



California Tower (330)

3737 Main Street, Riverside, CA 92501

Facility Condition Assessment

September 2015

Prepared for the State of California Department of General Services



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EXECUTIVE SUMMARY

BACKGROUND

This Facility Condition Assessment (FCA), prepared by EMG Corporation (EMG) in collaboration with the Department of General Services (DGS) Real Estate Services Division (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 California Towers (330).

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 California Towers (330) 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 California Towers (330) on February 24 - 25, 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	\$83,607,708
Immediate Repair Costs (12 months)	\$1,675,183
1-5 Year Capital Needs	\$11,538,501
6-10 Year Capital Needs	\$96,606
Total 10-Year Capital Reserve Needs	\$13,310,290

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

Current Year FCI

$$\text{Current FCI} = \frac{\$1,675,183}{\$83,607,708}$$

Ten-Year FCI

$$\text{Ten-Year FCI} = \frac{\$13,310,290}{\$83,607,708}$$

Current Year FCI	Ten-Year FCI
2.00 % = <i>Good Condition</i>	15.92 % = <i>Poor Condition</i>

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

- Elevator modernization in accordance with the State of California elevator report.
- Asphalt parking lot pavement replacement.
- HVAC control system replacement throughout to bring direct digital controls in-line with current technology.

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

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INTRODUCTION

BUILDING BACKGROUND

The California Towers Building (330) is located at 3737 Main Street in Riverside. Designed by Bahr Vermeer & Haecker Architects of Pasadena and constructed in 1972, the building underwent a major rehabilitation in 1994. Renovations were developed through a Joint Power Authority with the Redevelopment Agency of the City of Riverside.

The building houses eight state agencies, of which the Board of Equalization, Water Resources Control Board, and Department of Social Services are the largest. The 11-story rigid steel framed, curtain wall building contains both a mechanical penthouse and basement. The acrylic tile art piece on the first floor was created by local elementary school children, expressing their thoughts on government. The City of Riverside leases 22,500 SF from DGS on the ground floor, nearly all of which is leased to a variety of retail tenants. Building parking is available in an adjacent low-rise parking structure owned and managed by the City of Riverside.

The building's gross area is 162,000 SF encompassing 130,340 net usable SF. The ratio of net usable to gross building area SF is 80.5 percent. Occupant capacity is 507

BUILDING DESCRIPTION

The building is a structural steel superstructure with lightweight leveling concrete-topped metal deck floors and roof deck. The roof areas are flat throughout, with the lower roof areas finished with single-ply TPO membranes, and the upper roof area finished with heat-applied modified bituminous roofing membrane.

The lower level exterior walls are finished with stucco and have storefront type windows and doors throughout the tenant spaces. The upper level exteriors are finished with textured metal panels and glazed curtain walls.

The building's interiors include painted gypsum wallboards and areas of vinyl covered walls with a combination of various floor finishes. The finishes include epoxy sealed concrete, vinyl composition tiles, ceramic tile, carpeting, vinyl planks, and finished stone tiling. The ceilings throughout are mostly finished with acoustic ceiling tiles and painted gypsum ceilingboard.

There are five elevators; three are overhead traction type and two are hydraulically operated.

Domestic hot water is provided by a natural gas-fired commercial water heater located within the main mechanical room.

Heating and cooling are provided by a penthouse main mechanical/hydronic room which houses the main generation components for the central hydronic HVAC system, including the boilers and chillers. Additional components of the HVAC system include large capacity air handling units and VAV boxes located throughout various areas of the subject property. The only exception to the above central heating is the first floor tenant spaces, which are heated and cooled by various tenant-owned first floor rooftop mounted package and split system units.

Fire/life safety systems include automatic fire suppression sprinklers, smoke detectors, horns/strobes, manual pull stations, and handheld fire extinguishers.

There is minimal landscaping limited to small areas of shrubbery and a few scattered trees throughout the perimeter of the site. Parking is limited to four stalls on the property. The pedestrian walkways are constructed of cast-in-place concrete with cast-in-place concrete steps/stairs and metal handrails at areas of grade changes.

Project Statistics

Item	Description
Project Name	California Towers
Building ID	330
Property Type	Administration
Year Built	1972
Number of Stories	11
Occupied	Yes
Land Area (acres)	2
Gross Square Feet (GSF)	162,000

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 E2018-08¹ 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 California Towers (330) on February 24 - 25, 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.

¹ 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 as 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.

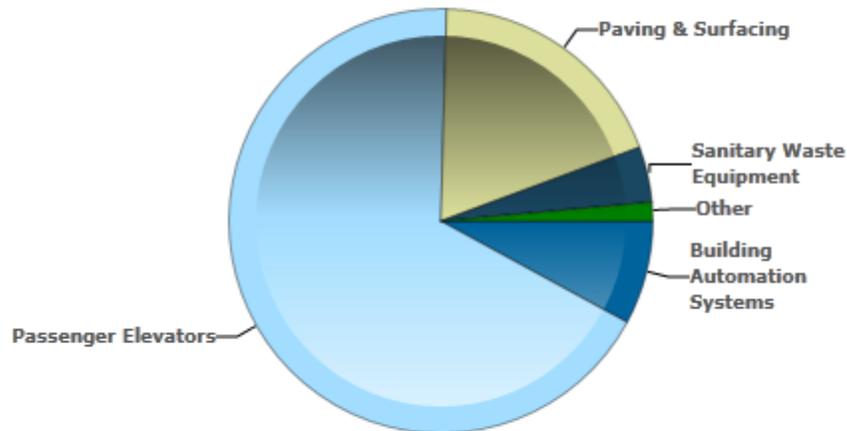
PRIORITY RATIO

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:

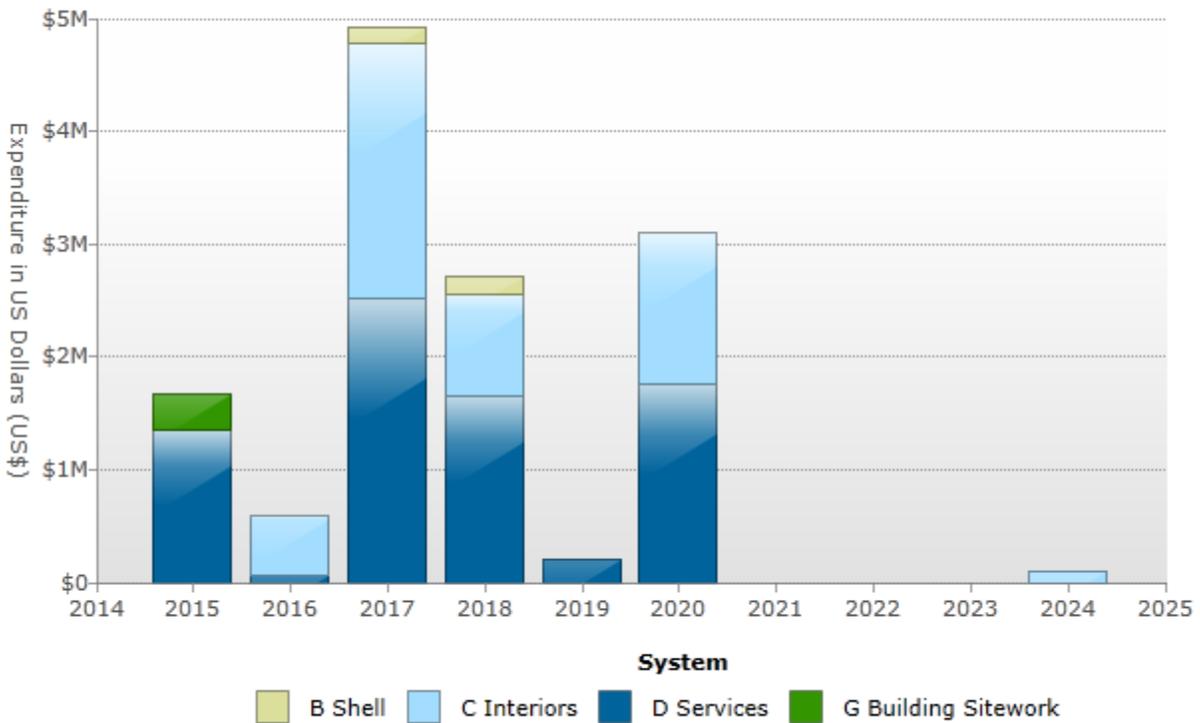
Condition	Definition
Good	In new or well-maintained condition, with no visual evidence of wear, soiling, or other deficiencies.
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable 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
D1011	Passenger Elevators	\$1,131,000
D2034	Sanitary Waste Equipment	\$70,800
D3042	Exhaust Ventilation Systems	\$11,469
D3043	Steam Distribution Systems	\$12,400
D3068	Building Automation Systems	\$132,581
G2012	Paving & Surfacing	\$316,934
	Total	\$1,675,183

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	\$0	\$0	\$1,358,249	\$0	\$0	\$316,934	\$1,675,183
2016	\$0	\$0	\$518,270	\$69,038	\$0	\$0	\$0	\$587,309
2017	\$0	\$145,600	\$2,260,845	\$2,518,785	\$0	\$0	\$0	\$4,925,230
2018	\$0	\$173,491	\$897,048	\$1,649,663	\$0	\$0	\$0	\$2,720,202
2019	\$0	\$0	\$0	\$198,890	\$0	\$0	\$0	\$198,890
2020	\$0	\$0	\$1,341,516	\$1,765,354	\$0	\$0	\$0	\$3,106,871
2024	\$0	\$0	\$96,606	\$0	\$0	\$0	\$0	\$96,606
Total	\$0	\$319,091	\$5,114,285	\$7,559,980	\$0	\$0	\$316,934	\$13,310,290

CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as \$83,607,708 for the California Towers Building (330). 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
162,000 GSF	\$516	\$83,607,708

FACILITY CONDITION INDEX

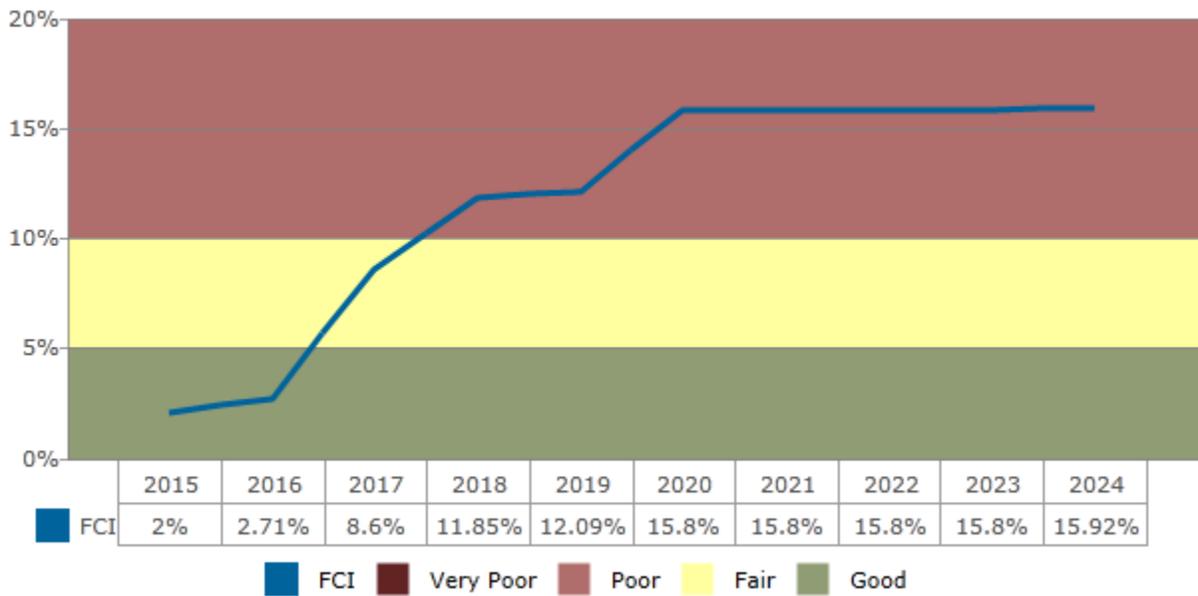
The FCI¹ is an indication of a building’s current and future overall condition. According to industry standards an FCI ratio of 65 percent, or the “rule of two-thirds,” is the threshold for identifying potential candidates for replacement or divestment.² Once the FCI ratio reaches 65 percent, or roughly two-thirds of the Current Replacement Value of the estimated cost to replace a building, it may not be prudent to continue to fund repairs. In cases where aggressive facilities planning is expected to be necessary, this threshold may be adjusted to address more pressing needs.

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

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

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

Cumulative Effects of FCI over the Study Period



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APPENDICES

APPENDIX A: ACCESSIBILITY ISSUES

Item	Description
C3005 ADA Renovations	C3005 Restroom ADA Upgrades and Remodel
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Restrooms

Recommendations:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3005	Replace C3005 Restroom ADA Upgrades and Remodel	1.0 - EA	1488000.0	CC - Accessibility	Priority 2	2017	1,488,000

Cost Summary:

Year	Total Expenditures
2017	\$1,488,000

APPENDIX B: GENERAL ASSESSMENT INFORMATION

B Shell Systems

B20 EXTERIOR ENCLOSURE

Item	Description
B2011 Exterior Wall Construction	B2010 Stucco Painting
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Exterior First Level

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, repainting is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2011	Replace B2010 Stucco Painting	1.0 - EA	145600.0	IN - Appearance	Priority 2	2017	145,600

Item	Description
B2011 Exterior Wall Construction	B2011 Textured Metal Panel Exterior Walls
Condition	Fair
Qty / UOM	42,000 / SF
RUL (years)	10
Location	Exterior Walls Above Ground Floor

OBSERVATIONS/COMMENTS:

The non-glazed portions of the exterior curtain walls on the 2nd through 11th floors are comprised of ribbed metal panels with vertically-oriented textured surfaces. Based on current condition and RUL, no further action is recommended.

Item	Description
B2011 Exterior Wall Construction	B2011 - Curtain Wall Glazing
Condition	Fair
Qty / UOM	28,000 / SF
RUL (years)	10
Location	Exterior Walls Above Ground Floor

OBSERVATIONS/COMMENTS:

The exterior curtain wall glazings were replaced in 1995, however, single-pane glazing was utilized. Damaged and leaking panels were noted throughout the exterior curtain walls at isolated corner locations. Based on current condition and RUL, no further action is required.

Item	Description
B2031 Glazed Doors & Entrances	B2031 Glazed Entrance Doors
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	10
Location	Entrance Doors

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, no further action is recommended.

COST SUMMARY:

Type	Year	Total Expenditures
B20 Exterior Enclosure	2017	\$145,600

B30 ROOFING

Item	Description
B3011 Roof Finishes	B3010 TPO, Roof 45 Mills
Condition	Good
Qty / UOM	20 / SQ
RUL (years)	19
Location	Lower Roofs

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, no further action is recommended.

Item	Description
B3011 Roof Finishes	B3011 Built-Up Roofing
Condition	Fair
Qty / UOM	127 / SQ
RUL (years)	3
Location	Upper Roofs

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B3011	Replace B3011 Built-Up Roofing	127.0 - SQ	1366.1	IN - Beyond Rated Life	Priority 2	2018	173,491

COST SUMMARY:

Type	Year	Total Expenditures
B30 Roofing	2018	\$173,491

C Interiors Systems

C10 INTERIOR CONSTRUCTION

Item	Description
C1021 Interior Doors	C1021 Interior Doors
Condition	Fair
Qty / UOM	386 / EA
RUL (years)	10
Location	Interior Doors

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, no further action is recommended.

Item	Description
C1024 Interior Door Wall Opening Elements	C1024 Interior Door Wall Opening Partitions
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	Interior Doors

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C1024	Replace C1024 Interior Door Wall Opening Partitions	1.0 - EA	173600.0	IN - Beyond Rated Life	Priority 4	2020	173,600

COST SUMMARY:

Type	Year	Total Expenditures
C10 Interior Construction	2020	\$173,600

C30 INTERIOR FINISHES

Item	Description
C3005 ADA Renovations	C3005 Restroom ADA Upgrades and Remodel
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Restrooms

OBSERVATIONS/COMMENTS:

Each level contains at least two common area restrooms. The main level has four common area restrooms. ADA accessibility modifications are recommended for the facility in the near term. Cost for these modifications have been provided via a client-obtained bid. This bid includes all restrooms except for the eighth floor restrooms, which have been incorporated into that floor's tenant space, and have been recently remodeled/modified.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3005	Replace C3005 Restroom ADA Upgrades and Remodel	1.0 - EA	1488000.0	CC - Accessibility	Priority 2	2017	1,488,000

Item	Description
C3012 Wall Finishes to Interior Walls	C3012 Paint Interior Walls, Drywall
Condition	Fair
Qty / UOM	243,000 / SF
RUL (years)	1
Location	Interior Walls

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, repaint is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3012	Replace C3012 Paint Interior Walls, Drywall	243,000.0 - SF	2.1	IN - Appearance	Priority 3	2016	518,270

Item	Description
C3024 Flooring	C3024 Vinyl Tile
Condition	Fair
Qty / UOM	5,500 / SY
RUL (years)	3
Location	Interior Flooring

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3024	Replace C3024 Vinyl Tile	5,500.0 - SY	163.1	IN - Appearance	Priority 3	2018	897,048

Item	Description
C3025 Carpeting	C3025 Carpeting
Condition	Fair
Qty / UOM	8,000 / SY
RUL (years)	2
Location	Interior Flooring

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3025	Replace C3025 Carpeting	8,000.0 - SY	96.6	IN - Appearance	Priority 3	2017	772,845

Item	Description
C3025 Carpeting	C3025 Carpet Tiles - Standard
Condition	Good
Qty / UOM	1,000 / SY
RUL (years)	9
Location	Interior Flooring

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3025	Replace C3025 Carpet Tiles - Standard	1,000.0 - SY	96.6	IN - Appearance	Priority 4	2024	96,606

Item	Description
C3032 Suspended Ceilings	C3032 Acoustical Ceiling Tile
Condition	Fair
Qty / UOM	972 / CSF
RUL (years)	5
Location	Interior Ceilings

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3032	Replace C3032 Acoustical Ceiling Tile	972.0 - CSF	1201.6	IN - Appearance	Priority 4	2020	1,167,916

COST SUMMARY:

Type	Year	Total Expenditures
C30 Interior Finishes	2016	\$518,270
C30 Interior Finishes	2017	\$2,260,845
C30 Interior Finishes	2018	\$897,048
C30 Interior Finishes	2020	\$1,167,916
C30 Interior Finishes	2024	\$96,606

D Services Systems

D10 CONVEYING SYSTEMS

Item	Description
D1011 Passenger Elevators	D1011 Traction Elevator Machinery and Controls
Condition	Poor
Qty / UOM	3 / EA
RUL (years)	0
Location	Elevators 1-3
Elevator Style	Passenger
Elevator Type	Traction
Machinery Location	Penthouse At The Top Of The Shaft
Elevator Cab Finishes	Plastic-Laminated Wood
Elevator Doors	Mechanical Safety Stops
Elevator Light Fixtures	Recessed Ceiling
Certificate of Inspection Location	Elevator Cab
Certificate of Inspection Expired	No

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendix of this report and details the anticipated modernization costs. This includes the consultant's suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Replace D1011 Traction Elevator Machinery and Controls	3.0 - EA	377000.0	FN - Modernization	Priority 1	2015	1,131,000

Item	Description
D1011 Passenger Elevators	D1011 Hydraulic Elevators, 3000 LB
Condition	Poor
Qty / UOM	1 / EA
RUL (years)	3
Location	Elevator 4
Elevator Style	Passenger
Elevator Type	Hydraulic
Machinery Location	Room Adjacent To The Shaft
Elevator Cab Finishes	Plastic-Laminated Wood
Elevator Doors	Electronic Safety Stops
Elevator Light Fixtures	Recessed Ceiling
Certificate of Inspection Location	Elevator Cab
Certificate of Inspection Expired	No

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendix of this report and details the anticipated modernization costs. This includes the consultant's suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Replace D1011 Hydraulic Elevators, 3000 LB	1.0 - EA	409500.0	FN - Modernization	Priority 3	2018	409,500

Item	Description
D1011 Passenger Elevators	D1011 Hydraulic Elevators, 3000 LB
Condition	Poor
Qty / UOM	1 / EA
RUL (years)	3
Location	Elevator 5
Elevator Style	Passenger
Elevator Type	Hydraulic
Machinery Location	Room Adjacent To The Shaft
Elevator Cab Finishes	Plastic-Laminated Wood
Elevator Doors	Electronic Safety Stops
Elevator Light Fixtures	Recessed Ceiling
Certificate of Inspection Location	Elevator Cab
Certificate of Inspection Expired	No

OBSERVATIONS/COMMENTS:

A 2015 assessment report by Elevator Consulting Associates is included in the appendix of this report and details the anticipated modernization costs. This includes the consultant's suggested additional costs for cab finishes, associated trades, and consulting fees.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D1011	Replace D1011 Hydraulic Elevators, 3000 LB	1.0 - EA	318500.0	FN - Modernization	Priority 3	2018	318,500

COST SUMMARY:

Type	Year	Total Expenditures
D10 Conveying Systems	2015	\$1,131,000
D10 Conveying Systems	2018	\$728,000

D20 PLUMBING

Item	Description
D2018 Drinking Fountains and Coolers	D2018 Drinking Fountain
Condition	Fair
Qty / UOM	24 / EA
RUL (years)	1
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2018	Replace D2018 Drinking Fountain	24.0 - EA	2876.6	IN - Beyond Rated Life	Priority 1	2016	69,038

Item	Description
D2022 Hot Water Service	D2030 Domestic Water Heater 100 Gallon
Condition	Good
Qty / UOM	1 / EA
RUL (years)	17
Location	Boiler Room

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, no further action is recommended.

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

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2023	Replace D2023 Domestic Water Booster Pump Station	2.0 - EA	18880.0	IN - Beyond Rated Life	Priority 2	2017	37,760

Item	Description
D2034 Sanitary Waste Equipment	D2034 Submersible Pump 1/4 HP
Condition	Poor
Qty / UOM	2 / EA
RUL (years)	0
Location	Basement Fire Pump Room

OBSERVATIONS/COMMENTS:

Two submersible pumps in the basement remove ground water from the basement. Based on current condition and RUL, replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2034	Replace D2034 Submersible Pump 1/4 HP	2.0 - EA	35400.0	IN - Beyond Rated Life	Priority 1	2015	70,800

COST SUMMARY:

Type	Year	Total Expenditures
D20 Plumbing	2015	\$70,800
D20 Plumbing	2016	\$69,038
D20 Plumbing	2017	\$37,760

D30 HVAC

Energy Supply	
Item	Description
Fuel Oil Type	N/A
Fuel Gas Type	Natural Gas
Solid Fuel Type	N/A
District Heat Type	N/A
District Cooling Type	N/A
Solar Thermal	No
Fuel Tank Type	N/A
Fuel Tank Size (gallons)	N/A
Fuel Tank Location	N/A
Gas Meter Location	West Side of Building at North Corner
Electrical Meter Location	West Side of Basement
Water Meter Location	West Side of Building at North Corner

Item	Description
D3021 Boilers	D3020 Water Boiler, Gas 5031 MBH
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	4
Location	Boiler Room
Boiler Draft Type	Atmospheric/Induced Draft
Boiler Location	Boiler Room In The Penthouse

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3021	Replace D3020 Water Boiler, Gas 5031 MBH	1.0 - EA	198889.8	IN - Beyond Rated Life	Priority 3	2019	198,890

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Chilled Water Circulation Pumps 5 HP
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	3
Location	HVAC Chiller Room
Piping Diameter	6
Piping Insulation	Fiberglass
Pump HP	5

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022 HVAC Chilled Water Circulation Pumps 5 HP	2.0 - EA	14413.8	IN - Beyond Rated Life	Priority 2	2018	28,828

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Chilled Water Circulation Pumps 20 HP
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	3
Location	HVAC Chiller Room
Piping Diameter	6
Piping Insulation	Fiberglass
Pump HP	20

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

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

Item	Description
D3022.1 Circulating Pumps	D3022 HVAC Heating Water Circulation Pumps 15 HP
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Boiler Room
Piping Type	Black Iron
Piping Insulation	Fiberglass
Pump HP	15

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022 HVAC Heating Water Circulation Pumps 15 HP	1.0 - EA	24193.1	IN - Beyond Rated Life	Priority 2	2017	24,193

Item	Description
D3023 Auxiliary Equipment	D3023 Condensate Return System
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	3
Location	HVAC Chiller Room

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3023	Replace D3023 Condensate Return System	1.0 - EA	17336.2	IN - Beyond Rated Life	Priority 2	2018	17,336

Item	Description
D3023 Auxiliary Equipment	D3023 Condensate Return System
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	3
Location	HVAC Chiller Room

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3023	Replace D3023 Condensate Return System	2.0 - EA	17336.2	IN - Beyond Rated Life	Priority 2	2018	34,672

Item	Description
D3031.1 Chillers	D3031 Chiller, Water Cooled, 150 Ton
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	Chiller Room
Chiller Refrigerant	123

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3031	Replace D3031 Chiller, Water Cooled, 150 Ton	1.0 - EA	285200.0	IN - Beyond Rated Life	Priority 3	2020	285,200

Item	Description
D3031.1 Chillers	D3031 Chiller, Water Cooled, 350 Ton
Condition	Good
Qty / UOM	1 / TN
RUL (years)	22
Location	HVAC Chiller Room
Chiller Refrigerant	123

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, no further action is recommended.

Item	Description
D3031.2 Cooling Towers	D3031 Cooling Tower, Galvanized Steel, 400 Ton
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	Upper Roof
Cooling Tower Type	Induced Draft Crossflow
Number of Cells	1
Cooling Tower Material	Galvanized Steel
Cooling Tower VFD	Yes

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3031	Replace D3031 Cooling Tower, Galvanized Steel, 400 Ton	1.0 - EA	187190.4	IN - Beyond Rated Life	Priority 3	2020	187,190

Item	Description
D3031.2 Cooling Towers	D3031 Cooling Tower, Galvanized Steel, 150 Ton
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	Upper Roof
Cooling Tower Type	Induced Draft Crossflow
Number of Cells	1
Cooling Tower Material	Galvanized Steel
Cooling Tower VFD	Yes

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3031	Replace D3031 Cooling Tower, Galvanized Steel, 150 Ton	1.0 - EA	103561.5	IN - Beyond Rated Life	Priority 3	2020	103,561

Item	Description
D3041.1 Air Handling Units	D3041 Interior AHU 16000-13000 CFM
Condition	Fair
Qty / UOM	11 / EA
RUL (years)	2
Location	Utility Areas/Closets
Air Handling Unit Sub Type	Variable Volume Multi-Zone
Air Handling Unit Heat Type	Hot Water
Air Handling Unit Duct Heat Type	Hot Water
Air Handling Unit Cooling Type	Chilled Water Coil
Air Handling Unit Outdoor Air	Provided By Makeup Air Units
Return Air Fan Capacity Units	Cfm
Return Air Fan Outdoor Air	Damper Controlled
Return Air Fan Duct Location	Concealed Above Ceilings And In Walls
Duct Supply Diffusers and Registers	In Conditioned Spaces On Walls And Ceilings
Duct Return Grilles	Conditioned Space

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by 12 interior AHUs which supply conditioned air to VAV terminals. Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041 Interior AHU 16000-13000 CFM	11.0 - EA	135274.1	IN - Beyond Rated Life	Priority 2	2017	1,488,015

Item	Description
D3041.1 Air Handling Units	D3041 Interior AHU 5600 CFM
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Rooftop
Air Handling Unit Sub Type	Variable Volume Single-Zone
Air Handling Unit Heat Type	Hot Water
Air Handling Unit Duct Heat Type	Hot Water
Air Handling Unit Cooling Type	Chilled Water Coil
Air Handling Unit Outdoor Air	Not Provided

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by 12 interior AHUs which supply conditioned air to VAV terminals. Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041 Interior AHU 5600 CFM	1.0 - EA	31806.0	IN - Beyond Rated Life	Priority 2	2017	31,806

Item	Description
D3041.1 Air Handling Units	D3041 AHU Fan Motor, 20 - 30 HP
Condition	Fair
Qty / UOM	12 / EA
RUL (years)	2
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041 AHU Fan Motor, 20 - 30 HP	12.0 - EA	9176.0	IN - Beyond Rated Life	Priority 2	2017	110,112

Item	Description
D3041.2 Terminal Units VAV	D3041 VAV Boxes
Condition	Fair
Qty / UOM	150 / EA
RUL (years)	3
Location	Throughout Facility
Terminal Units VAV Boxes	Electric Reheat
Terminal Units Control	Building System
Terminal Units Units	Btuh
Terminal Heating Medium	Hot Water

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by variable air volume (VAV) terminals supplied with conditioned air from the central system air handlers, located in each floor's air handling unit (AHU) room. The maintenance staff reports that the vast majority of VAVs are original to the 1972 construction of the facility. Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace All Units to work with DDC	150.0 - EA	2496.7	IN - Beyond Rated Life	Priority 2	2018	374,507

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 12000 CFM
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	3
Location	Stair Tower No. 2 First Floor
Ventilation System	Central Exhaust Duct Network

OBSERVATIONS/COMMENTS:

This exhaust fan located above the number two exit stair is used to pressurize the stair towers. It was last replaced in 1995. It utilizes a 7.5 hp fan motor and has fire dampers on each side. Based on current condition and remaining useful life (RUL), replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	Replace D3042 Exhaust Fan 12000 CFM	1.0 - EA	14791.8	IN - Beyond Rated Life	Priority 2	2018	14,792

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 16750 CFM
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Penthouse
Ventilation System	Central Exhaust Duct Network

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	Replace D3042 Exhaust Fan 16750 CFM	1.0 - EA	16594.2	IN - Beyond Rated Life	Priority 2	2017	16,594

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Exhaust Fan 5500 CFM
Condition	Poor
Qty / UOM	2 / EA
RUL (years)	0
Location	Penthouse
Ventilation System	No Duct

OBSERVATIONS/COMMENTS:

There are two wall-mounted exhaust fans in the penthouse; one for the HVAC boiler, and one for the HVAC chiller rooms. Each of these fans utilizes a 1.5 hp motor with belts and louvers that are in poor condition. Based on current condition and RUL, replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	Replace D3042 Exhaust Fan 5500 CFM	2.0 - EA	5734.3	IN - Beyond Rated Life	Priority 1	2015	11,469

Item	Description
D3042 Exhaust Ventilation Systems	D3042 Make-up Building Air Fan 22500 CFM
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Penthouse
Ventilation System	No Duct

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	Replace D3042 Make-up Building Air Fan 22500 CFM	1.0 - EA	28387.2	IN - Beyond Rated Life	Priority 2	2017	28,387

Item	Description
D3043 Steam Distribution Systems	D3043 HVAC Heating Water Heat Exchanger
Condition	Poor
Qty / UOM	1 / EA
RUL (years)	0
Location	Boiler Room

OBSERVATIONS/COMMENTS:

This heat exchanger is not being used and needs to be removed from the system, along with two pumps and associated large diameter piping.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3043	D3040 Remove heat exchangers from the system.	1.0 - EA	12400.0	FN - Obsolescence	Priority 1	2015	12,400

Item	Description
D3052.1 Self-Contained Air Conditioners	D3050 Heat Transfer Terminal and Packaged Units
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	3
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3052	Replace D3050 Heat Transfer Terminal and Packaged Units	1.0 - EA	22072.0	IN - Beyond Rated Life	Priority 2	2018	22,072

Item	Description
D3063 Heating/Cooling Air Handling Units	D3063 Variable Frequency Drive, 5 HP Motor
Condition	Fair
Qty / UOM	3 / EA
RUL (years)	3
Location	Throughout Facility
Equipment Controlled	Pumps

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3063	Replace D3063 Variable Frequency Drive, 5 HP Motor	3.0 - EA	8556.0	IN - Beyond Rated Life	Priority 2	2018	25,668

Item	Description
D3063 Heating/Cooling Air Handling Units	D3063 Variable Frequency Drive, 30 HP Motor
Condition	Fair
Qty / UOM	14 / EA
RUL (years)	3
Location	Throughout Facility
Equipment Controlled	Pumps, cooling towers, air handling units

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3063	Replace D3063 Variable Frequency Drive, 30 HP Motor	14.0 - EA	19730.9	IN - Beyond Rated Life	Priority 2	2018	276,232

Item	Description
D3068 Building Automation Systems	D3068 DDC Controls
Condition	Poor
Qty / UOM	162,000 / SF
RUL (years)	0
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

Direct digital control (DDC) system to be upgraded due to attainment of expected useful life (EUL). Based on current condition and RUL, replacement is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3068	Replace D3068 DDC Controls	162,000.0 - SF	0.8	IN - Beyond Rated Life	Priority 1	2015	132,581

COST SUMMARY:

Type	Year	Total Expenditures
D30 HVAC	2015	\$156,449
D30 HVAC	2017	\$1,699,107
D30 HVAC	2018	\$846,217
D30 HVAC	2019	\$198,890
D30 HVAC	2020	\$575,952

D40 FIRE PROTECTION SYSTEMS

Fire and Life Safety System	
Item	Description
Fire Alarm System Components Present	
Smoke detectors	Yes
Pull stations	Yes
Audible alarms	Yes
Strobe lights	Yes
Central fire alarm panel	Yes
Annunciator panel	Yes
Smoke Detectors Power Supply	Hardwired Electric with Battery Backup
Carbon Monoxide Detectors	N/A
Heat Detector	Yes
Central Fire Alarm Panel Location	Security Desk
Annunciator Panel Location	N/A
Fire Extinguishers	Yes
Fire Extinguisher Inspection Date	May 1, 2014
Distance to Nearest Fire Hydrant (ft)	100
Illuminated Exit Signs	Yes
Kitchen Suppression Systems	No
Halon Gas Systems	No
Smoke Evacuation Systems	No
Fire-rated Stairwells	Yes
Fire-rated Stairwell Finish	Masonry
Stairwell Discharge	Exterior of the building at Grade
Stairwell Pressurized	Yes
Fire-Rated Doors Observed	Yes
Location of Fire-Rated Doors	Stairwells
Fire Alarm Service Company	Unknown
Date of Last Fire Alarm Service	N/A
Are the individual office unit fire alarm systems monitored?	Yes
Are the common area fire alarm systems monitored?	Yes
Types of Common Areas Monitored	Throughout
Fire Alarm Monitoring Company	Unknown

Item	Description
D4011 Sprinkler Water Supply	D4011 Wet-Pipe Sprinkler System
Condition	Fair
Qty / UOM	162,000 / SF
RUL (years)	2
Location	Throughout Facility
Fire Sprinkler Type	Wet Sprinkler
Fire Sprinkler Pipe Material	Malleable Iron
Recalled Sprinkler Heads (Omega or Central brands)	No
Sprinkler Standpipes	Yes
Location of Sprinkler Standpipes	Stairwells
Backflow Preventer	Yes

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D4011	Replace D4011 Wet-Pipe Sprinkler System	162,000.0 - SF	2.2	CC - Life Safety	Priority 1	2017	359,381

Item	Description
D4012 Sprinkler Pumping Equipment	D4015 Sprinkler Pumping Equipment Electric Motor 50 HP
Condition	Good
Qty / UOM	1 / EA
RUL (years)	23
Location	Basement Fire Pump Room
Check Valve	Yes

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, no further action is recommended.

COST SUMMARY:

Type	Year	Total Expenditures
D40 Fire Protection Systems	2017	\$359,381

D50 ELECTRICAL SYSTEMS

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 500 kVA
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Main Electrical Room
Service Voltage	277/480
Service Voltage Type	Three-Phase Four-Wire Alternating Current (Ac)
Step Down Transformers	Yes
Electrical Distribution Panel Type	Circuit Breakers
Main Electrical Distribution Lines	Underground
Site Electrical Transformer Location	Pad-Mounted
Electrical Wiring in Metal Conduit	Yes

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5012 Secondary Dry Transformer 500 kVA	1.0 - EA	34432.4	IN - Reliability	Priority 2	2017	34,432

Item	Description
D5012 Low Tension Service & Dist.	D5010 Switchgear, Mainframe, 4000 Amps
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	3
Location	Main Electrical Room
Service Size (Amperage)	4000
Service Voltage	277/480
Service Voltage Type	Three-Phase Four-Wire Alternating Current (Ac)
Step Down Transformers	Yes
Electrical Distribution Panel Type	Circuit Breakers
Main Electrical Distribution Lines	Underground
Site Electrical Transformer Location	Pad-Mounted
Electrical Wiring in Metal Conduit	Yes

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5010 Switchgear, Mainframe, 4000 Amps	1.0 - EA	17847.0	IN - Beyond Rated Life	Priority 3	2018	17,847

Item	Description
D5012 Low Tension Service & Dist.	D5012 Secondary Dry Transformer 75 kVA
Condition	Fair
Qty / UOM	3 / EA
RUL (years)	3
Location	Utility Areas/Closets
Service Size (Amperage)	75
Service Voltage	120/208
Service Voltage Type	Three-Phase Four-Wire Alternating Current (Ac)
Step Down Transformers	Yes
Electrical Distribution Panel Type	Circuit Breakers
Main Electrical Distribution Lines	Underground
Site Electrical Transformer Location	Pad-Mounted
Electrical Wiring in Metal Conduit	Yes

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5012 Secondary Dry Transformer 75 kVA	3.0 - EA	19199.4	IN - Reliability	Priority 3	2018	57,598

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm Panel
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	Fire Control Room First Floor

OBSERVATIONS/COMMENTS:

The main fire control panel was replaced in 1995, along with upgrades to many devices including horns/strobes, pull stations, and detectors. Based on current condition and RUL, treplacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5037	Replace D5037 Fire Alarm Panel	1.0 - EA	9402.5	CC - Life Safety	Priority 3	2020	9,403

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm System
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	Throughout Facility

OBSERVATIONS/COMMENTS:

There are fire control devices throughout the facility. Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5037	Replace D5037 Fire Alarm System	1.0 - EA	1180000.0	CC - Life Safety	Priority 3	2020	1,180,000

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Generator 250 kW
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Site Exterior
Generator Fuel	Diesel
Power Rating kVA	312
Generator Serves	Fire And Life Safety Systems

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5092	Replace D5092 Emergency Generator 250 kW	1.0 - EA	377491.4	CC - Life Safety	Priority 2	2017	377,491

Item	Description
D5092 Emergency Light & Power Systems	D5092 Emergency Transfer Switch
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Utility Areas/Closets

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, replacement is recommended during the assessment term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5092	Replace D5092 Emergency Transfer Switch	1.0 - EA	10613.1	CC - Life Safety	Priority 2	2017	10,613

COST SUMMARY:

Type	Year	Total Expenditures
D50 Electrical Systems	2017	\$422,537
D50 Electrical Systems	2018	\$75,445
D50 Electrical Systems	2020	\$1,189,403

G Building Sitework Systems

G20 SITE IMPROVEMENTS

Site Information	
Item	Description
Main Ingress and Egress	Mission Inn Avenue
Access from	N
Additional Entrances	University Avenue
Access from	S
Parking Count: Open lot	4
Parking Count: Sheltered by carports	4
Parking Count: Private garages	N/A
Parking Count: Subterranean garage	N/A
Parking Count: Freestanding parking structure	N/A
Number of ADA Compliant Spaces	0
Number of ADA Compliant Spaces for Vans	0
Method of obtaining parking count	Physical count
Property Identification Sign-Primary	Structure mounted
Property Identification Sign- Secondary	Structure mounted
Illuminated Identification Signage	No
Building Identification Sign	Yes
Illuminated Sign	No
Location of Property ID Sign	Front elevation of building
Trees Present	Yes
Shrubs Present	Yes
Grasses Present	No
Flower beds Present	Yes
Decorative Rocks Present	No
Lava Rocks Present	No
Ponds Present	No
Fountains Present	No
Topography	Flat

Item	Description
G2012 Paving & Surfacing	G2012 Asphalt Seal Coat
Condition	Poor
Qty / UOM	7,370 / SF
RUL (years)	0
Location	Asphalt Parking Lot

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, the asphalt is recommended to be cracksealed, sealed, and striped at this time.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G2012	Replace G2012 Asphalt Seal Coat	7,370.0 - SF	0.8	IN - Beyond Rated Life	Priority 1	2015	5,666

Item	Description
G2012 Paving & Surfacing	G2012 Asphalt Cut and Resurface 2.0" - Roadways
Condition	Poor
Qty / UOM	7,370 / SF
RUL (years)	0
Location	Asphalt Parking Lot

OBSERVATIONS/COMMENTS:

The asphalt paving was noted to be significantly cracked at portions with trip hazards near the center area. These trip hazards are recommended to be remedied as all portions are to be replaced.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G2012	Replace G2012 Asphalt Cut and Resurface 2.0" - Roadways	7,370.0 - SF	42.2	IN - Beyond Rated Life	Priority 1	2015	311,268

Item	Description
G2013 Curbs Gutters & Drains	G2013 Concrete Swale
Condition	Fair
Qty / UOM	330 / LF
RUL (years)	10
Location	Concrete Swale

OBSERVATIONS/COMMENTS:

Based on current condition and RUL, no further action is recommended.

COST SUMMARY:

Type	Year	Total Expenditures
G20 Site Improvements	2015	\$316,934

The weather at the time of the assessment was:

Item	Description
Approximate Outdoor Temperature (degrees F)	70
Weather Conditions	Clear
Snow Covering Ground	No
Wind Conditions	Moderate Winds

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

Item	Description
Site Plan Reviewed	Yes
Floor Plan Reviewed	Yes
Construction Drawings Reviewed	Yes

Item	Description
Termite Inspection Report Reviewed	No
Boiler Certificates Reviewed	No
Document Year Built Information Obtained From	Original construction documents and Client

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.

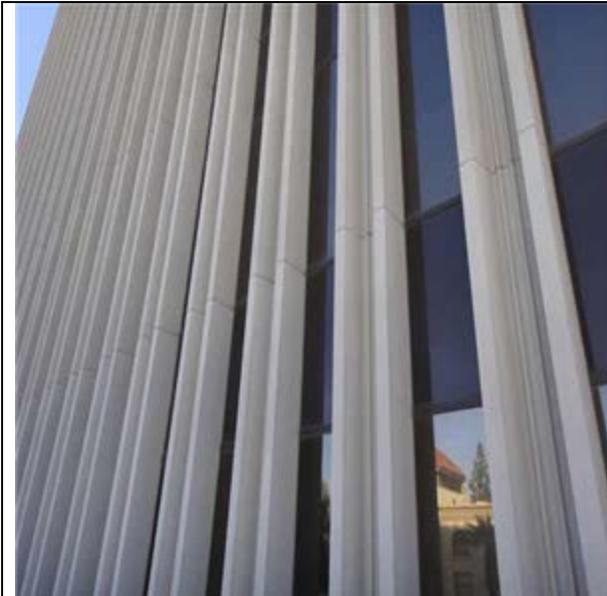
EMG's FCA cannot wholly eliminate the uncertainty regarding the presence of physical deficiencies and/or the performance of a subject property's building systems. Preparation of a FCA in accordance with ASTM E2018-08 is intended to reduce, but not eliminate, the uncertainty regarding the potential for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

Reviewed By: 
Matt Anderson, Program Manager

APPENDIX D: PHOTOS



:- Typical elevation



:- Typical elevation



:- Typical elevation



:- Typical elevation



B2011 - Curtain Wall Glazing



B2011 - Curtain Wall Glazing



B2011 Textured Metal Panel Exterior Walls



B2010 Stucco Painting



B2031 Glazed Entrance Doors



B3011 Built-Up Roofing



B3011 Built-Up Roofing



B3011 Built-Up Roofing



B3010 TPO, Roof 45 Mills



C1021 Interior Doors



C3005 Restroom ADA Upgrades and Remodel



C3005 Restroom ADA Upgrades and Remodel



C3005 Restroom ADA Upgrades and Remodel



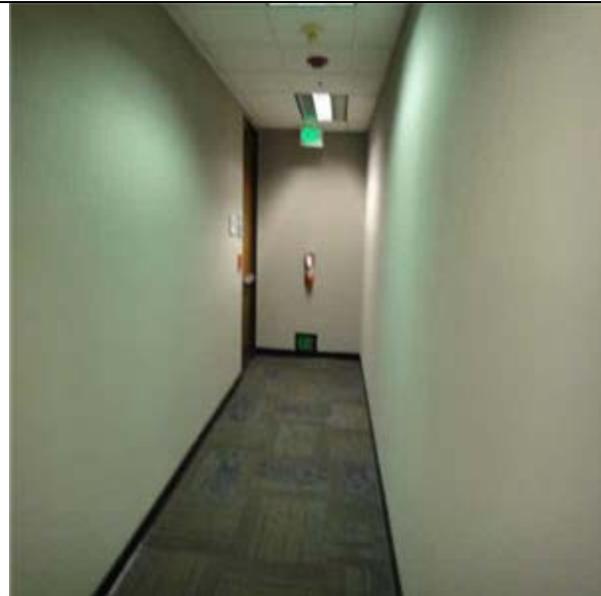
C3024 Vinyl Tile



C3025 Carpeting



C3025 Carpeting



C3025 Carpet Tiles - Standard



C3032 Acoustical Ceiling Tile



D1011 Hydraulic Elevators, 3000 LB :- Typical Hydraulic Elevator Equipment



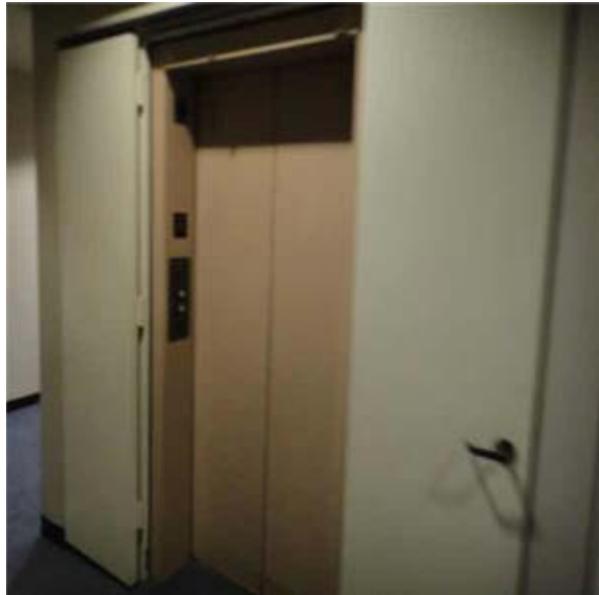
D1011 Hydraulic Elevators, 3000 LB:- Controls for the Passenger Elevator



D1011 Traction Elevator Machinery and Controls :-
Electric Motor for Traction a Elevator 2



D1011 Traction Elevator Machinery and Controls:-
Traction Elevator Electric Motor 3



D1011 Traction Elevator Machinery and Controls :-
Typical Elevator Entry Door



D1011 Traction Elevator Machinery and Controls:-
Passenger Elevator Control Panel



D1011 Traction Elevator Machinery and Controls :- Elevator Cab Interior



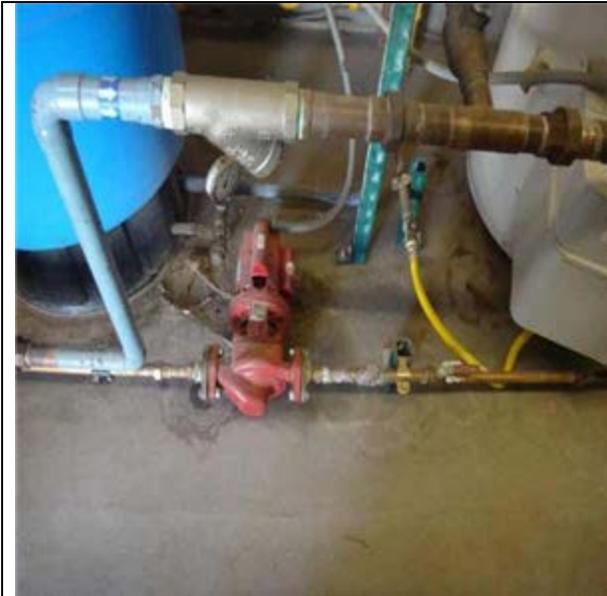
D2018 Drinking Fountain



D2030 Domestic Water Heater 100 Gallon :- Domestic Water Heater



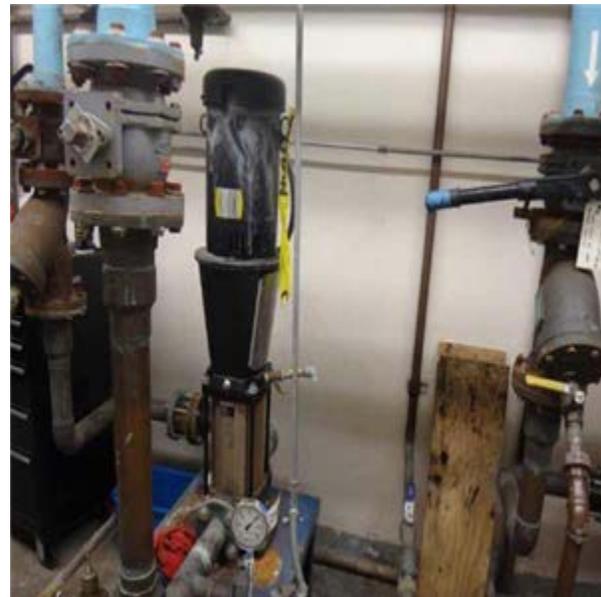
D2030 Domestic Water Heater 100 Gallon:- Domestic Hot Water Expansion Tank



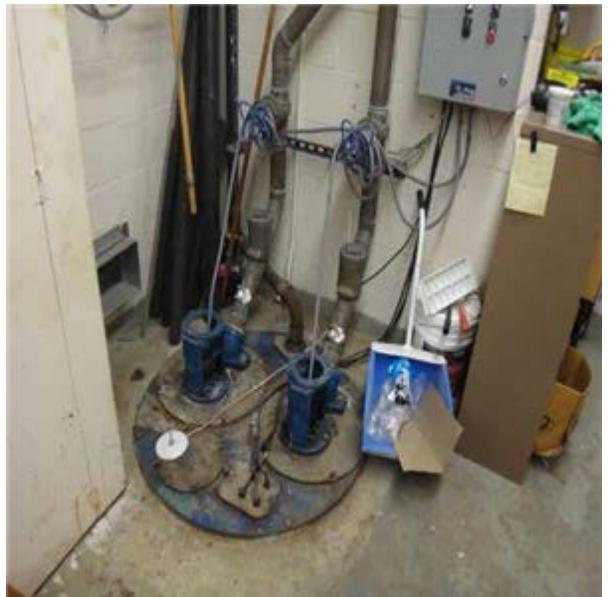
D2030 Domestic Water Heater 100 Gallon :- Small Circulation Pump for Domestic Hot Water Tank



D2023 Domestic Water Booster Pump Station:- Domestic Water Pump 1



D2023 Domestic Water Booster Pump Station :- Domestic Water Pump 2



D2034 Submersible Pump 1/4 HP:- Submersible Pumps



D3020 Water Boiler, Gas 5031 MBH :- Old Hot Water Heating Boiler



D3022 HVAC Chilled Water Circulation Pumps 20 HP:- CWP 1



D3022 HVAC Chilled Water Circulation Pumps 20 HP :- CWP 2



D3022 HVAC Chilled Water Circulation Pumps 20 HP:- VFD



D3022 HVAC Chilled Water Circulation Pumps 5 HP :-
CHWP 2



D3022 HVAC Chilled Water Circulation Pumps 5 HP:-
CHWP 1



D3022 HVAC Heating Water Circulation Pumps 15 HP
:- Hot Water Distribution Pump



D3023 Condensate Return System:- TVP 3



D3023 Condensate Return System :- VFD For Pump TWP 3



D3023 Condensate Return System:- Condensate pumps and VFD



D3023 Condensate Return System :- TWP 1



D3023 Condensate Return System:- TWP 2



D3031 Chiller, Water Cooled, 350 Ton :- New Larger Chiller



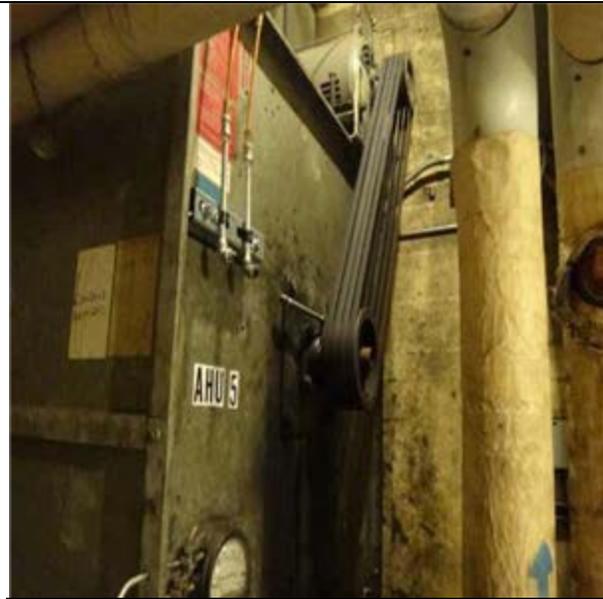
D3031 Chiller, Water Cooled, 150 Ton:- Smaller Chiller



D3031 Cooling Tower, Galvanized Steel, 150 Ton :- Smaller Cooling Tower



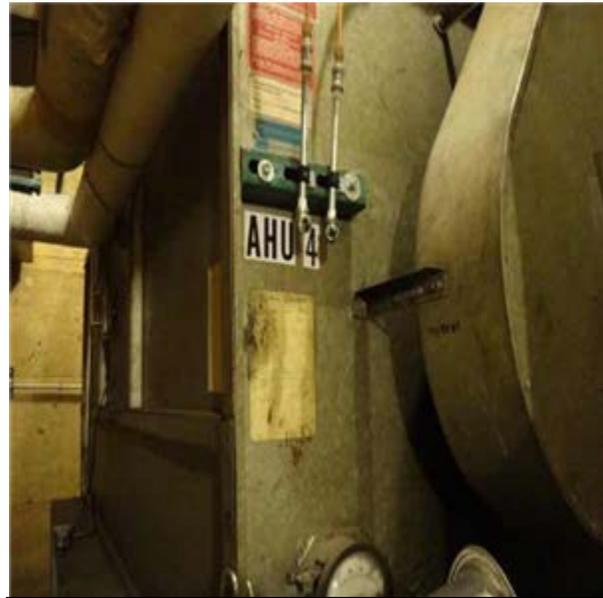
D3031 Cooling Tower, Galvanized Steel, 400 Ton:- Large Cooling Tower



D3041 AHU Fan Motor, 20 - 30 HP



D3041 AHU Fan Motor, 20 - 30 HP



D3041 Interior AHU 16000-13000 CFM



D3042 Exhaust Fan 16750 CFM:- Restroom Exhaust Fan



D3042 Exhaust Fan 12000 CFM :- Stair Exhaust Fan North Stair # 2



D3042 Exhaust Fan 5500 CFM:- Exhaust fan for the Penthouse



D3042 Make-up Building Air Fan 22500 CFM :- Fresh Air Make-Up Fan Unit



D3042 Make-up Building Air Fan 22500 CFM:- Make-up air unit VFD Not Operational



D3043 HVAC Heating Water Heat Exchanger :- Heat Exchanger



D3050 Heat Transfer Terminal and Packaged Units



D3063 Variable Frequency Drive, 5 HP Motor



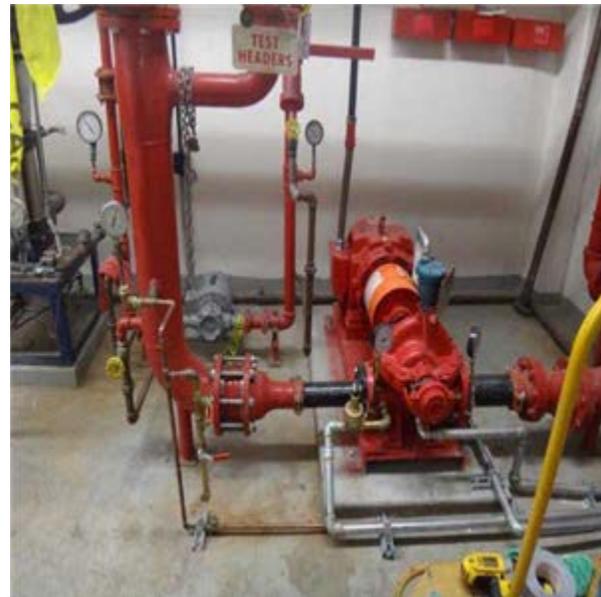
D3063 Variable Frequency Drive, 30 HP Motor



D4011 Wet-Pipe Sprinkler System :- Typical Fire Sprinkler



D4011 Wet-Pipe Sprinkler System:- Fire Sprinkler Cabinet



D4015 Sprinkler Pumping Equipment Electric Motor 50 HP :- Electric Fire Pump



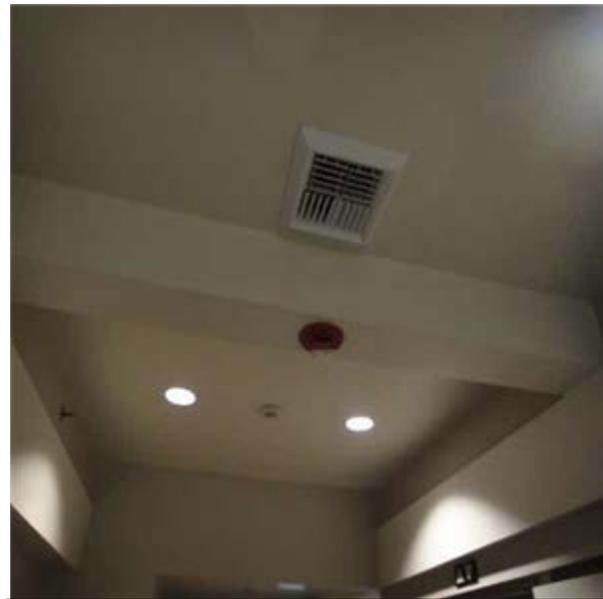
D4015 Sprinkler Pumping Equipment Electric Motor 50 HP:- Fire Jockey Pump



D5010 Switchgear, Mainframe, 4000 Amps



D5012 Secondary Dry Transformer 75 kVA:-
Transformer



D5037 Fire Alarm System :- Fire Alarm Devices



D5037 Fire Alarm System:- Fire Alarm Horn Strobe



D5037 Fire Alarm Panel :- Fire Panel 1



D5037 Fire Alarm Panel:- Fire Panel 2



D5092 Emergency Generator 250 kW :- Emergency Generator Ground Level



D5092 Emergency Generator 250 kW:- Secondary Around Day Tank



D5092 Emergency Generator 250 kW :- Emergency Generator



G2012 Asphalt Cut and Resurface 2.0'' - Roadways



G2012 Asphalt Cut and Resurface 2.0'' - Roadways



G2012 Asphalt Cut and Resurface 2.0'' - Roadways



G2013 Concrete Swale

APPENDIX E: TERMINOLOGY AND ABBREVIATIONS

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

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

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

TERMINOLOGY and ABBREVIATIONS	
Specialty Consultants	Practitioners in the fields of engineering, architecture; or, building system mechanics, specialized service personnel or other specialized individuals that have experience in the maintenance and repair of a particular building component, equipment, or system that have acquired detailed, specialized knowledge in the design, assessment, operation, repair, or installation of the particular component, equipment, or system.
Structural Component	A component of the building, which supports non-variable forces or weights (dead loads) and variable forces or weights (live loads).
Suggested Remedy	A preliminary opinion as to a course of action to remedy or repair a physical deficiency. There may be alternate methods that may be more commensurate with the Client's requirements. Further investigation might make other schemes more appropriate or the suggested remedy unworkable. The suggested remedy may be to conduct further research or testing, or to 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

RIVERSIDE CALIFORNIA TOWERS FACT SHEET

3737 Main Street

Riverside

Riverside County

Category 2 - Medium Priority - Further Study Required

BUILDING INFORMATION

- Age: 42 years (built: 1972); major rehabilitation early 1990s.
- Size: 11-story, includes a penthouse, basement, and first floor retail under control and management by the city.
162,000 GSF 130,340 NUSF 129,625 Assigned NSF
2.0 Acre Parcel
420 - City Managed Parking spaces
Capacity - 507 occupants; (approximately 600 individuals are housed at the building presently).
- * Source: Statewide Property Inventory (SPI)



- Financial: Developed through a JPA with the Redevelopment Agency of the City of Riverside. The 30 year lease term is from April 1995 through February 2025.
2003 Series A Bond of \$26,255,000 and Series B Bond of \$4,810,000 totaling \$31,065,000. Balance as of 6/30/2012 \$23,165,000.
IRR Rate - \$4.59/month per SF, FY 2013-14 (DGS Price Book)
\$4.63/month per SF, FY 2014-15 (Proposed DGS Price Book)
- LEED Status: LEED-EB Certified March 2011
- Tenants: 8 Agencies, larger tenants include the Board of Equalization (31,293 SF), Water Resources Control Board (21,186 SF), Department of Social Services (16,802 SF) and Department of Industrial Relations (14,485 SF)

SPI Structure #: 3868
Real Property #: 10052
BPM #: 330

COMPLETED STUDIES AND SIGNIFICANT FINDINGS

A. 2010 American Disability Act Accessibility Compliance Survey

Accessibility-related deficiencies exist throughout the building. These deficiencies create path-of-travel issues for future tenant improvement projects.

B. 2012 Access Compliance Conceptual Budget/Evaluation

Follow up to the 2010 American Disability Act Accessibility Compliance Survey this report provides the Conceptual Cost and Path of Travel Plans. ADA upgrades have been identified for this building as part of DGS's ten year ADA Compliance Upgrades and Deferred Special Repairs Program.

ADDITIONAL BUILDING ISSUES

New 350-ton chiller installed 2012 along with two new BAC cooling towers (350-ton and 150-ton). The 150-ton chiller is tied to the back-up 150-ton York chiller unit. Carpeting (glue-down), dating back to early 1990s, is in need of replacement in approximately 50% of tenant suites.

CURRENT UTILIZATION PROJECTS

None

RECENTLY COMPLETED PROJECTS

TBD

Cost

ACTIVE PROJECTS

TBD

Cost

PLANNED SPECIAL REPAIRS BY FISCAL YEAR

TBD

Estimated Cost

* Source: Statewide Property Inventory

DGS STRATEGY: No capital outlay work is required at this location at this time. However, since the BRA is subsidizing the special repairs for this building, it may be appropriate to request a one-time augmentation to support the necessary work. Further study may be performed in the next several years.

APPENDIX G: COST TABLES

10 YEAR EXPENDITURE FORECAST



California Towers
3737 Main Street
Riverside, California

Useful Life	Estimated Useful Life	Plan Type	OP: Operations	CC: Code Compliance
	Remaining Useful Life		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												
A. SUBSTRUCTURE																																	
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. SHELL																																	
B20 EXTERIOR ENCLOSURE																																	
B2011	Stucco and Lath	B2010 Stucco Painting	Exterior First Level	Replace B2010 Stucco Painting	10	2	1.00	EA	\$145,600.00	IN - Appearance	Priority 2	\$0	\$0	\$145,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$145,600									
B30 ROOFING																																	
B3011	Built-Up Roofing, Total Roof	B3011 Built-Up Roofing	Upper Roofs	Replace B3011 Built-Up Roofing	20	3	127.00	SQ	\$1,366.07	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$173,491	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$173,491									
Shell Subtotal												\$0	\$0	\$145,600	\$173,491	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$319,091
C. INTERIORS																																	
C10 INTERIOR CONSTRUCTION																																	
C1024	C1024 Interior Door Wall Opening Elements	C1024 Interior Door Wall Opening Partitions	Interior Doors	Replace C1024 Interior Door Wall Opening Partitions	25	5	1.00	EA	\$173,600.00	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$173,600	\$0	\$0	\$0	\$0	\$0	\$0	\$173,600									
C30 INTERIOR FINISHES																																	
C3005	C3005 ADA Renovations	C3005 Restroom ADA Upgrades and Remodel	Restrooms	Replace C3005 Restroom ADA Upgrades and Remodel	25	2	1.00	EA	\$1,488,000.00	CC - Accessibility	Priority 2	\$0	\$0	\$1,488,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,488,000									
C3012	Paint Interior Walls, Drywall	C3012 Paint Interior Walls, Drywall	Interior Walls	Replace C3012 Paint Interior Walls, Drywall	10	1	243,000.00	SF	\$2.13	IN - Appearance	Priority 3	\$0	\$518,270	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$518,270									
C3024	Vinyl Tile	C3024 Vinyl Tile	Interior Flooring	Replace C3024 Vinyl Tile	18	3	5,500.00	SY	\$163.10	IN - Appearance	Priority 3	\$0	\$0	\$0	\$897,048	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$897,048									
C3025	Carpet, Standard Commercial, Medium Traffic	C3025 Carpeting	Interior Flooring	Replace C3025 Carpeting	10	2	8,000.00	SY	\$96.61	IN - Appearance	Priority 3	\$0	\$0	\$772,845	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$772,845									
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard	Interior Flooring	Replace C3025 Carpet Tiles - Standard	10	9	1,000.00	SY	\$96.61	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$96,606									
C3032	Acoustical Tile With Exposed Grid System	C3032 Acoustical Ceiling Tile	Interior Ceilings	Replace C3032 Acoustical Ceiling Tile	25	5	972.00	CSF	\$1,201.56	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$1,167,916	\$0	\$0	\$0	\$0	\$0	\$0	\$1,167,916									
Interiors Subtotal												\$0	\$518,270	\$2,260,845	\$897,048	\$0	\$1,341,516	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,114,285
D. SERVICES																																	
D10 CONVEYING SYSTEMS																																	
D1011	Elevator Hydraulic System, 3,500 Lb Capacity	D1011 Hydraulic Elevators, 3000 LB	Elevator 5	Replace D1011 Hydraulic Elevators, 3000 LB	25	3	1.00	EA	\$318,500.00	FN - Modernization	Priority 3	\$0	\$0	\$0	\$318,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$318,500									
D1011	Elevator Hydraulic System, 3,500 Lb Capacity	D1011 Hydraulic Elevators, 3000 LB	Elevator 4	Replace D1011 Hydraulic Elevators, 3000 LB	25	3	1.00	EA	\$409,500.00	FN - Modernization	Priority 3	\$0	\$0	\$0	\$409,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$409,500									
D1011	Traction Elevator Machinery and Controls	D1011 Traction Elevator Machinery and Controls	Elevators 1-3	Replace D1011 Traction Elevator Machinery and Controls	25	0	3.00	EA	\$377,000.00	FN - Modernization	Priority 1	\$1,131,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,131,000									
D20 PLUMBING																																	
D2018	Drinking Fountain	D2018 Drinking Fountain	Throughout Facility	Replace D2018 Drinking Fountain	20	1	24.00	EA	\$2,876.60	IN - Beyond Rated Life	Priority 1	\$0	\$69,038	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$69,038									
D2023	Hydronic Circulating Pump, 5 HP	D2023 Domestic Water Booster Pump Station	Basement Fire Pump Room	Replace D2023 Domestic Water Booster Pump Station	20	2	2.00	EA	\$18,880.00	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$37,760	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$37,760									
D2034	Sanitary Lift Station Pumps 165 Gpm	D2034 Submersible Pump 1/4 HP	Basement Fire Pump Room	Replace D2034 Submersible Pump 1/4 HP	15	0	2.00	EA	\$35,400.00	IN - Beyond Rated Life	Priority 1	\$70,800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70,800									
D30 HVAC																																	
D3021	Water Boiler, Gas 3820 to 4500 MBH	D3020 Water Boiler, Gas 5031 MBH	Boiler Room	Replace D3020 Water Boiler, Gas 5031 MBH	30	4	1.00	EA	\$198,889.80	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$198,890	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$198,890									
D3022.1	Base-mounted circulating pumps (500 GPM, 20 HP)	D3022 HVAC Chilled Water Circulation Pumps 5 HP	HVAC Chiller Room	Replace D3022 HVAC Chilled Water Circulation Pumps 5 HP	15	3	2.00	EA	\$14,413.76	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$28,828	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28,828									
D3022.1	Base-mounted circulating pumps (500 GPM, 20 HP)	D3022 HVAC Chilled Water Circulation Pumps 20 HP	HVAC Chiller Room	Replace D3022 HVAC Chilled Water Circulation Pumps 20 HP	15	3	2.00	EA	\$26,054.88	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$52,110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$52,110									
D3022.1	Heating Water Distribution Pump 10 HP	D3022 HVAC Heating Water Circulation Pumps 15 HP	Boiler Room	Replace D3022 HVAC Heating Water Circulation Pumps 15 HP	15	2	1.00	EA	\$24,193.10	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$24,193	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,193									
D3023	Condensate return system (SIMPLEX PUMP, FLOAT SWITCH, 3/4 HP, 15 GPM)	D3023 Condensate Return System	HVAC Chiller Room	Replace D3023 Condensate Return System	20	3	2.00	EA	\$17,336.19	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$34,672	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34,672									
D3023	Condensate return system (SIMPLEX PUMP, FLOAT SWITCH, 3/4 HP, 15 GPM)	D3023 Condensate Return System	HVAC Chiller Room	Replace D3023 Condensate Return System	20	3	1.00	EA	\$17,336.19	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$17,336	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,336									
D3031.1	Chiller, Water Cooled, Centrifugal, 160 Ton	D3031 Chiller, Water Cooled, 150 Ton	Chiller Room	Replace D3031 Chiller, Water Cooled, 150 Ton	25	5	1.00	EA	\$285,200.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$285,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$285,200									
D3031.2	Cooling Tower, Galvanized Steel, 254 Ton	D3031 Cooling Tower, Galvanized Steel, 150 Ton	Upper Roof	Replace D3031 Cooling Tower, Galvanized Steel, 150 Ton	25	5	1.00	EA	\$103,561.48	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$103,561	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$103,561									
D3031.2	Cooling Tower, Galvanized Steel, 400 Ton	D3031 Cooling Tower, Galvanized Steel, 400 Ton	Upper Roof	Replace D3031 Cooling Tower, Galvanized Steel, 400 Ton	25	5	1.00	EA	\$187,190.40	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$187,190	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$187,190									
D3041.1	Air Handler 18,000-20,000 CFM	D3041 Interior AHU 16000-13000 CFM	Utility Areas/Closets	Replace D3041 Interior AHU 16000-13000 CFM	40	2	11.00	EA	\$135,274.08	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$1,488,015	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,488,015									
D3041.1	Central Ahu Fan Motor,	D3041 AHU Fan Motor, 20 - 30 HP	Throughout Facility	Replace D3041 AHU Fan Motor, 20 - 30 HP	20	2	12.00	EA	\$9,176.00	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$110,112	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$110,112									
D3041.1	Air Handler 18,000-20,000 CFM	D3041 Interior AHU 5600 CFM	Rooftop	Replace D3041 Interior AHU 5600 CFM	40	2	1.00	EA	\$31,806.00	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$31,806	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$31,806									
D3041.2	Vav Box, 270 to 600 CFM	D3041 VAV Boxes	Throughout Facility	Replace All Units to work with DDC	30	3	150.00	EA	\$2,496.72	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$374,507	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$374,507									
D3042	Exhaust Fan, Utility Set, Corrosive Fume Resistant, 1200 to 2180 CFM	D3042 Exhaust Fan 12000 CFM	Stair Tower No. 2 First Floor	Replace D3042 Exhaust Fan 12000 CFM	15	3	1.00	EA	\$14,791.84	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$14,792	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,792									
D3042	Fan, Inflatable Structure, 10HP	D3042 Make-up Building Air Fan 22500 CFM	Penthouse	Replace D3042 Make-up Building Air Fan 22500 CFM	15	2	1.00	EA	\$28,387.17	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$28,387	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28,387									
D3042	Exhaust Fan, Sidewall 11,250 CFM	D3042 Exhaust Fan 16750 CFM	Penthouse	Replace D3042 Exhaust Fan 16750 CFM	20	2	1.00	EA	\$16,594.18	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$16,594	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,594									
D3042	Exhaust Fan, Centrifugal, Belt-Drive, Aluminum Housing, 2050 Through 3500 CFM	D3042 Exhaust Fan 5500 CFM	Penthouse	Replace D3042 Exhaust Fan 5500 CFM	10	0	2.00	EA	\$5,734.31	IN - Beyond Rated Life	Priority 1	\$11,469	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,469									
D3043	Multi-pass shell and tube (Cast iron heads, 40 to 180 deg., steam 10 psi, 96 GPM)	D3043 HVAC Heating Water Heat Exchanger	Boiler Room	D3040 Remove heat exchangers from the system.	30	0	1.00	EA	\$12,400.00	FN - Obsolescence	Priority 1	\$12,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,400									
D3052.1	Downflow Computer Room Air Conditioning Unit,	D3050 Heat Transfer Terminal and Packaged Units	Main Electrical Room	Replace D3050 Heat Transfer Terminal and Packaged Units	20	3	1.00	EA	\$22,072.00	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$22,072	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,072									
D3063	Variable Frequency Drive, 20 HP Motor	D3063 Variable Frequency Drive, 30 HP Motor	Throughout Facility	Replace D3063 Variable Frequency Drive, 30 HP Motor	20	3	14.00	EA	\$19,730.88	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$276,232	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$276,232									
D3063	Variable Frequency Drive, 20 HP Motor	D3063 Variable Frequency Drive, 5 HP Motor	Throughout Facility	Replace D3063 Variable Frequency Drive, 5 HP Motor	20	3	3.00	EA	\$8,556.00	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$0	\$25,668	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,668									
D3068	Direct Digital Controls (DDC) Extensive	D3068 DDC Controls	Throughout Facility	Replace D3068 DDC Controls	20	0	162,000.00	SF	\$0.82	IN - Beyond Rated Life	Priority 1	\$132,581	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$132,581									
D40 FIRE PROTECTION SYSTEMS																																	
D4011	Sprinkler Heads	D4011 Wet-Pipe Sprinkler System	Throughout Facility	Replace D4011 Wet-Pipe Sprinkler System	20	2	162,000.00	SF	\$2.22	CC - Life Safety	Priority 1	\$0	\$0	\$359,381	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$359,381									
D50 ELECTRICAL SYSTEMS																																	
D5012	Secondary Dry Transformer 75 kVA	D5012 Secondary Dry Transformer 75 kVA	Utility Areas/Closets	Replace D5012 Secondary Dry Transformer 75 kVA	40	3	3.00	EA	\$19,199.43	IN - Reliability	Priority 3	\$0	\$0	\$0	\$57,598	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$57,598									
D5012	Switchgear, Mainframe < 600 Amps	D5010 Switchgear, Mainframe, 4000 Amps	Main Electrical Room	Replace D5010 Switchgear, Mainframe, 4000 Amps	40	3	1.00	EA	\$17,846.98	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$17,847	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,847								

10 YEAR EXPENDITURE FORECAST

California Towers
3737 Main Street
Riverside, California

Useful Life ¹	Estimated Useful Life
	Remaining Useful Life

Plan Type ²	OP: Operations	CC: Code Compliance
	EN: Environmental	FN: Functionality
	IN: Integrity	

Legend	Deferred
	Scheduled

Element #	Component Description	Asset	Location	Action	EUL (Yrs)	RUL (Yrs)	Qty.	Unit of Meas.	Unit Cost	Plan Type	Priority ²	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total - Deferred	Total - Scheduled			
												Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9					
D5012	Secondary Dry Transformer 45 kVA	D5012 Secondary Dry Transformer 500 kVA	Main Electrical Room	Replace D5012 Secondary Dry Transformer 500 kVA	40	2	1.00	EA	\$34,432.40	IN - Reliability	Priority 2	\$0	\$0	\$34,432	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34,432		
D5037	Fire Alarm Panel	D5037 Fire Alarm Panel	Fire Control Room First Floor	Replace D5037 Fire Alarm Panel	15	5	1.00	EA	\$9,402.52	CC - Life Safety	Priority 3	\$0	\$0	\$0	\$0	\$0	\$9,403	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,403	
D5037	Install Smoke Detector in Bedrooms, Hard Wired	D5037 Fire Alarm System	Throughout Facility	Replace D5037 Fire Alarm System	25	5	1.00	EA	\$1,180,000.00	CC - Life Safety	Priority 3	\$0	\$0	\$0	\$0	\$0	\$1,180,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,180,000	
D5092	Transfer Switch	D5092 Emergency Transfer Switch	Utility Areas/Closets	Replace D5092 Emergency Transfer Switch	25	2	1.00	EA	\$10,613.06	CC - Life Safety	Priority 2	\$0	\$0	\$10,613	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,613	
D5092	Diesel Generator Over 205 Up to 250 kW	D5092 Emergency Generator 250 kW	Site Exterior	Replace D5092 Emergency Generator 250 kW	25	2	1.00	EA	\$377,491.44	CC - Life Safety	Priority 2	\$0	\$0	\$377,491	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$377,491	
Services Subtotal												\$1,358,249	\$69,038	\$2,518,785	\$1,649,663	\$198,890	\$1,765,354	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,358,249	\$6,201,730

E. EQUIPMENT & FURNISHING																																	
Equipment & Furnishing Subtotal												\$0																					

F. SPECIAL CONSTRUCTION AND DEMOLITION																																	
Special Construction And Demolition Subtotal												\$0																					

G. BUILDING SITEWORK																																			
G20 SITE IMPROVEMENTS																																			
G2012	Asphalt, Mill 1.5" / Resurface 2.0" - Roadways	G2012 Asphalt Cut and Resurface 2.0" - Roadways	Asphalt Parking Lot	Replace G2012 Asphalt Cut and Resurface 2.0" - Roadways	30	0	7,370.00	SF	\$42.23	IN - Beyond Rated Life	Priority 1	\$311,268	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$311,268	\$0								
G2012	Asphalt- Seal Coat- Roadways	G2012 Asphalt Seal Coat	Asphalt Parking Lot	Replace G2012 Asphalt Seal Coat	10	0	7,370.00	SF	\$0.77	IN - Beyond Rated Life	Priority 1	\$5,666	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,666	\$0								
Building Sitework Subtotal												\$316,934	\$0	\$316,934	\$0																				

Z. GENERAL																																			
General Subtotal												\$0																							

Expenditure Totals per Year	\$1,675,183	\$587,209	\$4,925,230	\$2,720,202	\$198,890	\$2,106,871	\$0	\$0	\$0	\$96,604	\$1,675,183	\$11,635,107
Total Cost (Inflated @ 5% per Yr.)	\$1,675,183	\$616,674	\$5,420,044	\$3,148,974	\$241,752	\$3,965,242	\$0	\$0	\$0	\$149,867	Total *	\$13,210,290

* - 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 \$83,607,708

APPENDIX H: SUPPORTING DOCUMENTATION

		
	<p>Source:</p> <p>The north arrow indicator is an approximation of 0° North.</p>	<p>Project Number:</p> <p>111326.14R-050.305</p> <p>Project Name:</p> <p>California Towers</p>
		<p>On-Site Date:</p> <p>February 24 - 25, 2015</p>

FEMA Flood Insurance Rate Map (FIRM)



Source:

FEMA

Subject Property is located in Flood Zone **X** and within Community and Panel Number 06065C0726G, effective August 28, 2008. Flood Zone X, is an area identified as having a minimal flood hazard risk

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



Project Number:

111326.14R-050.305

Project Name:

California Towers

Onsite Date:

February 24-25, 2015

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

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

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

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

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

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

PLAN TYPE DEFINITION

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

Code Compliance (CC)

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

Operations (OP)

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

Environmental (EN)

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

Functionality (FN)

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

Integrity (IN)

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

Estimate of Structures Cost Using Marshall Cost Systems			
California Towers			
Site Calculation			
Estimate of Unusual Land Improvements Cost (Estimators Data Cost Base):			
Description	Cost	Estimated \$/ SF	Unusual Land Total
			\$0
Total			\$0
Estimate of Unusual Land Improvements Cost (Estimators Cost Data Base):			
Estimate of Structure Cost :			
Building Type	Cost per SF	Number of SF	Building TypeTotal
Main Building	\$412.88	162,000	\$66,886,167
	\$0.00	0	\$0
	\$0.00	0	\$0
	\$0.00	0	\$0
	\$0.00	0	\$0
Total		162,000	\$66,886,167
Estimate of Adjustments for Fees:			
Description	% increase		
Soft Costs	25.00%		
	0.00%		
	0.00%		
Total Fees/ Interest included in Marshall System			25.00%
Total Structure Estimate:			
Description	Unit	Fee Adjust	Adjusted Totals
Main Building	\$66,886,167	25.00%	\$83,607,708
	\$0	25.00%	\$0
	\$0	25.00%	\$0
	\$0	25.00%	\$0
	\$0	25.00%	\$0
Cost Per SF	\$516.10	Total Estimate	\$83,607,708

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: Frank A. Morales

Building name: California Towers (330)

What is your association with this property? Building Manager

What is the length of your association with this property? 9 years

Phone number: 951-715-0130

Please provide information about inspections relating to the following items

Inspections	Date Last Inspected	List Name & Contact for Maintenance Contractor, if any.
1. Elevators	7/2014	Fujitec Elevators, Dan Quinn
2. HVAC, Mechanical, Electric, Plumbing	5/2014	Marty Carter, Cooling Technologies
3. Life-Safety/Fire	2/2015	Joe Brennan, Brennan Fire
4. Roofs	6/2014	

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

Installation of new 350 TON SMARTD Chiller, Installation of new Cooling Towers.

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

Boiler replacement, Upgrade of the Building Management System, Upgrade of the Building Fire Alarm System & Panel, Replacement of the 150 YORK Chiller.

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

20 years

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

Chiller, Fire Alarm System & Panel, Building Management System, Boiler Unit, Penthouse Roof. Replacement of broken and leaking windows

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

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

Question	Y	N	N/A	Unk	Comments
12. Is the property served by a private water well?		x			
13. Is the property served by a private septic system or other waste treatment systems?		x			
14. Are there any problems with foundations or structures?		x			
15. Is there any water infiltration in basements or crawl spaces?		x			
16. Are there any wall, or window leaks?	x				2 leaks on the 11th & 10th floors. Gasketing must be replaced.
17. Are there any roof leaks?		x			
18. Is the roofing covered by a warranty or bond?		x			
19. Are there any poorly insulated areas?		x			
20. Is Fire Retardant Treated (FRT) plywood used?		x			
21. Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used?			x		
22. Are there any problems with the utilities, such as inadequate capacities?		x			
23. Are there any problems with the landscape irrigation systems?		x			
24. Has a termite/wood boring insect inspection been performed within the last year?			x		
25. Do any of the HVAC systems use R-11, 12, or 22 refrigerants?	x				YORK 150 Ton Chiller R-134, SMARDT 350 Ton Chiller R-410
26. Has any part of the property ever contained visible suspect mold growth?		x			
27. Is there a mold Operations and Maintenance Plan?		x			
28. Have there been indoor air quality or mold related complaints from tenants?		x			

Question	Y	N	N/A	Unk	Comments
29. Is polybutylene piping used?		x			
30. Are there any plumbing leaks or water pressure problems?		x			
31. Are there any leaks or pressure problems with natural gas service?		x			
32. Does any part of the electrical system use aluminum wiring?		x			
33. Are there transformers inside the building?	x				Transformners on each floor of the electrical rooms. 480 volt transformer located in basement
34. Do any Commercial units have less than 200-Amp service?		x			
35. Are there any recalled fire sprinkler heads (Star, GEM, Central, Omega)?		x			
36. Is there any pending litigation concerning the property?		x			
37. Has the State previously completed an ADA or 'Title 24 review?	x				2003
38. Have any ADA or Title 24 improvements been made to the property?	x				2002 horizontal store front doors
39. Does a Barrier Removal Plan exist for the property?		x			
40. Has the Barrier Removal Plan been approved by a credentialed third party?		x			
41. Have there been any ADA or Title 24 related complaints?		x			
42. Have there been any complaints about the elevators or wait times?	x				Several break downs of all elevators in the past 5 years. All elevators are currently operational
43. Are there any problems with exterior lighting?		x			
44. Are there any other significant issues/hazards with the property?		x			
45. Are there any unresolved construction defects at the property?		x			

APPENDIX J: ELEVATOR REPORT



Elevator Assessment

**Building 330 – Riverside State Building
3737 Main St.
Riverside, CA**

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Appendix A – Elevator Equipment Summary

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

Bank/Elevator Description	Elevator Number	Speed	Capacity	Floors Served	Date of Original Install	Date of Last Mod	Next Mod Due	Elevator Type	Machine/ Power Unit Manuf.	Motor Control	Control Manuf.	Door Size/ Style	Door Equip. Manuf.
Elevators 1-3 (Group – ID# 55372, 56445, 56442)	1	500 fpm	4,000 pounds	B, 1-11	1973	1995	1-2 years	Overhead Gearless Traction	Haughton	SCR	MCE	42”x 84” Center Opening	MAC
	2	500 fpm	3,000 pounds	1-11	1973	1995	1-2 years	Overhead Gearless Traction	Haughton	SCR	MCE	42”x 84” Center Opening	MAC
	3	500 fpm	3,000 pounds	1-11	1973	1995	1-2 years	Overhead Gearless Traction	Haughton	SCR	MCE	42”x 84” Center Opening	MAC
Elevator 4 (Simplex – ID# 55983)	4	125 fpm	3,000 pounds	B, 1, M, 2	1973	1996	3-5 years	Inground Hydraulic	Armor	EM Starter	MCE	42”x 84” Center Opening	GAL
Elevator 5 (Simplex – ID# 55982)	5	85 fpm	3,000 pounds	B, 1	1973	2000	3-5 years	Inground Hydraulic	Armor	EM Starter	MCE	72”x 80” Vertical Bi-Parting	Manual

Elevator Number	State Inspection Date	State Inspection Status	5-Year Test Date	5-Year Test Status	Annual Test Date	Annual Test Status	Fire Service Testing Logs	Machine Room Maintenance Logs	Overall Level of Maintenance	Modernization Priority
1	7/2014	Current	Not Required	Not Required	Not Required	Not Required	Missed Oct/Nov, 2014	Current	Below Average	High
2	7/2014	Current	Not Required	Not Required	Not Required	Not Required	Missed Oct/Nov, 2014	Current	Below Average	High
3	7/2014	Current	Not Required	Not Required	Not Required	Not Required	Missed Oct/Nov, 2014	Current	Below Average	High
4	7/2014	Current	4/2014	Current	Not Required	Not Required	Current	Current	Average	Medium-High
5	7/2014	Current	4/2014	Current	Not Required	Not Required	Current	Current	Average	Medium-High

Appendix B – Repair Items

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

Building 330 – Riverside State Building				
Current Items			These Columns For Use by Contractor and in Future ECA Visits	
Item #	Item Description	Units Affected	Item Complete	Comments
1	Hoist ropes rouged and very nearly undersized – replace ropes	1		
2	Bearing growl coming from machine – investigate and repair	1		
3	Seal grease leak from machine shaft	1		
4	Replace packing	4		

Appendix C – Maintenance Corrections

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

Building 330 – Riverside State Building				
Current Items			These Columns For Use by Contractor and in Future ECA Visits	
Item #	Item Description	Units Affected	Item Complete	Comments
1	Fire service logs missing October/November 2014 – ensure tests are performed and logged monthly	1-3		
2	Maintenance logs missing October/November 2014 – ensure maintenance is being performed monthly per contract	1-3		
3	Clean rouge from machine	1		
4	Hoist ropes showing some rouge - monitor	2		
5	Clean rope debris from machine room floor	2		
6	Wipe down machine room equipment	1-3		
7	Clean machine room	1-4		
8	Properly store prints in machine room	1-3		
9	Replace covers on controllers	1-3, 5		
10	Clean tops of cars	1-5		
11	Adjust for smoother ride	1-3		
12	Adjust doors for smoother operation	1-3		
13	Repair in-car position indicator	3		
14	Repair broken lobby sight guard	1		
15	Car hitting fascia at lobby - adjust	1		
16	Clean pits	1-5		
17	Clean hall and car door equipment	4		
18	Monitor oil leaking from Victaulic fittings under tank	5		
19	Seal leak from muffler in machine room	5		

Appendix D – Owner’s Maintenance Items

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

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

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

Building 330 – Riverside State Building				
Current Items			These Columns For Use by University and in Future ECA Visits	
Item #	Item Description	Units Affected	Item Complete	Comments
1	Properly label machine room door – “Elevator Equipment Room – Authorized Personnel Only”	1-3, 5		
2	Remove building storage from machine room	4		
3	Relamp machine room light	5		

Appendix E – Modernization Recommendation

It is commonly held in the industry that elevator equipment should be modernized every 20-25 years. While this is a valid generalization, the actual time for modernization can vary greatly from property to property, depending on the type of equipment installed, its age, the level of usage, etc. In this case, the traction elevators were modernized in 1995 (20 years ago). The MCE controls have two major parts known to be obsolete, with the most concerning being the Baldor drives. These are no longer available, and refurbished drives are very hard to find. They can be repaired, but the success of repairs is about 50/50 and the drives have to be sent away for repair, meaning the elevators will be down for 2-3 weeks minimum, and maybe much longer, should a drive fail. The same is true for the black box units in the controls, which have to be sent to Sacramento for repair. With all of this in mind, we are recommending a modernization of the traction cars in 1-2 years.

The hydraulic elevators were modernized in 1996 (car 4) and 2000 (car 5). The controls for hydraulic elevators are simpler and don't have the same obsolescence concerns. These modernizations could be pushed out as far as 5-7 years, except for the fact that the piston/cylinders were not modernized previously, and thus are original to 1972. Replacement of the cylinders could occur separately from a modernization, or could happen at the same time in order to have some economy of scale. We do recommend replacing the cylinders proactively, as it is much more expensive to replace them if they fail, and the downtime is unplanned at about 9-12 weeks (if a cylinder fails, the elevator has to be left out of service until it can be replaced). With this in mind, we are recommending a modernization be budgeted for 3-5 years for elevators 4 and 5. The budget we are offering is for a complete modernization with pistons and cylinders, but we could talk about splitting up the work into separate projects if desired.

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

Elevator Modernization Plan		
Item	Elevator(s)	Action
Elevator Control	All	New Solid State
Motor Control (Drive)	Traction	New
Solid State Starter	Hydraulic	New
Dispatching	New	Standard
Battery Lowering Operation	Hydraulic	New
Traction Machine	Traction	New
Secondary/Deflector Sheaves	Traction	New
Power Unit	Hydraulic	New
Governor	Traction	New
Hoist Ropes	Traction	New
Car Safety	Traction	Retain
Load Weighing Operation	Traction	New
Car Button Station	All	New
Car Position Indicator	All	New

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

Our recommended budgets are as follows:

Years 1-2:

Elevators 1-3: \$300,000 per elevator, \$900,000 total

Years 3-5:

Elevator 4: \$160,000

Elevator 5: \$130,000

If you choose to refurbish the cab interiors (floors, side and back walls and ceiling), we would recommend a budget of \$25,000 per elevator. This budget assumes fairly standard finishes for the cab interiors. If you feel that you may want custom or “better than average” cabs, you may wish to add a contingency of 20% to this budget.

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

Not included in the above is work by other trades. When an elevator modernization occurs, it often precipitates the requirement for work in other related areas, either due to code changes since installation, different requirements for the new control systems, desired changes in look of the systems, etc. The most common required work is electrical work (new or modified disconnects in the machine room, increase in lighting, etc.), fire and life safety work (addition of smoke detectors in elevator areas, addition or removal of sprinklers, etc.), general contracting (modifications for access to machine areas, cutting and patching for new fixtures, etc.) and potentially other areas. It is difficult for ECA to provide accurate budgets at this time, as our expertise is in the area of elevators and not necessarily in these other areas. However, we can estimate in this case that the required work by other trades will be roughly \$125,000 for the traction elevators (years 1-2) and \$40,000 for the hydraulic elevators (years 3-5). We think this is a fairly conservative estimate and, combined with our other budgets should provide you a placeholder to allocate the proper funds (we don't want this work to be a surprise for you down the road).

Finally, as the State typically employs an elevator consultant for assistance with elevator modernization projects, we would recommend adding \$30,00 to the traction budget and \$20,000 to the hydraulic budget for that purpose.

The total budget for the recommended modernization project is \$1,055,000 for the traction elevators in years 1-2, and \$350,000 for the hydraulic elevators in years 3-5. This includes the elevator contractor's portion of the work, work by other trades, and elevator consulting. It does not include cab interior refurbishment, which would add \$25,000 per elevator to the total project cost.

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



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