



## Justice Joseph A. Rattigan Building (480)

50 D Street, Santa Rosa, CA 95404

### 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 Justice Joseph A. Rattigan Building (480).

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

### OBJECTIVE

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

The Justice Joseph A. Rattigan Building (480) FCI ratio will be incorporated as a comparative factor in the overall DGS portfolio analysis, enabling DGS to accurately rank and prioritize building repair/replacement needs in the long-range strategic plan.

## SCOPE OF ASSESSMENT

The EMG evaluation team, comprised of engineers and architects, visited the Justice Joseph A. Rattigan Building (480) on March 18, 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	\$41,569,143
Immediate Repair Costs (12 months)	\$1,795,179
1-5 Year Capital Needs	\$2,262,752
6-10 Year Capital Needs	\$1,017,419
Total 10-Year Capital Reserve Needs	\$5,075,350

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

**Current Year FCI**

$$\text{Current FCI} = \frac{\$1,795,179}{\$41,569,143}$$

**Ten-Year FCI**

$$\text{Ten-Year FCI} = \frac{\$5,075,350}{\$41,569,143}$$

Current Year FCI	Ten-Year FCI
<b>4.32 % = <i>Good Condition</i></b>	<b>12.21 % = <i>Poor Condition</i></b>

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

- The roof is old and there were leaks during the most recent winter. Replacement is recommended. At the time the roofing is replaced the skylights over the atrium should also be replaced. Portions of the skylights have shade cloth that is wrinkled and traps moisture between the glass and the cloth.
- The cooling system condensers are original and in fair to poor condition. Replacement is recommended.
- The air distribution ducts from the roof mounted air-handlers leak water into the building. The joints have failed and the water has damaged the interior of the ductwork. The ducts should be replaced.

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 Santa Rosa - Justice Joseph A. Rattigan Building (480) is located at 50 D Street in Santa Rosa. This contemporary pre-cast concrete panel-structured building designed by local Santa Rosa architect, Lawrence Simons and Associates, opened in 1983. It is distinguished by its design, including tinted windows on the west projecting toward Courthouse Square.

Named after State Associate Justice Joseph A. Rattigan, the building houses several pieces of art: a ceramic tile sculpture by Karen Atkinson; lobby sculpture by Robert Hudson; Seth Siederman's atrium sculpture, and the atrium painting by Alexis Smith.

The interior opens to a large atrium with a central staircase providing access to all four floors. The building's atrium was designed with a rolling roof capable of opening in the summer for additional ventilation. There are 12 agency tenants in the building, including offices for the State Senate and Assembly. There is no public parking onsite.

The gross floor area is 97,377 SF with 73,014 net usable SF. The ratio of net usable to gross building area is 74.9 percent. The occupant capacity is 280.

### BUILDING DESCRIPTION

The building structural system is primarily steel and concrete column and beam superstructure with concrete-topped metal floor decks. The roof structure is flat with modified bitumen roofing. The exterior walls are concrete panels, and glazed curtain walls in aluminum and steel framing.

Interior walls are painted drywall, ceramic tile, and paneling. Floor finishes include carpet, vinyl composition tiles, and ceramic tiles. Ceilings are suspended acoustical tiles, painted drywall, and an open atrium to the skylight.

The facility is served by two hydraulic passenger elevators serving all floors of the building.

Domestic hot water is provided by commercial grade gas-fired water heaters located in the mechanical room.

Heating and cooling are provided by a central system of boilers, condensers, chillers, cooling towers, air handling units, and variable air volume terminals.

Life safety systems include fire sprinklers, hydrants, smoke detectors, alarms, extinguishers and wet standpipes. The building has an emergency diesel generator, one electric and two diesel fire pumps.

The building covers nearly the entire site and the only landscaping area is narrow perimeter planters along the D Street frontage. Landscaped areas are irrigated by an in-ground drip irrigation system.

### Project Statistics

Item	Description
Project Name	Judge Joseph A. Rattigan Building
Building ID	480
Property Type	Administration
Year Built	1983
Number of Stories	4
Occupied	Yes
Land Area (acres)	0.92
Gross Square Feet (GSF)	97,377

## FACILITY CONDITION ASSESSMENT

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

### COMPONENTS OF THE FCA

#### Current conditions analysis

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

#### Anticipated building reserve analysis

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

#### Funding needs analysis

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

## CALCULATION OF FUNDING NEEDS

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

### Immediate Repair Costs

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

### Capital Reserve Needs

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

### Current Replacement Value

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

## Remaining Useful Life

Remaining Useful Life (RUL) estimate is based upon site observations, research, and judgment, along with reference to Expected Useful Life (EUL) tables from various industry sources. A sample copy of the EUL table is included in the appendices. EMG estimates when a system or component will likely need replacement based on a visual review of the current condition and the RUL estimate. Exposure to the elements, quality of installation, extent of use, and quality and amount of preventive maintenance exercised are factors that impact the effective age of a system or component. As a result, a system or component might have an effective age that is greater or less than its actual chronological age. The RUL of a system or component equals the EUL less its effective age.

## Opinions of Probable Cost

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

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

## Facility Condition Index

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

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

## SCOPE OF ASSESSMENT

The evaluation team conducted a walk-through survey of Justice Joseph A. Rattigan Building (480) on March 18, 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.

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.

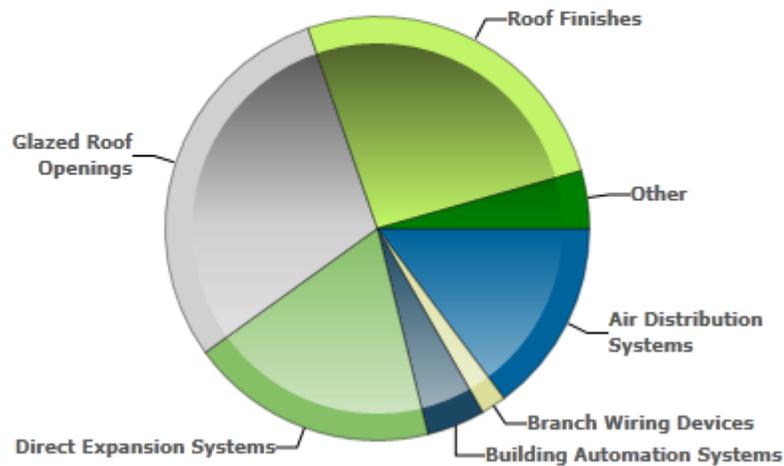
## **PRIORITY RATIO**

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:

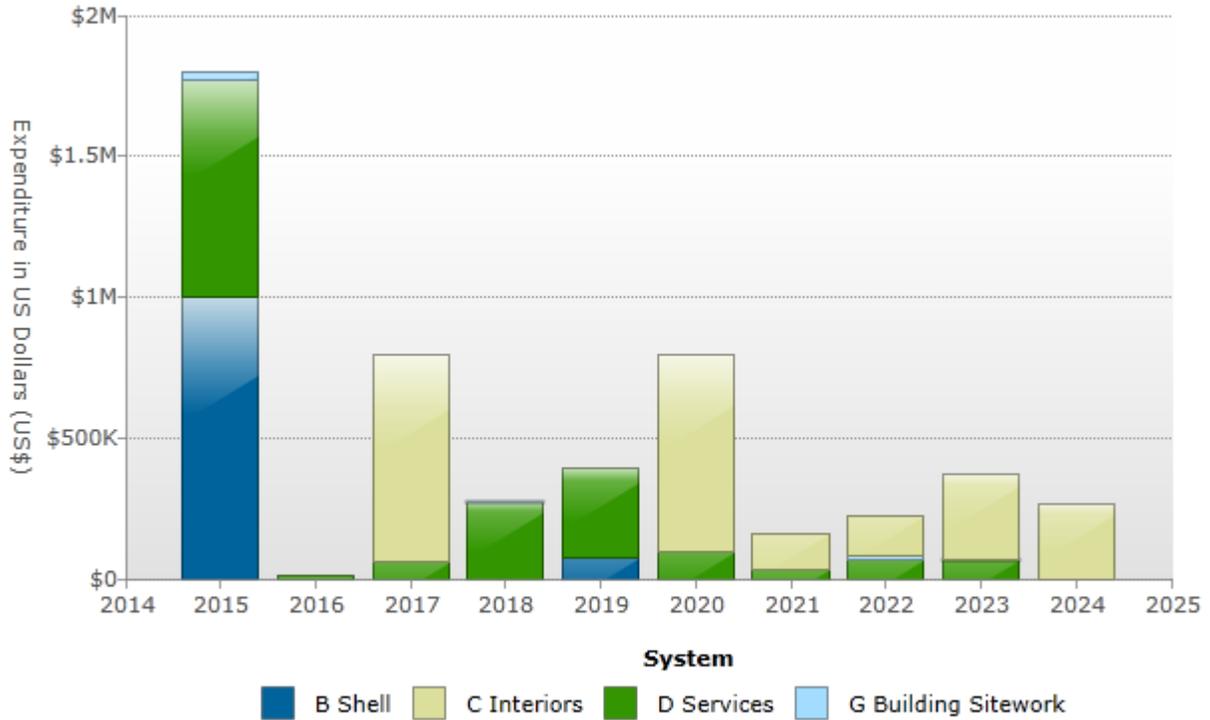
Condition	Definition
Good	In new or well-maintained condition, with no visual evidence of wear, soiling, or other deficiencies.
Fair	Subjected to wear and soiling but is still in a serviceable and functioning condition.
Poor	Subjected to hard or long-term wear. Nearing the end of its useful or serviceable 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
B3011	Roof Finishes	\$464,970
B3021	Glazed Roof Openings	\$532,086
D3023	Auxiliary Equipment	\$2,360
D3032	Direct Expansion Systems	\$339,140
D3041	Air Distribution Systems	\$265,839
D3041	Air Handling Units	\$14,277
D3042	Exhaust Ventilation Systems	\$5,222
D3044	Hot Water Distribution	\$14,483
D3068	Building Automation Systems	\$79,693
D5012	Low Tension Service & Dist.	\$11,800
D5021	Branch Wiring Devices	\$34,471
D5022	Lighting Equipment	\$7,236
G4032	Site Security & Alarm Systems	\$23,600
	<b>Total</b>	<b>\$1,795,179</b>

### Total Capital Needs By System and Year



Year	Building System							Total
	A Sub-Structure	B Shell	C Interiors	D Services	E Equip. & Furnishings	F Spec. Const. & Demolition	G Bldg. Site Work	
2015	\$0	\$997,057	\$0	\$774,523	\$0	\$0	\$23,600	\$1,795,179
2016	\$0	\$0	\$0	\$13,383	\$0	\$0	\$0	\$13,383
2017	\$0	\$0	\$731,304	\$61,095	\$0	\$0	\$0	\$792,400
2018	\$0	\$0	\$0	\$269,276	\$0	\$0	\$1,937	\$271,213
2019	\$0	\$73,011	\$0	\$320,168	\$0	\$0	\$0	\$393,179
2020	\$0	\$0	\$696,905	\$95,672	\$0	\$0	\$0	\$792,577
2021	\$0	\$0	\$128,891	\$32,003	\$0	\$0	\$0	\$160,893
2022	\$0	\$0	\$138,632	\$65,708	\$0	\$0	\$18,249	\$222,588
2023	\$0	\$0	\$301,872	\$65,784	\$0	\$0	\$1,937	\$369,594
2024	\$0	\$0	\$264,343	\$0	\$0	\$0	\$0	\$264,343
<b>Total</b>	<b>\$0</b>	<b>\$1,070,068</b>	<b>\$2,261,947</b>	<b>\$1,697,612</b>	<b>\$0</b>	<b>\$0</b>	<b>\$45,723</b>	<b>\$5,075,350</b>

## CURRENT REPLACEMENT VALUE

The Current Replacement Value has been determined as \$41,569,143 for the Justice Joseph A. Rattigan Building Building (480). 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
97,377 GSF	\$427	\$41,569,143

## FACILITY CONDITION INDEX

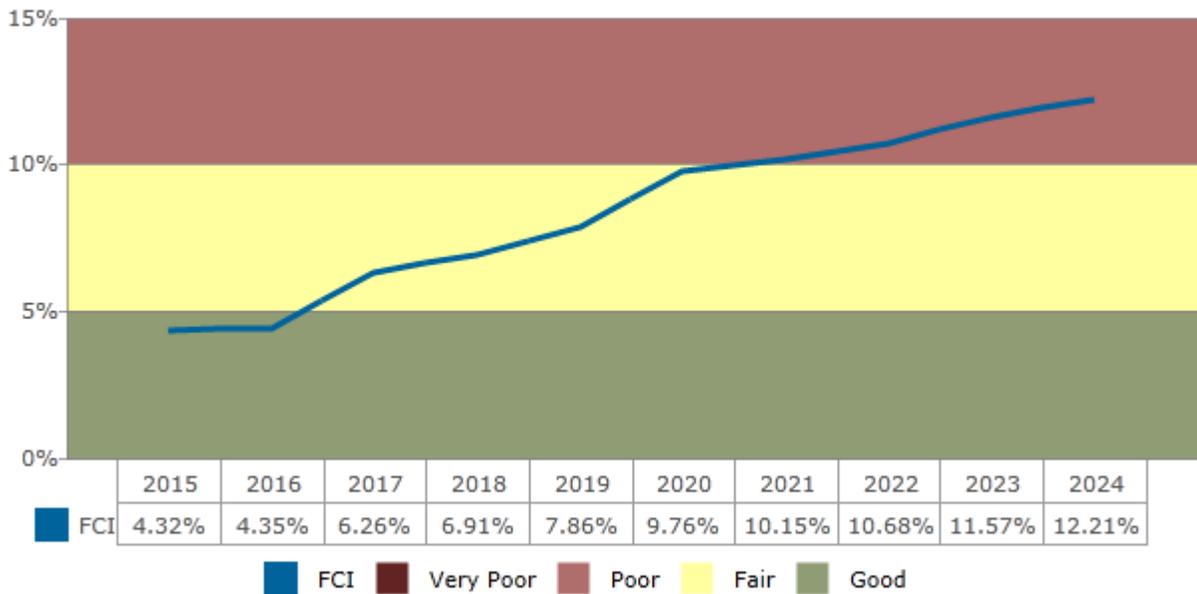
The FCI<sup>1</sup> is an indication of a building’s current and future overall condition. According to industry standards an FCI ratio of 65 percent, or the “rule of two-thirds,” is the threshold for identifying potential candidates for replacement or divestment.<sup>2</sup> Once the FCI ratio reaches 65 percent, or roughly two-thirds of the Current Replacement Value of the estimated cost to replace a building, it may 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%

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

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

No accessibility issues were observed.



**APPENDIX B: GENERAL ASSESSMENT INFORMATION**

**A Substructure Systems**

**A10 FOUNDATIONS**

Item	Description
A1011 Wall Foundations	A1011 Wall Foundations
Condition	Good
Qty / UOM	24,344 / SF
RUL (years)	43
Location	Ground floor

OBSERVATIONS/COMMENTS:  
 No further action is required.

**B Shell Systems**

**B10 SUPERSTRUCTURE**

Item	Description
B1021 Flat Roof Construction	B1021 Steel Column, Beams and Deck
Condition	Good
Qty / UOM	97,377 / SF
RUL (years)	40
Location	Throughout facility

OBSERVATIONS/COMMENTS:  
 No further action is required.

**B20 EXTERIOR ENCLOSURE**

Item	Description
B2011 Exterior Wall Construction	B2011 Paint Stucco and Lath
Condition	Good
Qty / UOM	16,000 / SF
RUL (years)	4
Location	Exterior
Exterior Wall Construction	Stucco
Parapets	Yes

OBSERVATIONS/COMMENTS:

Based on RUL, the exterior walls will require re-painting during the assessment period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B2011	Replace B2011 Paint Stucco and Lath	16,000.0 - SF	4.6	IN - Beyond Rated Life	Priority 3	2019	73,011

Item	Description
<b>B2011 Exterior Wall Construction</b>	B2011 Recaulk Exterior Walls
<b>Condition</b>	Good
<b>Qty / UOM</b>	14,500 / LF
<b>RUL (years)</b>	10
<b>Location</b>	Exterior

OBSERVATIONS/COMMENTS:

Exterior panels were re-caulked in 2005 and are in good condition.

Item	Description
<b>B2021 Windows</b>	B2021 Aluminum Windows
<b>Condition</b>	Good
<b>Qty / UOM</b>	370 / EA
<b>RUL (years)</b>	12
<b>Location</b>	Exterior
<b>Window Type</b>	Fixed
<b>Windows Material</b>	Aluminum
<b>Windows Glazing</b>	Single Glazed
<b>Window Operation</b>	Fixed

OBSERVATIONS/COMMENTS:

Based on the observed conditions, replacement of the windows is not anticipated. Continued maintenance including caulking and gasket replacement will be required,

Item	Description
<b>B2031 Glazed Doors &amp; Entrances</b>	B2031 Glazed Entrance Doors
<b>Condition</b>	Good
<b>Qty / UOM</b>	5 / EA
<b>RUL (years)</b>	14
<b>Location</b>	Exterior

**OBSERVATIONS/COMMENTS:**

Based on observed conditions, replacement of the windows is not anticipated. Continued maintenance including caulking and weather-stripping replacement will be required,

**COST SUMMARY:**

Type	Year	Total Expenditures
B20 Exterior Enclosure	2019	\$73,011

**B30 ROOFING**

Item	Description
B3011 Roof Finishes	B3011 PVC Roofing
Condition	Poor - Fair
Qty / UOM	310 / SQ
RUL (years)	0
Location	Roof
Insulation	None
Flashings and Trim	Metal
Roof Eaves and Soffits	Yes
Roof Drainage	Internal Building Piping
Roof Warranty	Yes

**OBSERVATIONS/COMMENTS:**

Many leaks were observed and reported, primarily through damaged caulking at roof level ducting. A few gaps in the flashing were observed. The roofing contractor who provided the warranty is out of business. Replacement during the next year is recommended due to continuous leaks.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B3011	Replace B3011 PVC Roofing	310.0 - SQ	1499.9	IN - Reliability	Priority 1	2015	464,970

Item	Description
B3021 Glazed Roof Openings	B3021 Glass Skylight
Condition	Poor
Qty / UOM	4,650 / SF
RUL (years)	0
Location	Roof

OBSERVATIONS/COMMENTS:

Significant leaking occurs at skylights, namely at the gap between the panels. These are automatic sliding-type skylights.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
B3021	Replace B3021 Glass Skylight	4,650.0 - SF	114.4	IN - Beyond Rated Life	Priority 1	2015	532,086

COST SUMMARY:

Type	Year	Total Expenditures
B30 Roofing	2015	\$997,057

# C Interiors Systems

## C10 INTERIOR CONSTRUCTION

Item	Description
C1021 Interior Doors	C1021 Interior Doors
Condition	Good
Qty / UOM	110 / EA
RUL (years)	9
Location	Throughout facility

**OBSERVATIONS/COMMENTS:**

Some interior doors appear to have been replaced. Based on RUL, interior door replacement is anticipated during the assessment period.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C1021	Replace C1021 Interior Doors	110.0 - EA	2403.1	IN - Beyond Rated Life	Priority 4	2024	264,343

**COST SUMMARY:**

Type	Year	Total Expenditures
C10 Interior Construction	2024	\$264,343

**C20 STAIRS**

Item	Description
<b>C2011 Regular Stairs</b>	C2011 Carpeted Steps
<b>Condition</b>	Good
<b>Qty / UOM</b>	2,400 / SF
<b>RUL (years)</b>	30
<b>Location</b>	Throughout facility

OBSERVATIONS/COMMENTS:

No further action is required.

**C30 INTERIOR FINISHES**

Item	Description
<b>C3012 Wall Finishes to Interior Walls</b>	C3012 Paint Interior Walls, Drywall
<b>Condition</b>	Good
<b>Qty / UOM</b>	65,000 / SF
<b>RUL (years)</b>	7
<b>Location</b>	Throughout facility

OBSERVATIONS/COMMENTS:

Based on RUL, the interior walls will require re-painting during the assessment period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3012	Replace C3012 Paint Interior Walls, Drywall	65,000.0 - SF	2.1	IN - Appearance	Priority 4	2022	138,632

Item	Description
<b>C3024 Flooring</b>	C3024 Ceramic tile
<b>Condition</b>	Good
<b>Qty / UOM</b>	1,260 / SF
<b>RUL (years)</b>	10
<b>Location</b>	Restrooms

OBSERVATIONS/COMMENTS:

No further action is required.

Item	Description
<b>C3024 Flooring</b>	C3024 Vinyl Tile
<b>Condition</b>	Fair - Good
<b>Qty / UOM</b>	2,400 / SY
<b>RUL (years)</b>	8
<b>Location</b>	Throughout facility

OBSERVATIONS/COMMENTS:

Based on RUL, vinyl tile replacement is anticipated during the assessment period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3024	Replace C3024 Vinyl Tile	2,400.0 - SY	125.8	IN - Appearance	Priority 4	2023	301,872

Item	Description
<b>C3025 Carpeting</b>	C3025 Carpet Tiles - Standard
<b>Condition</b>	Fair - Good
<b>Qty / UOM</b>	7,570 / SY
<b>RUL (years)</b>	2
<b>Location</b>	Throughout facility

OBSERVATIONS/COMMENTS:

Based on RUL, carpet tile replacement is anticipated during the assessment period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3025	Replace C3025 Carpet Tiles - Standard	7,570.0 - SY	96.6	IN - Appearance	Priority 3	2017	731,304

Item	Description
<b>C3031 Ceiling Finishes</b>	C3031 Drywall – Painted Finished Ceilings
<b>Condition</b>	Good
<b>Qty / UOM</b>	28,400 / SF
<b>RUL (years)</b>	6
<b>Location</b>	Throughout facility

OBSERVATIONS/COMMENTS:

Based on RUL, ceiling painting is anticipated during the assessment period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3031	Replace C3031 Drywall – Painted Finished Ceilings	28,400.0 - SF	4.5	IN - Beyond Rated Life	Priority 4	2021	128,891

Item	Description
<b>C3032 Suspended Ceilings</b>	C3032 Acoustical Ceiling Tile
<b>Condition</b>	Fair - Good
<b>Qty / UOM</b>	580 / CSF
<b>RUL (years)</b>	5
<b>Location</b>	Throughout facility

OBSERVATIONS/COMMENTS:

Based on RUL, acoustic ceiling tile replacement is anticipated during the assessment period.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
C3032	Replace C3032 Acoustical Ceiling Tile	580.0 - CSF	1201.6	IN - Appearance	Priority 4	2020	696,905

COST SUMMARY:

Type	Year	Total Expenditures
C30 Interior Finishes	2017	\$731,304
C30 Interior Finishes	2020	\$696,905
C30 Interior Finishes	2021	\$128,891
C30 Interior Finishes	2022	\$138,632
C30 Interior Finishes	2023	\$301,872

## D Services Systems

### D10 CONVEYING SYSTEMS

Item	Description
D1011 Passenger Elevators	D1011 Hydraulic Passenger Elevator 3500 lbs
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	15
Location	Elevator Rooms

OBSERVATIONS/COMMENTS:

No further action is recommended. A 2015 assessment report by Elevator Consulting Associates is included in the appendices. The elevator report recommends the addition of an emergency battery-lowering system to lower the elevator to the ground floor and open the doors in the event of a power outage. This is not a code requirement and installation is optional.

### D20 PLUMBING

Item	Description
D2011 Water Closets	D2011 Water Closet, 1.6 GPF Unit- Automatic
Condition	Fair - Good
Qty / UOM	24 / EA
RUL (years)	6
Location	All Facilities
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2011	Replace D2011 Water Closet, 1.6 GPF Unit- Automatic	24.0 - EA	1233.1	OP - Energy	Priority 4	2021	29,596

Item	Description
D2011 Water Closets	D2011 Water Closet, 1.6 GPF Unit- Manual
Condition	Poor - Fair
Qty / UOM	5 / EA
RUL (years)	4
Location	Restrooms
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

Based on RUL, replacement is anticipated during the reserve term and automatic flush valves are recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2011	Replace D2011 Water Closet, 1.6 GPF Unit- Manual	5.0 - EA	1233.1	OP - Energy	Priority 3	2019	6,166

Item	Description
D2012 Urinals	D2012 Urinals- waterless
Condition	Good
Qty / UOM	8 / EA
RUL (years)	30
Location	Restrooms
Low Flow Toilet	Yes
System Grade	Commercial Grade

OBSERVATIONS/COMMENTS:

The urinals are waterless. No further action is required.

Item	Description
D2014 Sinks	D2014 Automatic flush- water closets
Condition	Poor - Fair
Qty / UOM	5 / EA
RUL (years)	1
Location	Restrooms

OBSERVATIONS/COMMENTS:

Based on their current conditions and RUL, replacement of the water closets is recommended during the next few years.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2014	Replace D2014 Automatic flush- water closets	5.0 - EA	236.0	OP - Energy	Priority 2	2016	1,180

Item	Description
D2014 Sinks	D2014 Lavatory sink- manual
Condition	Fair
Qty / UOM	25 / EA
RUL (years)	7
Location	Restrooms

OBSERVATIONS/COMMENTS:

The lavatory sinks are manual operation. Based on their current conditions and RUL, replacement with automatic operation faucets is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2014	Replace D2014 Lavatory sink- manual	25.0 - EA	2628.3	IN - Beyond Rated Life	Priority 4	2022	65,708

Item	Description
D2018 Drinking Fountains and Coolers	D2018 Drinking Fountain
Condition	Good
Qty / UOM	5 / EA
RUL (years)	5
Location	Hallways

OBSERVATIONS/COMMENTS:

Drinking fountains are located near rest room areas. Based on their current conditions and RUL, replacement is anticipated during the reserve term..

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2018	Replace D2018 Drinking Fountain	5.0 - EA	2876.6	IN - Beyond Rated Life	Priority 3	2020	14,383

Item	Description
D2022 Hot Water Service	D2022 Water Heater - Gas 75 Gal
Condition	Good
Qty / UOM	75 / GALS
RUL (years)	13
Location	4th Floor

OBSERVATIONS/COMMENTS:

A gas water heater (75 MBH) for the building restrooms is located in the southeast corner of the building. No further action is recommended.

Item	Description
D2022 Hot Water Service	D2022 Heater - Electric 20 Gal
Condition	Fair - Good
Qty / UOM	20 / GALS
RUL (years)	6
Location	1st Floor

OBSERVATIONS/COMMENTS:

An electric water heater provides hot water for the building custodial staff. Based on its current conditions and RUL, replacement of the water heater is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2022	Replace D2022 Heater - Electric 20 Gal	20.0 - GALS	120.4	IN - Beyond Rated Life	Priority 3	2021	2,407

Item	Description
D2023 Domestic Water Supply Equipment	D2023 Water Distribution Pump 1/4 HP
Condition	Good
Qty / UOM	1 / EA
RUL (years)	8
Location	4th Floor

OBSERVATIONS/COMMENTS:

The recirculation pump is for the domestic hot water system. Based on its current condition and remaining useful life (RUL), replacement of the pump is anticipated during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D2023	Replace D2023 Water Distribution Pump 1/4 HP	1.0 - EA	2980.1	IN - Beyond Rated Life	Priority 4	2023	2,980

COST SUMMARY:

Type	Year	Total Expenditures
D20 Plumbing	2016	\$1,180
D20 Plumbing	2019	\$6,166
D20 Plumbing	2020	\$14,383
D20 Plumbing	2021	\$32,003
D20 Plumbing	2022	\$65,708
D20 Plumbing	2023	\$2,980

**D30 HVAC**

Energy Supply	
Item	Description
Fuel Oil Type	N/A
Fuel Gas Type	Natural Gas
Solid Fuel Type	N/A
District Heat Type	N/A
District Cooling Type	N/A
Solar Thermal	N/A
Fuel Tank Type	N/A
Fuel Tank Size (gallons)	N/A
Fuel Tank Location	N/A
Gas Meter Location	Loading dock
Electrical Meter Location	Main electrical room near loading dock
Water Meter Location	In the front, west side of building

Item	Description
D3021 Boilers	D3021 Hydronic Gas Boilers (1700 MBH)
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	17
Location	Roof

OBSERVATIONS/COMMENTS:

Two hydronic copper fin tube heating boilers manufactured by Lochinvar each have a capacity of 1700 MBH. They supply the hot water to the AHUs and perimeter VAV boxes. The equipment runs all the time based on calls for heat from EMS system. No further action is required.

Item	Description
D3022.1 Circulating Pumps	D3022.1 Booster Pump 2 HP
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	1

Item	Description
Location	1st Floor

OBSERVATIONS/COMMENTS:

The booster pump is connected to the incoming city water piping. It is original to the building and has an integral VFD. Replacements are recommended during the next few years.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022.1 Booster Pump 2 HP	1.0 - EA	12202.8	IN - Beyond Rated Life	Priority 1	2016	12,203

Item	Description
D3022.1 Circulating Pumps	D3022.1 Heating Secondary Water Circulation Pumps 3 HP
Condition	Fair - Good
Qty / UOM	2 / EA
RUL (years)	11
Location	Roof

OBSERVATIONS/COMMENTS:

Secondary distribution pumps for the boiler circulate hot water through the building. One is a backup and they run alternately. No further action recommended.

Item	Description
D3022.1 Circulating Pumps	D3022.1 Primary Boiler Circulation Pump 1/2 HP
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	5
Location	Roof

OBSERVATIONS/COMMENTS:

The primary boiler loop pump supplies water between the boiler and secondary pumps. Based on its current condition and RUL, replacement of the pump is recommended during the reserve term.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3022	Replace D3022.1 Primary Boiler Circulation Pump 1/2 HP	2.0 - EA	3114.9	IN - Beyond Rated Life	Priority 3	2020	6,230

Item	Description
D3023 Auxiliary Equipment	D2094 Chemical feeder
Condition	Poor
Qty / UOM	1 / EA
RUL (years)	0
Location	Roof

**OBSERVATIONS/COMMENTS:**

There is an automatic chemical feeder for heating system water piping . Based on information from the maintenance staff, it is not functioning properly and needs to be replaced. A cost for replacement is added.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3023	Replace D2094 Chemical feeder	1.0 - EA	2360.0	OP - Maintenance	Priority 1	2015	2,360

Item	Description
D3023 Auxiliary Equipment	D3023 Expansion Tank (210 Gal)
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	16
Location	Roof

OBSERVATIONS/COMMENTS:

An expansion tank for the hot water system which prevents excessive pressure is in the mechanical room. No further action recommended.

Item	Description
D3032 Direct Expansion Systems	D3032 Condenser, Roof-Mounted, 25-Ton, North
Condition	Poor - Fair
Qty / UOM	4 / EA
RUL (years)	0
Location	Roof

OBSERVATIONS/COMMENTS:

North side roof-mounted air cooled condenser units, original to the building, feed the air handlers with cooling. The refrigerant is R-22. Based on current conditions and RUL, replacement is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3032	Replace D3032 Condenser, Roof-Mounted, 25-Ton, North	4.0 - EA	51646.0	OP - Energy	Priority 1	2015	206,584

Item	Description
<b>D3032 Direct Expansion Systems</b>	D3032 Condenser, Roof-Mounted, 35-Ton- South
<b>Condition</b>	Poor - Fair
<b>Qty / UOM</b>	2 / EA
<b>RUL (years)</b>	0
<b>Location</b>	Roof

OBSERVATIONS/COMMENTS:

South side roof-mounted air cooled condenser units, original to the building, feed the air handlers with cooling. The refrigerant is R-22. Based on current conditions and RUL, replacement is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3032	Replace D3032 Condenser, Roof-Mounted, 35-Ton- South	2.0 - EA	66278.0	OP - Energy	Priority 1	2015	132,556

Item	Description
<b>D3041 Air Distribution Systems</b>	D3041.1 interior ducts
<b>Condition</b>	Poor
<b>Qty / UOM</b>	97,377 / SF
<b>RUL (years)</b>	0
<b>Location</b>	Throughout Building

OBSERVATIONS/COMMENTS:

Several areas within the building have damage to the ducts, due to water leaking into the ducting. Based on the current conditions, replacement is recommended during the next year.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041.1 interior ducts	97,377.0 - SF	2.7	OP - Maintenance	Priority 1	2015	265,839

Item	Description
D3041.1 Air Handling Units	D3041.1 AHU Fan supply motor 60hp
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	5
Location	Roof

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041.1 AHU Fan supply motor 60hp	1.0 - EA	22143.9	OP - Maintenance	Priority 3	2020	22,144

Item	Description
D3041.1 Air Handling Units	D3041.1 AHU Fan return motor, 15 hp
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	0
Location	Roof

OBSERVATIONS/COMMENTS:

The 15hp air handler motor is original and nearing the end of its useful life. Replacement during the next few years is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041.1 AHU Fan return motor, 15 hp	1.0 - EA	10917.0	OP - Maintenance	Priority 1	2015	10,917

Item	Description
D3041.1 Air Handling Units	D3041.1 AHU Fan supply motor 10 hp
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Roof

OBSERVATIONS/COMMENTS:

The 10hp air handler motor is original and nearing the end of its useful life. Replacement during the next few years is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041.1 AHU Fan supply motor 10 hp	1.0 - EA	7474.7	OP - Maintenance	Priority 2	2017	7,475

Item	Description
D3041.1 Air Handling Units	D3041.1 AHU Fan supply motor 50 hp
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	5
Location	Roof

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041.1 AHU Fan supply motor 50 hp	1.0 - EA	11799.8	OP - Energy	Priority 3	2020	11,800

Item	Description
D3041.1 Air Handling Units	D3041.1 AHU Fan supply motor 60 hp
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	5
Location	Roof

OBSERVATIONS/COMMENTS:

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

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041.1 AHU Fan supply motor 60 hp	1.0 - EA	22143.9	OP - Energy	Priority 3	2020	22,144

Item	Description
D3041.1 Air Handling Units	D3041.1 AHU 47,000 CFM- North
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	3
Location	Roof

OBSERVATIONS/COMMENTS:

The north rooftop air handler supplies the VAV boxes located in building based on the call for heating or cooling from the zonal temperature sensors. Dampers on the air handlers are digital and are controlled by EMS system. There are VFD drives for all supply and return AHU motors, also controlled by EMS system. According to the maintenance staff, there are issues with the sealant used for coating the air handlers. The sealant and insulation have been damaged and exposed to rain, and are causing leaking. Full seal and repair is recommended.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	D3041 Replace sealant and repair insulation	1.0 - Lump sum	1680.0	OP - Maintenance	Priority 2	2015	1,680
D3041	Replace D3041.1 AHU 47,000 CFM- North	1.0 - EA	134638.0	IN - Beyond Rated Life	Priority 2	2018	134,638

Item	Description
<b>D3041.1 Air Handling Units</b>	D3041.1 AHU 36,000 CFM- South
<b>Condition</b>	Poor - Fair
<b>Qty / UOM</b>	1 / EA
<b>RUL (years)</b>	3
<b>Location</b>	Roof

**OBSERVATIONS/COMMENTS:**

The north rooftop air handler supplies the VAV boxes located in building with based on the call for heating or cooling from the zonal temperature sensors. Dampers on the air handlers are all digital and are controlled by the EMS system. There are VFD drives for all supply and return AHU motors that are also controlled by the EMS system. According to the maintenance staff there are issues with the sealant used for coating the air handlers. The sealant and insulation have been damaged and exposed to rain, and are causing leaking. Full seal and repair is recommended.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	D3041 Replace sealant and repair insulation	1.0 - LS	1680.0	OP - Maintenance	Priority 2	2015	1,680
D3041	Replace D3041.1 AHU 36,000 CFM- South	1.0 - EA	134638.0	IN - Beyond Rated Life	Priority 2	2018	134,638

Item	Description
<b>D3041.2 Terminal Units VAV</b>	D3041 VAV Boxes
<b>Condition</b>	Fair
<b>Qty / UOM</b>	122 / EA
<b>RUL (years)</b>	4
<b>Location</b>	All Facilities

OBSERVATIONS/COMMENTS:

The facility is heated and cooled by variable air volume (VAV) terminals supplied with conditioned air from the central system air handlers. They supply the multiple diffusers located in office spaces. VAVs placed at the perimeter have reheat coils. The CFM range is from 325 to 1250 CFM for the boxes. No further action is recommended

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3041	Replace D3041 VAV Boxes	122.0 - EA	2496.7	IN - Beyond Rated Life	Priority 3	2019	304,599

Item	Description
<b>D3042 Exhaust Ventilation Systems</b>	D3042 Exhaust fan 1/3 hp
<b>Condition</b>	Poor - Fair
<b>Qty / UOM</b>	1 / EA
<b>RUL (years)</b>	0
<b>Location</b>	Roof

OBSERVATIONS/COMMENTS:

Exhaust fans (3300 cfm) on the roof are connected to the restrooms and exhaust air out of the building to keep the building in balance with the supply air. The majority of the fans are belt driven. Belts and motors are replaced by the maintenance staff on an as-needed basis. Replacement with direct drive fans is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	Replace D3042 Exhaust fan 1/3 hp	1.0 - EA	3450.4	OP - Energy	Priority 1	2015	3,450

Item	Description
<b>D3042 Exhaust Ventilation Systems</b>	D3042 Exhaust fan 1/12 hp
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	0
Location	Roof

OBSERVATIONS/COMMENTS:

The exhaust fan (225 cfm) on the roof is connected to the utility rooms and exhausts air out of the building to keep the building in balance with the supply air. Belts and motors are replaced by the maintenance staff on an as-needed basis. Replacement with direct drive fans is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3042	Replace D3042 Exhaust fan 1/12 hp	1.0 - EA	1772.0	OP - Energy	Priority 1	2015	1,772

Item	Description
<b>D3044 Hot Water Distribution</b>	D3044 Pipe Insulation, 1" Pipe, 1 Inch Fiberglass
Condition	Poor
Qty / UOM	600 / LF
RUL (years)	0
Location	Roof

OBSERVATIONS/COMMENTS:

Polyethylene pipe insulation on the refrigerant lines is damaged. It should be replaced with fiberglass insulation.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3044	Replace D3044 Pipe Insulation, 1" Pipe, 1 Inch Fiberglass	600.0 - LF	20.7	OP - Maintenance	Priority 1	2015	12,395

Item	Description
<b>D3044 Hot Water Distribution</b>	D3044 Pipe Insulation, 2" Pipe, 1 Inch Fiberglass
<b>Condition</b>	Poor
<b>Qty / UOM</b>	100 / LF
<b>RUL (years)</b>	0
<b>Location</b>	Roof

**OBSERVATIONS/COMMENTS:**

Polyethylene pipe insulation on the refrigerant lines is damaged. It should be replaced with fiberglass insulation.

**COST RECOMMENDATIONS:**

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3044	Replace D3044 Pipe Insulation, 2" Pipe, 1 Inch Fiberglass	100.0 - LF	20.9	OP - Maintenance	Priority 1	2015	2,088

Item	Description
D3052 Package Units	D3052 Air Conditioner, Split unit 1.5 tons
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	5
Location	Computer Room

OBSERVATIONS/COMMENTS:

The split system unit provides cooling for the computer server room on third floor. Based on the current condition and RUL, replacement is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3052	Replace D3052 Air Conditioner, Split unit 1.5 tons	1.0 - EA	18972.0	IN - Beyond Rated Life	Priority 3	2020	18,972

Item	Description
D3063 Heating/Cooling Air Handling Units	D3063 Variable Frequency Drive, 10 HP Motor,
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Roof

OBSERVATIONS/COMMENTS:

The 10hp air handler motor is original and nearing the end of its useful life. Replacement during the next few years is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3063	Replace D3063 Variable Frequency Drive, 10 HP Motor,	1.0 - EA	16776.3	FN - Modernization	Priority 2	2017	16,776

Item	Description
D3063 Heating/Cooling Air Handling Units	D3063 Variable Frequency Drive, 30 HP Fan Motor,
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Roof

OBSERVATIONS/COMMENTS:

The 30hp air handler motor is original and nearing the end of its useful life. Replacement during the next few years is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3063	Replace D3063 Variable Frequency Drive, 30 HP Fan Motor,	1.0 - EA	15767.8	FN - Modernization	Priority 2	2017	15,768

Item	Description
D3063 Heating/Cooling Air Handling Units	D3063 Variable Frequency Drive, 50 HP Fan Motor
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	2
Location	Roof

OBSERVATIONS/COMMENTS:

The 50hp air handler motor is original and nearing the end of its useful life. Replacement during the next few years is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3063	Replace D3063 Variable Frequency Drive, 50 HP Fan Motor	1.0 - EA	21076.6	FN - Modernization	Priority 2	2017	21,077

Item	Description
D3063 Heating/Cooling Air Handling Units	D3063 Variable Frequency Drive, 60 HP Fan Motor
Condition	Good
Qty / UOM	1 / EA
RUL (years)	15
Location	Roof

OBSERVATIONS/COMMENTS:

Variable frequency drives (VFDs) for AHU north supply fans are fairly new. No further action recommended.

Item	Description
D3068 Building Automation Systems	D3068 DDC Controls
Condition	Poor - Fair
Qty / UOM	97,377 / SF
RUL (years)	0
Location	Throughout Building

OBSERVATIONS/COMMENTS:

The building's HVAC equipment runs on digital control system tied into EMS system (Staefa Integral V 2.1). Most of the system is original to the building. There is only one laptop centrally tied into the building system. Overall upgrade of software and DDC controls, including lighting, is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D3068	Replace D3068 DDC Controls	97,377.0 - SF	0.8	FN - Modernization	Priority 1	2015	79,693

**COST SUMMARY:**

<b>Type</b>	<b>Year</b>	<b>Total Expenditures</b>
D30 HVAC	2015	\$721,015
D30 HVAC	2016	\$12,203
D30 HVAC	2017	\$61,095
D30 HVAC	2018	\$269,276
D30 HVAC	2019	\$304,599
D30 HVAC	2020	\$81,289

**D40 FIRE PROTECTION SYSTEMS**

<b>Fire and Life Safety System</b>	
<b>Item</b>	<b>Description</b>
<b>Fire Alarm System Components Present</b>	
Smoke detectors	Yes
Pull stations	Yes
Audible alarms	Yes
Strobe lights	Yes
Central fire alarm panel	Yes
Annunciator panel	N/A
Smoke Detectors Power Supply	N/A
Carbon Monoxide Detectors	N/A
Heat Detector	N/A
Central Fire Alarm Panel Location	Electrical Room
Annunciator Panel Location	N/A
Fire Extinguishers	Yes
Fire Extinguisher Inspection Date	September 29, 2014
Distance to Nearest Fire Hydrant (ft)	30
Illuminated Exit Signs	Yes
Kitchen Suppression Systems	N/A
Halon Gas Systems	N/A
Smoke Evacuation Systems	N/A
Fire-rated Stairwells	No, open to atrium
Fire-rated Stairwell Finish	N/A
Stairwell Discharge	Lobby
Stairwell Pressurized	No
Fire-Rated Doors Observed	Yes
Location of Fire-Rated Doors	N/A
Fire Alarm Service Company	N/A
Date of Last Fire Alarm Service	N/A
Are the individual office unit fire alarm systems monitored?	N/A
Are the common area fire alarm systems monitored?	N/A
Types of Common Areas Monitored	N/A
Fire Alarm Monitoring Company	N/A

Item	Description
<b>D4011 Sprinkler Water Supply</b>	D4011 Wet-Pipe Sprinkler System
Condition	Fair - Good
Qty / UOM	97,377 / SF
RUL (years)	11
Location	All Facilities

## OBSERVATIONS/COMMENTS:

A wet sprinkler system is located throughout the facility office spaces and computer data room. It is original to the building. According to the maintenance staff it is due for an inspection. No further action is required.

**D50 ELECTRICAL SYSTEMS**

Item	Description
<b>D5012 Low Tension Service &amp; Dist.</b>	D5012 Dry Transformer 3 kVA
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	20
Location	Roof

## OBSERVATIONS/COMMENTS:

The secondary transformers in the boiler room were installed in 2002. The electrical service is reportedly adequate for the facility's needs, and the transformer is in working condition. No further action is required.

Item	Description
<b>D5012 Low Tension Service &amp; Dist.</b>	D5012 Breaker Panel 225 Amps
Condition	Fair - Good
Qty / UOM	3 / EA
RUL (years)	10
Location	Main Electrical Room

## OBSERVATIONS/COMMENTS:

The breaker panels in electrical rooms are original 1983 GTE Sylvania equipment. The electrical service is reportedly adequate for the facility's needs, and the panels are in working condition. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Main Switchgear 2000 Amps
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	0
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The main switchgear is original 1983 GTE Sylvania equipment. During a recent inspection, it was found to have incorrect installation of the bonding jumper. Without the bonding jumper, the ground fault system will not operate properly and open the breaker during a fault to the ground. The repair cost is included in the capital reserve tables.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5012 Main Switchgear 2000 Amps	1.0 - EA	11800.0	CC - Life Safety	Priority 1	2015	11,800

Item	Description
D5012 Low Tension Service & Dist.	D5012 Dry Transformer 45 kVA
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	8
Location	Electrical rooms

OBSERVATIONS/COMMENTS:

The secondary transformer is original. Based on current condition and RUL, replacement is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5012 Dry Transformer 45 kVA	1.0 - EA	14159.8	IN - Beyond Rated Life	Priority 4	2023	14,160

Item	Description
D5012 Low Tension Service & Dist.	D5012 Emergency Transfer switch 150 Amps
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	8
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The emergency transfer switch is original 1983 Siemens equipment. The switchgear is in working condition. Based on the current condition and RUL, replacement is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5012 Emergency Transfer switch 150 Amps	1.0 - EA	9116.1	CC - Life Safety	Priority 4	2023	9,116

Item	Description
D5012 Low Tension Service & Dist.	D5012 Switchgear 600 Amps
Condition	Fair
Qty / UOM	2 / EA
RUL (years)	10
Location	Roof

OBSERVATIONS/COMMENTS:

The switchgear on the roof is original 1983 GTE Sylvania equipment. The electrical service is reportedly adequate for the mechanical equipment on the roof, and the switchgear is in working condition. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Dry Transformer 75 kVA
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	8
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The secondary transformer is original. Based on the current condition and RUL, replacement is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5012 Dry Transformer 75 kVA	1.0 - EA	19199.4	IN - Beyond Rated Life	Priority 4	2023	19,199

Item	Description
D5012 Low Tension Service & Dist.	D5012 Dry Transformer 30 kVA
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	8
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The secondary transformer is original. Based on the current condition and RUL, replacement is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5012 Dry Transformer 30 kVA	1.0 - EA	12043.4	IN - Beyond Rated Life	Priority 4	2023	12,043

Item	Description
D5012 Low Tension Service & Dist.	D5012 Breaker Panel 100-800 Amps
Condition	Fair - Good
Qty / UOM	9 / EA
RUL (years)	10
Location	Electrical rooms

OBSERVATIONS/COMMENTS:

The breaker panels in all electrical rooms are original 1983 GTE Sylvania equipment. The electrical service is reportedly adequate for the facility's needs and the panels are in working condition. No further action is required.

Item	Description
D5012 Low Tension Service & Dist.	D5012 Dry Transformer 15 kVA
Condition	Fair - Good
Qty / UOM	1 / EA
RUL (years)	8
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The secondary transformers in the electrical room are original. Based on the current condition and RUL, replacement is recommended during the reserve term.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5012	Replace D5012 Dry Transformer 15 kVA	1.0 - EA	8285.6	IN - Beyond Rated Life	Priority 4	2023	8,286

Item	Description
D5021 Branch Wiring Devices	D5021 Lighting control unit
Condition	Poor - Fair
Qty / UOM	97,377 / SF
RUL (years)	0
Location	All Facilities

OBSERVATIONS/COMMENTS:

Lighting of each room is operated by a controller on each floor, with a manual switch located near the elevators. It is the only manual control for the building. Upgrading lighting controls and tying into EMS system is recommended.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5021	Replace D5021 Lighting control unit	97,377.0 - SF	0.4	OP - Energy	Priority 1	2015	34,471

Item	Description
D5022 Lighting Equipment	D5022 Wall Pack 70 W HPS
Condition	Poor - Fair
Qty / UOM	6 / EA
RUL (years)	0
Location	Roof

OBSERVATIONS/COMMENTS:

There are no exterior fixtures on the roof. New wall pack fixtures are recommended near the stairways and air handlers.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
D5022	Replace D5022 Wall Pack 70 W HPS	6.0 - EA	1206.0	FN - Modernization	Priority 1	2015	7,236

Item	Description
D5022 Lighting Equipment	D5022 LED Canopies 40 W
Condition	Fair
Qty / UOM	8 / EA
RUL (years)	10
Location	All Exterior

OBSERVATIONS/COMMENTS:

The exterior LED Canoy fixtures around the front lobby are operated by a central control unit. No further action is recommended.

Item	Description
D5037 Fire Alarm Systems	D5037 Fire Alarm Panel
Condition	Fair
Qty / UOM	1 / EA
RUL (years)	4
Location	Main Electrical Room

OBSERVATIONS/COMMENTS:

The main fire alarm central panel is located in the main electrical room. It notifies the central computer room panel, which distributes the information to all. Inspection is recommended in the near future.

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 2	2019	9,403

Item	Description
<b>D5037 Fire Alarm Systems</b>	D5037 Strobe and Horn
<b>Condition</b>	Fair - Good
<b>Qty / UOM</b>	28 / EA
<b>RUL (years)</b>	11
<b>Location</b>	All Facilities

OBSERVATIONS/COMMENTS:

Strobe light alarms and horns are located in the offices and hallways. No further action is recommended.

Item	Description
<b>D5092 Emergency Light &amp; Power Systems</b>	D5092 Diesel Generator 75 kW
<b>Condition</b>	Fair
<b>Qty / UOM</b>	1 / EA
<b>RUL (years)</b>	10
<b>Location</b>	Loading Dock
<b>Generator Fuel</b>	Diesel

OBSERVATIONS/COMMENTS:

The generator serves the building backup, emergency services, and lighting. It is original to the building and tested monthly. It is in good working condition according to the maintenance staff. No further action is required.

COST SUMMARY:

Type	Year	Total Expenditures
D50 Electrical Systems	2015	\$53,508
D50 Electrical Systems	2019	\$9,403
D50 Electrical Systems	2023	\$62,804

# G Building Sitework Systems

## G20 SITE IMPROVEMENTS

Site Information	
Item	Description
Main Ingress and Egress	D Street
Access from	W
Additional Entrances	N/A
Access from	N/A
Parking Count: Open lot	4
Parking Count: Sheltered by carports	0
Parking Count: Private garages	0
Parking Count: Subterranean garage	0
Parking Count: Freestanding parking structure	0
Number of ADA Compliant Spaces	0
Number of ADA Compliant Spaces for Vans	0
Method of obtaining parking count	Physical count
Property Identification Sign-Primary	Structure mounted
Property Identification Sign- Secondary	N/A
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	Yes
Lava Rocks Present	No
Ponds Present	No
Fountains Present	No
Topography	Flat

Item	Description
G2012 Paving & Surfacing	G2012 Asphalt Seal Coat
Condition	Fair - Good
Qty / UOM	2,520 / SF
RUL (years)	3
Location	Loading area

OBSERVATIONS/COMMENTS:

Based on its age and anticipated lifecycle, the asphalt pavement will require a sealcoat and restriping.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G2012	G2012 Asphalt Slurry Seal	2,520.0 - SF	0.8	OP - Maintenance	Priority 3	2018	1,937
G2012	G2012 Asphalt Slurry Seal	2,520.0 - SF	0.8	OP - Maintenance	Priority 3	2023	1,937

Item	Description
G2055 Planting	G2055 Planting
Condition	Good
Qty / UOM	1,750 / SF
RUL (years)	12
Location	D Street frontage

OBSERVATIONS/COMMENTS:

Landscape planter areas along the street frontage are covered with ground ivy.

Item	Description
<b>G2057 Irrigation Systems</b>	G2050 Sprinkler System, Backflow Preventer, 4"
<b>Condition</b>	Good
<b>Qty / UOM</b>	2 / EA
<b>RUL (years)</b>	7
<b>Location</b>	All Exterior

OBSERVATIONS/COMMENTS:

Backflow preventer for protecting building potable water is in good condition. No further action is required.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G2057	Replace G2050 Sprinkler System, Backflow Preventer, 4"	2.0 - EA	9124.3	IN - Beyond Rated Life	Priority 4	2022	18,249

COST SUMMARY:

Type	Year	Total Expenditures
G20 Site Improvements	2018	\$1,937
G20 Site Improvements	2022	\$18,249
G20 Site Improvements	2023	\$1,937

**G30 SITE CIVIL/MECHANICAL UTILITIES**

Item	Description
<b>G3063 Fuel Storage Tanks</b>	G3063 Diesel Tank, 308 Gallon
<b>Condition</b>	Fair
<b>Qty / UOM</b>	1 / EA
<b>RUL (years)</b>	10
<b>Location</b>	Loading Dock

OBSERVATIONS/COMMENTS:

Diesel storage tank is for the generators. No further action is required.

**G40 SITE ELECTRICAL UTILITIES**

Item	Description
G4032 Site Security & Alarm Systems	G4032 Site Security & Alarm Systems
Condition	Poor - Fair
Qty / UOM	1 / EA
RUL (years)	0
Location	Electrical rooms

OBSERVATIONS/COMMENTS:

CCTV cameras are only located in the lobby. The existing security system is outdated and needs to be upgraded with more cameras throughout the building. The cost for this work is included in the capital reserve tables.

COST RECOMMENDATIONS:

Type	Component Description	Qty / UOM	Unit Cost (\$)	Plan Type	Priority	Year	Expenditures (\$)
G4032	Replace G4032 Site Security & Alarm Systems	1.0 - EA	23600.0	OP - Security	Priority 1	2015	23,600

COST SUMMARY:

Type	Year	Total Expenditures
G40 Site Electrical Utilities	2015	\$23,600

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	Light Winds

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

Item	Description
Site Plan Reviewed	No
Floor Plan Reviewed	No
Construction Drawings Reviewed	No
Termite Inspection Report Reviewed	No
Boiler Certificates Reviewed	No
Document Year Built Information Obtained From	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:** Timothy Harder, Field Observer

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

## **APPENDIX D: PHOTOS**



View of northwest corner of building



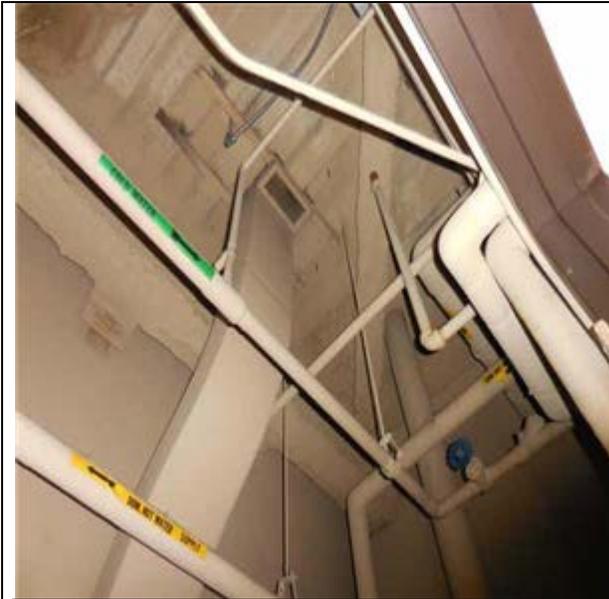
North elevation



East elevation



Southeast corner of building



B1021 Steel Column, Beams and Deck



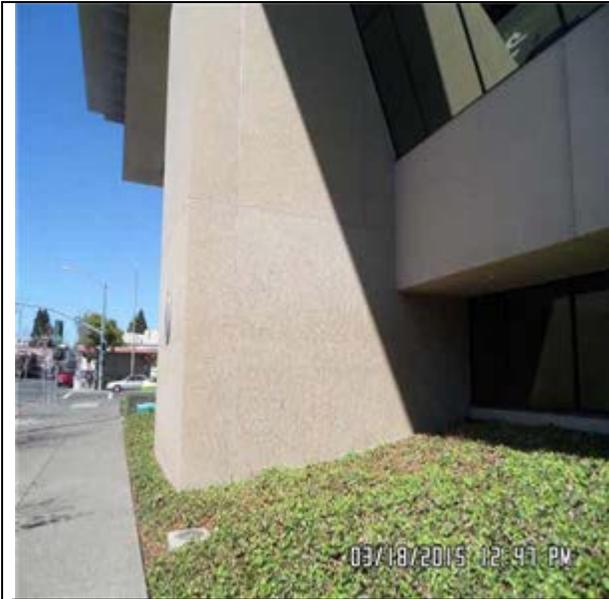
B1021 Steel Column, Beams and Deck



B1021 Steel Column, Beams and Deck



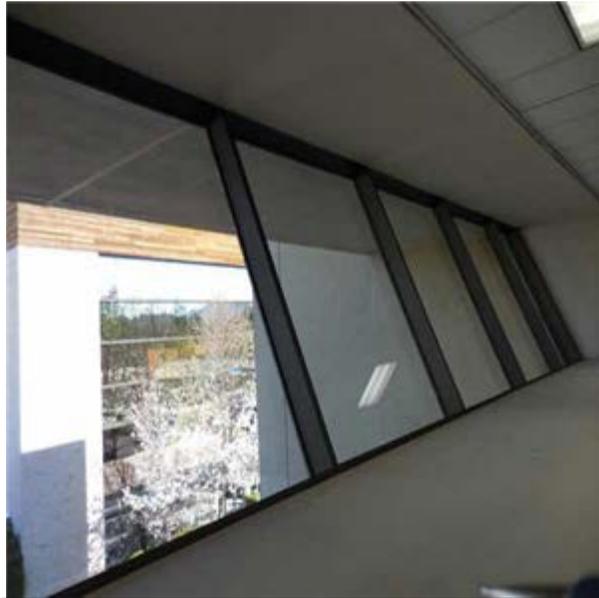
B2011 Recaulk Exterior Walls



B2011 Recaulk Exterior Walls



B2011 Paint Stucco and Lath



B2021 Aluminum Windows



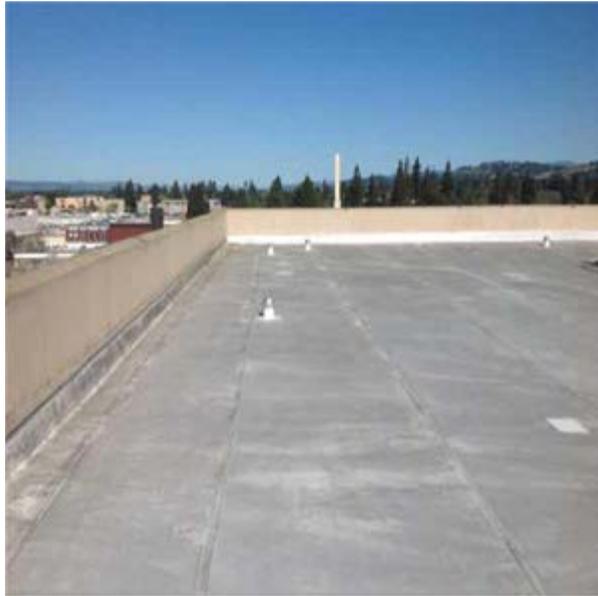
B2031 Glazed Entrance Doors



B3011 PVC Roofing



B3011 PVC Roofing



B3011 PVC Roofing



B3011 PVC Roofing



B3011 PVC Roofing



B3011 PVC Roofing



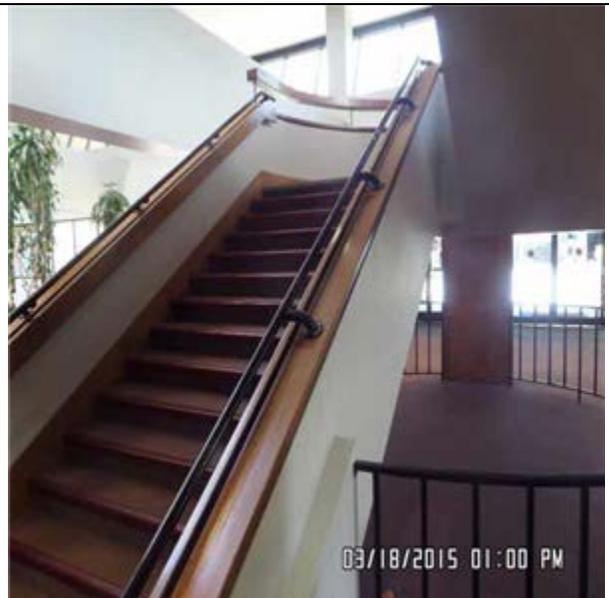
B3021 Glass Skylight



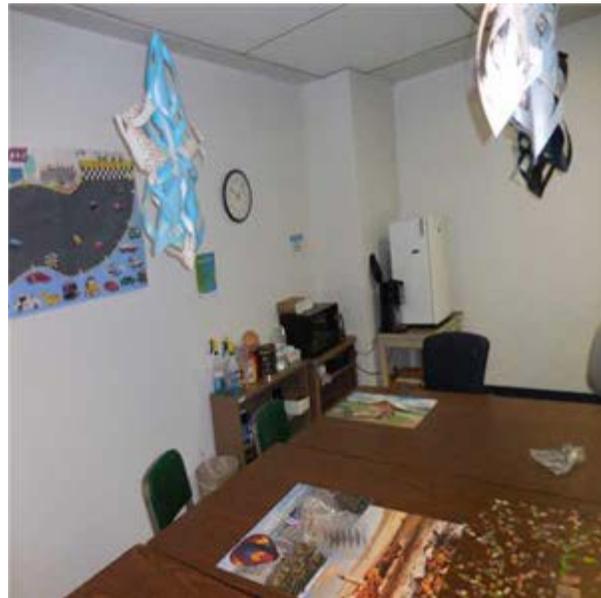
B3021 Glass Skylight



C1021 Interior Doors



C2011 Carpeted Steps



C3012 Paint Interior Walls, Drywall



C3024 Vinyl Tile



C3025 Carpet Tiles - Standard



C3025 Carpet Tiles - Standard



C3032 Acoustical Ceiling Tile



D1011 Hydraulic Passenger Elevator 3500 lbs



D2011 Water Closet, 1.6 GPF Unit- Automatic



D2011 Water Closet, 1.6 GPF Unit- Manual



D2012 Urinals- waterless



D2014 Lavatory sink- manual



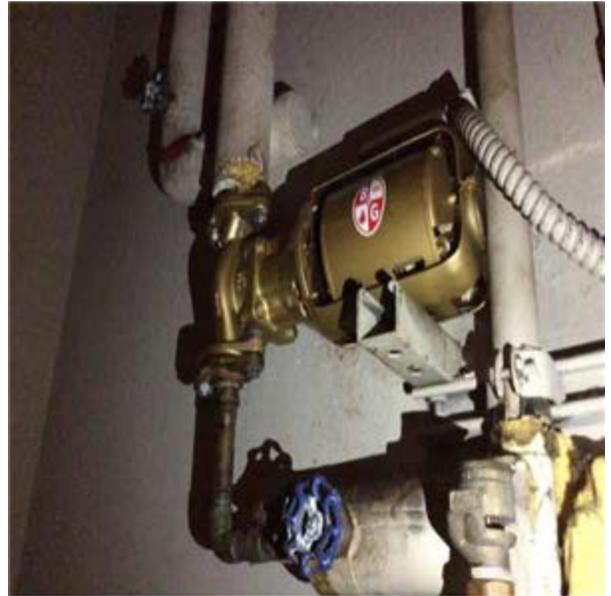
D2018 Drinking Fountain



D2022 Heater - Electric 20 Gal



D2022 Water Heater - Gas 75 Gal



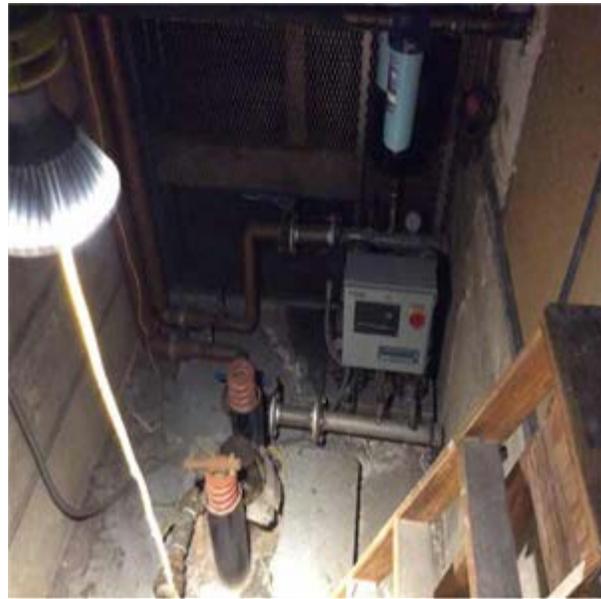
D2023 Water Distribution Pump 1/4 HP



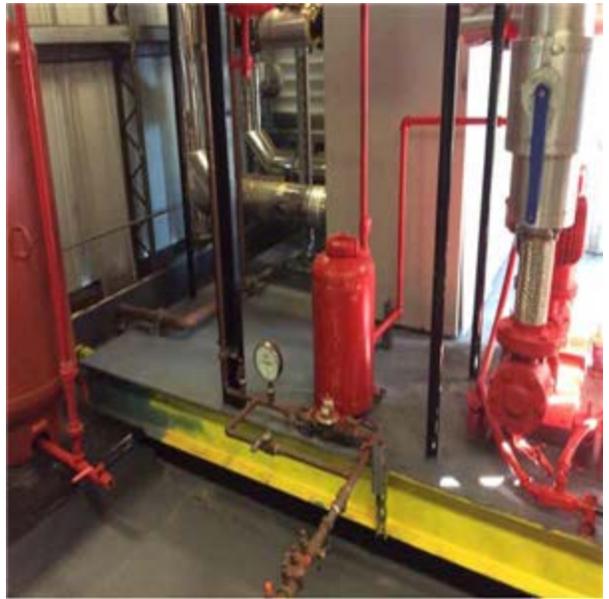
D3021 Hydronic Gas Boilers (1700 MBH)



D3022.1 Heating Secondary Water Circulation Pumps 3 HP



D3022.1 Booster Pump 2 HP



D2094 Chemical feeder



D3023 Expansion Tank (210 Gal)



D3032 Condenser, Roof-Mounted, 25-Ton, North



D3032 Condenser, Roof-Mounted, 35-Ton- South



D3041.1 interior ducts



D3041.1 AHU Fan supply motor 60 hp



D3041.1 AHU 47,000 CFM- North



D3041.1 AHU 36,000 CFM- South



D3042 Exhaust fan 1/3 hp



D3042 Exhaust fan 1/12 hp



D3044 Pipe Insulation, 2" Pipe, 1 Inch Fiberglass



D3044 Pipe Insulation, 1" Pipe, 1 Inch Fiberglass



D3052 Air Conditioner, Split unit 1.5 tons



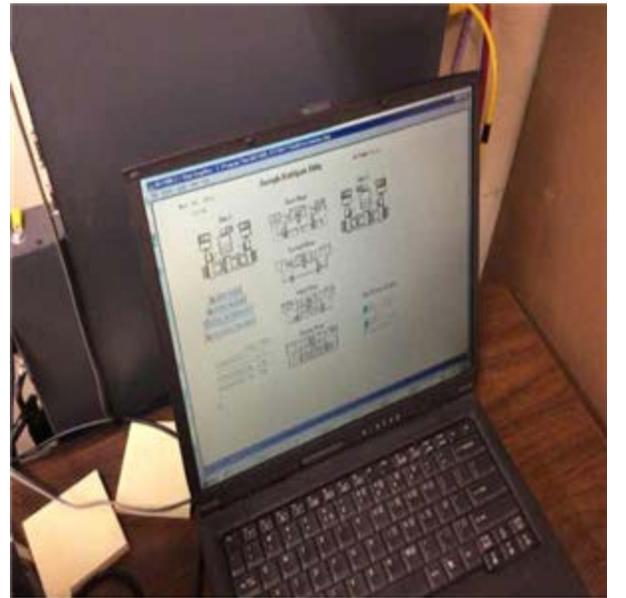
D3052 Air Conditioner, Split unit 1.5 tons



D3063 Variable Frequency Drive, 30 HP Fan Motor,



D3063 Variable Frequency Drive, 50 HP Fan Motor



D3068 DDC Controls



D4011 Wet-Pipe Sprinkler System



D5012 Emergency Transfer switch 150 Amps



D5012 Switchgear 600 Amps



D5012 Dry Transformer 30 kVA



D5012 Main Switchgear 2000 Amps



D5012 Breaker Panel 100-800 Amps



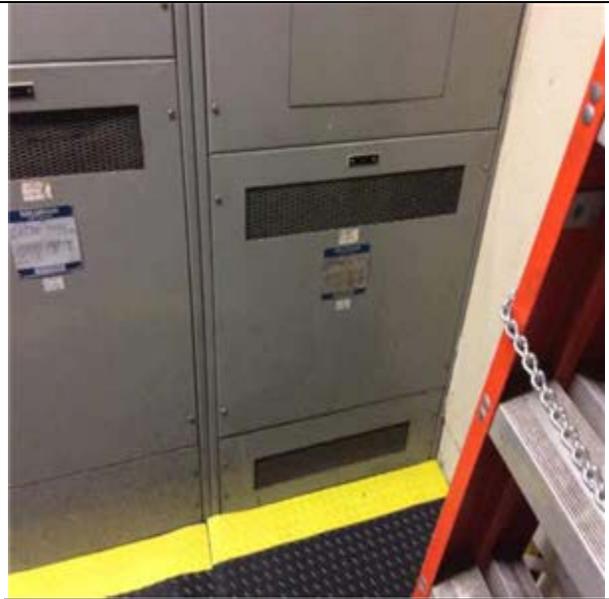
D5012 Dry Transformer 75 kVA



D5012 Breaker Panel 225 Amps



D5012 Dry Transformer 3 kVA



D5012 Dry Transformer 15 kVA



D5021 Lighting control unit



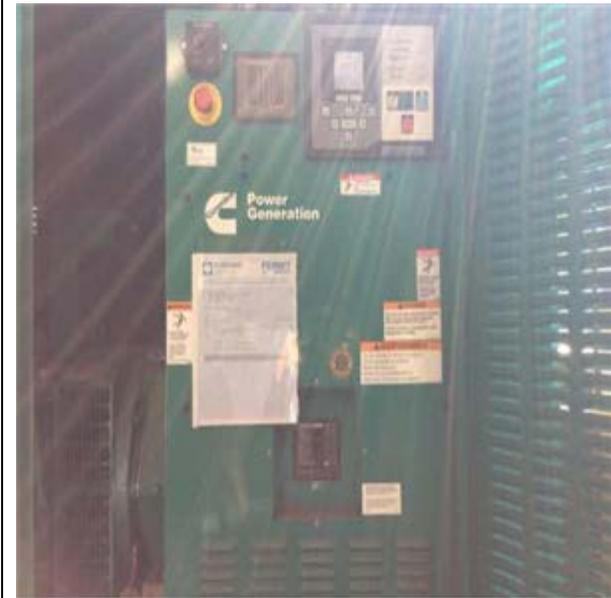
D5022 LED Canopies 40 W



D5037 Strobe and Horn



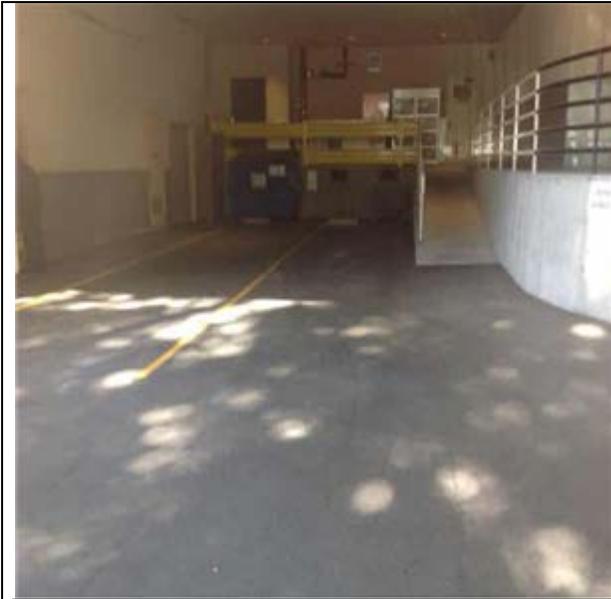
D5037 Fire Alarm Panel



D5092 Diesel Generator 75 kW



G2012 Asphalt Seal Coat



G2012 Asphalt Seal Coat



G2050 Sprinkler System, Backflow Preventer, 4"



G3063 Diesel Tank, 308 Gallon



G4032 Site Security & Alarm Systems

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

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

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

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

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



**APPENDIX F: BUILDING FACT SHEET**

**SANTA ROSA - RATTIGAN BUILDING FACT SHEET**

50 D Street  
Santa Rosa  
Sonoma County

Category 2 - Medium Priority - Further Study Required

**BUILDING INFORMATION**

- Age: 31 years (completed in 1983)
- Size:\* 4-story  
97,377 GSF      73,014 NUSF      73,014 Assigned NSF  
0.92 Acre Parcel  
Parking through lease with the city  
Capacity - 260 workstations currently
- Financial: No Encumbrances  
BRA Rate - \$1.64/month per SF, FY 2012-13 (DGS Price Book)  
\$1.69/month per SF, FY 2013-14 (Proposed DGS Price)
- LEED Status: Registered for LEED-EB Silver February, 2008
- Tenants: 12 Agencies, larger tenants include Department of Industrial Relations (13,226 SF), Board of Equalization (12,143 SF), Employment Development Department (11,862 SF) and Department of Rehabilitation (9,810 SF)



SPI Structure #: 3113  
Real Property #: 666  
BPM #: 480

**COMPLETED STUDIES AND SIGNIFICANT FINDINGS**

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

Even though there was an accessibility modernization project in 2007, many access barriers still remain and are identified in this survey. Because of code changes, this building has substantial accessibility deficiencies, some requiring major retrofit, while others only minor alterations to achieve full compliance. Areas of inaccessibility include drinking fountains, handrails at all stairs, all toilet facilities, exiting signage, fire alarm pulls, and adjustment or replacement of all door closures.

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

This report made no recommendations for immediate maintenance or capital outlay. Repair leaks at the fiberglass skylight were in progress at the time of the inspection. Noted for years 1 - 6 on the report were maintenance and code upgrade expenses totaling \$204,500.

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

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

**ADDITIONAL BUILDING ISSUES**

There are water intrusion issues associated with the ductwork and the skylight, and roofing issues continue due to leaks and water damage in spite of recent repairs. A water conservation project is being undertaken to use water more efficiently. An OSHA complaint was received in 2011 claiming mold issues in water capture receptacles. A study is currently underway to determine the validity of the claim.

**CURRENT UTILIZATION PROJECTS**

None, however 3 office suites for a total of 7,496 sf are vacant and being marketed.

**RECENTLY COMPLETED PROJECTS**

TBD

**Cost**

**ACTIVE PROJECTS**

TBD

**Cost**

**PLANNED SPECIAL REPAIRS BY FISCAL YEAR**

TBD

**Estimated Cost**

\* Source: Statewide Property Inventory

**Santa Rosa Rattigan Building Fact Sheet**

50 D Street  
Santa Rosa

**Category 2 - Medium Priority  
Further Study Required**

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



## **APPENDIX G: COST TABLES**

10 YEAR EXPENDITURE FORECAST



Justice Joseph A. Rattigan Building  
50 D Street  
Santa Rosa, CA

Useful Life	Estimated Useful Life
	Remaining Useful Life

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

Legend	Deferred
	Scheduled

Element #	Component Description	Asset	Location	Action	EUL (Yrs)	RUL (Yrs)	Qty.	Unit of Meas.	Unit Cost	Plan Type	Priority	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total - Deferred	Total - Scheduled										
												Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9												
<b>A. SUBSTRUCTURE</b>																																	
Substructure Subtotal												\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>B. SHELL</b>																																	
<b>B20 EXTERIOR ENCLOSURE</b>																																	
B2011	Stucco and Lath	B2011 Paint Stucco and Lath	Exterior	Replace B2011 Paint Stucco and Lath	10	4	16,000.00	SF	\$4.56	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$73,011	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73,011									
<b>B30 ROOFING</b>																																	
B3011	Single Fly Eptdm Roofing System with Ballast 60 Mills Including Demo	B3011 PVC Roofing	Roof	Replace B3011 PVC Roofing	20	0	310.00	SQ	\$1,499.90	IN - Reliability	Priority 1	\$464,970	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$464,970	\$0									
B3021	Glass Skylight	B3021 Glass Skylight	Roof	Replace B3021 Glass Skylight	30	0	4,650.00	SF	\$114.43	IN - Beyond Rated Life	Priority 1	\$532,086	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$532,086	\$0									
Shell Subtotal												\$997,057	\$0	\$0	\$0	\$0	\$73,011	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$997,057	\$73,011	
<b>C. INTERIORS</b>																																	
<b>C10 INTERIOR CONSTRUCTION</b>																																	
C1021	Fire Door, Wood, Flush, 60 Minute, Incl. Demo, with Hardware	C1021 Interior Doors	Throughout facility	Replace C1021 Interior Doors	30	9	110.00	EA	\$2,403.12	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$264,343	\$0	\$264,343									
<b>C30 INTERIOR FINISHES</b>																																	
C3012	Paint Interior Walls, Drywall	C3012 Paint Interior Walls, Drywall	Throughout facility	Replace C3012 Paint Interior Walls, Drywall	10	7	65,000.00	SF	\$2.13	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$138,632	\$0	\$0	\$0	\$0	\$138,632									
C3024	Vinyl Tile	C3024 Vinyl Tile	Throughout facility	Replace C3024 Vinyl Tile	18	8	2,400.00	SY	\$125.78	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$301,872	\$0	\$0	\$301,872									
C3025	Carpet Tiles - Standard	C3025 Carpet Tiles - Standard	Throughout facility	Replace C3025 Carpet Tiles - Standard	10	2	7,570.00	SY	\$96.61	IN - Appearance	Priority 3	\$0	\$0	\$731,304	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$731,304									
C3031	Drywall - Painted Finished Ceilings	C3031 Drywall - Painted Finished Ceilings	Throughout facility	Replace C3031 Drywall - Painted Finished Ceilings	20	6	28,400.00	SF	\$4.54	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$128,891	\$0	\$0	\$0	\$0	\$0	\$128,891									
C3032	Acoustical Tile With Exposed Grid System	C3032 Acoustical Ceiling Tile	Throughout facility	Replace C3032 Acoustical Ceiling Tile	20	5	580.00	CSF	\$1,201.56	IN - Appearance	Priority 4	\$0	\$0	\$0	\$0	\$0	\$696,905	\$0	\$0	\$0	\$0	\$0	\$0	\$696,905									
Interiors Subtotal												\$0	\$0	\$731,304	\$0	\$0	\$696,905	\$128,891	\$138,632	\$301,872	\$264,343	\$0	\$2,261,947										
<b>D. SERVICES</b>																																	
<b>D20 PLUMBING</b>																																	
D2011	Commercial Grade Water Closet With 1.6 Gpf Unit	D2011 Water Closet, 1.6 GPF Unit- Manual	Restrooms	Replace D2011 Water Closet, 1.6 GPF Unit- Manual	25	4	5.00	EA	\$1,233.15	OP - Energy	Priority 3	\$0	\$0	\$0	\$0	\$6,166	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,166									
D2011	Commercial Grade Water Closet With 1.6 Gpf Unit	D2011 Water Closet, 1.6 GPF Unit- Automatic	All Facilities	Replace D2011 Water Closet, 1.6 GPF Unit- Automatic	25	6	24.00	EA	\$1,233.15	OP - Energy	Priority 4	\$0	\$0	\$0	\$0	\$0	\$29,596	\$0	\$0	\$0	\$0	\$0	\$0	\$29,596									
D2014	Stainless Steel Sink and Faucet	D2014 Lavatory sink- manual	Restrooms	Replace D2014 Lavatory sink- manual	30	7	25.00	EA	\$2,628.31	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$65,708	\$0	\$0	\$0	\$0	\$65,708									
D2014	D2014 Sinks	D2014 Automatic flush- water closets	Restrooms	Replace D2014 Automatic flush- water closets	20	1	5.00	EA	\$236.00	OP - Energy	Priority 2	\$0	\$1,180	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,180									
D2018	Drinking Fountain	D2018 Drinking Fountain	Hallways	Replace D2018 Drinking Fountain	10	5	5.00	EA	\$2,876.60	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$14,383	\$0	\$0	\$0	\$0	\$0	\$0	\$14,383									
D2022	Domestic Hot Water Heater - Electric	D2022 Heater - Electric 20 Gal	1st Floor	Replace D2022 Heater - Electric 20 Gal	15	6	20.00	GALS	\$120.36	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$0	\$2,407	\$0	\$0	\$0	\$0	\$0	\$2,407									
D2023	Water Distribution Pump 1/8 HP	D2023 Water Distribution Pump 1/4 HP	4th Floor	Replace D2023 Water Distribution Pump 1/4 HP	10	8	1.00	EA	\$2,980.11	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,980	\$0	\$0	\$0	\$2,980									
<b>D30 HVAC</b>																																	
D3022.1	Circulation Pump 1.5 HP	D3022.1 Booster Pump 2 HP	1st Floor	Replace D3022.1 Booster Pump 2 HP	15	1	1.00	EA	\$12,202.79	IN - Beyond Rated Life	Priority 1	\$0	\$12,203	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,203									
D3022.1	Circulation Pump 1/3 to 3/4 HP	D3022.1 Primary Boiler Circulation Pump 1/2 HP	Roof	Replace D3022.1 Primary Boiler Circulation Pump 1/2 HP	15	5	2.00	EA	\$3,114.88	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$6,230	\$0	\$0	\$0	\$0	\$0	\$0	\$6,230									
D3023	Chemical Water Treatment	D2094 Chemical feeder	Roof	Replace D2094 Chemical feeder	20	0	1.00	EA	\$2,360.00	OP - Maintenance	Priority 1	\$2,360	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,360	\$0									
D3032	Condenser, Roof-Mounted, 25-Ton	D3032 Condenser, Roof-Mounted, 35-Ton- South	Roof	Replace D3032 Condenser, Roof-Mounted, 35-Ton- South	15	0	2.00	EA	\$66,278.00	OP - Energy	Priority 1	\$132,556	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$132,556	\$0									
D3032	Condenser, Roof-Mounted, 25-Ton	D3032 Condenser, Roof-Mounted, 25-Ton, North	Roof	Replace D3032 Condenser, Roof-Mounted, 25-Ton, North	15	0	4.00	EA	\$51,646.00	OP - Energy	Priority 1	\$206,584	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$206,584	\$0									
D3041	Grills and Diffusers	D3041.1 interior ducts	Throughout Building	Replace D3041.1 interior ducts	25	0	97,377.00	SF	\$2.73	OP - Maintenance	Priority 1	\$265,839	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$265,839	\$0									
D3041.1	Central Ahu Fan Motor,	D3041.1 AHU Fan supply motor 60 hp	Roof	Replace D3041.1 AHU Fan supply motor 60 hp	20	5	1.00	EA	\$22,143.92	OP - Energy	Priority 3	\$0	\$0	\$0	\$0	\$0	\$22,144	\$0	\$0	\$0	\$0	\$0	\$0	\$22,144									
D3041.1	Central Station Ahu 33500 CFM	D3041.1 AHU 47,000 CFM- North	Roof	D3041 Replace sealant and repair insulation	20	0	1.00	Lump sum	\$1,680.00	OP - Maintenance	Priority 2	\$1,680	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,680	\$0									
D3041.1	Central Station Ahu 33500 CFM	D3041.1 AHU 47,000 CFM- North	Roof	Replace D3041.1 AHU 47,000 CFM- North	35	3	1.00	EA	\$134,637.96	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$134,638	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$134,638									
D3041.1	Central Ahu Fan Motor,	D3041.1 AHU Fan supply motor 50 hp	Roof	Replace D3041.1 AHU Fan supply motor 50 hp	20	5	1.00	EA	\$11,799.84	OP - Energy	Priority 3	\$0	\$0	\$0	\$0	\$0	\$11,800	\$0	\$0	\$0	\$0	\$0	\$0	\$11,800									
D3041.1	D3041.1 Air Handling Units	D3041.1 AHU Fan supply motor 60hp	Roof	Replace D3041.1 AHU Fan supply motor 60hp	20	5	1.00	EA	\$22,143.92	OP - Maintenance	Priority 3	\$0	\$0	\$0	\$0	\$0	\$22,144	\$0	\$0	\$0	\$0	\$0	\$0	\$22,144									
D3041.1	D3041.1 Air Handling Units	D3041.1 AHU Fan supply motor 10 hp	Roof	Replace D3041.1 AHU Fan supply motor 10 hp	20	2	1.00	EA	\$7,474.72	OP - Maintenance	Priority 2	\$0	\$0	\$7,475	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,475									
D3041.1	Central Station Ahu 33500 CFM	D3041.1 AHU 36,000 CFM- South	Roof	D3041 Replace sealant and repair insulation	20	0	1.00	LS	\$1,680.00	OP - Maintenance	Priority 2	\$1,680	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,680	\$0									
D3041.1	Central Station Ahu 33500 CFM	D3041.1 AHU 36,000 CFM- South	Roof	Replace D3041.1 AHU 36,000 CFM- South	35	3	1.00	EA	\$134,637.96	IN - Beyond Rated Life	Priority 2	\$0	\$0	\$134,638	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$134,638									
D3041.1	D3041.1 Air Handling Units	D3041.1 AHU Fan return motor, 15 hp	Roof	Replace D3041.1 AHU Fan return motor, 15 hp	20	0	1.00	EA	\$10,917.96	OP - Maintenance	Priority 1	\$10,917	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,917									
D3041.2	Vav Box , 270 to 600 CFM	D3041 VAV Boxes	All Facilities	Replace D3041 VAV Boxes	30	4	122.00	EA	\$2,496.72	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$304,599	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$304,599									
D3042	Exhaust Fan 2000 CFM	D3042 Exhaust fan 1/3 hp	Roof	Replace D3042 Exhaust fan 1/3 hp	10	0	1.00	EA	\$3,450.37	OP - Energy	Priority 1	\$3,450	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,450	\$0									
D3042	Exhaust Fan 375 CFM	D3042 Exhaust fan 1/12 hp	Roof	Replace D3042 Exhaust fan 1/12 hp	10	0	1.00	EA	\$1,771.98	OP - Energy	Priority 1	\$1,772	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,772	\$0									
D3044	Pipe Insulation, 1" Pipe, 1 Inch Fiberglass	D3044 Pipe Insulation, 1" Pipe, 1 Inch Fiberglass	Roof	Replace D3044 Pipe Insulation, 1" Pipe, 1 Inch Fiberglass	20	0	600.00	LF	\$20.66	OP - Maintenance	Priority 1	\$12,395	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,395	\$0									
D3044	Pipe Insulation, 2" Pipe, 1" Fiberglass	D3044 Pipe Insulation, 2" Pipe, 1" Fiberglass	Roof	Replace D3044 Pipe Insulation, 2" Pipe, 1" Fiberglass	20	0	100.00	LF	\$20.88	OP - Maintenance	Priority 1	\$2,088	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,088	\$0									
D3052	Split System Unit, 3-Ton, Condenser and Fan Coil	D3052 Air Conditioner, Split unit 1.5 tons	Computer Room	Replace D3052 Air Conditioner, Split unit 1.5 tons	15	5	1.00	EA	\$18,972.00	IN - Beyond Rated Life	Priority 3	\$0	\$0	\$0	\$0	\$0	\$18,972	\$0	\$0	\$0	\$0	\$0	\$0	\$18,972									
D3063	Variable Frequency Drive, 7.5 to 10 HP Motor,	D3063 Variable Frequency Drive, 10 HP Motor,	Roof	Replace D3063 Variable Frequency Drive, 10 HP Motor,	20	2	1.00	EA	\$16,776.31	FN - Modernization	Priority 2	\$0	\$0	\$16,776	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,776									
D3063	Variable Frequency Drive, 40 HP Fan Motor, Install	D3063 Variable Frequency Drive, 50 HP Fan Motor	Roof	Replace D3063 Variable Frequency Drive, 50 HP Fan Motor	20	2	1.00	EA	\$21,076.63	FN - Modernization	Priority 2	\$0	\$0	\$21,077	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$21,077									
D3063	Variable Frequency Drive, 25 HP Fan Motor,	D3063 Variable Frequency Drive, 30 HP Fan Motor,	Roof	Replace D3063 Variable Frequency Drive, 30 HP Fan Motor,	20	2	1.00	EA	\$15,767.84	FN - Modernization	Priority 2	\$0	\$0	\$15,768	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,768									
D3068	Direct Digital Controls (DDC) Extensive	D3068 DDC Controls	Throughout Building	Replace D3068 DDC Controls	20	0	97,377.00	SF	\$0.82	FN - Modernization	Priority 1	\$79,693	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$79,693	\$0									
<b>D50 ELECTRICAL SYSTEMS</b>																																	
D5012	Secondary Dry Transformer 15 kVA	D5012 Dry Transformer 15 kVA	Main Electrical Room	Replace D5012 Dry Transformer 15 kVA	40	8	1.00	EA	\$8,285.58	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,286	\$0	\$0	\$8,286										
D5012	Secondary Dry Transformer 75 kVA	D5012 Dry Transformer 75 kVA	Main Electrical Room	Replace D5012 Dry Transformer 75 kVA	40	8	1.00	EA	\$19,199.43	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,199	\$0	\$0	\$19,199										
D5012	Switchgear, Mainframe < 600 Amps	D5012 Emergency Transfer switch 150 Amps	Main Electrical Room	Replace D5012 Emergency Transfer switch 150 Amps	40	8	1.00	EA	\$9,116.07	CC - Life Safety	Priority 4	\$0	\$0</																				

Element #	Component Description	Asset	Location	Action	EUL (Yrs)	RUL (Yrs)	Qty.	Unit of Meas.	Unit Cost	Plan Type	Priority <sup>2</sup>	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total - Deferred	Total - Scheduled	
												Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9			
D5037	Fire Alarm Panel	D5037 Fire Alarm Panel	Main Electrical Room	Replace D5037 Fire Alarm Panel	15	4	1.00	EA	\$9,402.52	CC - Life Safety	Priority 2	\$0	\$0	\$0	\$0	\$9,403	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,403
<b>Services Subtotal</b>												\$774,523	\$13,383	\$61,095	\$269,276	\$320,168	\$95,672	\$32,003	\$65,708	\$65,784	\$0	\$774,523	\$923,089	
<b>E. EQUIPMENT &amp; FURNISHING</b>																								
<b>Equipment &amp; Furnishing Subtotal</b>												\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>F. SPECIAL CONSTRUCTION AND DEMOLITION</b>																								
<b>Special Construction And Demolition Subtotal</b>												\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>G. BUILDING SITEWORK</b>																								
<b>G20 SITE IMPROVEMENTS</b>																								
G2012	Asphalt- Seal Coat- Roadways	G2012 Asphalt Seal Coat	Loading area	G2012 Asphalt Slurry Seal	5	3	2,520.00	SF	\$0.77	OP - Maintenance	Priority 3	\$0	\$0	\$0	\$1,937	\$0	\$0	\$0	\$0	\$1,937	\$0	\$0	\$0	\$3,875
G2057	Sprinkler System, Backflow Preventer, 4"	G2050 Sprinkler System, Backflow Preventer, 4"	All Exterior	Replace G2050 Sprinkler System, Backflow Preventer, 4"	30	7	2.00	EA	\$9,124.27	IN - Beyond Rated Life	Priority 4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,249	\$0	\$0	\$0	\$0	\$18,249
<b>G40 SITE ELECTRICAL UTILITIES</b>																								
G4032	G4032 Site Security & Alarm Systems	G4032 Site Security & Alarm Systems	Electrical rooms	Replace G4032 Site Security & Alarm Systems	40	0	1.00	EA	\$23,600.00	OP - Security	Priority 1	\$23,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$23,600	\$0
<b>Building Sitework Subtotal</b>												\$23,600	\$0	\$0	\$1,937	\$0	\$0	\$0	\$18,249	\$1,937	\$0	\$23,600	\$22,123	
<b>Z. GENERAL</b>																								
<b>General Subtotal</b>												\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>Expenditure Totals per Year</b>												\$1,795,179	\$13,383	\$792,400	\$271,213	\$393,179	\$792,577	\$160,893	\$222,588	\$369,594	\$264,343	\$1,795,179	\$3,280,171	
<b>Total Cost (Inflated @ 5% per Yr.)</b>												\$1,795,179	\$14,052	\$873,621	\$313,963	\$477,911	\$1,011,552	\$215,612	\$313,204	\$546,059	\$410,083	Total *	\$5,075,350	

\* - Present Value Currency

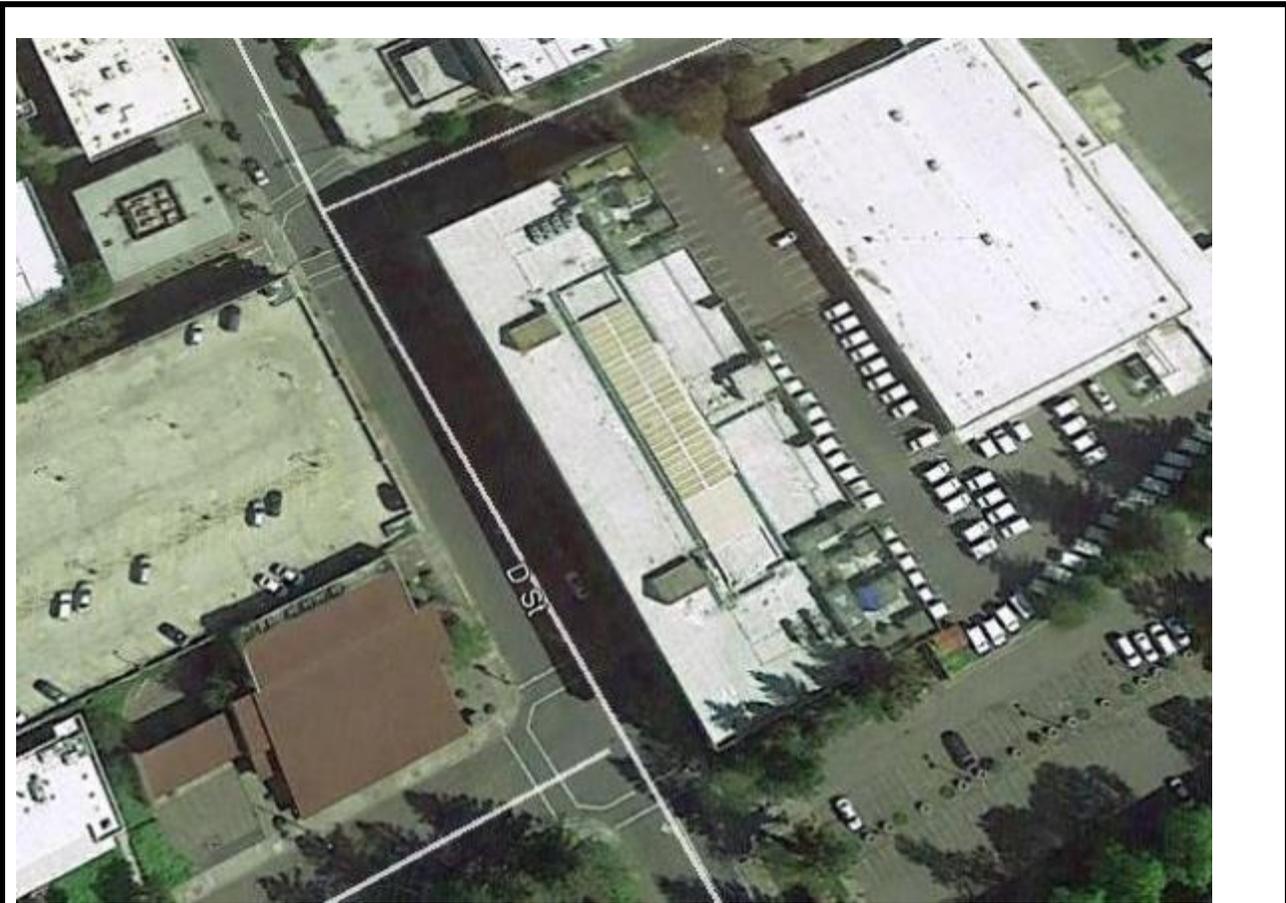
**Footnotes**

- 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 \$41,569,143

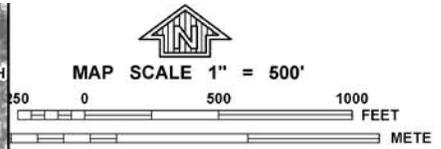


**APPENDIX H: SUPPORTING DOCUMENTATION**



	<p><b>Source:</b></p> <p>The north arrow indicator is an approximation of 0° North.</p>	<p><b>Project Number:</b></p> <p>111326.14R-045.305</p> <p><b>Project Name:</b></p> <p>Justice Joseph A. Rattigan Building</p>
		<p><b>On-Site Date:</b></p> <p>March 18, 2015</p>

# Flood Map



**NFIP**  
**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0729E

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**SONOMA COUNTY,**  
**CALIFORNIA**  
**AND INCORPORATED AREAS**

PANEL 729 OF 1150  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SANTA ROSA, CITY OF	060381	0729	E
SONOMA COUNTY	060375	0729	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

 **MAP NUMBER**  
**06097C0729E**

**EFFECTIVE DATE**  
**DECEMBER 2, 2008**

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



**Source:**

**FEMA**

**Project Number:**

**111326.15R-045.305**



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

**Project Name:**

**Judge Joseph A. Rattigan Building**

**On-Site Date:**

**March 18, 2015**

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

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

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

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

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

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

## **PLAN TYPE DEFINITION**

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

### **Code Compliance (CC)**

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

### **Operations (OP)**

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

### **Environmental (EN)**

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

### **Functionality (FN)**

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

### **Integrity (IN)**

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

## Estimate of Structures Cost Using Marshall Cost Systems

<b>Santa Rosa - Rattigan</b>			
<b>Site Calculation</b>			
<b>Estimate of Unusual Land Improvements Cost (Estimators Data Cost Base):</b>			
Description	Cost	Estimated \$/ SF	Unusual Land Total
			\$0
<b>Total</b>			<b>\$0</b>
<b>Estimate of Unusual Land Improvements Cost (Estimators Cost Data Base):</b>			
<b>Estimate of Structure Cost :</b>			
Building Type	Cost per SF	Number of SF	Building Type Total
Main Building	\$341.51	97,377	\$33,255,314
	\$0.00	0	\$0
	\$0.00	0	\$0
	\$0.00	0	\$0
	\$0.00	0	\$0
	<b>Total</b>	<b>97,377</b>	<b>\$33,255,314</b>
<b>Estimate of Adjustments for Fees:</b>			
Description	% increase		
Soft Costs	25.00%		
	0.00%		
	0.00%		
<b>Total Fees/ Interest included in Marshall System</b>			<b>25.00%</b>
<b>Total Structure Estimate:</b>			
Description	Unit	Fee Adjust	Adjusted Totals
Main Building	\$33,255,314	25.00%	\$41,569,143
	\$0	25.00%	\$0
	\$0	25.00%	\$0
	\$0	25.00%	\$0
	\$0	25.00%	\$0
<b>Cost Per SF</b>	<b>\$426.89</b>	<b>Total Estimate</b>	<b>\$41,569,143</b>

## **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: Tony Secchitano

Building name: Justice Joseph A. Rattigan Building (480)

What is your association with this property? BPM Building Manager

What is the length of your association with this property? 43 days in current assignment at this facility

Phone number: 707-576-2424

Please provide information about inspections relating to the following items

Inspections	Date Last Inspected	List Name & Contact for Maintenance Contractor, if any.
1. Elevators	3/13/14	ThyssenKrupp Elevator
2. HVAC, Mechanical, Electric, Plumbing	JDI 6/14/14	VFD installed 5/20/14
3. Life-Safety/Fire	12/2/14	State Fire Marshal
4. Roofs	March 18/2014	DJM Coating Roof Repair

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

None

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

None

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

Installed November 12, 2003, 12 years old

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

roof, interior/exterior finishes, paving

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

Question	Y	N	N/A	Unk	Comments
9. Are there any unresolved building, or fire code issues?	<b>x</b>				Title 25 Five Year Fire Inspection Repair and Correction
10. Are there any "down" or unusable units?	<b>x</b>				Rooms 100 and 105
11. Are there any problems with erosion, storm-water drainage or areas of paving that do not drain?		<b>x</b>			

Question	Y	N	N/A	Unk	Comments
12. Is the property served by a private water well?		<b>x</b>			
13. Is the property served by a private septic system or other waste treatment systems?		<b>x</b>			
14. Are there any problems with foundations or structures?		<b>x</b>			
15. Is there any water infiltration in basements or crawl spaces?		<b>x</b>			
16. Are there any wall, or window leaks?		<b>x</b>			
17. Are there any roof leaks?	<b>x</b>				Water intrusion occurs in 4th floor offices, Rooms 415, 420 and 425 through ductwork, skylight and/or roof surfaces in periods of heavy rain
18. Is the roofing covered by a warranty or bond?	<b>x</b>				California Single Ply - roof warrenty expires 11/12/23
19. Are there any poorly insulated areas?				<b>x</b>	Standard
20. Is Fire Retardant Treated (FRT) plywood used?	<b>x</b>				server rack mounts
21. Is exterior insulation and finish system (EIFS) or a synthetic stucco finish used?	<b>x</b>				Exterior surfaces Gunnite and precast
22. Are there any problems with the utilities, such as inadequate capacities?		<b>x</b>			
23. Are there any problems with the landscape irrigation systems?		<b>x</b>			
24. Has a termite/wood boring insect inspection been performed within the last year?	<b>x</b>				
25. Do any of the HVAC systems use R-11, 12, or 22 refrigerants?	<b>x</b>				R-22 for all 6 chiller units
26. Has any part of the property ever contained visible suspect mold growth?	<b>x</b>				
27. Is there a mold Operations and Maintenance Plan?	<b>x</b>				ESHOP
28. Have there been indoor air quality or mold related complaints from tenants?		<b>x</b>			

Question	Y	N	N/A	Unk	Comments
29. Is polybutylene piping used?	x				Roof and restroom drain pipes
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				277 volt transformers - 2/floor for lighting
34. Do any Commercial units have less than 200-Amp service?	x				in-house wiring 112- 120 amp
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				Dates unknown
38. Have any ADA or Title 24 improvements been made to the property?	x				the restrooms, steps and handrails on main staircase
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			
43. Are there any problems with exterior lighting?		x			
44. Are there any other significant issues/hazards with the property?	x				Water intrusion with leaky Roof, ductwork and skylight during periods of heavy rain
45. Are there any unresolved construction defects at the property?	x				roof, skylight and ductwork defects

**APPENDIX J: ELEVATOR REPORT**



# Elevator Assessment

**Building 480 – Judge Joseph A. Rattigan Building  
50 D Street  
Santa Rosa, CA**

## Table of Contents

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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	Power Unit Manuf.	Motor Control	Control Manuf.	Door Size/ Style	Door Equip. Manuf.
Elevator 1 (Simplex – ID# 69686)	1	125 fpm	2,500 pounds	1-4	1981	2006	15-17 years	Inground Hydraulic	Boremax	Solid State	MCE	42”x 84” Center Opening	GAL
Elevator 2 (Simplex – ID# 69687)	2	125 fpm	3,500 pounds	1, 1R, 2-4	1981	2006	15-17 years	Inground Hydraulic	Boremax	Solid State	MCE	42”x 84” Center Opening	GAL

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	3/13/14	Current (expires this month)	3/3/11	Current	Not Required	Not Required	None	None	Average	Low
3/13/14	Current (expires this month)	3/3/11	Current	Not Required	Not Required	None	None	Average	Low	

## 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.

<b>Building 480 – Judge Ratigan Building</b>				
<b>Current Items</b>			<b>These Columns For Use by Contractor and in Future ECA Visits</b>	
<b>Item #</b>	<b>Item Description</b>	<b>Units Affected</b>	<b>Item Complete</b>	<b>Comments</b>
1	None noted			

## 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.

<b>Building 480 – Judge Ratigan Building</b>				
<b>Current Items</b>			<b>These Columns For Use by Contractor and in Future ECA Visits</b>	
<b>Item #</b>	<b>Item Description</b>	<b>Units Affected</b>	<b>Item Complete</b>	<b>Comments</b>
1	Place state ID# on disconnect	1-2		
2	Clean up wiring in controllers and replace raceway covers	1-2		
3	Check travel – some noises from hoistway including rubbing and possibly cam noise	1-2		
4	Clean door operator chain	2		
5	Clean top of car	1		

## 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](mailto:sean.colgan@elevatorconsultingassociates.com)

Matt Ensley: 213-247-8992 – [matt.ensley@elevatorconsultingassociates.com](mailto:matt.ensley@elevatorconsultingassociates.com)

<b>Building 480 – Judge Ratigan Building</b>				
<b>Current Items</b>			<b>These Columns For Use by University and in Future ECA Visits</b>	
<b>Item #</b>	<b>Item Description</b>	<b>Units Affected</b>	<b>Item Complete</b>	<b>Comments</b>
1	Machine room fire extinguisher last serviced 3/2013 – perform annual service	1-2		
2	Remove non-elevator storage from machine room	1-2		
3	Repair front center cab light	1		

## 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 elevator equipment received a fairly complete modernization in 2006 (9 years ago). Assuming that the level of maintenance will be maintained at or above industry standard, these elevators should operate properly for another 15-17 years before modernization is required. Furthermore, there are currently no obsolescence or serviceability issues which would keep these elevators from being competitively bid or serviced by any qualified elevator contractor. As such, we do not recommend any budgets for modernization or major upgrade of the elevators at this time.

However, it does not appear that the elevators were modernized without battery lowering operation. This is currently a very common type of operation in which hydraulic elevators use battery power to lower to the main landing and open their doors in the event of a power outage, thus avoiding an entrapment. We would recommend the State consider adding this option, at an approximate cost of \$5,000 per elevator, or \$10,000 total. It is not a code requirement, but simply an upgrade that will prevent entrapments down the road.

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](mailto:sean.colgan@elevatorconsultingassociates.com).



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