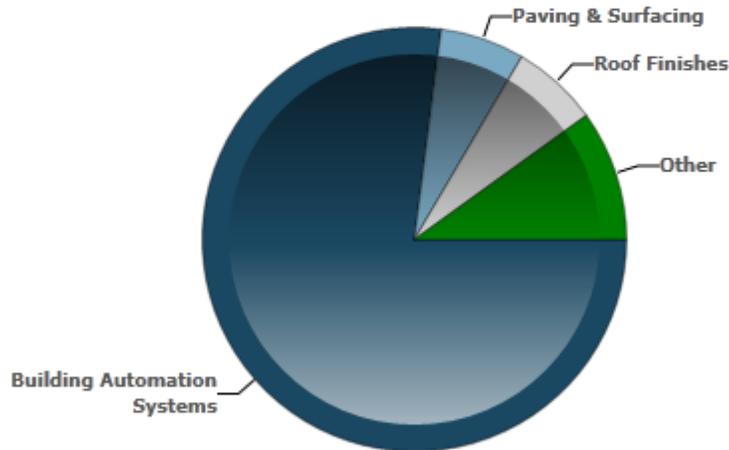
**PRIORITY RATIO**

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.

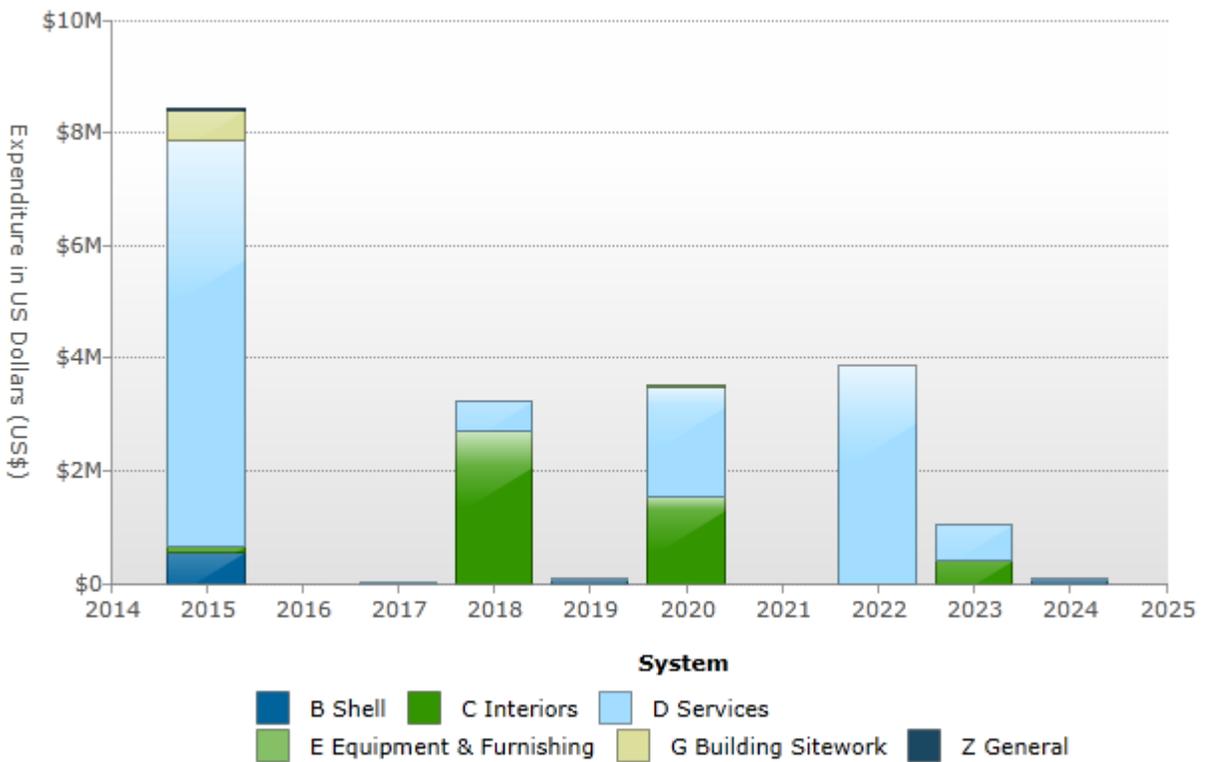
### Distribution of Immediate Needs by Building System



Level	Building System	Estimated Cost
B3011	Roof Finishes	\$555,768
C3005	ADA Renovations	\$76,260
C3012	Wall Finishes to Interior Walls	\$15,092
D1011	Passenger Elevators	\$18,400
D1012	Freight Elevators	\$3,000
D1093	Hoists & Cranes	\$103,740
D2011	Water Closets	\$42,000
D2013	Lavatories	\$27,552
D2022	Hot Water Service	\$3,611
D3021	Boilers	\$77,000
D3022	Circulating Pumps	\$64,424
D3031	Cooling Towers	\$54,556
D3041	Air Handling Units	\$4,404
D3042	Exhaust Ventilation Systems	\$4,881

Level	Building System	Estimated Cost
D3068	Building Automation Systems	\$6,477,653
D5012	Low Tension Service & Dist.	\$16,270
D5021	Branch Wiring Devices	\$43,811
D5022	Lighting Equipment	\$202,181
D5032	Intercommunication & Paging System	\$54,044
D5037	Fire Alarm Systems	\$1,300
G2022	Paving & Surfacing	\$540,402
Z1011	Further Studies	\$23,660
	<b>Total</b>	<b>\$8,410,009</b>

**Total Capital Needs By System and Year**



Year	Building System							Total
	A Sub-Structure	B Shell	C Interiors	D Services	E Equip. & Furnishings	F Spec. Const. & Demolition	G Bldg. Site Work	
2015	\$0	\$555,768	\$91,352	\$7,198,827	\$0	\$0	\$540,402	\$8,410,009
2017	\$0	\$0	\$0	\$5,817	\$0	\$0	\$0	\$5,817
2018	\$0	\$0	\$2,709,523	\$529,424	\$0	\$0	\$0	\$3,238,946
2019	\$0	\$42,156	\$0	\$33,354	\$0	\$0	\$0	\$75,510
2020	\$0	\$0	\$1,526,368	\$1,968,249	\$27,714	\$0	\$0	\$3,522,331
2022	\$0	\$0	\$0	\$3,873,924	\$0	\$0	\$0	\$3,873,924
2023	\$0	\$0	\$395,720	\$638,015	\$0	\$0	\$0	\$1,033,734
2024	\$0	\$56,800	\$0	\$33,354	\$0	\$0	\$0	\$90,154
<b>Total</b>	<b>\$0</b>	<b>\$654,724</b>	<b>\$4,722,962</b>	<b>\$14,280,964</b>	<b>\$27,714</b>	<b>\$0</b>	<b>\$540,402</b>	<b>\$20,250,426</b>

### CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as \$351,654,250 for the Department of Justice Office Building Building (030). 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
560,661 GSF	\$627	\$351,654,250

### FACILITY CONDITION INDEX

The FCI<sup>1</sup> 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.<sup>2</sup> 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

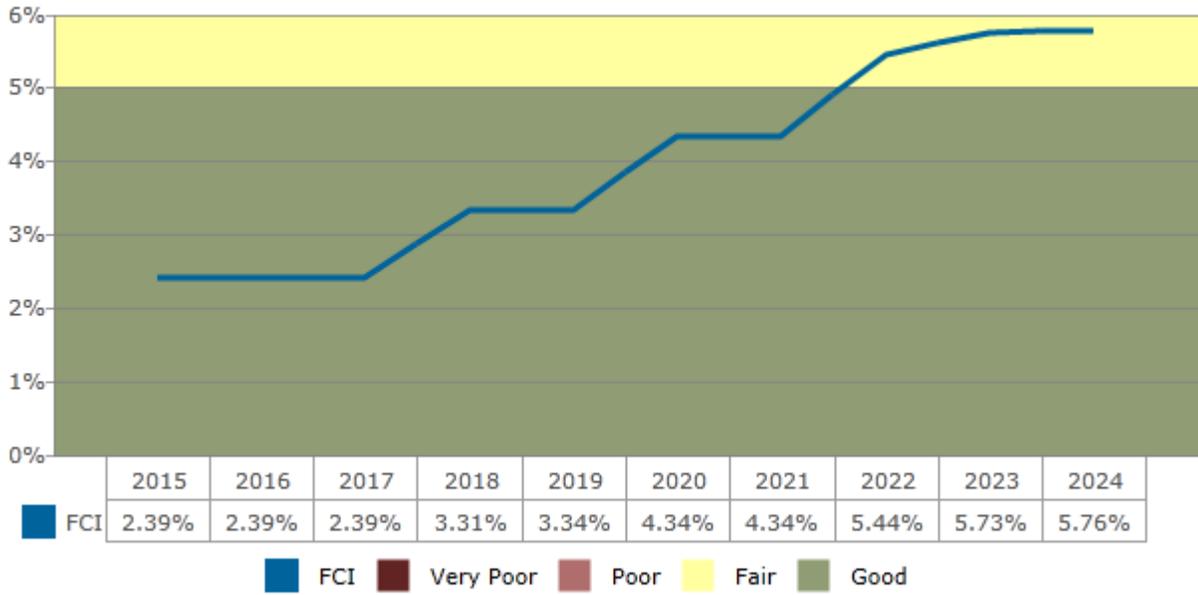
<sup>2</sup> Sean C. Rush (1991). Managing the Facilities Portfolio: a Practical Approach to Institutional Facility Renewal and Deferred Maintenance. National Association of College and University Business Officers. pp. 26–66. ISBN 978-0-915164-59-2.

not be prudent to continue to fund repairs. In cases where aggressive facilities planning is expected to be necessary, this threshold may be adjusted to address more pressing needs.

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

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

### Cumulative Effects of FCI over the Study Period



# APPENDICES

## APPENDIX A: ACCESSIBILITY ISSUES

Item	Description
C3005 ADA Renovations	C3005 ADA Renovations - Door Signage
Condition	Fair - Good
Qty / UOM	615 / EA
RUL (years)	0
Location	Throughout Building

Item	Description
D5032 Intercommunication & Paging System	D5032 ADA Renovations - Emergency Elevator Intercom
Condition	Fair - Good
Qty / UOM	8 / EA
RUL (years)	0
Location	Elevators

**Recommendations:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3005	replace intercom	615.0 - EA	124.0	CC - Accessibility	Priority 1	2015	76,260
D1011	Install Braille signage at elevator jamb	2.0 - EACH	400.0	CC - Accessibility	Priority 1	2015	800
D1011	Install Braille signage at jamb	5.0 - EA	400.0	CC - Accessibility	Priority 1	2015	2,000

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5032	replace intercom	8.0 - EA	6755.5	CC - Accessibility	Priority 1	2015	54,044

**Cost Summary:**

Year	Total Expenditures
2015	\$133,104

**APPENDIX B: GENERAL ASSESSMENT INFORMATION**

**A Substructure Systems**

**A10 FOUNDATIONS**

Item	Description
A1012 Column Foundations & Pile Caps	A1011 Foundation
Condition	Good
Qty / UOM	45000 / SF
RUL (years)	50
Location	Below Grade

OBSERVATIONS/COMMENTS:

No significant foundation cracks or displacement were observed.

**B Shell Systems**

**B10 SUPERSTRUCTURE**

Item	Description
B1029 Other Roof Systems	B1021 Helipad framing
Condition	Good
Qty / UOM	8 / EA
RUL (years)	0
Location	Roof

OBSERVATIONS/COMMENTS:

Diagonal bracing is open at the top with no water outlet at the bottom of the structural members. Repair is recommended at this time to prevent corrosion to the structural steel members.

**B20 EXTERIOR ENCLOSURE**

Item	Description
B2011 Exterior Wall Construction	B2010 Stucco and Lath
Condition	Fair - Good
Qty / UOM	40000 / SF
RUL (years)	10
Location	Exterior
Exterior Wall Construction	Stucco
Balcony Walls and Handrails	Metal
Exterior Soffits	Concealed

OBSERVATIONS/COMMENTS:

Stucco is integrally colored, therefore painting is not required unless the stucco is stained or heavily soiled. Periodic finish replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2011	B2011 - Paint Existing Stucco	40,000.0 - SF	1.4	IN - Beyond Rated Life	Priority 4	2024	56,800

Item	Description
<b>B2011 Exterior Wall Construction</b>	B2011 Precast Concrete Panels
<b>Condition</b>	Good
<b>Qty / UOM</b>	600000 / SF
<b>RUL (years)</b>	15
<b>Location</b>	Exterior

OBSERVATIONS/COMMENTS:

Water infiltration through panel, wall, and window joints was observed to be minimal. No further action is required.

Item	Description
<b>B2014 Exterior Sun Control Devices</b>	B2014 Awning, Cloth Overhang
<b>Condition</b>	Fair - Good
<b>Qty / UOM</b>	1111 / EA
<b>RUL (years)</b>	4
<b>Location</b>	Exterior

OBSERVATIONS/COMMENTS:

Periodic repairs and replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2014	Replace B2014 Awning, Cloth Overhang	1,111.0 - EA	37.9	IN - Beyond Rated Life	Priority 3	2019	42,156

Item	Description
B2023 Storefronts	B2023 Storefronts
Condition	Good
Qty / UOM	5760 / SF
RUL (years)	10
Location	Exterior

OBSERVATIONS/COMMENTS:

No further action is required at this time.

COST SUMMARY:

Type	Year	Total Expenditures
B20 Exterior Enclosure	2019	\$42,156
B20 Exterior Enclosure	2024	\$56,800

**B30 ROOFING**

Item	Description
B3011 Roof Finishes	B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills
Condition	Fair
Qty / UOM	332 / CSF
RUL (years)	0
Location	Roof
Traffic Toppings and Pavings	Large pavers
Flashings and Trim	Metal
Roof Eaves and Soffits	No

OBSERVATIONS/COMMENTS:

Roof leaks have been reported and observed on the 17th floor, beneath the main roof area. Moisture infiltration has also been observed within the lower terrace roofing. It is recommended that the roofing be replaced to address reported moisture infiltration.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B3011	Replace	332.0 - CSF	1674.0	IN - Beyond Rated Life	Priority 1	2015	555,768

COST SUMMARY:

Type	Year	Total Expenditures
B30 Roofing	2015	\$555,768

# C Interiors Systems

## C10 INTERIOR CONSTRUCTION

Item	Description
C1021 Interior Doors	C1020 Interior Doors
Condition	Good
Qty / UOM	1040 / EA
RUL (years)	11
Location	Throughout the Building

OBSERVATIONS/COMMENTS:

Replacement of the heavily used interior doors is recommended during the next ten years.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C1021	C1020 - Replace Interior Doors - Partial	205.0 - EA	950.0	IN - Beyond Rated Life	Priority 4	2023	194,750

COST SUMMARY:

Type	Year	Total Expenditures
C10 Interior Construction	2023	\$194,750

**C30 INTERIOR FINISHES**

Item	Description
<b>C3005 ADA Renovations</b>	C3005 ADA Renovations - Door Signage
Condition	Fair - Good
Qty / UOM	615 / EA
RUL (years)	0
Location	Throughout Building

OBSERVATIONS/COMMENTS:

Signage on 60 percent of the doors was above the ADA 60-inch mounting-height limit. Relocate all signage that is noncompliant.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3005	replace intercom	615.0 - EA	124.0	CC - Accessibility	Priority 1	2015	76,260

Item	Description
<b>C3012 Wall Finishes to Interior Walls</b>	C3012 Lobby Drywall – Vinyl Coverings
Condition	Fair
Qty / UOM	4140 / SF
RUL (years)	3
Location	Lobby

OBSERVATIONS/COMMENTS:

Periodic finish replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3012	Replace C3012 Lobby Drywall – Vinyl Coverings	4,140.0 - SF	9.6	IN - Appearance	Priority 3	2018	39,734

Item	Description
<b>C3012 Wall Finishes to Interior Walls</b>	C3012 Fiberglass Reinforced Plastic Backsplash
<b>Condition</b>	Poor - Fair
<b>Qty / UOM</b>	10 / EA
<b>RUL (years)</b>	0
<b>Location</b>	Hopper Rooms

OBSERVATIONS/COMMENTS:

Disintegration of the original particle board-based backsplash is prevalent at nearly all mop sinks. Recommend replacement with fiberglass reinforced backsplash panels.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3012	Replace C3012 Fiberglass Reinforced Plastic Backsplash	10.0 - EA	1509.2	IN - Appearance	Priority 2	2015	15,092

Item	Description
<b>C3024 Flooring</b>	C3024 Ceramic Tile Partial replacement
<b>Condition</b>	Good
<b>Qty / UOM</b>	2000 / SF
<b>RUL (years)</b>	8
<b>Location</b>	Throughout building

OBSERVATIONS/COMMENTS:

Periodic finish replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3024	Repair	2,000.0 - SF	43.0	IN - Appearance	Priority 4	2023	86,006

Item	Description
<b>C3024 Flooring</b>	C3024 Vinyl Floor Finishes
<b>Condition</b>	Fair - Good
<b>Qty / UOM</b>	914 / SY
<b>RUL (years)</b>	8
<b>Location</b>	Throughout building

OBSERVATIONS/COMMENTS:

Periodic finish replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3024	Replace	914.0 - SY	125.8	IN - Appearance	Priority 4	2023	114,963

Item	Description
<b>C3025 Carpeting</b>	C3025 Carpet Tiles - Standard Newer
<b>Condition</b>	Good
<b>Qty / UOM</b>	15800 / SY
<b>RUL (years)</b>	5
<b>Location</b>	Throughout building

OBSERVATIONS/COMMENTS:

Periodic finish replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3025	Replace C3025 Carpet Tiles - Standard Newer	15,800.0 - SY	96.6	IN - Appearance	Priority 4	2020	1,526,368

Item	Description
<b>C3025 Carpeting</b>	C3025 Carpet Tiles - Standard Older
<b>Condition</b>	Good
<b>Qty / UOM</b>	15800 / SY
<b>RUL (years)</b>	3
<b>Location</b>	Throughout building

OBSERVATIONS/COMMENTS:

Periodic finish replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3025	Replace	15,800.0 - SY	96.6	IN - Appearance	Priority 3	2018	1,526,368

Item	Description
<b>C3032 Suspended Ceilings</b>	C3032 Acoustical Ceiling Tiles - Partial
<b>Condition</b>	Fair
<b>Qty / UOM</b>	1000 / CSF
<b>RUL (years)</b>	3
<b>Location</b>	Throughout Building

OBSERVATIONS/COMMENTS:

Periodic finish replacement will be required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3032	Replace C3032 Acoustical Ceiling Tiles - Partial	1,000.0 - CSF	1143.4	IN - Appearance	Priority 3	2018	1,143,420

**COST SUMMARY:**

Type	Year	Total Expenditures
C30 Interior Finishes	2015	\$91,352
C30 Interior Finishes	2018	\$2,709,523
C30 Interior Finishes	2020	\$1,526,368
C30 Interior Finishes	2023	\$200,970

## D Services Systems

### D10 CONVEYING SYSTEMS

Item	Description
D1011 Passenger Elevators	D1011 Passenger Elevator 3500 lbs
Condition	Good
Qty / UOM	2 / EACH
RUL (years)	7
Location	Lobby

**OBSERVATIONS/COMMENTS:**

The passenger elevators are original to the building. They are traction-type elevators powered by 50-hp motors. They provide service between the first floor and seventh floor parking garage. They were last inspected on August 14, 2014. See the elevator report for costs and timing of modernization.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Install Braille signage at elevator jamb	2.0 - EACH	400.0	CC - Accessibility	Priority 1	2015	800
D1011	Perform 5-year load test	2.0 - EACH	300.0	CC - Building Code	Priority 1	2015	600
D1011	Replace D1011 Passenger Elevator 3500 lbs	2.0 - EACH	378742.7	IN - Beyond Rated Life	Priority 4	2022	757,485

Item	Description
D1011 Passenger Elevators	D1011 Passenger Elevator 3500 lbs
Condition	Good
Qty / UOM	5 / EA
RUL (years)	7
Location	Elevator Rooms

OBSERVATIONS/COMMENTS:

The passenger elevators are original to the building. They are gearless-type elevators powered by 50-hp motors. They provide service between the 1st floor and 17th floor. They were last inspected on August 14, 2014. See the elevator report for costs and timing of modernization.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Perform 5-year load test	5.0 - EA	3000.0	CC - Building Code	Priority 1	2015	15,000
D1011	Install Braille signage at jamb	5.0 - EA	400.0	CC - Accessibility	Priority 1	2015	2,000
D1011	Replace D1011 Passenger Elevator 3500 lbs	5.0 - EA	546000.0	IN - Beyond Rated Life	Priority 4	2022	2,730,000

Item	Description
D1012 Freight Elevators	D1011 Freight Elevator 6000 lbs
Condition	Good
Qty / UOM	1 / EA
RUL (years)	7
Location	Elevator Rooms

OBSERVATIONS/COMMENTS:

The freight elevator is original to the building. It is a traction-type elevator with 60-hp motor. It was last inspected on August 14, 2014. See the elevator report in the appendices for more information.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1012	Perform 5-year load test	1.0 - EA	3000.0	CC - Building Code	Priority 1	2015	3,000
D1012	Replace D1011 Freight Elevator 6000 lbs	1.0 - EA	378742.7	IN - Beyond Rated Life	Priority 4	2022	378,743

Item	Description
D1093 Hoists & Cranes	D1093 Swing Stage
Condition	Poor
Qty / UOM	1 / EA
RUL (years)	0
Location	AG Roof

OBSERVATIONS/COMMENTS:

The swing staging for window cleaning and exterior façade work does not function properly. The rollers and retraction equipment are dysfunctional.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1093	Replace D1093 Swing Stage	1.0 - EA	103740.0	OP - Maintenance	Priority 1	2015	103,740

COST SUMMARY:

Type	Year	Total Expenditures
D10 Conveying Systems	2015	\$125,140
D10 Conveying Systems	2022	\$3,866,228

**D20 PLUMBING**

Item	Description
D2011 Water Closets	D2011 Commercial Grade Water Closet, 1.6 GPF
Condition	Fair
Qty / UOM	105 / EA
RUL (years)	0
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

Manual flush valves were on the majority of plumbing fixtures. Automatic flush valves are recommended to improve hygiene and reduce water usage.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2011	Install automatic flush valves on toilets	105.0 - EA	400.0	OP - Energy	Priority 2	2015	42,000

Item	Description
D2012 Urinals	D2012 Urinal
Condition	Fair
Qty / UOM	25 / EA
RUL (years)	15
Location	Throughout Facility
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

The urinals are functional and have been fit with automatic flush valves. No further action is required.

Item	Description
D2013 Lavatories	D2012 Lavatory Sink
Condition	Fair
Qty / UOM	96 / EA
RUL (years)	10
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The lavatory sinks are functional and manual. There were no ADA issues. Automatic valves are recommended to improve hygiene and reduce water consumption.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2013	Automatic valves	96.0 - ea	287.0	FN - Modernization	Priority 2	2015	27,552

Item	Description
<b>D2014 Sinks</b>	D2014 Kitchen Top Sink and Faucet
<b>Condition</b>	Good
<b>Qty / UOM</b>	24 / EA
<b>RUL (years)</b>	10
<b>Location</b>	Throughout Facility

OBSERVATIONS/COMMENTS:

No further action is required.

Item	Description
<b>D2017 Showers</b>	D2017 Stall Shower and Faucet
<b>Condition</b>	Good
<b>Qty / UOM</b>	6 / EA
<b>RUL (years)</b>	5
<b>Location</b>	Throughout Facility

OBSERVATIONS/COMMENTS:

Roll-in showers in the restroom at the mezzanine level are ADA compliant.

Item	Description
<b>D2018 Drinking Fountains and Coolers</b>	D2018 Drinking Fountain
<b>Condition</b>	Good
<b>Qty / UOM</b>	13 / EA
<b>RUL (years)</b>	5
<b>Location</b>	Throughout Building

OBSERVATIONS/COMMENTS:

Drinking fountains are located near restrooms. Based on RUL, replacement is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2018	Replace D2018 Drinking Fountain	13.0 - EA	2876.6	IN - Beyond Rated Life	Priority 3	2020	37,396

Item	Description
D2022 Hot Water Service	D2022 DHW Heater - Electric 71 Gal
Condition	Good
Qty / UOM	1 / EA
RUL (years)	7
Location	12th Floor - Janitor Closet

OBSERVATIONS/COMMENTS:

There is a 71 gallon water heater that provides hot water for the restrooms. Based on the RUL, replacement is recommended during the assessment period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2022	Replace D2022 DHW Heater - Electric 71 Gal	1.0 - EA	7696.0	IN - Beyond Rated Life	Priority 4	2022	7,696

Item	Description
D2022 Hot Water Service	D2022 DHW Heater - 30 Gal
Condition	Good
Qty / UOM	1 / EA
RUL (years)	5
Location	Attorney General Office - Janitor Closet

OBSERVATIONS/COMMENTS:

There is a 30 gallon water heater that provides hot water for the restrooms in the Attorney General's office. Based on the estimated RUL replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2022	Replace D2022 DHW Heater - 30 Gal	1.0 - EA	3610.8	IN - Beyond Rated Life	Priority 3	2020	3,611

Item	Description
D2022 Hot Water Service	D2022 DHW Heater - 20 Gal
Condition	Good
Qty / UOM	1 / EA
RUL (years)	5
Location	12th Floor Janitor Closet

OBSERVATIONS/COMMENTS:

There is a 20 gallon water heater that provides hot water to the 12th floor restroom. Based on the estimated RUL, replacement is anticipated during the term.'

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2022	Replace D2022 DHW Heater - 20 Gal	1.0 - EA	2407.2	IN - Beyond Rated Life	Priority 3	2020	2,407

Item	Description
D2022 Hot Water Service	D2022 DHW Heater - 10 Gal
Condition	Good
Qty / UOM	4 / EA
RUL (years)	5
Location	Janitor Closets

OBSERVATIONS/COMMENTS:

These water heaters provide hot water for the restrooms throughout the building. Based on the estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2022	Replace D2022 DHW Heater - 10 Gal	4.0 - EA	1203.6	IN - Beyond Rated Life	Priority 3	2020	4,814

Item	Description
D2022 Hot Water Service	D2022 DHW Heater - 40 Gal
Condition	Good
Qty / UOM	1 / EA
RUL (years)	5
Location	7th Floor Janitor Closet

OBSERVATIONS/COMMENTS:

There is a 40 gallon water heater that provides hot water for the restrooms on floors seven and eight. Based on the estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2022	Replace D2022 DHW Heater - 40 Gal	1.0 - EA	4814.4	IN - Beyond Rated Life	Priority 3	2020	4,814

Item	Description
D2022 Hot Water Service	D2022 DHW Electric Heater - 119 Gal
Condition	Good
Qty / UOM	1 / EA
RUL (years)	13
Location	2nd Flr - Shop Room

OBSERVATIONS/COMMENTS:

There is a 119 gallon electric water heater located in the shop room that provides hot water for the cafeteria and restrooms on the second floor.

Item	Description
D2022 Hot Water Service	D2022 Heater - Electric 30 Gal
Condition	Poor
Qty / UOM	1 / EA
RUL (years)	0
Location	Mail Room

OBSERVATIONS/COMMENTS:

There is a 30 gallon water heater that is no longer used for the print room and mail room. It is recommended that the water heater be removed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2022	Replace D2022 Heater - Electric 30 Gal	1.0 - EA	3610.8	FN - Obsolescence	Priority 1	2015	3,611

Item	Description
D2023 Domestic Water Supply Equipment	D2023 DHW Distribution Pump 15 hp
Condition	Poor
Qty / UOM	3 / EA
RUL (years)	3
Location	Fire Sprinkler Room

OBSERVATIONS/COMMENTS:

Inline cold water pumps for the DHW supply water to the building. According to building staff, one of the pumps needs a new regulator. The pumps are original to the building. Based on their estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2023	Replace D2023 DHW Distribution Pump 15 hp	3.0 - EA	24553.4	IN - Beyond Rated Life	Priority 3	2018	73,660

Item	Description
D2023 Domestic Water Supply Equipment	D2023 Instantaneous Water Heater
Condition	Good
Qty / UOM	22 / EA
RUL (years)	5
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Multiple wall mounted electric instant water heaters located in the break room closets provide hot water for kitchenettes. Based on their estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2023	Replace D2023 Instantaneous Water Heater	22.0 - EA	2140.0	IN - Beyond Rated Life	Priority 3	2020	47,080

**COST SUMMARY:**

Type	Year	Total Expenditures
D20 Plumbing	2015	\$73,163
D20 Plumbing	2018	\$73,660
D20 Plumbing	2020	\$100,123
D20 Plumbing	2022	\$7,696

**D30 HVAC**

Energy Supply	
Item	Description
Fuel Oil Type	N/A
Fuel Gas Type	N/A
Solid Fuel Type	N/A
District Heat Type	N/A
District Cooling Type	N/A
Solar Thermal	No
Fuel Tank Type	N/A
Fuel Tank Size (gallons)	N/A
Fuel Tank Location	N/A
Gas Meter Location	Exterior west
Electrical Meter Location	Inside main electrical room 1st floor
Water Meter Location	Exterior east outside

Item	Description
D3021 Boilers	D3021 Hydronic Gas Boilers (3000 MBH)
Condition	Poor
Qty / UOM	2 / EA
RUL (years)	10
Location	AG Roof

**OBSERVATIONS/COMMENTS:**

Two hydronic heating boilers on roof, each with dual fire rate of 3000 MBH and 1800 MBH, supply the heating to the building. The equipment runs all the time based on call for heat from EMS. The boilers handled the load of the

buildings. The burners were not functioning properly and should be replaced. No further action is required beyond burner replacement.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3021	Replace D3021 Burners	2.0 - EA	38500.0	FN - Modernization	Priority 1	2015	77,000

Item	Description
<b>D3022.1 Circulating Pumps</b>	D3022.1 Chiller Secondary Distribution Pump 25hp
<b>Condition</b>	Good
<b>Qty / UOM</b>	2 / EA
<b>RUL (years)</b>	5
<b>Location</b>	AG Chiller Room

**OBSERVATIONS/COMMENTS:**

Chiller distribution pumps supply chilled water to all the building's air handlers. They all have connected VFDs and control the flow based on EMS. One VFD is an older 1995 model which needs to be replaced, as it is at the end of its life cycle.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022.1 Chiller Secondary Distribution Pump 25hp	2.0 - EA	1879.4	IN - Beyond Rated Life	Priority 3	2020	3,759
D3022	Replace D3022 Older VFD- 1995 model	1.0 - ea	12375.1	FN - Modernization	Priority 3	2020	12,375

Item	Description
D3022.1 Circulating Pumps	D3022.1 Chiller Condenser Pump 25 hp
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	5
Location	AG Chiller Room

OBSERVATIONS/COMMENTS:

Condenser pumps supply water from the cooling towers after rejecting heat they run back to chiller. They control the flow based on the energy management system (EMS). Based on their estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022.1 Chiller Condenser Pump 25 hp	2.0 - EA	26054.9	IN - Beyond Rated Life	Priority 3	2020	52,110

Item	Description
D3022.1 Circulating Pumps	D3022.1 Chiller Primary Pump 15 hp
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	5
Location	AG Chiller Room

OBSERVATIONS/COMMENTS:

Primary distribution pumps for the chiller recirculate chilled water through primary loop. Based on their estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022.1 Chiller Primary Pump 15 hp	2.0 - EA	19837.2	IN - Beyond Rated Life	Priority 3	2020	39,674

Item	Description
D3022.1 Circulating Pumps	D3022.1 HWS Circulation Pumps 7.5 HP
Condition	Poor
Qty / UOM	2 / EA
RUL (years)	0
Location	AG Roof

OBSERVATIONS/COMMENTS:

Boiler distribution pumps supply hot water to all the building's air handlers. They do not have variable frequency drives (VFD) connected, and supply 130 degrees Fahrenheit water all the time. The pumps were working adequately, but based on the age and exposure to outside, it is recommended that the distribution pumps be replaced with new pumps and VFDs that tie into EMS.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022.1 HWS Circulation Pumps 7.5 HP	2.0 - EA	19837.2	IN - Beyond Rated Life	Priority 1	2015	39,674
D3022	New VFD drives	2.0 - ea	12375.0	FN - Modernization	Priority 1	2015	24,750

Item	Description
D3023 Auxiliary Equipment	D3023 Expansion Tank (119 Gal)
Condition	Good
Qty / UOM	1 / EA
RUL (years)	5
Location	AG Roof

OBSERVATIONS/COMMENTS:

Based on its estimated RUL, replacement is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3023	Replace D3023 Expansion Tank (119 Gal)	1.0 - EA	14372.5	IN - Beyond Rated Life	Priority 3	2020	14,373

Item	Description
D3023 Auxiliary Equipment	D3023 Expansion Tank (57 Gal)
Condition	Good
Qty / UOM	1 / EA
RUL (years)	5
Location	AG Chiller Room

OBSERVATIONS/COMMENTS:

Based on its estimated RUL, replacement is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3023	Replace D3023 Expansion Tank (57 Gal)	1.0 - EA	8412.5	IN - Beyond Rated Life	Priority 3	2020	8,413

Item	Description
D3031.1 Chillers	D3031.1 Water cooled chiller 350 ton
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	5
Location	AG Chiller Room

OBSERVATIONS/COMMENTS:

Two water cooled centrifugal chillers (350 tons each), supply the chilled water to the building and are controlled by an EMS. Based on their estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3031	Replace D3031.1 Water cooled chiller 350 ton	2.0 - EA	682992.0	IN - Beyond Rated Life	Priority 3	2020	1,365,984

Item	Description
D3031.2 Cooling Towers	D3031.2 Cooling Tower chemical water treatment
Condition	Good
Qty / UOM	1 / EA
RUL (years)	5
Location	AG Chiller Room

OBSERVATIONS/COMMENTS:

Cooling water treatment to remove rust, mud, sand, and other debris from tower and pipe surfaces also removes biocides, control algal, fungal, and bacterial slimes in cooling tower. It also has two expansion tanks of 80 gallons each. According to building staff it is original to building and works adequately. Based on the estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3031	Replace D3031.2 Cooling Tower chemical water treatment	1.0 - EA	19840.0	IN - Beyond Rated Life	Priority 3	2020	19,840

Item	Description
D3031.2 Cooling Towers	D3031.2 Cooling Towers
Condition	Good
Qty / UOM	2 / EA
RUL (years)	0
Location	AG Roof

OBSERVATIONS/COMMENTS:

The two cooling towers for the chillers are located on the roof. There are four 7.5-hp fan motors. There are no VFDs. Replacement fans with VFDs are recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3031	New VFD drives	4.0 - EA	12375.0	OP - Energy	Priority 1	2015	49,500
D3031	Fan motors	4.0 - EA	1264.0	OP - Energy	Priority 1	2015	5,056

Item	Description
D3041.1 Air Handling Units	D3041.1 AHU 54300 CFM
Condition	Fair
Qty / UOM	4 / EA
RUL (years)	20
Location	AG Roof

OBSERVATIONS/COMMENTS:

Multiple air handlers (60-hp) on north and south penthouse supply the fan coil and VAV boxes in building, based on the call for heating or cooling from the zonal temperature sensors. All AHUs are equipped with a two-pipe system for hot or chilled water circulation. Dampers on the air handlers are pneumatic and are controlled by EMS. There are VFDs for all supply AHU motors, also controlled by EMS. It maintains 1 inch static pressure in the duct. MERV-14 Filters on the fan are cleaned annually. The equipment was working adequately and motor replacement is the only recommendation.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	New Motor	4.0 - ea	8029.0	OP - Energy	Priority 3	2020	32,116

Item	Description
D3041.1 Air Handling Units	D3041.1 AHU 14000CFM
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	20
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Multiple air handlers supply the fan coils and VAV boxes serving cafeteria and mailroom, with desired air temperature based on the call for heating or cooling from the zonal temperature sensors. All AHUs are equipped with a two-pipe system for hot or chilled water circulation. Dampers on the air handlers are all pneumatic, controlled by EMS. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	New Motor 7.5 hp	2.0 - ea	1264.0	OP - Energy	Priority 1	2015	2,528

Item	Description
D3041.1 Air Handling Units	D3041.1 Stairway pressurization fan 9450 CFM
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	20
Location	AG Roof

OBSERVATIONS/COMMENTS:

There are two pressurization fans which are belt-driven by 5-hp motors to maintain pressure within the stairwells in the event of a fire. Belts are replaced by the maintenance staff on as-needed basis. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	New Motor	2.0 - ea	938.0	OP - Energy	Priority 1	2015	1,876

Item	Description
D3041.2 Terminal Units VAV	D3041 VAV Boxes
Condition	Fair
Qty / UOM	418 / EA
RUL (years)	10
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by VAVs supplied with conditioned air from the rooftop air handlers. They supply the multiple diffusers located in office spaces. Exterior VAVs have reheat coils. The CFM range is from 200 to 2700 CFM for the boxes. The equipment were working adequately with minor maintenance repairs on as-needed basis. No further action is required.

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan (5 hp)
Condition	Poor - Fair
Qty / UOM	2 / EA
RUL (years)	5
Location	AG Roof

OBSERVATIONS/COMMENTS:

Exhaust fans for the electrical and telecom room on the 7th to 17th floors are connected to the HVAC duct system, and exhaust air out of the building to keep the building in balance with the supply air. Majority of the fans are belt driven. Belts are replaced by the maintenance staff on as-needed basis. Fan replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	Replace D3042 Exhaust Fan (5 hp)	2.0 - EA	16594.2	OP - Energy	Priority 3	2020	33,188

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Restroom Exhaust Fan (5 hp)
Condition	Poor - Fair
Qty / UOM	3 / EA
RUL (years)	5
Location	AG Roof

OBSERVATIONS/COMMENTS:

Exhaust fans (11,600 CFM) on the roof, are connected to the restroom system and exhaust air out of the building to keep the building in balance with the supply air. The majority of the fans are belt driven. Belts are replaced by the maintenance staff on as-needed basis. Fans are recommended for replacement.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	Replace D3042 Restroom Exhaust Fan (5 hp)	3.0 - EA	7965.2	OP - Energy	Priority 3	2020	23,896

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 8500 CFM
Condition	Poor - Fair
Qty / UOM	3 / EA
RUL (years)	13
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Exhaust fans for the cafeteria, print shop, and mailroom are connected to the HVAC duct system, and exhaust air out of the building to keep the building in balance with the supply air. The majority of the fans are belt driven. Belts are replaced by the maintenance staff on as needed basis. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	New motor	3.0 - EA	1155.0	OP - Energy	Priority 3	2020	3,465

Item	Description
D3042 Exhaust Ventilation Systems	D3042 General Exhaust Fan 8000 cfm
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	11
Location	AG Roof

OBSERVATIONS/COMMENTS:

Exhaust fans (5-hp) for floors 7 through 17 are connected to the HVAC duct system and exhaust air out of the building to keep the building in balance with the supply air. The majority of the fans are belt driven. Belts are replaced by the maintenance staff on as-needed basis. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	New Motor	1.0 - EA	938.0	OP - Energy	Priority 3	2020	938

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust fan upto 1 hp
Condition	Poor - Fair
Qty / UOM	6 / EA
RUL (years)	12
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Exhaust fans on the mezzanine area are connected to the HVAC duct system, and exhaust air out of the building to keep the building in balance with the supply air. The majority of the fans are belt driven. Belts are replaced by the maintenance staff on as-needed basis. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	New Motor	6.0 - EA	831.0	OP - Energy	Priority 2	2017	4,986

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust fan 1/2 hp
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Fire Sprinkler Room

OBSERVATIONS/COMMENTS:

Exhaust fans for the fire sprinkler room are connected to the HVAC duct system, and exhaust air out of the building to keep the building in balance with the supply air. Majority of the fans are belt driven. Belts are replaced by the maintenance staff on as- needed basis. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	New motor	1.0 - ea	831.0	OP - Energy	Priority 1	2015	831

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust fan 2 hp
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	15
Location	Fire Pump Room

OBSERVATIONS/COMMENTS:

Exhaust fans for the fire pump room are connected to the HVAC duct system, and exhaust air out of the building to keep the building in balance with the supply air. The majority of the fans are belt driven. Belts are replaced by the maintenance staff on as-needed basis. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	New Motor	1.0 - EA	831.0	OP - Energy	Priority 3	2020	831

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust fan 1/4hp
Condition	Poor - Fair
Qty / UOM	2 / EA
RUL (years)	5
Location	Loading Dock

OBSERVATIONS/COMMENTS:

Exhaust fans for the kitchen trash room and mail room are connected to the HVAC duct system, and exhaust air out of the building to keep the building in balance with the supply air. The majority of the fans are belt driven. Belts are replaced by the maintenance staff on as-needed basis. Replacment is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	Replace D3042 Exhaust fan 1/4hp	2.0 - EA	4196.3	OP - Energy	Priority 3	2020	8,393

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Return fan 40000 cfm
Condition	Good
Qty / UOM	2 / EA
RUL (years)	10
Location	AG Roof

OBSERVATIONS/COMMENTS:

Return fans (15-hp) on the roof are connected to the HVAC duct system, and exhaust air out of the building to keep the building in balance with the supply air. They have VFDs and are connected to EMS. They are used to exhaust air when the generator operates. The majority of the fans are belt driven. Belts are replaced by the maintenance staff on as-needed basis. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	New Motor	2.0 - EA	2025.0	OP - Energy	Priority 1	2015	4,050

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Return fan 83000 cfm
Condition	Good
Qty / UOM	1 / EA
RUL (years)	12
Location	AG Roof

OBSERVATIONS/COMMENTS:

Return fans (40-hp) on the roof are connected to the HVAC duct system, and exhaust air out of the building to keep the building in balance with the supply air. It has VFD and is connected to EMS. It is used to exhaust air when the generator operates. The majority of the fans are belt driven. Belts are replaced by the maintenance staff on as-needed basis. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	New Motor	1.0 - EA	3976.0	OP - Energy	Priority 3	2020	3,976

Item	Description
D3051 Terminal Self-Contained Units	D3051 Fan Coil 9 tons cooling
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	Switchgear Room-Roof

OBSERVATIONS/COMMENTS:

Fan coil unit provides conditioned air to main switchgear room. It is ceiling mounted and contains R-22, with a 1-hp motor. According to building staff, it is working adequately. Based on the estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3051	Replace D3051 Fan Coil 9 tons cooling	1.0 - EA	87035.0	IN - Beyond Rated Life	Priority 3	2020	87,035

Item	Description
D3051 Terminal Self-Contained Units	D3051 Fan Coil 3 tons cooling
Condition	Good
Qty / UOM	1 / EA
RUL (years)	12
Location	8 th and 7 th floor

OBSERVATIONS/COMMENTS:

This fan coil unit provides conditioned air to multiple diffusers in the electrical and telecom room on the seventh floor. It has R-22 refrigerant. According to building staff, it is working adequately and is repaired on an as-needed basis. Motor replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3051	new motor	1.0 - EA	831.0	OP - Energy	Priority 2	2017	831

Item	Description
D3051.1 Terminal Heat Pumps	D3051.1 Packaged Heat pump 10 ton
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	AG Elevator Rooms

OBSERVATIONS/COMMENTS:

Packaged rooftop unit using R-22 refrigerant provides additional cooling or heating to the elevator room. According to building staff, they were working adequately. Based on their estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3051	Replace D3051.1 Packaged Heat pump 10 ton	1.0 - EA	35540.9	IN - Beyond Rated Life	Priority 3	2020	35,541

Item	Description
D3052 Package Units	D3052 PTAC unit 1 Ton
Condition	Good
Qty / UOM	1 / EA
RUL (years)	5
Location	9th floor

OBSERVATIONS/COMMENTS:

Packaged air conditioner for Press Room cooling is maintained at 76 degrees Fahrenheit and exhausts into the above ceiling plenum. Based on the estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3052	Replace D3052 PTAC unit 1 Ton	1.0 - EA	12619.3	IN - Beyond Rated Life	Priority 3	2020	12,619

Item	Description
D3052 Package Units	D3052 Single packaged Cooling unit 1.5 Ton
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	5
Location	13th floor docketing room

OBSERVATIONS/COMMENTS:

Packaged unit for the docketing room cooling is maintained at 76 degrees Fahrenheit and exhausts heat into the plenum. Based on their estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3052	Replace D3052 Single packaged Cooling unit 1.5 Ton	1.0 - EA	12619.3	IN - Beyond Rated Life	Priority 3	2020	12,619

Item	Description
D3052 Package Units	D3052 Packaged Cooling unit 2 Ton
Condition	Good
Qty / UOM	1 / EA
RUL (years)	8
Location	12 th floor

OBSERVATIONS/COMMENTS:

Based on its estimated RUL replacement of this unit is anticipated.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3052	Replace D3052 Packaged Cooling unit 2 Ton	1.0 - EA	15625.3	IN - Beyond Rated Life	Priority 4	2023	15,625

Item	Description
D3052 Package Units	D3052 Single packaged Cooling unit 5 Ton
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	RSC Room

OBSERVATIONS/COMMENTS:

This unit serves the RSC room. Based on the estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3052	Replace D3052 Single packaged Cooling unit 5 Ton	1.0 - EA	5078.2	IN - Beyond Rated Life	Priority 3	2020	5,078

Item	Description
D3052 Package Units	D3052 Single packaged Cooling unit 5 Ton
Condition	Good
Qty / UOM	1 / EA
RUL (years)	16
Location	11th floor

OBSERVATIONS/COMMENTS:

Packaged unit for security room cooling. It is maintained at 76 degrees Fahrenheit and exhausts to outside.

Item	Description
D3052 Package Units	D3052 Single packaged Cooling unit 1Ton
Condition	Good
Qty / UOM	1 / EA
RUL (years)	5
Location	9th floor

OBSERVATIONS/COMMENTS:

No further action is required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3052	Replace D3052 Single packaged Cooling unit 1Ton	1.0 - EA	2673.8	IN - Beyond Rated Life	Priority 3	2020	2,674

Item	Description
D3068 Building Automation Systems	D3068 DDC Controls
Condition	Fair - Good
Qty / UOM	560661 / SF
RUL (years)	0
Location	AG Chiller Room

OBSERVATIONS/COMMENTS:

All the building HVAC equipment runs on pneumatic control system tied into EMS. There are DDC controls in limited areas. Most of the system is original to the building. Upgrade of controls is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3068	Replace D3068 DDC Controls	560,661.0 - SF	11.6	FN - Modernization	Priority 1	2015	6,477,653

COST SUMMARY:

Type	Year	Total Expenditures
D30 HVAC	2015	\$6,682,918
D30 HVAC	2017	\$5,817
D30 HVAC	2020	\$1,778,896
D30 HVAC	2023	\$15,625

**D40 FIRE PROTECTION SYSTEMS**

<b>Fire and Life Safety System</b>	
<b>Item</b>	<b>Description</b>
<b>Fire Alarm System Components Present</b>	
Smoke detectors	Yes
Pull stations	Yes
Audible alarms	Yes
Strobe lights	Yes
Central fire alarm panel	Yes
Annunciator panel	Yes
Smoke Detectors Power Supply	N/A
Carbon Monoxide Detectors	N/A
Heat Detector	N/A
Central Fire Alarm Panel Location	N/A
Annunciator Panel Location	N/A
Fire Extinguishers	Yes
Fire Extinguisher Inspection Date	October 23, 2014
Distance to Nearest Fire Hydrant (ft)	20
Illuminated Exit Signs	Yes
Kitchen Suppression Systems	No
Halon Gas Systems	No
Smoke Evacuation Systems	No
Fire-rated Stairwells	Yes
Fire-rated Stairwell Finish	Drywall
Stairwell Discharge	Exterior of the building at Grade
Stairwell Pressurized	No
Fire-Rated Doors Observed	Yes
Location of Fire-Rated Doors	Stairwells
Fire Alarm Service Company	N/A
Date of Last Fire Alarm Service	N/A
Are the individual office unit fire alarm systems monitored?	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
<b>D4011 Sprinkler Water Supply</b>	D4011 Water Tank for Fire Sprinklers, 23,696 Gal
<b>Condition</b>	Good
<b>Qty / UOM</b>	1 / EA
<b>RUL (years)</b>	13
<b>Location</b>	Fire Pump Room

OBSERVATIONS/COMMENTS:

Backup water for the fire sprinkler system is collected in a tank underground. No further action is required.

Item	Description
<b>D4011 Sprinkler Water Supply</b>	D4011 Wet-Pipe Sprinkler System
<b>Condition</b>	Good
<b>Qty / UOM</b>	560661 / SF
<b>RUL (years)</b>	19
<b>Location</b>	Throughout Facility

OBSERVATIONS/COMMENTS:

A wet pipe fire sprinkler system is located throughout the facility, office spaces, and the computer data room located Building A. It was upgraded in 2009. According to maintenance staff, it is inspected regularly. No further action is required.

Item	Description
<b>D4012 Sprinkler Pumping Equipment</b>	D4012 Jockey pump (3 hp)
<b>Condition</b>	Good
<b>Qty / UOM</b>	1 / EA
<b>RUL (years)</b>	10
<b>Location</b>	Fire Pump Room

OBSERVATIONS/COMMENTS:

The jockey pump maintains 75 psi within the sprinkler system. No further action is required

Item	Description
D4012 Sprinkler Pumping Equipment	D4012 Fire pump Diesel (160 hp)
Condition	Good
Qty / UOM	1 / EA
RUL (years)	10
Location	Fire Pump Room

OBSERVATIONS/COMMENTS:

The 160-hp diesel fire pump supplies water to all the buildings in case of fire emergency, and is a backup for the electric fire pump. No further action is required

Item	Description
D4012 Sprinkler Pumping Equipment	D4012 Fire Pump Electric
Condition	Good
Qty / UOM	1 / EA
RUL (years)	10
Location	Fire Pump Room

OBSERVATIONS/COMMENTS:

One 150-hp electric fire pump supplies water to all the buildings in case of fire emergency. No further action is required

Item	Description
D4031 Fire Extinguishers	D4031 Ansul System at Kitchen Hood
Condition	Good
Qty / UOM	1 / EA
RUL (years)	10
Location	Cafeteria

OBSERVATIONS/COMMENTS:

Based on the estimated RUL, replacement is anticipated during the term.

**COST SUMMARY:**

<b>Type</b>	<b>Year</b>	<b>Total Expenditures</b>
D40 Fire Protection Systems	2019	\$33,354
D40 Fire Protection Systems	2024	\$33,354

**D50 ELECTRICAL SYSTEMS**

Item	Description
D5012 Low Tension Service & Dist.	D5012 Dry Transformer 30 kVA
Condition	Good
Qty / UOM	10 / EA
RUL (years)	10
Location	Electrical Rooms

OBSERVATIONS/COMMENTS:

The secondary transformers in all electrical rooms are original to 1995. The electrical service is reportedly adequate for the facility's needs and the transformers are in working condition. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Dry Transformer 15 kVA
Condition	Good
Qty / UOM	4 / EA
RUL (years)	10
Location	Electrical Rooms

OBSERVATIONS/COMMENTS:

The secondary transformers in all electrical rooms are original to 1995. The electrical service is reportedly adequate for the facility's needs and the transformers are in functional condition. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Dry Transformer 45 kVA
Condition	Good
Qty / UOM	3 / EA
RUL (years)	10
Location	Electrical Rooms

OBSERVATIONS/COMMENTS:

The secondary transformers in all electrical rooms are original to 1995. The electrical service is reportedly adequate for the facility's needs and the transformers are in functional condition. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Dry Transformer 112.5 kVA
Condition	Good
Qty / UOM	3 / EA
RUL (years)	10
Location	Electrical Rooms

OBSERVATIONS/COMMENTS:

The secondary transformers in all electrical rooms are original to 1995. The electrical service is reportedly adequate for the facility's needs and the transformers are in functional condition. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel <250 Amps
Condition	Fair - Good
Qty / UOM	26 / EA
RUL (years)	11
Location	Electrical Rooms

OBSERVATIONS/COMMENTS:

The breaker panels in all electrical rooms are original 1995 General Electric equipment. The electrical service is reportedly adequate for the facility's needs. No further action is recommended.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Substation Switchgear 3000 Amps
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	5
Location	Main Electrical Rooms

OBSERVATIONS/COMMENTS:

The main emergency switchgears are original 1995 GE equipment. The electrical service is reportedly adequate for the facility's needs. Based on the estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5012 Substation Switchgear 3000 Amps	2.0 - EA	17847.0	FN - Modernization	Priority 3	2020	35,694

Item	Description
D5012 Low Tension Service & Dist.	D5012 Switchgear, Mainframe, 8000 Amps
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	11
Location	Main Electrical Rooms

OBSERVATIONS/COMMENTS:

The main emergency switchgear is original 1995 General Electric equipment. The electrical service is reportedly adequate for the facility's needs and the switchgear is in functional condition.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel 600 Amps
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	11
Location	Main Electrical Rooms

OBSERVATIONS/COMMENTS:

The breaker panels in all electrical rooms are original 1995 General Electric equipment. The electrical service is reportedly adequate for the facility's needs. No further action is recommended.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel up to 600 - 1600 Amps
Condition	Fair - Good
Qty / UOM	10 / EA
RUL (years)	11
Location	Electrical Rooms

OBSERVATIONS/COMMENTS:

The breaker panels in all electrical rooms are original 1995 General Electric equipment. The electrical service is reportedly adequate for the facility's needs. No further action is recommended.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Dry Transformer 75 kVA
Condition	Poor - Fair
Qty / UOM	11 / EA
RUL (years)	4
Location	Electrical Rooms

OBSERVATIONS/COMMENTS:

The secondary transformers in all electrical rooms are original to 1995. The electrical service is reportedly adequate for the facility's needs and the transformers are in functional condition. Due to the age of the components, however, long-term lifecycle replacement is recommended. Two transformers are problematic and require replacement.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	New 75 kW transformer	2.0 - EA	8135.0	OP - Maintenance	Priority 2	2015	16,270

Item	Description
D5012 Low Tension Service & Dist.	D5012 Emergency Distribution Panel, 1000Amp
Condition	Good
Qty / UOM	1 / EA
RUL (years)	20
Location	Main Electrical Rooms

OBSERVATIONS/COMMENTS:

The emergency breaker panel in the central plant is original 1995 equipment. The electrical service is reportedly adequate for the facility's needs and the panels are in functional condition. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel 250<600 Amps
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	11
Location	Electrical Rooms

OBSERVATIONS/COMMENTS:

The breaker panels in all electrical rooms are original 1995 General Electric equipment. The electrical service is reportedly adequate for the facility's needs. No further action is recommended.

Item	Description
D5021 Branch Wiring Devices	D5021 Day Lighting Sensors
Condition	Good
Qty / UOM	200 / EA
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Ceiling mounted daylight sensors control the T8 lighting fixtures and are original to building. Replacement is required to provide daylight sensors that work in conjunction with EMS.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5021	Replace D5021 Day Lighting Sensors	200.0 - EA	219.1	FN - Modernization	Priority 1	2015	43,811

Item	Description
D5021 Branch Wiring Devices	D5021 Motion Sensor Lighting Control
Condition	Fair
Qty / UOM	220 / EA
RUL (years)	5
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Wall mounted timers need to be modernized to function with EMS system.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5021	Replace D5021 Motion Sensor Lighting Control	220.0 - EA	219.1	FN - Modernization	Priority 3	2020	48,192

Item	Description
D5022 Lighting Equipment	D5022 Lighting Fixtures
Condition	Fair - Good
Qty / UOM	1136 / EA
RUL (years)	3
Location	Offices and corridors

OBSERVATIONS/COMMENTS:

Replacement of the light fixtures will be required when the acoustic ceiling tile system is replaced.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Lighting Fixtures	1,136.0 - EA	401.2	FN - Modernization	Priority 3	2018	455,763

Item	Description
D5022 Lighting Equipment	D5022 Floor mounted uplight 250 W HPS
Condition	Poor - Fair
Qty / UOM	19 / EA
RUL (years)	0
Location	AG Roof

OBSERVATIONS/COMMENTS:

Floor mounted lighting has not been used since energy crisis in 2000. Lighting removal is recommended. No cost added to perform this work.

Item	Description
D5022 Lighting Equipment	D5022 Canopies main lobby 150 W HPS
Condition	Poor - Fair
Qty / UOM	15 / EA
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Replacement of existing wall packs with more efficient lighting is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Canopies main lobby 150 W HPS	15.0 - EA	890.7	OP - Energy	Priority 1	2015	13,360

Item	Description
D5022 Lighting Equipment	D5022 Canopies 100 W HPS
Condition	Poor - Fair
Qty / UOM	135 / EA
RUL (years)	0
Location	2nd - 6th Floors

OBSERVATIONS/COMMENTS:

Replacement of existing wall packs with more efficient lighting is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Canopies 100 W HPS	135.0 - EA	890.7	OP - Energy	Priority 1	2015	120,240

Item	Description
D5022 Lighting Equipment	D5022 Canopies and up-lights 150 W HPS
Condition	Poor - Fair
Qty / UOM	28 / EA
RUL (years)	0
Location	Exterior

OBSERVATIONS/COMMENTS:

Replacement of existing wall packs with more efficient lighting is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Canopies and up-lights 150 W HPS	28.0 - EA	890.7	OP - Energy	Priority 1	2015	24,939

Item	Description
D5022 Lighting Equipment	D5022 Wall Pack 150 W HPS
Condition	Poor - Fair
Qty / UOM	5 / EA
RUL (years)	0
Location	Exterior

OBSERVATIONS/COMMENTS:

Replacement of existing wall packs with more efficient lighting is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Wall Pack 150 W HPS	5.0 - EA	890.7	OP - Energy	Priority 1	2015	4,453

Item	Description
D5022 Lighting Equipment	D5022 Wall pack 150 W HPS
Condition	Poor - Fair
Qty / UOM	10 / EA
RUL (years)	0
Location	Roof

OBSERVATIONS/COMMENTS:

Replacement of existing wall packs with more efficient lighting is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Wall pack 150 W HPS	10.0 - EA	890.7	OP - Energy	Priority 1	2015	8,907

Item	Description
D5022 Lighting Equipment	D5022 Canopies, 100 W HPS
Condition	Poor - Fair
Qty / UOM	6 / EA
RUL (years)	5
Location	Loading Dock

OBSERVATIONS/COMMENTS:

Replacement of existing wall packs with more efficient lighting is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Canopies, 100 W HPS	6.0 - EA	890.7	OP - Energy	Priority 3	2020	5,344

Item	Description
D5022 Lighting Equipment	D5022 Wall pack, 100 W HPS
Condition	Poor - Fair
Qty / UOM	3 / EA
RUL (years)	0
Location	7th and 8th floors

OBSERVATIONS/COMMENTS:

Replacement of existing wall packs with more efficient lighting is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Wall pack, 100 W HPS	3.0 - EA	890.7	OP - Energy	Priority 1	2015	2,672

Item	Description
D5022 Lighting Equipment	D5022 Canopies, 100 W HPS
Condition	Poor - Fair
Qty / UOM	23 / EA
RUL (years)	0
Location	7th and 8th floors

OBSERVATIONS/COMMENTS:

Replacement of existing wall packs with more efficient lighting is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Canopies, 100 W HPS	23.0 - EA	890.7	OP - Energy	Priority 1	2015	20,485

Item	Description
D5022 Lighting Equipment	D5022 Canopies near sign 150 W HPS
Condition	Poor - Fair
Qty / UOM	8 / EA
RUL (years)	0
Location	Exterior

OBSERVATIONS/COMMENTS:

Exterior wall packs near sign no longer work. It is recommended that these fixtures be removed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Canopies near sign 150 W HPS	8.0 - EA	890.7	IN - Beyond Rated Life	Priority 1	2015	7,125

Item	Description
D5032 Intercommunication & Paging System	D5032 ADA Renovations - Emergency Elevator Intercom
Condition	Fair - Good
Qty / UOM	8 / EA
RUL (years)	0
Location	Elevators

OBSERVATIONS/COMMENTS:

The emergency phones in elevators utilize handset devices. Replacement with ADA compliant intercom is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5032	replace intercom	8.0 - EA	6755.5	CC - Accessibility	Priority 1	2015	54,044

Item	Description
<b>D5037 Fire Alarm Systems</b>	D5037 Central Diesel Pump Panel and control of fire pump
<b>Condition</b>	Good
<b>Qty / UOM</b>	1 / EA
<b>RUL (years)</b>	10
<b>Location</b>	Fire Pump Room

OBSERVATIONS/COMMENTS:

No further action is required.

Item	Description
<b>D5037 Fire Alarm Systems</b>	D5037 Electric Pump Panel and control of fire pump
<b>Condition</b>	Good
<b>Qty / UOM</b>	1 / EA
<b>RUL (years)</b>	10
<b>Location</b>	Fire Pump Room

OBSERVATIONS/COMMENTS:

A central panel controls the operation of the fire pump. No further action is required.

Item	Description
<b>D5037 Fire Alarm Systems</b>	D5037 Fire Alarm System
<b>Condition</b>	Fair
<b>Qty / UOM</b>	560661 / SF
<b>RUL (years)</b>	21
<b>Location</b>	Throughout Facility

OBSERVATIONS/COMMENTS:

It is recommended that outdated fire panels on the roof are removed.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5037	D5037 Remove roof fire panels	2.0 - EA	650.0	CC - Life Safety	Priority 1	2015	1,300

Item	Description
<b>D5092 Emergency Light &amp; Power Systems</b>	D5092 Diesel Generator 765 KW
<b>Condition</b>	Good
<b>Qty / UOM</b>	1 / EA
<b>RUL (years)</b>	8
<b>Location</b>	Main Electrical Rooms
<b>Generator Fuel</b>	Diesel
<b>Power Rating kVA</b>	1560

OBSERVATIONS/COMMENTS:

The generator serves all the facility's backup emergency services and lighting. It is original to the building and tested monthly. Based on its estimated RUL, replacement is anticipated during the term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5092	Replace D5092 Diesel Generator 765 KW	1.0 - EA	622389.6	CC - Life Safety	Priority 4	2023	622,390

COST SUMMARY:

Type	Year	Total Expenditures
D50 Electrical Systems	2015	\$317,606
D50 Electrical Systems	2018	\$455,763
D50 Electrical Systems	2020	\$89,230
D50 Electrical Systems	2023	\$622,390

## E Equipment & Furnishing Systems

### E10 EQUIPMENT

Item	Description
<b>E1031 Vehicular Service Equipment</b>	E1031 Electric Charging Station
<b>Condition</b>	Good
<b>Qty / UOM</b>	4 / EA
<b>RUL (years)</b>	28
<b>Location</b>	2nd - 6th Floors

**OBSERVATIONS/COMMENTS:**

Electric vehicle charging stations are located on the fifth and third floors of the parking garage. No further action is required.

Item	Description
<b>E1092 Solid Waste Handling Equipment</b>	E1092 Trash Compactor
<b>Condition</b>	Good
<b>Qty / UOM</b>	1 / EA
<b>RUL (years)</b>	5
<b>Location</b>	Loading Dock

**OBSERVATIONS/COMMENTS:**

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

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
E1092	Replace E1092 Trash Compactor	1.0 - EA	22134.0	IN - Beyond Rated Life	Priority 4	2020	22,134

Item	Description
E1095 Unit Kitchens	E1095 Kitchenette
Condition	Good
Qty / UOM	24 / EA
RUL (years)	10
Location	

OBSERVATIONS/COMMENTS:

No further action required at this time.

Item	Description
E1099 Other Equipment	E1099 Rescue Air Filling Station
Condition	Good
Qty / UOM	3 / EA
RUL (years)	5
Location	Sixth, tenth, and 15th floors

OBSERVATIONS/COMMENTS:

Firefighter air replenishment system is located on the 6th, 10th, and 15th floors. Replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
E1099	Replace E1099 Rescue Air Filling Station	3.0 - EA	1860.0	CC - Life Safety	Priority 3	2020	5,580

COST SUMMARY:

Type	Year	Total Expenditures
E10 Equipment	2020	\$27,714

## G Building Sitework Systems

### G20 SITE IMPROVEMENTS

Site Information	
Item	Description
Main Ingress and Egress	I street
Access from	N
Additional Entrances	N/A
Access from	N/A
Parking Count: Open lot	0
Parking Count: Sheltered by carports	0
Parking Count: Private garages	0
Parking Count: Subterranean garage	597
Parking Count: Freestanding parking structure	0
Number of ADA Compliant Spaces	N/A
Number of ADA Compliant Spaces for Vans	N/A
Method of obtaining parking count	Site plan
Property Identification Sign-Primary	Structure mounted
Property Identification Sign- Secondary	Structure mounted
Illuminated Identification Signage	No
Building Identification Sign	Yes
Illuminated Sign	No
Location of Property ID Sign	North side of the property
Trees Present	Yes
Shrubs Present	Yes
Grasses Present	No
Flower beds Present	No
Decorative Rocks Present	No
Lava Rocks Present	No
Ponds Present	No
Fountains Present	No
Topography	Flat

Item	Description
G2022 Paving & Surfacing	G2022 Concrete Parking Surface Sealing
Condition	Poor
Qty / UOM	81200 / SF
RUL (years)	0
Location	Three levels of parking garage plus ramp

OBSERVATIONS/COMMENTS:

The first three levels of the parking garage have water infiltration issues from both vehicular runoff and exterior water infiltration. The original parking surface sealant is at the end of its useful life.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G2022	Reseal concrete deck	81,200.0 - SF	6.7	IN - Beyond Rated Life	Priority 1	2015	540,402

COST SUMMARY:

Type	Year	Total Expenditures
G20 Site Improvements	2015	\$540,402

**G30 SITE CIVIL/MECHANICAL UTILITIES**

Item	Description
G3063 Fuel Storage Tanks	G3063 Diesel Tank, 150 Gallon
Condition	Good
Qty / UOM	1 / EA
RUL (years)	11
Location	Fire Pump Room

OBSERVATIONS/COMMENTS:

No further action required.

# Z General Systems

## Z10 GENERAL REQUIREMENTS

Item	Description
Z1011 Further Studies	Z1011 Structural Study
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	0
Location	Utility rooms and at 17th level doorways

**OBSERVATIONS/COMMENTS:**

Structural study is recommended. Cracking along south beam line was observed at most utility rooms. The cracks vary from hairline to about 1/4 inch. Also some cracks were above doorways at the 17th level.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
Z1011	structural study	1.0 - EA	11830.0	CC - Life Safety	Priority 1	2015	11,830

Item	Description
Z1011 Further Studies	Z1011 Further Studies - Boiler Roof Covering
Condition	Poor
Qty / UOM	1 / EA
RUL (years)	0
Location	Rooftop Boiler

**OBSERVATIONS/COMMENTS:**

A study is recommended to examine the need to enclose the rooftop-mounted boilers, to reduce exposure to harsh outside conditions and weathering.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
Z1011	Replace Z1011 Further Studies - Boiler Roof Covering	1.0 - EA	11830.0	IN - Beyond Rated Life	Priority 2	2015	11,830

**COST SUMMARY:**

<b>Type</b>	<b>Year</b>	<b>Total Expenditures</b>
Z10 General Requirements	2015	\$23,660

The weather at the time of the assessment was:

Item	Description
Approximate Outdoor Temperature (degrees F)	60
Weather Conditions	Clear
Snow Covering Ground	No
Wind Conditions	Little to no wind

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

Item	Description
Site Plan Reviewed	Yes
Floor Plan Reviewed	Yes
Construction Drawings Reviewed	No
Termite Inspection Report Reviewed	No
Boiler Certificates Reviewed	No
Document Year Built Information Obtained From	Building Component List

## **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.

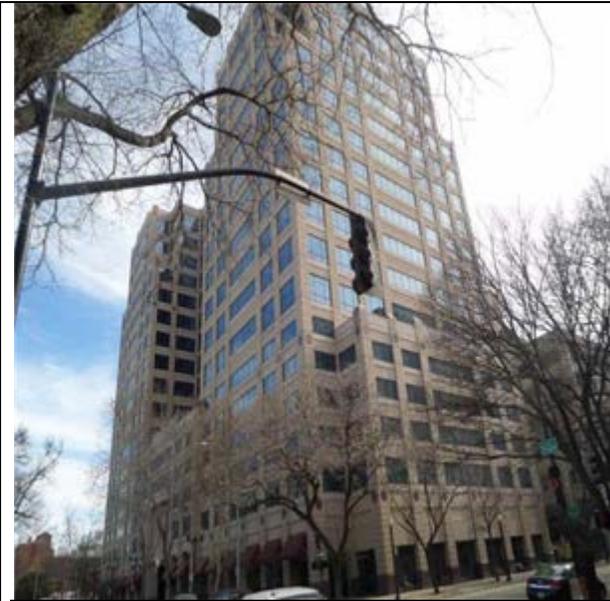
EMG's FCA cannot wholly eliminate the uncertainty regarding the presence of physical deficiencies and/or the performance of a subject property's building systems. Preparation of a FCA in accordance with ASTM E2018-08 is intended to reduce, but not eliminate, the uncertainty regarding the potential for 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:** Timothy Harder, Field Observer

**Reviewed By:**   
Matt Anderson, Program Manager

## **APPENDIX D: PHOTOS**



:- North and west elevations.



:- West building elevation.



:- Partial view of the south building elevation.



:- East building elevation.



**B1021 Helipad framing**



**B2010 Stucco and Lath**



**B2010 Stucco and Lath**



**B2011 Precast Concrete Panels**



**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills**



**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills**



**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills**



**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills**



**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills**



**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills**



**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills**



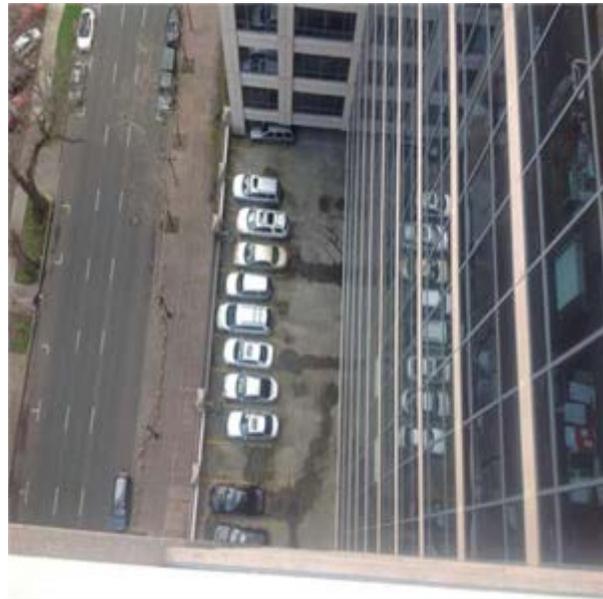
**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills**



B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills



B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills



B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills



B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills



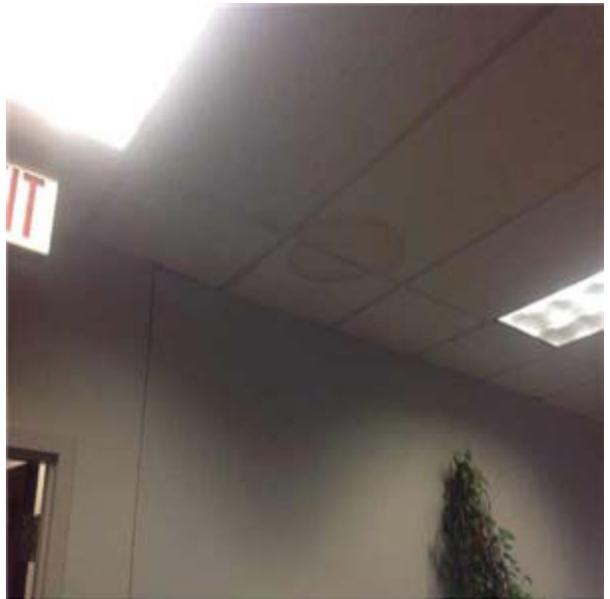
**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills**



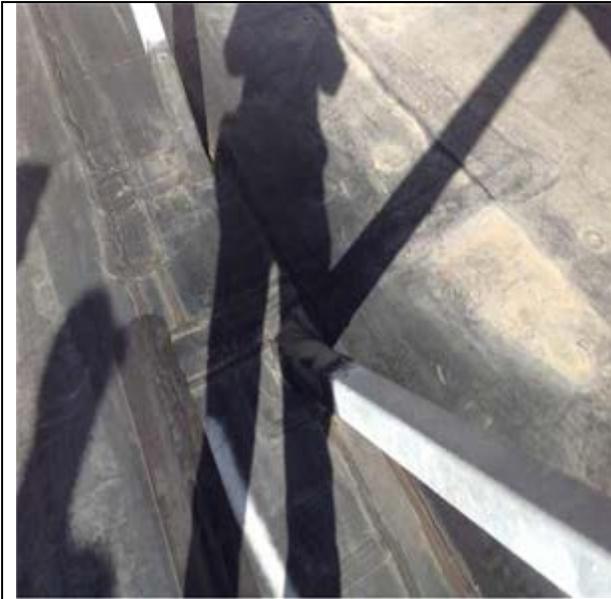
**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills**



**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills :- Visible moisture staining at the suspended ceiling tiles.**



**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills:- Visible moisture damage at the suspended ceiling.**



**B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills :- Helipad steel framing members.**



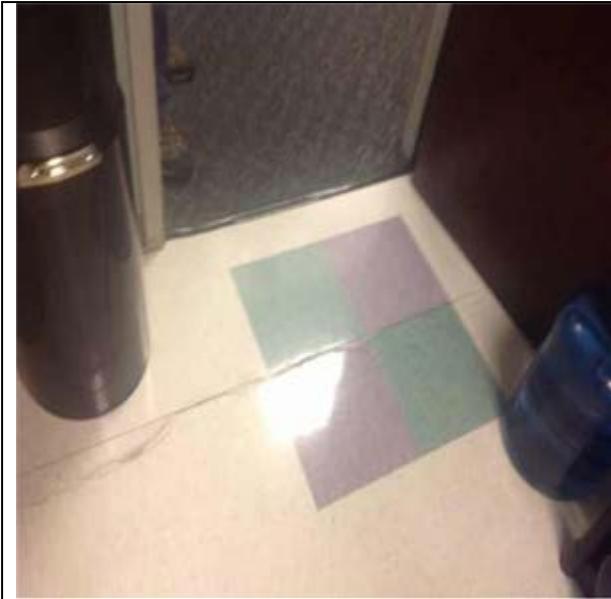
**C1020 Interior Doors**



**C1020 Interior Doors**



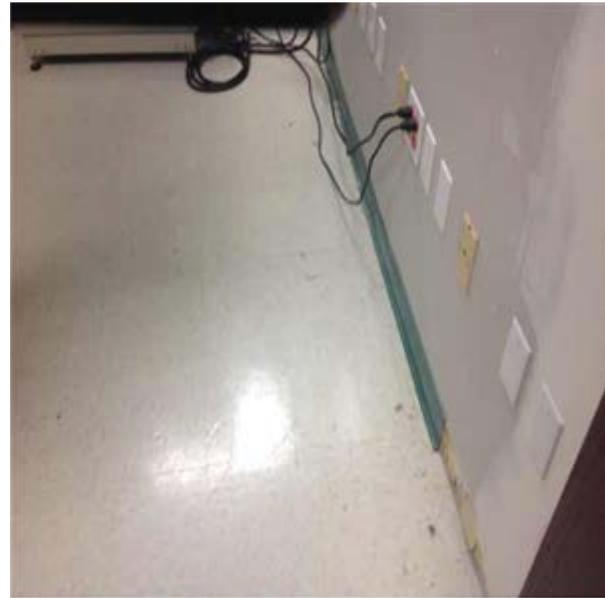
**C3012 Fiberglass Reinforced Plastic Backsplash:- Damaged original FRP**



C3012 Fiberglass Reinforced Plastic Backsplash



C3012 Fiberglass Reinforced Plastic Backsplash



C3024 Vinyl Floor Finishes



C3025 Carpet Tiles - Standard Newer



C3025 Carpet Tiles - Standard Newer



D1011 Passenger Elevator 3500 lbs



D1011 Passenger Elevator 3500 lbs



D1011 Passenger Elevator 3500 lbs



D1011 Passenger Elevator 3500 lbs



D1011 Passenger Elevator 3500 lbs



D1011 Freight Elevator 6000 lbs



D1011 Freight Elevator 6000 lbs



D1093 Swing Stage



D2011 Commercial Grade Water Closet, 1.6 GPF



D2011 Commercial Grade Water Closet, 1.6 GPF



D2012 Urinal



D2012 Lavatory Sink



D2014 Kitchen Top Sink and Faucet



D2017 Stall Shower and Faucet



D2017 Stall Shower and Faucet



D2018 Drinking Fountain



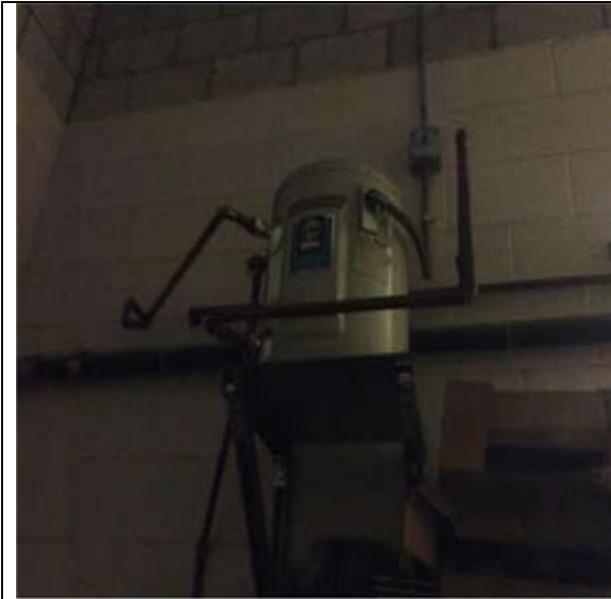
D2022 DHW Heater - Electric 71 Gal



D2022 Heater - Electric 30 Gal



D2022 DHW Heater - 30 Gal



D2022 DHW Heater - 10 Gal



D2022 DHW Electric Heater - 119 Gal



D2023 Instantaneous Water Heater



D2023 DHW Distribution Pump 15 hp



D3021 Hydronic Gas Boilers (3000 MBH)



D3021 Hydronic Gas Boilers (3000 MBH)



D3022.1 Chiller Condenser Pump 25 hp



D3022.1 HWS Circulation Pumps 7.5 HP



D3022.1 Chiller Secondary Distribution Pump 25hp



D3022.1 Chiller Secondary Distribution Pump 25hp



D3022.1 Chiller Primary Pump 15 hp



D3023 Expansion Tank (119 Gal)



D3023 Expansion Tank (57 Gal)



D3031.1 Water cooled chiller 350 ton



D3031.2 Cooling Tower chemical water treatment



D3031.2 Cooling Tower chemical water treatment



D3031.2 Cooling Towers



D3041.1 AHU 54300 CFM



D3041.1 AHU 54300 CFM



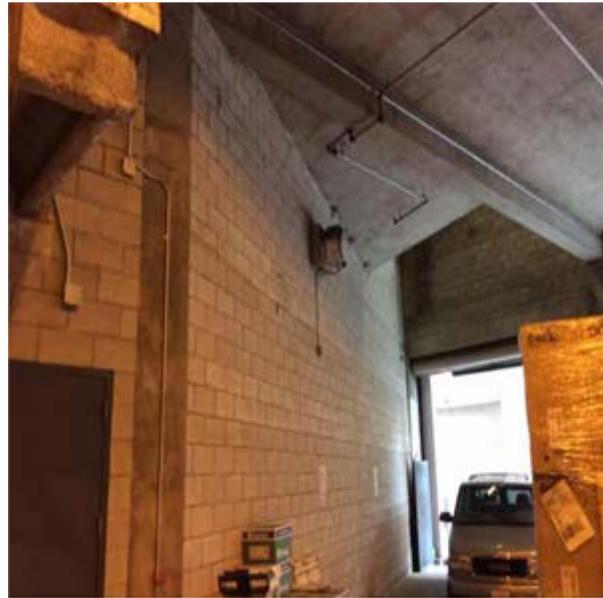
D3041.1 Stairway pressurization fan 9450 CFM



D3041 VAV Boxes



D3042 General Exhaust Fan 8000 cfm



D3042 Exhaust fan 1/4hp :- D3042 Exhaust fan at top of wall



D3042 Return fan 40000 cfm



D3042 Restroom Exhaust Fan (5 hp)



D3042 Exhaust Fan (5 hp)



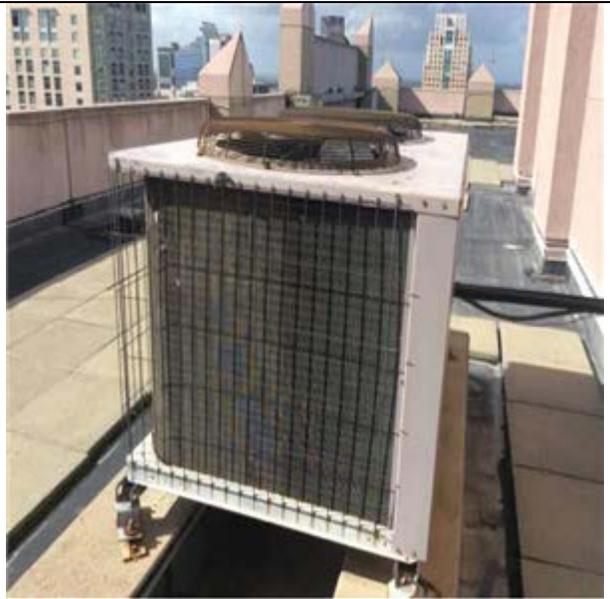
D3042 Return fan 83000 cfm



D3042 Return fan 83000 cfm



D3051 Fan Coil 9 tons cooling



D3051 Fan Coil 9 tons cooling



D3051.1 Packaged Heat pump 10 ton



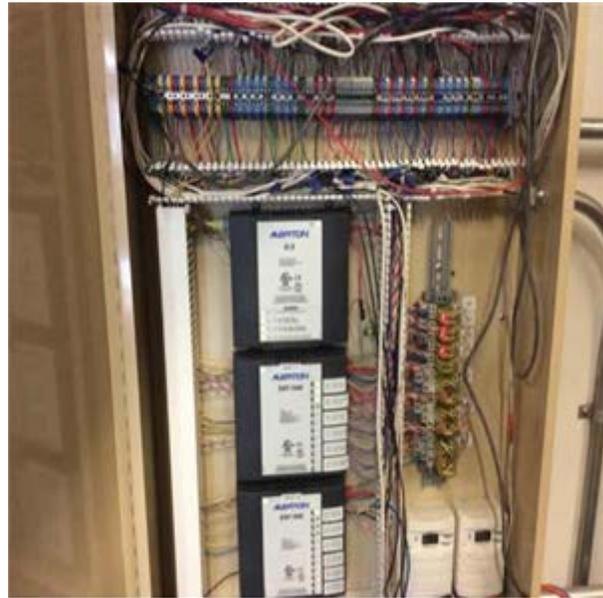
D3052 Single packaged Cooling unit 5 Ton



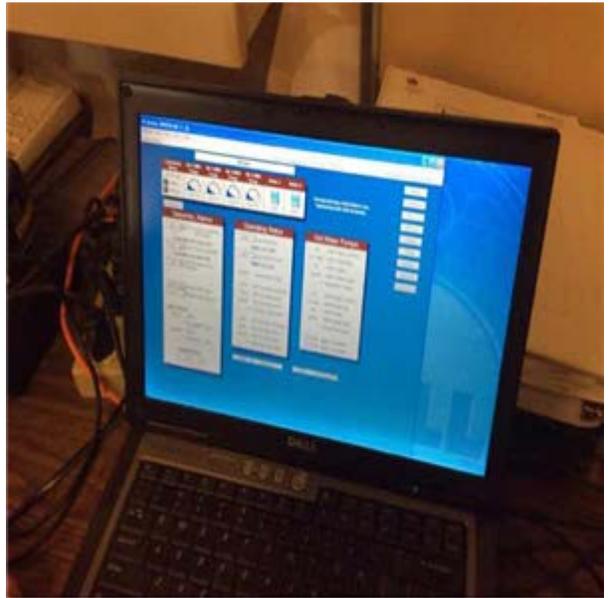
D3052 PTAC unit 1 Ton



D3052 Packaged Cooling unit 2 Ton



D3068 DDC Controls



D3068 DDC Controls



D4011 Wet-Pipe Sprinkler System



D4012 Jockey pump (3 hp)



D4012 Fire Pump Electric



D4012 Fire pump Diesel (160 hp)



D4031 Fire Extinguishers 5 Lb, Install



D4031 Ansul System at Kitchen Hood



D5012 Dry Transformer 30 kVA



D5012 Breaker Panel 250<600 Amps



D5012 Switchgear, Mainframe, 8000 Amps



D5012 Substation Switchgear 3000 Amps



D5012 Breaker Panel 600 Amps



D5012 Dry Transformer 15 kVA



D5012 Breaker Panel up to 600 - 1600 Amps



D5012 Dry Transformer 75 kVA



D5012 Dry Transformer 45 kVA



D5012 Breaker Panel <250 Amps



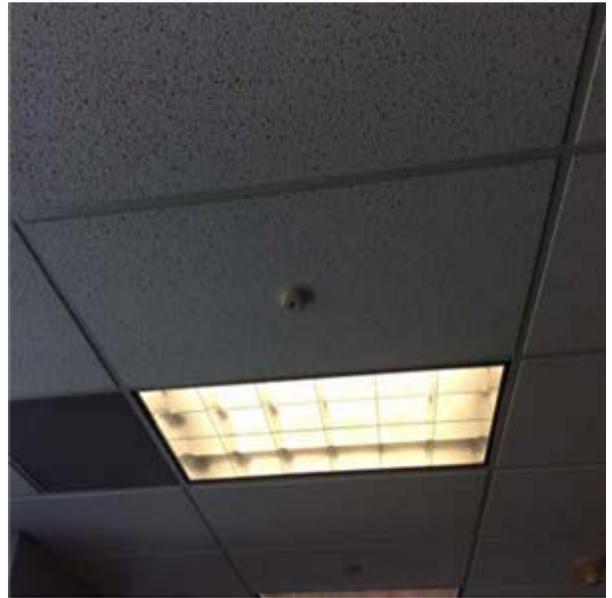
D5012 Dry Transformer 112.5 kVA



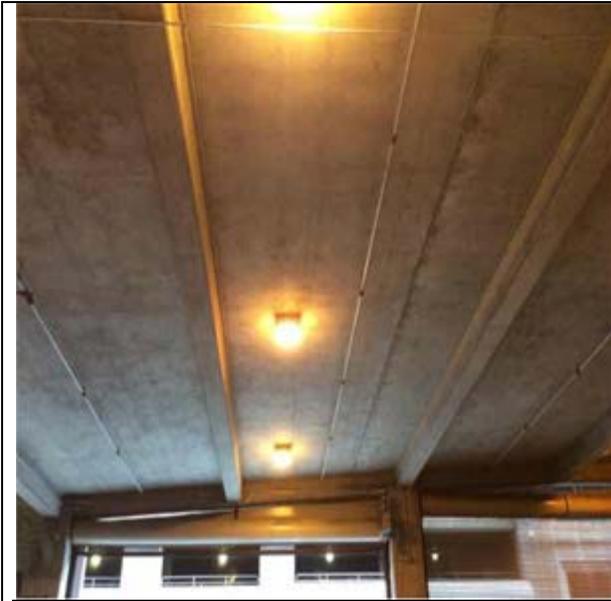
D5012 Emergency Distribution Panel, 1000Amp



D5021 Motion Sensor Lighting Control



D5021 Day Lighting Sensors



D5022 Canopies, 100 W HPS



D5022 Floor mounted uplight 250 W HPS



D5022 Canopies main lobby 150 W HPS



D5022 Canopies near sign 150 W HPS



D5022 Canopies 100 W HPS



D5022 Canopies and up-lights 150 W HPS



D5022 Canopies and up-lights 150 W HPS



D5022 Wall pack, 100 W HPS



D5022 Wall Pack 150 W HPS



D5022 Wall pack 150 W HPS



D5022 Canopies, 100 W HPS



D5022 Canopies, 100 W HPS



D5037 Electric Pump Panel and control of fire pump



D5037 Central Diesel Pump Panel and control of fire pump



D5037 Fire Alarm System



D5092 Diesel Generator 765 KW



E1031 Electric Charging Station



E1092 Trash Compactor



E1095 Kitchenette :- Under sink



E1099 Rescue Air Filling Station



G3063 Diesel Tank, 150 Gallon



Z1011 Structural Study:- Cracking in the floor slab at the 17th level.

## **APPENDIX E:      TERMINOLOGY AND ABBREVIATIONS**

<b>TERMINOLOGY and ABBREVIATIONS</b>	
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.

<b>TERMINOLOGY and ABBREVIATIONS</b>	
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

<b>TERMINOLOGY and ABBREVIATIONS</b>	
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)	<p>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.</p> <p>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.</p>
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 <i>Means</i> and <i>Dodge</i> , 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.

<b>TERMINOLOGY and ABBREVIATIONS</b>	
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 employ Specialty Consultants to gain a better understanding of the cause, extent of a deficiency (whether observed or highly probable), and the appropriate remedy.
Survey	Observations as the result of a walk-through scan or reconnaissance to obtain information by EMG of the Property's readily accessible and easily visible components or systems.
System	A combination of interacting or interdependent components assembled to carry out one or more functions.
Technically Exhaustive	The use of measurements, instruments, testing, calculations, exploratory probing or discover, and/or other means to discover and/or troubleshoot Physical Deficiencies, develop scientific or Engineering findings, conclusions, and recommendations.
Term	Reserve Term: The number of years that Capital Reserves are projected for as specified in the Expenditure Forecast.
TPO	Thermoplastic polyolefin, a white single ply roofing material, usually white
Timely Access	Entry provided to the Project Manager at the time of his site visit.
UST	Underground Storage Tank
Walk-through Survey	The Project Manager's site visit of the Property consisting of his visual reconnaissance and scan of readily accessible and easily visible components and systems. This definition connotes that such a survey should not be considered in depth, and is to be conducted without the aid of special protective clothing, exploratory probing, removal of materials, testing, or the use of special equipment such as ladders, scaffolding, binoculars, moisture meters, air flow meters, or metering/testing equipment or devices of any kind. It is literally the Project Manager's walk of the Property and observations.



## **APPENDIX F: BUILDING FACT SHEET**

**ATTORNEY GENERAL BUILDING FACT SHEET**

1300 I Street  
Sacramento  
Sacramento County

**Category 4 - Low Priority - Constructed in Last 20 Years, Special Repairs and Maintenance**

**BUILDING INFORMATION**

- Age: 19 years (completed in 1995)
- Size:\* 19-story  
560,661 GSF      315,492 NUSF      315,492 Assigned SF  
1.45 Acre Parcel  
589 parking spaces in a 6-story garage  
Capacity - 1,228 occupants
- Financial: State Public Works Board  
Lease-Revenue Bonds 1995 Series A, 1998 Series A  
Refinance, 2005 Series I final maturity date of November 2020  
Original Bond \$117,070,000 - Balance as of 6/30/13 \$27,910,000  
IRR Rate - \$1.99/month per SF, FY 2013-14 (DGS Price Book)  
\$1.96/month per SF, FY 2014-15 (Proposed DGS Price Book)
- LEED Status: Certified LEED-EB GOLD, 2009
- Tenants: 4 Agencies, primary tenant is the Department of Justice, the building houses the Office of the State Attorney General, and small offices for the Arts Council, a Department of Rehabilitation Cafeteria, and the Department of General Services



SPI Structure #: 4474  
Real Property #: 9998  
BPM #: 030

**COMPLETED STUDIES AND SIGNIFICANT FINDINGS**

**A. 2009 American Disability Act Accessibility Compliance Survey**

This survey indicated various areas of inaccessibility but reported they require mostly minor alterations with no major issues to remedy.

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

This report noted some probable future repairs. The recommendations include a reserve to overlay roofs at the main roof and penthouse levels, allowance for anticipated rehabilitation work on the cooling towers and replacement of the exterior swingstage system which includes installation of safety anchors.

**C 2012 Access Compliance Conceptual Budget/Evaluation**

In follow up to the 2009 American Disability Act Accessibility Compliance Survey this report provides 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**

Rehabilitation work on the cooling towers and a major roof repair are active projects. The Swing Stage powered maintenance platform is currently not certified and will require replacement. Water storage tanks on the roof are currently unbraced.

**CURRENT UTILIZATION PROJECTS**

Approximately 100 PYs consolidated into 1300 I Street from leased space at 1325 J Street. Completed February 2013.

**RECENTLY COMPLETED PROJECTS**

**Cost**

TBD

**ACTIVE PROJECTS**

**Cost**

TBD

**PLANNED SPECIAL REPAIRS BY FISCAL YEAR**

**Estimated Cost**

TBD

\* Source: Statewide Property Inventory

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



## **APPENDIX G: COST TABLES**

10 YEAR EXPENDITURE FORECAST



Department of Justice Office Building

1300 I Street

Sacramento

Useful Life

Estimated Useful Life
Remaining Useful Life

Plan Type

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 Meas.	Unit Cost	Plan Type	Priority	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												
<b>A. SUBSTRUCTURE</b>																																	
Substructure Subtotal												\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>B. SHELL</b>																																	
<b>B20 EXTERIOR ENCLOSURE</b>																																	
B2011	Stucco and Lath	B2010 Stucco and Lath	Exterior	B2011 - Paint Existing Stucco	9	9	40,000.00	SF	\$1.42	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$56,800	\$0	\$56,800										
B2014	Awning, Cloth Overhang	B2014 Awning, Cloth Overhang	Exterior	Replace B2014 Awning, Cloth Overhang	24	4	1,111.00	EA	\$37.94	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$42,156	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,156									
<b>B30 ROOFING</b>																																	
B3011	B3011 Roof Finishes	B3011 Single-Ply EPDM with Insulation, Fully Adhered 60 Mills	Roof	Replace	20	0	332.00	CSF	\$1,674.00	IN - Beyond Rated Life	Priority 1	\$555,768	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$555,768	\$0									
Shell Subtotal												\$555,768	\$0	\$0	\$0	\$42,156	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$56,800	\$555,768	\$98,956					
<b>C. INTERIORS</b>																																	
<b>C10 INTERIOR CONSTRUCTION</b>																																	
C1021	C1021 Interior Doors	C1020 Interior Doors	Throughout the Building	C1020 - Replace Interior Doors - Partial	8	8	205.00	EA	\$950.00	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$194,750	\$0	\$194,750										
<b>C30 INTERIOR FINISHES</b>																																	
C3005	C3005 ADA Renovations	C3005 ADA Renovations - Door Signage	Throughout Building	replace intercom	20	0	615.00	EA	\$124.00	CC - Accessibility	Priority 1	\$76,260	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$76,260	\$0									
C3012	Drywall - Vinyl Coverings	C3012 Lobby Drywall - Vinyl Coverings	Lobby	Replace C3012 Lobby Drywall - Vinyl Coverings	12	3	4,140.00	SF	\$9.60	IN - Appearance	Priority 3	\$0	\$0	\$0	\$39,734	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39,734									
C3012	Frp Panels	C3012 Fiberglass Reinforced Plastic Backsplash	Hopper Rooms	Replace C3012 Fiberglass Reinforced Plastic Backsplash	15	0	10.00	EA	\$1,509.15	IN - Appearance	Priority 2	\$15,092	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,092	\$0									
C3024	Vinyl Tile	C3024 Vinyl Floor Finishes	Throughout building	Replace	18	8	914.00	SY	\$125.78	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$114,963	\$0	\$114,963										
C3024	2X2 Ceramic Tile	C3024 Ceramic Tile Partial replacement	Throughout building	Repair	28	8	2,000.00	SF	\$43.00	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$86,006	\$0	\$86,006										
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard Older	Throughout building	Replace	10	3	15,800.00	SY	\$96.61	IN - Appearance	Priority 3	\$0	\$0	\$0	\$1,526,368	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,526,368										
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard Newer	Throughout building	Replace C3025 Carpet Tiles - Standard Newer	10	5	15,800.00	SY	\$96.61	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$1,526,368	\$0	\$0	\$0	\$0	\$0	\$1,526,368										
C3032	Acoustical Ceiling Tiles - Partial	C3032 Acoustical Ceiling Tiles - Partial	Throughout Building	Replace C3032 Acoustical Ceiling Tiles - Partial	15	3	1,000.00	CSF	\$1,143.42	IN - Appearance	Priority 3	\$0	\$0	\$0	\$1,143,420	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,143,420										
Interiors Subtotal												\$91,352	\$0	\$0	\$2,709,523	\$0	\$1,526,368	\$0	\$0	\$395,720	\$0	\$91,352	\$4,631,611										
<b>D. SERVICES</b>																																	
<b>D10 CONVEYING SYSTEMS</b>																																	
D1011	Traction Geared Elevator - High Rise	D1011 Passenger Elevator 3500 lbs	Elevator Rooms	Install Braille signage at jamb	15	0	5.00	EA	\$400.00	CC - Accessibility	Priority 1	\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000	\$0									
D1011	Traction Geared Elevator - High Rise	D1011 Passenger Elevator 3500 lbs	Elevator Rooms	Perform 5-year load test	15	0	5.00	EA	\$3,000.00	CC - Building Code	Priority 1	\$15,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000	\$0									
D1011	Traction Geared Elevator - High Rise	D1011 Passenger Elevator 3500 lbs	Elevator Rooms	Replace D1011 Passenger Elevator 3500 lbs	30	7	5.00	EA	\$546,000.00	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,730,000	\$0	\$0	\$2,730,000										
D1011	Traction Geared Elevator - High Rise	D1011 Passenger Elevator 3500 lbs	Lobby	Install Braille signage at elevator jamb	15	0	2.00	EACH	\$400.00	CC - Accessibility	Priority 1	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800	\$0									
D1011	Traction Geared Elevator - High Rise	D1011 Passenger Elevator 3500 lbs	Lobby	Perform 5-year load test	15	0	2.00	EACH	\$300.00	CC - Building Code	Priority 1	\$600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600	\$0									
D1011	Traction Geared Elevator - High Rise	D1011 Passenger Elevator 3500 lbs	Lobby	Replace D1011 Passenger Elevator 3500 lbs	30	7	2.00	EACH	\$378,742.75	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$757,485	\$0	\$0	\$757,485										
D1012	D1012 Freight Elevators	D1011 Freight Elevator 6000 lbs	Elevator Rooms	Perform 5-year load test	15	0	1.00	EA	\$3,000.00	CC - Building Code	Priority 1	\$3,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000	\$0									
D1012	D1012 Freight Elevators	D1011 Freight Elevator 6000 lbs	Elevator Rooms	Replace D1011 Freight Elevator 6000 lbs	30	7	1.00	EA	\$378,742.75	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$378,743	\$0	\$0	\$378,743										
D1093	D1093 Hoists & Cranes	D1093 Swing Stage	AG Roof	Replace D1093 Swing Stage	20	0	1.00	EA	\$103,740.00	OP - Maintenance	Priority 1	\$103,740	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$103,740	\$0									
<b>D20 PLUMBING</b>																																	
D2011	Commercial Grade Water Closet With 1.6 Gpf Unit	D2011 Commercial Grade Water Closet, 1.6 GPF	Throughout Facility	Install automatic flush valves on toilets	35	0	105.00	EA	\$400.00	OP - Energy	Priority 2	\$42,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,000	\$0									
D2013	Lavatory, Wall Hung Cultured Marble Top, Wheelchair Accessible, 20" X 27" w/ Fixture	D2012 Lavatory Sink	Throughout Facility	Automatic valves	20	0	96.00	ea	\$287.00	FN - Modernization	Priority 2	\$27,552	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27,552	\$0									
D2018	Drinking Fountain	D2018 Drinking Fountain	Throughout Building	Replace D2018 Drinking Fountain	10	5	13.00	EA	\$2,876.60	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$37,396	\$0	\$0	\$0	\$0	\$0	\$37,396										
D2022	Domestic Hot Water Heater - Electric	D2022 DHW Heater - 20 Gal	12th Floor Janitor Closet	Replace D2022 DHW Heater - 20 Gal	15	5	1.00	EA	\$2,407.20	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$2,407	\$0	\$0	\$0	\$0	\$0	\$2,407										
D2022	Domestic Hot Water Heater - Electric	D2022 DHW Heater - 10 Gal	Janitor Closets	Replace D2022 DHW Heater - 10 Gal	15	5	4.00	EA	\$1,203.60	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$4,814	\$0	\$0	\$0	\$0	\$0	\$4,814										
D2022	Domestic Hot Water Heater - Electric	D2022 DHW Heater - 30 Gal	Attorney General Office - Janitor Closet	Replace D2022 DHW Heater - 30 Gal	15	5	1.00	EA	\$3,610.80	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$3,611	\$0	\$0	\$0	\$0	\$0	\$3,611										
D2022	Domestic Hot Water Heater - Electric	D2022 DHW Heater - Electric 71 Gal	12th Floor - Janitor Closet	Replace D2022 DHW Heater - Electric 71 Gal	15	7	1.00	EA	\$7,695.96	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,696	\$0	\$0	\$7,696										
D2022	Domestic Hot Water Heater - Electric	D2022 Heater - Electric 30 Gal	Mail Room	Replace D2022 Heater - Electric 30 Gal	15	0	1.00	EA	\$3,610.80	FN - Obsolescence	Priority 1	\$3,611	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,611	\$0									
D2022	Domestic Hot Water Heater - Electric	D2022 DHW Heater - 40 Gal	7th Floor Janitor Closet	Replace D2022 DHW Heater - 40 Gal	15	5	1.00	EA	\$4,814.40	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$4,814	\$0	\$0	\$0	\$0	\$0	\$4,814										
D2023	Instantaneous Water Heater Installation	D2023 Instantaneous Water Heater	Throughout Facility	Replace D2023 Instantaneous Water Heater	15	5	22.00	EA	\$2,140.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$47,080	\$0	\$0	\$0	\$0	\$0	\$47,080										
D2023	Hydronic Circulating Pump, 15 HP	D2023 DHW Distribution Pump 15 hp	Fire Sprinkler Room	Replace D2023 DHW Distribution Pump 15 hp	20	3	3.00	EA	\$24,553.44	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$73,660	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73,660										
<b>D30 HVAC</b>																																	
D3021	Water Boiler, Gas 2850 to 3240 MBH	D3021 Hydronic Gas Boilers (3000 MBH)	AG Roof	Replace D3021 Burners	20	0	2.00	EA	\$38,500.00	FN - Modernization	Priority 1	\$77,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$77,000	\$0									
D3022.1	Base-mounted circulating pumps (500 GPM, 20 HP)	D3022.1 Chiller Secondary Distribution Pump 25hp	AG Chiller Room	Replace D3022 Older VFD - 1995 model	20	5	1.00	ea	\$12,375.10	FN - Modernization	Priority 3	\$0	\$0	\$0	\$0	\$0	\$12,375	\$0	\$0	\$0	\$0	\$0	\$12,375	\$0									
D3022.1	Base-mounted circulating pumps (500 GPM, 20 HP)	D3022.1 Chiller Secondary Distribution Pump 25hp	AG Chiller Room	Replace D3022.1 Chiller Secondary Distribution Pump 25hp	20	5	2.00	EA	\$1,879.44	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$3,759	\$0	\$0	\$0	\$0	\$0	\$3,759	\$0									
D3022.1	Circulation Pump, 7 to 10 HP	D3022.1 Chiller Primary Pump 15 hp	AG Chiller Room	Replace D3022.1 Chiller Primary Pump 15 hp	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										
D3022.1	Circulation Pump, 7 to 10 HP	D3022.1 HWWS Circulation Pumps 7.5 HP	AG Roof	New VFD drives	20	0	2.00	ea	\$12,375.00	FN - Modernization	Priority 1	\$24,750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,750	\$0									
D3022.1	Circulation Pump, 7 to 10 HP	D3022.1 HWWS Circulation Pumps 7.5 HP	AG Roof	Replace D3022.1 HWWS Circulation Pumps 7.5 HP	20	0	2.00	EA	\$19,837.20	IN - Beyond Rated Life	Priority 1	\$39,674	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39,674	\$0									
D3022.1	Circulation Pump 30 HP	D3022.1 Chiller Condenser Pump 25 hp	AG Chiller Room	Replace D3022.1 Chiller Condenser Pump 25 hp	20	5	2.00	EA	\$26,054.88	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$52,110	\$0	\$0	\$0	\$0	\$0	\$52,110										
D3023	200 Gallon Expansion Tank	D3023 Expansion Tank (57 Gal)	AG Chiller Room	Replace D3023 Expansion Tank (57 Gal)	20	5	1.00	EA	\$8,412.54	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$8,413	\$0	\$0	\$0	\$0	\$0	\$8,413										
D3023	200 Gallon Expansion Tank	D3023 Expansion Tank (119 Gal)	AG Roof	Replace D3023 Expansion Tank (119 Gal)	20	5	1.00	EA	\$14,372.54	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$14,373	\$0	\$0	\$0	\$0	\$0	\$14,373										
D3031.1	Chiller, Water Cooled, Centrifugal, 360 Ton	D3031.1 Water cooled chiller 350 ton	AG Chiller Room	Replace D3031.1 Water cooled chiller 350 ton	25	5	2.00	EA	\$682,992.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$1,365,984	\$0	\$0	\$0	\$0	\$0	\$1,365,984										
D3031.2	Cooling Tower, Galvanized Steel, 400 Ton	D3031.2 Cooling Towers	AG Roof	Fan motors	15	0	4.00	EA	\$1,264.00	OP - Energy	Priority 1	\$5,056	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,056	\$0									
D3031.2	Cooling Tower, Galvanized Steel, 400 Ton	D3031.2 Cooling Towers	AG Roof	New VFD drives	20	0	4.00	EA	\$12,375.00	OP - Energy	Priority 1	\$49,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,500	\$0									
D3031.2	Cooling Towers	D3031.2 Cooling Tower chemical water treatment	AG Chiller Room	Replace D3031.2 Cooling Tower chemical water treatment	25	5	1.00	EA	\$19,840.00	IN - Beyond Rated Life	Priority 3	\$0	\$0																				

Element #	Component Description	Asset	Location	Action	EUL (Yrs)	RUL (Yrs)	Qty.	Unit of Meas.	Unit Cost	Plan Type	Priority <sup>2</sup>	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		
D3042	Exhaust Fan 8500 CFM	D3042 General Exhaust Fan 8000 cfm	AG Roof	New Motor	20	5	1.00	EA	\$938.00	OP - Energy	Priority 3	\$0	\$0	\$0	\$0	\$0	\$938	\$0	\$0	\$0	\$0	\$0	\$938
D3042	Exhaust Fan, Sidewall 11,250 CFM	D3042 Exhaust Fan (5 hp)	AG Roof	Replace D3042 Exhaust Fan (5 hp)	20	5	2.00	EA	\$16,594.18	OP - Energy	Priority 3	\$0	\$0	\$0	\$0	\$0	\$33,188	\$0	\$0	\$0	\$0	\$0	\$33,188
D3042	Draft Fan 6700 CFM	D3042 Return fan 4000 cfm	AG Roof	New Motor	20	0	2.00	EA	\$2,025.00	OP - Energy	Priority 1	\$4,050	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,050
D3042	Draft Fan 6700 CFM	D3042 Return fan 83000 cfm	AG Roof	New Motor	20	5	1.00	EA	\$3,976.00	OP - Energy	Priority 3	\$0	\$0	\$0	\$0	\$0	\$3,976	\$0	\$0	\$0	\$0	\$0	\$3,976
D3051	Fan Coil with Cooling and Heat 10 Ton	D3051 Fan Coil 9 tons cooling	Switchgear Room-Roof	Replace D3051 Fan Coil 9 tons cooling	15	5	1.00	EA	\$87,034.97	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$87,035	\$0	\$0	\$0	\$0	\$0	\$87,035
D3051	Fan Coil with Cooling and Heat 1.5 Ton	D3051 Fan Coil 3 tons cooling	8 th and 7 th floor	new motor	20	2	1.00	EA	\$831.00	OP - Energy	Priority 2	\$0	\$0	\$831	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$831
D3051.I	Heat Pump Air to Air 10-Ton	D3051.I Packaged Heat pump 10 ton	AG Elevator Rooms	Replace D3051.I Packaged Heat pump 10 ton	20	5	1.00	EA	\$35,540.88	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$35,541	\$0	\$0	\$0	\$0	\$0	\$35,541
D3052	Dx Cooling Unit 1.5 Ton	D3052 Single packaged Cooling unit 1 Ton	9th floor	Replace D3052 Single packaged Cooling unit 1 Ton	15	5	1.00	EA	\$2,673.79	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$2,674	\$0	\$0	\$0	\$0	\$0	\$2,674
D3052	Package Units, Gas Heat, 2 Ton Cooling	D3052 Packaged Cooling unit 2 Ton	12 th floor	Replace D3052 Packaged Cooling unit 2 Ton	15	8	1.00	EA	\$15,625.34	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,625	\$0	\$0	\$15,625
D3052	Single Zone Package Unit, 1.5-Ton	D3052 PTAC unit 1 Ton	9th floor	Replace D3052 PTAC unit 1 Ton	15	5	1.00	EA	\$12,619.26	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$12,619	\$0	\$0	\$0	\$0	\$0	\$12,619
D3052	Dx Cooling Unit 5 Ton	D3052 Single packaged Cooling unit 5 Ton	RSC Room	Replace D3052 Single packaged Cooling unit 5 Ton	15	5	1.00	EA	\$5,078.17	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$5,078	\$0	\$0	\$0	\$0	\$0	\$5,078
D3052	Single Zone Package Unit, 1.5-Ton	D3052 Single packaged Cooling unit 1.5 Ton	13th floor docketing room	Replace D3052 Single packaged Cooling unit 1.5 Ton	15	5	1.00	EA	\$12,619.26	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$12,619	\$0	\$0	\$0	\$0	\$0	\$12,619
D3068	Direct Digital Controls (DDC) Extensive	D3068 DDC Controls	AG Chiller Room	Replace D3068 DDC Controls	20	0	560,661.00	SF	\$11.55	FN - Modernization	Priority 1	\$6,477,653	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,477,653
<b>D50 ELECTRICAL SYSTEMS</b>																							
D5012	Switchgear, Mainframe, 1600 Amps	D5012 Substation Switchgear 3000 Amps	Main Electrical Rooms	Replace D5012 Substation Switchgear 3000 Amps	40	5	2.00	EA	\$17,846.98	FN - Modernization	Priority 3	\$0	\$0	\$0	\$0	\$0	\$35,694	\$0	\$0	\$0	\$0	\$0	\$35,694
D5012	Secondary Dry Transformer 75 kVA	D5012 Dry Transformer 75 kVA	Electrical Rooms	New 75 kW transformer	30	0	2.00	EA	\$8,135.00	OP - Maintenance	Priority 2	\$16,270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,270
D5021	Motion Sensor Lighting Control Installation	D5021 Motion Sensor Lighting Control	Throughout Facility	Replace D5021 Motion Sensor Lighting Control	20	5	220.00	EA	\$219.06	FN - Modernization	Priority 3	\$0	\$0	\$0	\$0	\$0	\$48,192	\$0	\$0	\$0	\$0	\$0	\$48,192
D5021	Motion Sensor Lighting Control Installation	D5021 Day Lighting Sensors	Throughout Facility	Replace D5021 Day Lighting Sensors	10	0	200.00	EA	\$219.06	FN - Modernization	Priority 1	\$43,811	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$43,811
D5022	150-Watt Exterior Lamps, with 65-Watt Induction Lamps	D5022 Canopies near sign 150 W HPS	Exterior	Replace D5022 Canopies near sign 150 W HPS	10	0	8.00	EA	\$890.66	IN - Beyond Rated Life	Priority 1	\$7,125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,125
D5022	150-Watt Exterior Lamps, with 65-Watt Induction Lamps	D5022 Wall pack 150 W HPS	Roof	Replace D5022 Wall pack 150 W HPS	20	0	10.00	EA	\$890.66	OP - Energy	Priority 1	\$8,907	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,907
D5022	150-Watt Exterior Lamps, with 65-Watt Induction Lamps	D5022 Wall Pack 150 W HPS	Exterior	Replace D5022 Wall Pack 150 W HPS	10	0	5.00	EA	\$890.66	OP - Energy	Priority 1	\$4,453	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,453
D5022	150-Watt Exterior Lamps, with 65-Watt Induction Lamps	D5022 Wall pack, 100 W HPS	7th and 8th floors	Replace D5022 Wall pack, 100 W HPS	20	0	3.00	EA	\$890.66	OP - Energy	Priority 1	\$2,672	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,672
D5022	150-Watt Exterior Lamps, with 65-Watt Induction Lamps	D5022 Canopies 100 W HPS	2nd - 6th Floors	Replace D5022 Canopies 100 W HPS	20	0	135.00	EA	\$890.66	OP - Energy	Priority 1	\$120,240	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$120,240
D5022	150-Watt Exterior Lamps, with 65-Watt Induction Lamps	D5022 Canopies main lobby 150 W HPS	Throughout Facility	Replace D5022 Canopies main lobby 150 W HPS	10	0	15.00	EA	\$890.66	OP - Energy	Priority 1	\$13,360	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,360
D5022	150-Watt Exterior Lamps, with 65-Watt Induction Lamps	D5022 Canopies and up-lights 150 W HPS	Exterior	Replace D5022 Canopies and up-lights 150 W HPS	10	0	28.00	EA	\$890.66	OP - Energy	Priority 1	\$24,939	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,939
D5022	150-Watt Exterior Lamps, with 65-Watt Induction Lamps	D5022 Canopies, 100 W HPS	7th and 8th floors	Replace D5022 Canopies, 100 W HPS	20	0	23.00	EA	\$890.66	OP - Energy	Priority 1	\$20,485	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,485
D5022	150-Watt Exterior Lamps, with 65-Watt Induction Lamps	D5022 Canopies, 100 W HPS	Loading Dock	Replace D5022 Canopies, 100 W HPS	20	5	6.00	EA	\$890.66	OP - Energy	Priority 3	\$0	\$0	\$0	\$0	\$0	\$5,344	\$0	\$0	\$0	\$0	\$0	\$5,344
D5022	D5022 Lighting Equipment	D5022 Lighting Fixtures	Offices and corridors	Replace D5022 Lighting Fixtures	20	3	1,136.00	EA	\$401.20	FN - Modernization	Priority 3	\$0	\$0	\$0	\$455,763	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$455,763
D5032	D5032 Intercommunication & Paging System	D5032 ADA Renovations - Emergency Elevator Intercom	Elevators	replace intercom	20	0	8.00	EA	\$6,755.52	CC - Accessibility	Priority 1	\$5,044	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,044
D5037	Fire Alarm System, Install New	D5037 Fire Alarm System	Throughout Facility	D5037 Remove roof fire panels	25	0	2.00	EA	\$650.00	CC - Life Safety	Priority 1	\$1,300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,300
D5092	Diesel Generator 650 to 750 kW	D5092 Diesel Generator 765 KW	Main Electrical Rooms	Replace D5092 Diesel Generator 765 KW	25	8	1.00	EA	\$622,389.61	CC - Life Safety	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$622,390	\$0	\$0	\$622,390
<b>Services Subtotal</b>												\$7,198,827	\$0	\$5,817	\$529,424	\$0	\$1,968,249	\$0	\$3,873,924	\$638,015	\$33,354	\$7,198,827	\$7,048,782
<b>E. EQUIPMENT &amp; FURNISHING</b>																							
<b>E10 EQUIPMENT</b>																							
E1092	Trash Compactor	E1092 Trash Compactor	Loading Dock	Replace E1092 Trash Compactor	15	5	1.00	EA	\$22,134.00	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$22,134	\$0	\$0	\$0	\$0	\$0	\$22,134
E1099	E1099 Other Equipment	E1099 Rescue Air Filling Station	Sixth, tenth, and 15th floors	Replace E1099 Rescue Air Filling Station	15	5	3.00	EA	\$1,860.00	CC - Life Safety	Priority 3	\$0	\$0	\$0	\$0	\$0	\$5,580	\$0	\$0	\$0	\$0	\$0	\$5,580
<b>Equipment &amp; Furnishing Subtotal</b>												\$0	\$0	\$0	\$0	\$0	\$0	\$27,714	\$0	\$0	\$0	\$0	\$27,714
<b>F. SPECIAL CONSTRUCTION AND DEMOLITION</b>																							
<b>Special Construction And Demolition Subtotal</b>												\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>G. BUILDING SITWORK</b>																							
<b>G20 SITE IMPROVEMENTS</b>																							
G2022	G2022 Paving & Surfacing	G2022 Concrete Parking Surface Sealing	Three levels of parking garage plus ramp	Reseal concrete deck	10	0	81,200.00	SF	\$6.66	IN - Beyond Rated Life	Priority 1	\$540,402	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$540,402
<b>Building Sitework Subtotal</b>												\$540,402	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Z. GENERAL</b>																							
<b>Z10 GENERAL REQUIREMENTS</b>																							
Z1011	Z1011 Further Studies	Z1011 Further Studies - Boiler Roof Covering	Rooftop Boiler	Replace Z1011 Further Studies - Boiler Roof Covering	30	0	1.00	EA	\$11,830.00	IN - Beyond Rated Life	Priority 2	\$11,830	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,830
Z1011	Z1011 Further Studies	Z1011 Structural Study	Utility rooms and at 17th level doorways	structural study	30	0	1.00	EA	\$11,830.00	CC - Life Safety	Priority 1	\$11,830	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,830
<b>General Subtotal</b>												\$23,660	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Expenditure Totals per Year</b>												\$8,410,009	\$0	\$5,817	\$3,238,946	\$0	\$3,522,331	\$0	\$3,873,924	\$1,033,734	\$90,154	\$8,410,009	\$11,764,907
<b>Total Cost (Inflated @ 5% per Yr.)</b>												\$8,410,009	\$0	\$6,413	\$3,749,485	\$0	\$4,495,486	\$0	\$5,451,000	\$1,527,297	\$139,858	\$8,410,009	\$12,158,643

\* - Present Value Currency

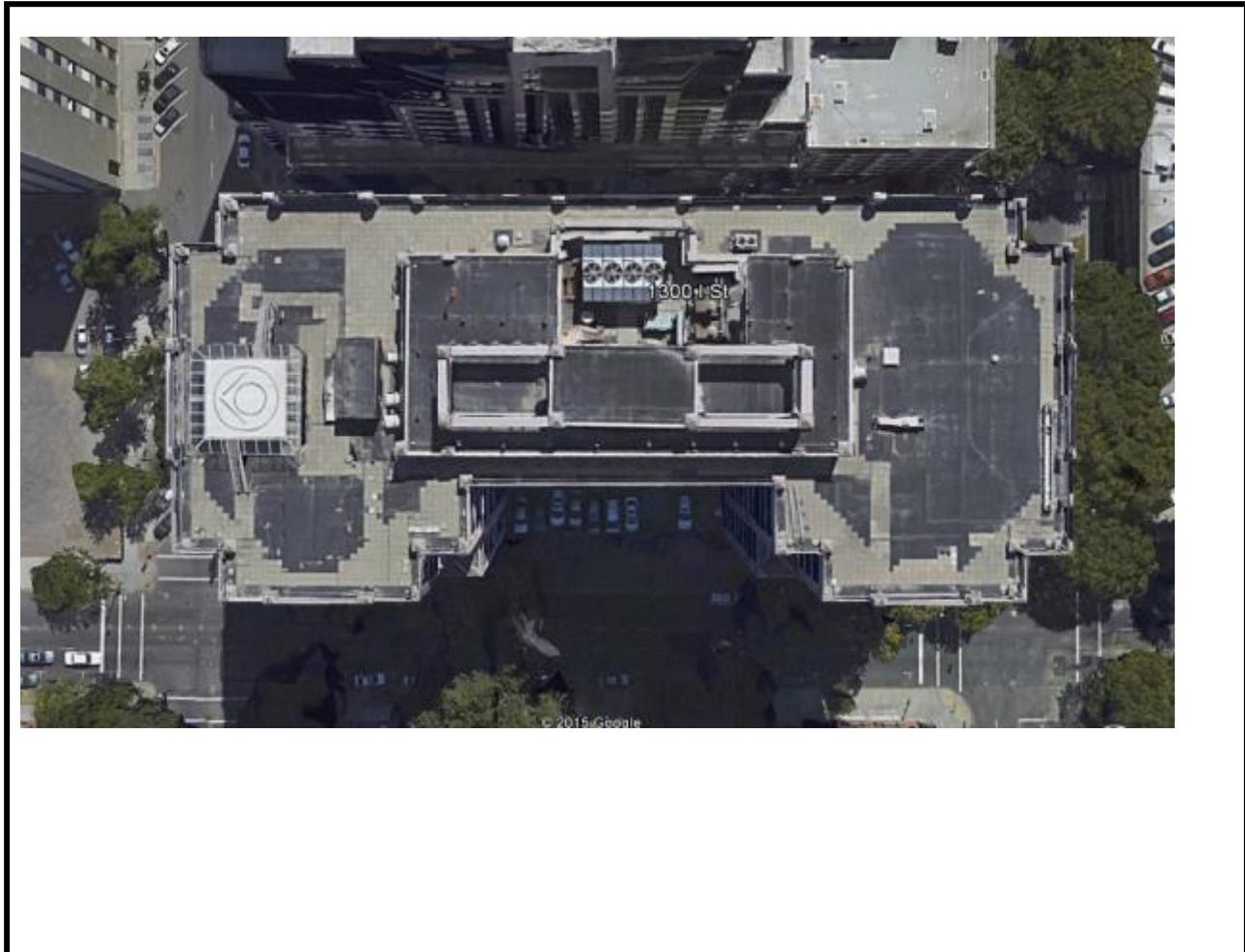
**Footnotes**

- 1 Detailed descriptions for Useful Life and Plan Type can be found in the Appendices of the Facility Condition
- 2 Detailed Descriptions of the Priorities can be found in the Appendices of the Facility Condition Assessment

Current Repl.Value \$351,654,250

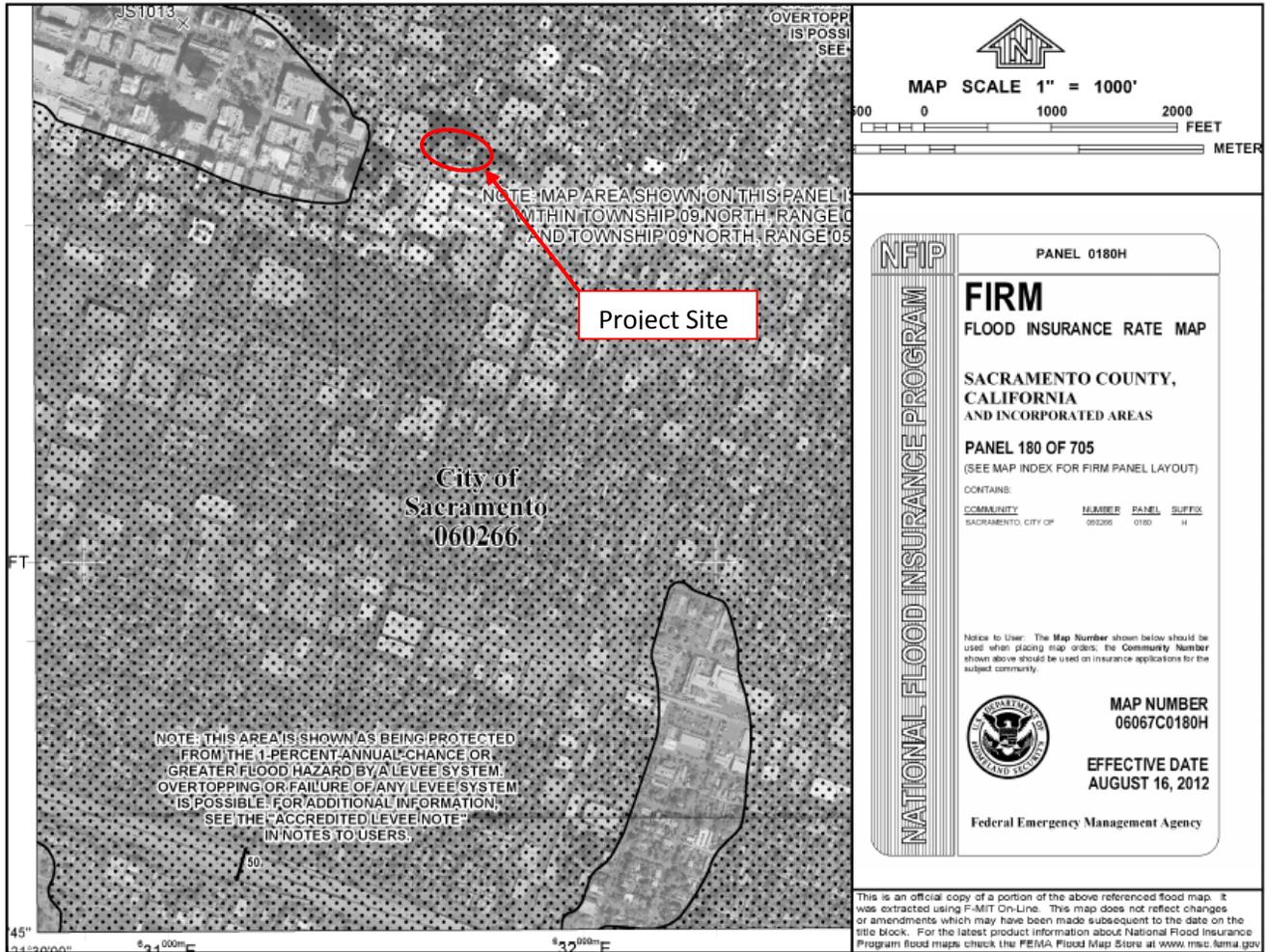


**APPENDIX H: SUPPORTING DOCUMENTATION**



	<p><b>Source:</b></p> <p>The north arrow indicator is an approximation of 0° North.</p>	<p><b>Project Number:</b></p> <p>111326.14R-031.305</p> <p><b>Project Name:</b></p> <p>Department of Justice Office Building</p>
		<p><b>On-Site Date:</b></p> <p>February 9, 2015</p>

# Flood Map



**Source:**  
FEMA

**Project Number:**  
111326.14R-031.305



Not drawn to scale. The north arrow indicator is an approximation of 0° North.

**Project Name:**  
Department of Justice Office Building

**On-Site Date:**  
January 22, 2015

**Estimate of Structures Cost Using Marshall Cost Systems**

**Department of Justice Building (030)**

**Site Calculation**

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

Description	Cost	Estimated \$/ SF	Unusual Land Total
			\$0
<b>Total</b>			<b>\$0</b>

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

**Estimate of Structure Cost :**

Building Type	Cost per SF	Number of SF	Building Type Total
main building	\$501.77	560,661	\$281,323,400
0	\$0.00	0	\$0
0	\$0.00	0	\$0
0	\$0.00	0	\$0
0	\$0.00	0	\$0
<b>Total</b>		<b>560,661</b>	<b>\$281,323,400</b>

**Estimate of Adjustments for Fees:**

Description	% increase	
Soft Costs	25.00%	
	0.00%	
	0.00%	
<b>Total Fees/ Interest included in Marshall System</b>		<b>25.00%</b>

**Total Structure Estimate:**

Description	Unit	Fee Adjust	Adjusted Totals
main building	\$281,323,400	25.00%	\$351,654,250
0	\$0	25.00%	\$0
0	\$0	25.00%	\$0
0	\$0	25.00%	\$0
0	\$0	25.00%	\$0
<b>Cost Per SF</b>	<b>\$627.21</b>	<b>Total Estimate</b>	<b>\$351,654,250</b>

<b>Expected Useful Life (EUL) Table</b>	
<b>SITE SYSTEM ITEMS</b>	
<b>ROADWAYS/ PARKING/ WALKWAYS</b>	
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
<b>STORM SEWER, DRAINAGE AND EROSION CONTROL</b>	
Catch basins, inlets, culverts	50
Earthwork, grading and erosion control	50
Storm drain lines	40
<b>LANDSCAPING, TOPOGRAPHY AND FENCING</b>	
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
<b>SITE SYSTEM ITEMS</b>	
<b>GENERAL SITE IMPROVEMENTS</b>	
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

<b>GENERAL SITE IMPROVEMENTS</b>	
Tennis court Surface (acrylic emulsion)	10
Tot-lot (playground equipment)	10
<b>SITE SANITARY AND WATER</b>	
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
<b>SITE MECHANICAL / ELECTRICAL</b>	
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
<b>BUILDING ARCHITECTURAL ITEMS</b>	
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+

<b>BUILDING ARCHITECTURAL ITEMS</b>	
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
<b>EXTERIOR CLADDING</b>	
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

<b>INTERIORS</b>	
Public bathroom accessories	7
Public bathroom fixtures	15
Refrigerator, common area	10
<b>BUILDING ARCHITECTURAL ITEMS</b>	
<b>ROOF COVERINGS</b>	
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+
<b>BOILER ROOM EQUIPMENT</b>	
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
<b>BOILERS</b>	
Oil/ gas/ dual fired, high MBH	40
Gas fired atmospheric	25
Electric	20

<b>BUILDING HEATING WATER TEMPERATURE CONTROLS</b>	
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
<b>CONDENSATE, FEEDWATER, WATER</b>	
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
<b>ELECTRICAL &amp; ELEVATOR</b>	
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
<b>EMERGENCY ALARM AND FIRE PROTECTION</b>	
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

<b>EMERGENCY ALARM AND FIRE PROTECTION</b>	
Fuel Transfer System	25
Gas Distribution	50+
Heat Sensors	15
Heat Exchanger	35
Heating Risers and Distribution	50+
<b>MECHANICAL – ELECTRIC – PLUMBING ITEMS</b>	
Heating Water Circulating Pumps	by size
Heating Water Controller	15
Hot and Cold Water Distribution	50
<b>HVAC</b>	
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
<b>POWER VENTILATOR</b>	
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
<b>SUMP PUMP</b>	
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

## **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: Alison Krampetz, OBM / Steven Jackson, SE

Building name: Department of Justice Office Building (030)

What is your association with this property? Building Manager/ Stationary Engineer

What is the length of your association with this property? < 2 yrs/ 6+ yrs

Phone number: (916) 445-6789

Please provide information about inspections relating to the following items

Inspections	Date Last Inspected	List Name & Contact for Maintenance Contractor, if any.
1. Elevators	8/2014	ThyssenKrup Elevators (916) 376-8700
2. HVAC, Mechanical, Electric, Plumbing	varied annual maintenance schedules for components of chillers, boilers, pumps, back-flow, and generator	American Chiller; Performance HVAC; CA Diesel & Power; BPM Central Shop for backflow
3. Life-Safety/Fire	December, 2014	Sentinel Inc (916) 455-5630 testing/inspections; ATP (888) 646-1559 alarm monitoring
4. Roofs	summer 2014	RESO - PMDB staff

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

carpet/paint done by Tenant; supply fan shaft replacement; re-seal cooling tower and replace mediafil; add re-heat coils to first floor

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

boiler burner replacements; swing stage replacement

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

original roof: 20 yr

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

all major building systems are repaired or replaced by licensed contractors

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

Question	Y	N	N/A	Unk	Comments
9. Are there any unresolved building, or fire code issues?	<b>x</b>				main fire panel being replaced
10. Are there any "down" or unusable units?		<b>x</b>			
11. Are there any problems with erosion, storm-water drainage or areas of paving that do not drain?		<b>x</b>			

Question	Y	N	N/A	Unk	Comments
12. Is the property served by a private water well?		<b>x</b>			
13. Is the property served by a private septic system or other waste treatment systems?		<b>x</b>			
14. Are there any problems with foundations or structures?		<b>x</b>			
15. Is there any water infiltration in basements or crawl spaces?		<b>x</b>			
16. Are there any wall, or window leaks?	<b>x</b>				17th floor leak may be window, not roof; also stucco envelope seal leaks TBD once main roof replaced
17. Are there any roof leaks?	<b>x</b>				
18. Is the roofing covered by a warranty or bond?		<b>x</b>			
19. Are there any poorly insulated areas?		<b>x</b>			
20. Is Fire Retardant Treated (FRT) plywood used?	<b>x</b>				tele-com rooms
21. Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used?	<b>x</b>				
22. Are there any problems with the utilities, such as inadequate capacities?		<b>x</b>			
23. Are there any problems with the landscape irrigation systems?		<b>x</b>			
24. Has a termite/wood boring insect inspection been performed within the last year?		<b>x</b>			
25. Do any of the HVAC systems use R-11, 12, or 22 refrigerants?	<b>x</b>				
26. Has any part of the property ever contained visible suspect mold growth?	<b>x</b>				hopper room; 1st flt print shop hot water heater closet; Café fridge leak
27. Is there a mold Operations and Maintenance Plan?	<b>x</b>				contact ESHOP for inspection, testing, and direction
28. Have there been indoor air quality or mold related complaints from tenants?	<b>x</b>				first floor mail room employee complaints regarding cigarette smoke from outdoors

Question	Y	N	N/A	Unk	Comments
29. Is polybutylene piping used?		<b>x</b>			
30. Are there any plumbing leaks or water pressure problems?		<b>x</b>			
31. Are there any leaks or pressure problems with natural gas service?		<b>x</b>			
32. Does any part of the electrical system use aluminum wiring?	<b>x</b>				buss bars on main transformers on first floor and penthouse
33. Are there transformers inside the building?	<b>x</b>				
34. Do any Commercial units have less than 200-Amp service?		<b>x</b>			
35. Are there any recalled fire sprinkler heads (Star, GEM, Central, Omega)?		<b>x</b>			were changed out while under warranty 2009 due to recall
36. Is there any pending litigation concerning the property?		<b>x</b>			
37. Has the State previously completed an ADA or 'Title 24 review?	<b>x</b>				RESD approx. 2010
38. Have any ADA or Title 24 improvements been made to the property?		<b>x</b>			
39. Does a Barrier Removal Plan exist for the property?			<b>x</b>		
40. Has the Barrier Removal Plan been approved by a credentialed third party?			<b>x</b>		
41. Have there been any ADA or Title 24 related complaints?		<b>x</b>			
42. Have there been any complaints about the elevators or wait times?	<b>x</b>				entrapments
43. Are there any problems with exterior lighting?	<b>x</b>				uppermost lights on face of building; limited access for maintenance
44. Are there any other significant issues/hazards with the property?				<b>x</b>	
45. Are there any unresolved construction defects at the property?				<b>x</b>	

## **APPENDIX J: ELEVATOR REPORT**



Attorney General Building  
1300 "I" Street  
Sacramento, CA

Due Diligence  
Elevator Report

February 22, 2015

**Prepared for:**

Ms. Karla Rodriquez  
EMG Corporation  
Hunt Valley, MD 21212

**Prepared by:**

Mr. Bob Nicholson  
President  
Architectural Elevator Consulting, LLC  
1326 5<sup>th</sup> Ave., Suite 630  
Seattle, WA 98101



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## **Section I: Executive Summary**

### **A. Introduction**

During February 2015, Bob Nicholson, James Young and Russell Holt of Architectural Elevator Consulting, LLC (AEC) surveyed all the vertical transportation systems at the Attorney General Building, 1300 I Street, Sacramento, CA. There are six (6) gearless and two (2) geared traction elevators. The elevators provide vertical transportation to the office floors on levels 7 to 17 and to the parking levels on 1, M, 2 to 6. 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.

All the elevators were manufactured and installed by Dover Elevator Company during the original building construction in 1995. The elevators have Dover's Traflomatic IV controller with solid-state drives. The office elevators, Cars 1-6, have high-speed gearless traction machines while the garage elevators, Cars 1-2, have slower geared traction machines.

During our survey we noted that the elevators were being properly maintained by ThyssenKrupp Elevator. Housekeeping in the machine rooms was satisfactory. The car tops and pits were clean but a few had excess dirt. Elevator performance is close to design. The elevators did not have any test tags on the governors indicating that they may not have been tested since they were installed in 1995. These elevators were installed under Group II and are exempt from annual and five year testing, but we highly recommend these tests be performed anyway.

### **B. Elevator Layout**

Elevators 1-6 are the main passenger cars and serve floors 1, 7 to 17. In addition Car 3 goes to the roof and mezzanine and has rear entrances for service deliveries. Car 2 also has a rear entrance. Elevators 7 and 8 serve the parking levels 1, M, 2-6. All the passenger elevators have fast and efficient center opening doors. Car 3 has larger side opening doors for service. The number, speed and size of the elevators appear to be adequate to provide satisfactory service for the building.

<b>Elevator Summary</b>				
<b>Elevator Bank</b>	<b>Elevator Speed</b>	<b>Floors Served</b>	<b>Capacity</b>	<b>Door Type</b>
Cars 1,2,4-6	700 FPM	1,7-17	3,500 lbs.	Center
Car 3	500 FPM	1, M-7,R	6,000 lbs.	Side
Cars 7-8	350 FPM	1, M, 2-6	3,500 lbs.	Center

\* Car 2 also has a rear entrance at the 1<sup>st</sup> floor.

### **C. Condition/Components**

Most the major components of the elevators were found to be in good condition. The elevators have solid-state controllers with energy efficient VF AC drives for the garage cars and Dover SCR drives for the main office cars. The car and hall signal fixtures meet ADA and were in good condition. The machines, car equipment and door operators are all in good condition. Most of the equipment is 20 years old and should be modernized in 4 to 6 years,

but if parts are still available could last for 7 to 10 years. 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. The level of maintenance was noted to be good. The performance was observed to be close to design. The pits and car tops were found to be in fairly good condition, with only a few that had significant dirt. The commutators on the gearless machines should be turned and undercut as a few had significant scarring and may need more extensive work. Several alarm bells did not ring and several stop switches were not connected to the alarms as required by code. 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:**

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 meet ADA for new and existing elevators. All the cars had proper hall lanterns and gongs. **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. **Jamb Braille:** Some of the jamb braille at the 1<sup>st</sup> floor meets ADA but does not meet California Title 24.
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 were installed with a majority of these items. The following is a summary of items that do not meet A17.3:
  - a. **Fire Service:** Phase II fire service does not have a “hold” feature and therefore does not meet A17.3. We recommend this be remedied when the elevators are modernized.
3. **Seismic:** The elevators were installed in 1995 under California Group II seismic code which is less stringent than Group III. The car and counterweight rails do not have seismic fishplates, but the counterweights have extra brackets and rail backing that minimize the spacing and strengthen the counterweight rails. All the cars have ring and string derailment. The cars also have seismic detection switches in the machine rooms.

**F. Recommendation:**

We recommend further research to determine when the last five year full load test was performed. If they have not been performed since the elevators were installed, as we suspect, all the elevators should have a five year full load test performed as soon as possible. The State of California exempts older traction elevators under Group II from being tested, however we recommend these tests be performed. The elevators should be fully modernized in the next 4 to 6 years, however if a high level of maintenance is continued and parts are available it is possible to extend the life for 7 to 10 years.

## **Section II : Component Review**

### **A. MACHINE ROOM:**

#### **Controllers:**

The controllers were manufactured and installed by Dover Elevator in 1995 when the building was constructed. The controllers are Dover's Trafloomatic IV with Dover solid state drives which are known to be a reliable elevator system.



#### **Machines:**

The elevators for Cars 1-6 have gearless machines manufactured and installed by Dover Elevator. The elevators for Cars 7-8 have geared Dover machines. They were all noted to be in good condition, except the commutators on a few of the gearless cars have severe burn marks.



#### **Commutator:**

The commutators on several of the gearless machines had severe burn marks.



**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 found to be in good condition.

**Car Guide Rails:**

The car rails are in good condition but do not have seismic fish plates. Upgrading the guide rails to current seismic standards is voluntary.

**Pits:**

The pits were found to be dry and most were clean but a few need further cleaning.



**C. CAR TOP:**

**Door Operator:**

The door operators are Dover HD 91 units which are known to be reliable. They were found to be in good condition.



**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. All the cars and counterweights have Dover roller guides that were in good condition.

#### **D. SIGNAL FIXTURES:**

##### **Car Operating Panels:**

All the Car Operating Panels (COP's) are original. The panels are in good condition and meet all ADA and T24. The stop switches are not keyed and many did not ring the alarm bell 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. All the existing passenger elevators have hall lanterns for each car. The lanterns have the proper gong for up and down.

##### **Hall Call Pushbuttons:**

At each floor hall call push buttons are located so that users can call the elevator. The hall call stations have raised operation buttons which meet ADA and California Title 24. They also have the code required fire exit signs in station.



**E. CAB INTERIOR:**

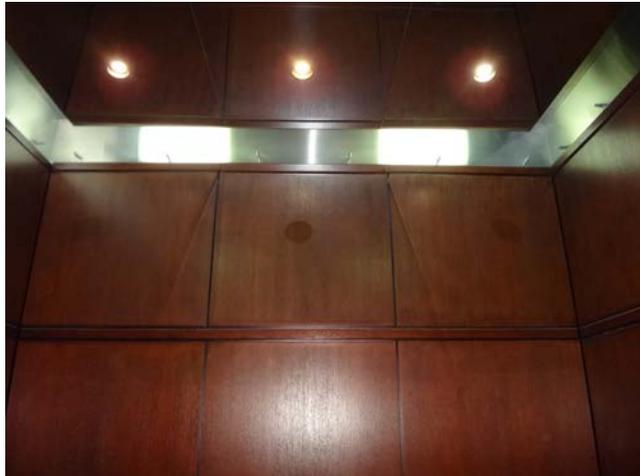
**Wall Finish:**

The existing cab interiors have decorative wood panels and are in good condition. They have the code required handrails. No work is needed unless it is desired to update them for aesthetics.



**Ceilings:**

The passenger elevators 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

Attorney General Building - 1300 I Street

Item No.	Recommendation	Rating	Quantity	Unit	Unit Cost	Immediate Code Items	Immediate - Repair	Years 1-3	Years 4-6	Years 7-10	Totals
1	Modernize gearless Cars 1-6 with new controllers, SCR drives, signal fixtures and closed loop door operators.	4	6	EA	\$300,000.00				\$1,800,000		\$1,800,000
2	Modernize geared garage Cars 7-8 with new controllers, AC motors, VF drives, signal fixtures and closed loop door operators.	4	2	EA	\$220,000.00				\$440,000		\$440,000
3	Perform five year full load tests. Elevators are not required to have tests and it appears they have not since 1994 when installed.	1	8	EA	\$3,000.00	\$24,000					\$24,000
4	Install Jamb braille at main lobby that meets California T24.	1	8	EA	\$400.00	\$2,400					\$2,400
5				EA							\$0
6				EA							\$0
7				EA							\$0
8				EA							\$0
9				EA							\$0
10				EA							\$0
11											
12											
	<b>Subtotal</b>					\$26,400	\$0	\$0	\$2,240,000	\$0	\$2,266,400
		1	\$26,400			Code and Safety					
		2	\$0			Deferred Maintenance & Repair					
		3	\$0			Capital Expenditure					
		4	\$2,240,000			Modernization / Improvements					
		5	\$2,266,400			Total					

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

Appendix A  
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		<b>Cars 1-8</b>
	<b>GENERAL</b>	
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
	<b>AUTOMATIC OPERATION</b>	
4.10.2	Elevators must be Automatic.	Yes
4.10.2	Self-leveling to within 1/2 in.	Yes
	<b>HALL CALL BUTTONS</b>	
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. <b>(T24 must be raised)</b>	Yes
4.10.3	Objects mounted beneath hall buttons not to project into the lobby more than 4 in.	Yes
	<b>HALL or CAR LANTERNS</b>	
4.10.4	Visible and audible signals at each hoistway entrance to indicate which car is responding to the call.	Yes – Hall
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
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.	N/A
	<b>HOISTWAY ENTRANCES</b>	
4.10.5	Raised and Braille floor designations are required on both door jambs. Permanently applied plates are acceptable. <b>(T24 must be to the left)</b>	Yes at typical floors. No at lobby.
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
	<b>DOOR PROTECTIVE &amp; REOPENING DEVICES</b>	
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

Appendix A  
ADA/California T24 ELEVATOR CHECKLIST

ADA	Item	Complies Yes/No/N/A
		<b>Cars 1-8</b>
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
	<b>DOOR AND SIGNAL TIMING</b>	
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
	<b>DOOR DELAY FOR CAR CALLS</b>	
4.10.8	Doors to remain open for a minimum of 3.0 seconds in response to car calls.	Yes
	<b>FLOOR PLAN NEW ELEVATOR</b>	
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
	<b>FLOOR PLAN EXISTING ELEVATOR</b>	
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 1-1/4 in.	Yes
	Handrails Circular Square Dia. ____ Top of Handrail ____ Height Side Back <b>(T24 must be 32")</b>	Yes
	<b>FLOOR SURFACES</b>	
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
	<b>ILLUMINATION LEVELS</b>	
4.10.11	Five foot-candles of illumination to be provided at car controls, platform and at sill.	Yes
	<b>CAR CONTROLS</b>	
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. <b>(T24 must be raised)</b>	Yes
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
		<b>Cars 1-8</b>
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 than 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
	<b>CAR POSITION INDICATORS</b>	
4.10.13	Visual car position indicator must be provided above control panel or over door.	Yes
4.10.13	Car position indicator numerals must be a minimum of 1/2 in. high.	Yes
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.	Yes
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
	<b>EMERGENCY COMMUNICATIONS</b>	
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.	N/A
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.	N/A
4.10.13	The system must not require voice communication.	Yes

**Appendix “B”**  
A17.3 Code for Existing Traction Elevators

A17.3	Code Item	Cars: 1-8
2.1	<b>HOISTWAYS</b>	
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
2.1.5	Counterweight Guards (Start at 12” go to 84” above pit floor; not needed with comp rope/chain)	N/A
2.2	<b>MACHINE ROOMS AND MACHINERY SPACES</b>	
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	<b>PITS</b>	
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
2.4	<b>CLEARANCES AND RUNBYS</b>	
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	<b>PROTECTION OF SPACES BELOW HOISTWAYS</b>	
2.5	Counterweight safeties required	N/A
2.6	<b>HOISTWAY ENTRANCES</b>	
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
2.7	<b>HOISTWAY DOOR LOCKING DEVICES, PARKING, DEVICES, AND ACCESS</b>	
2.7.1	Hoistway Door or Gate Locking Devices (Mechanical and electrical interlocks required)	Yes
2.7.2	Elevator Parking Device (For cars operated from within car only)	N/A
2.7.3	Access to Hoistway (Hoistway door unlocking devices and access switches)	Yes

**Appendix “B”**  
A17.3 Code for Existing Traction Elevators

A17.3	Code Item	Cars: 1-8
2.7.4	Restricted Opening of Hoistway Doors and/or Car Doors on Passenger Elevators (Cannot open more than 4” outside unlocking zone +-18” max.)	Yes
2.7.5	Hoistway Emergency Door Contacts (Positively opened)	Yes
<b>2.8</b>	<b>POWER OPERATION OF DOORS AND GATES</b>	
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
2.8.2	Reopening Device for Power-Operated Car Doors or Gates (Can be rendered inoperative if less than 2.5ft/lb)	Yes
	<b>Part III</b>	
3.1	Buffers And Bumpers (Car and counterweight buffers are required)	Yes
3.2	Counterweights (The weights shall be protected so that they cannot be dislodged. The rod nuts shall be protected)	Yes
<b>3.3</b>	<b>CAR FRAMES AND PLATFORMS</b>	
3.3.1	Car Platforms(Cover entire area)	Yes
3.3.2	Platform Guards (Aprons) (Vertical face at least 21”, 60-75deg, withstand 150#)	Yes
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 sheet metal or fire resistant material)	Yes
<b>3.4</b>	<b>CAR ENCLOSURES</b>	
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
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 than 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
<b>3.5</b>	<b>SAFTIES</b>	
3.5.1	Car Safeties (Every car must have a safety)	Yes
3.5.2	Counterweight Safeties (If occupied space below)	Yes
3.5.3	Safeties to Stop Ascending Cars or Counterweights Prohibited (Cannot be provided)	Yes
3.5.4	Application and Release of Safeties (Must be mechanical can only release if car goes up)	Yes
3.5.5	Max. Permissible Movement of Gov. Rope to Oper. Safety (For type “B” Safties-200ft or less 42in.; 201 to 375fpm – 36in.; Over 375 FPM 30in. Cwt. = 42in all speeds.)	Yes
3.5.6	Rail Lubricants and Lubrication Plate (Plate on cross head stating type of lubricant or none at all.)	Yes
3.5.7	Overall Length of Guide Rails (Extended to prevent disengaging)	Yes
<b>3.6</b>	<b>SPEED GOVERNORS</b>	
3.6.1	Speed Governor Overspeed and Car Safety Mechanism Switches. (A switch shall be provided when speed is over 150FPM. For static control switch shall be for all speeds & both direct.)	Yes
3.6.2	Governor Ropes (Shall be of iron, steel, monel metal, phosphor bronze, or ss. At least 3/8” in diameter Tiller rope not allowed.)	Yes
<b>3.7</b>	<b>CAPACITY AND LOADING</b>	
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)	N/A
3.7.3	Min. Rated Load for Freight Elevators (Class A = Not more than ¼ of total cap.; Class B = Motor Veh.; Class C = loading with industrial truck, etc.)	N/A
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”	Yes

**Appendix “B”**  
A17.3 Code for Existing Traction Elevators

A17.3	Code Item	Cars: 1-8
	for frt.)	
3.7.5	Signs on Freight Elevators (NOT A PASS ELEV...etc. ½” high letters)	N/A
<b>3.8</b>	<b>DRIVING MACHINES AND SHEAVES</b>	
3.8.1	General Requirements (Must be cast iron or steel, fin. Grooves no set screws)	Yes
3.8.2	Winding Drum Machines (Must have slack rope switch; Chain, belt, or rope-driven mechanisms shall not be used.)	N/A
3.8.3	Indirect-Drive Machines (Must be at least 3 belts, safety factor of 10)	Yes
3.8.4	Brakes (Must be released electrically and have spring or gravity and friction)	Yes
<b>3.9</b>	<b>TERMINAL STOPPING DEVICES</b>	
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
3.9.2	Final Terminal Stopping Devices (Winding drum machines- on machines and in hoistway; Traction – in the hoistway operated by the car.)	Yes
<b>3.10</b>	<b>OPERATING DEVICES AND CONTROL EQUIPMENT</b>	
3.10.1	Types of Operating Devices (Rope or rod devices shall not be used.)	Yes
3.10.2	Car-Switch Operation Elevators (If provided must return to stop position if released by hand)	Yes
3.10.3	Top-of-Car Operating Devices (Continuous pressure <150FPM; between crosshead & door)	Yes
3.10.4	Electrical Provisions	
	(a) Slack Rope Switch	N/A
	(b) Motor-Generator Running Switch	N/A
	(c) Compensating Rope Sheave Switch	N/A
	(d) Broken rope, tape or chain	Yes
	(e) Stop Switch – Top of Car- marked “stop” & “run”	Yes
	(f) Car-Safety Mechanism Switch	Yes
	(g) Speed Gov. Overspeed Switch	Yes
	(h) Final Terminal Stopping Devices	Yes
	(i) Emergency Terminal Stopping Devices (reduced stroke)	Yes
	(j) Motor Generator Overspeed Protection	N/A
	(k) Motor Field Sensing Means (not required w/ static drive)	Yes
	(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)	Yes
	(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
3.10.8	Release and Application of Driving Machine Brakes (If ungrounded or if stop switch is pulled shall release brake)	Yes
3.10.9	Control and Operating Circuit Requirements (The failure of any single magnetically operated switch)	Yes
3.10.10	Absorption of Regenerated Power (Provide means to absorb energy during overhauling)	Yes

**Appendix “B”**  
A17.3 Code for Existing Traction Elevators

A17.3	Code Item	Cars: 1-8
<b>3.11</b>	<b>EMERGENCY OPERATION AND SIGNALING DEVICES</b>	
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)	No – does not have hold feature.
<b>3.12</b>	<b>SUSPENSION MEANS AND THEIR CONNECTIONS</b>	
3.12.1	Suspension Means (Must be wire rope made of iron or steel- Elevator ropes only)	Yes
3.12.2	Rope Data Tag	Yes
3.12.3	Factor of Safety ( $f = S \times N / W$ or table 3.12.3)	Yes
3.12.4	Minimum Number and Diameter of Suspension Ropes (3 for traction; 2 for drum; minimum diameter = 3/8” )	Yes
3.12.5	Suspension Rope Equalizers (When provided shall be of the individual-compression spring type)	Yes
3.12.6	Securing of Suspension Wire Ropes to Winding Drums (rope must be secured by clamps or tapered babbitted sockets.)	N/A
3.12.7	Spare Turns on Winding Drums (Not less than one turn of the rope when car is on buffer)	N/A
3.12.8	Suspension Rope Fastenings (Spliced eyes by return loop may continue in service)	Yes
3.12.9	Auxiliary Rope Fastening Devices	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  $\frac{3}{4}$  open for center opening doors, and  $\frac{1}{2}$  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

1300 ‘T’ Street							
	PERFORMANCE TIMES	Design	CAR 1	CAR 2	CAR 4	CAR 5	CAR 6
7.1	Door Open Time	1.7	1.7	1.7	2.3	1.8	1.9
7.2	Door Close Time	2.7	2.8	2.8	2.8	2.7	2.6
7.3	Floor to Floor Up	8.5	10.2	10.2	10.0	9.9	10.2
9.6	Floor to Floor Down	8.5	10.2	10.2	10.0	9.9	10.2
7.5	Full Speed Up	700 FPM	711	DNC	699	700	687
7.6	Full Speed Down	700 FPM	709	DNC	698	711	689
7.7	Jerk Rate Up	< 7.0	6.0	6.2	5.3	5.9	7.4
7.8	Jerk Rate Down	<7.0	8.8	9.7	10.1	8.8	6.6
7.9	Power Closing of Door (Pressure Gauge)	<30lbs	32 lbs	33 lbs	25 lbs	Door split	34 lbs
7.10	Interrupted Ray	.5sec	2.0	1.73	1.0	2.5	1.8
7.11	Car Dwell Time	3.0	5.9	6.5	7.4	6.4	6.2
7.12	Hall Call Dwell Time	5.0	6.9	7.2	8.1	7.6	7.2
7.13	Hall/Car Lantern Time	8.0	12.5	11.0	14.4	12.5	11.7
7.14	Nudging	20.0	>20	>20	>20	>20	>20
7.15	Test Emergency Phone	Yes	Yes	Yes	Yes	Yes	No

Items in Red do not comply and should be adjusted.

Car #	GENERAL MAINTENANCE DEFICIENCIES
	<b>Car 1</b>
1.1	Bad commutator on machine.
1.2	Alarm bell on main COP does not work.
1.3	Stop switch on main COP does not ring bell.
1.4	Auxiliary alarm button is in-operative - no alarm bell with stop button.
	<b>Car 2</b>
2.1	Rear alarm is in operative and does not ring bell on stop switch.
2.2	E-phone calls security and they can't tell which elevator.
	<b>Car 3</b>
3.1	Bad commutator on machine.
	<b>Car 4</b>
4.1	Alarm bell does not work on main car station.
4.2	Stop button on main car station does not ring bell.
	<b>Car 5</b>

## Appendix “C”

### Performance Review and Maintenance Deficiency List

5.1	Bad commutator on machine.
5.2	Auxiliary alarm bell is inoperative.
5.3	Alarm bell on stop switch does not ring.
<b>Car 6</b>	
6.1	E-phone dials out and rings, but no answer.

1300 “T” Street							
	PERFORMANCE TIMES	Design 3	CAR 3	Design 7-8	CAR 7	CAR 8	
7.1	Door Open Time	2.5	Not available	1.6	1.7	1.8	
7.2	Door Close Time	4.4		2.4	2.7	2.8	
7.3	Floor to Floor Up	10.8		9.1	9.7	10.1	
9.6	Floor to Floor Down	10.8		9.1	9.6	9.1	
7.5	Full Speed Up	500 FPM		350 FPM	330	342	
7.6	Full Speed Down	500 FPM		350 FPM	330	352	
7.7	Jerk Rate Up	< 7.0		< 7.0	7.8	7.6	
7.8	Jerk Rate Down	<7.0		<7.0	6.7	5.6	
7.9	Power Closing of Door (Pressure Gauge)	<30lbs		<30lbs	21 lbs	26 lbs	
7.10	Interrupted Ray	.5sec		.5sec	2.1	1.5	
7.11	Car Dwell Time	3.0		3.0	4.2	4.5	
7.12	Hall Call Dwell Time	5.0		5.0	5.5	5.1	
7.13	Hall/Car Lantern Time	8.0		8.0	8.5	8.5	
	Nudging	20.0		20.0	>20	>20	
	Test Emergency Phone	Yes	↓	Yes	Yes	Yes	

<b>Car 7</b>	
7.1	Tachometer cover is off the governor.
7.2	Machine room is messy.
7.3	Pit is dirty.
<b>Car 8</b>	
8.1	Machine room is messy.
8.2	Machine sounds rough- check gear box.
8.3	Cover on duct is open over controller.
8.4	Pit is dirty.



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