

Citywide
Facility Condition Assessment

Report of
Facility Condition Assessment

For
City of Manhattan Beach
Sand Dune Park Office and Restrooms
3800 Bell Avenue, Manhattan Beach, CA



*September 4, 2013
(Rev A)*

Provided By:

Faithful+Gould, Inc.

Provided For:



TABLE OF CONTENTS

| | |
|--|-----------|
| <u>SECTION 1 - EXECUTIVE SUMMARY</u> | <u>2</u> |
| <u>SECTION 2 - A SUBSTRUCTURE</u> | <u>18</u> |
| <u>SECTION 3 - B SHELL</u> | <u>20</u> |
| <u>SECTION 4 - C INTERIORS</u> | <u>27</u> |
| <u>SECTION 5 - D SERVICES</u> | <u>31</u> |
| <u>SECTION 6 - G BUILDING SITEWORK</u> | <u>37</u> |

APPENDICES

| |
|---|
| <u>APPENDIX A 10-YEAR EXPENDITURE FORECASTS</u> |
| <u>APPENDIX B FACILITY PHOTOGRAPHS</u> |
| <u>APPENDIX C ASSET INVENTORY</u> |
| <u>APPENDIX D DOCUMENT REVIEW AND WARRANTY INFORMATION</u> |
| <u>APPENDIX E ENVIRONMENTAL REPORT: ASBESTOS & LEAD-BASED PAINT</u> |
| <u>APPENDIX F GLOSSARY OF TERMS</u> |

SECTION 1 - EXECUTIVE SUMMARY

INTRODUCTION

In accordance with the agreement held between City of Manhattan Beach, dated May 9, 2013 and Faithful+Gould Inc, this completed report provides a comprehensive Facility Condition Assessment of the Sand Dune Park Office and Restrooms building located at 3800 Bell Avenue, Manhattan Beach, CA (The Facility).

This report provides a summary of the facility information known to us at the time of the study, the scope of work performed, an equipment inventory, evaluation of the visually apparent condition of the Property and an expenditure forecast of expenditures anticipated over the next 10 years. The expenditure forecast does not account for typical planned maintenance items such as changing filters to fan coil units and only considers deficiencies above a \$500 aggregated value.

Our cost rates to produce life cycle and replacement cost estimates are based on our knowledge of the local regional market rates. Our line item costs assume that the work will be undertaken by either in-house or by direct sub-contract labor. Identified recommended works that are required during the ten-year study period have been included with an allowance of 25% for professional fees and general contractor overhead/profit and management costs (where applicable).

Charts EX-1 through EX-3 provides a summary of the anticipated primary expenditures over the 10 year study period. Further details of these expenditures are included within each respective report section and within the 10 year expenditure forecast, in Appendix A.

The report also calculates the Facility Condition Index (FCI) of each building based upon the calculated FCI. Further discussion of the Facility Condition Index is detailed in the sections below. The FCI does not include the general site systems, however we have still included repair and replacement costs so that they can be represented in the study.

This report was completed in general accordance with the ASTM E2018-08 Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process.

PROJECT DETAILS

On May 14, 2013, Mr. Jeffrey Dillon of Faithful+Gould visited the facility to observe and document the condition of the building and the site components. During our site visit, Faithful+Gould was assisted by Mr. Doug Foster, Senior Facilities Maintenance Technician for the City of Manhattan Beach.

Overview of the Facility



— Assumed site boundary

BUILDING SUMMARY

Table EX-1 Facility Details

| | | | |
|--|---|---|-------------------------------|
| BUILDING NAME: | Office and Restrooms | LAT/LONG: | 33° 89' 86"N / -118° 41' 19"W |
| ADDRESS: | 3800 Bell Avenue Manhattan Beach, CA 90266 | OCCUPANCY STATUS: | |
| HISTORIC DISTRICT: | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> | OCCUPIED <input checked="" type="checkbox"/> VACANT <input type="checkbox"/> PARTIALLY <input type="checkbox"/> | |
| HISTORIC BUILDING: | YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> | | |
| GROSS SQUARE FOOTAGE OF BUILDING: | 681 | GROSS SQUARE FOOTAGE OF LAND: | 132,000 (estimated) |
| CURRENT REPLACEMENT VALUE: | \$162,747 | YEAR OF CONSTRUCTION: | 1964 |
| | | BUILDING EUL: | 60 Years |
| | | BUILDING RUL: | 12 Years |
| BUILDING USE: | Administration and Restrooms | NUMBER OF STORIES: | 1 |

BUILDING DESCRIPTION

The Sand Dune Parke Office and Restroom building is located at 3800 Bell Avenue, which is at the intersection of Bell Avenue and 31st Place, The building was constructed in circa 1964.

The building has a wood joist roof construction which is supported via concrete masonry units and wood framed walls which are encapsulated with either the painted CMU walls or wood clapboards. The low-sloped roof contained a BUR roof covering. The floor consisted of a cast-in-place reinforced concrete slab-on-grade. Windows were wood framed single pane units and doors consisted of hollow core steel service doors.

The interior finishes of the building contained ceramic tile flooring, the sealed concrete slab-on-grade, painted and ceramic tiled walls and painted ceilings.

The building is not furnished with heating and cooling equipment or domestic water heater. The Main Distribution Panel was manufactured by Cutler Hammer and is rated at 120/240 volts at 100-amps. The interior lighting is generally provided by surface mounted 4' and fluorescent fixtures with T8 watt tubes and electronic ballasts and compact fluorescent fixtures.

The building does not contain a wet-pipe sprinkler system, fire alarm system, intruder security alarm or emergency generator.



ENVIRONMENTAL REVIEW

During the assessment period an inspection and survey to ascertain if Asbestos Containing Materials (ACM) and Lead-Based Paint (LBP) are present at the interior and exteriors of the building. The assessment was undertaken by Andersen Environmental and their full report can be reviewed Appendix E. A summary of results indicate the following:

The following materials were found to contain asbestos and considered ACM:

Table EX-2 Summary of Asbestos Results

| Material Description | Material Location | Condition | Asbestos Percentage | Estimated Quantity* |
|------------------------------------|-------------------|-----------|---------------------|---------------------|
| Roofing Materials (Mastic & Felts) | Roof | Good | Presumed | 2,000 |

* These quantities are only approximations

Expenditure relating to the removal of the ACM has not been provided within this report. We recommend that the abatement contractor is selected through a bidding process.

Lead-Based Paint was not identified at the building. Through sampling of several paint components the presence of LBP was indicated at or above the action level at the following locations:

- All interior and exterior painted surfaces samples during the inspection tested negative for lead-based paint.

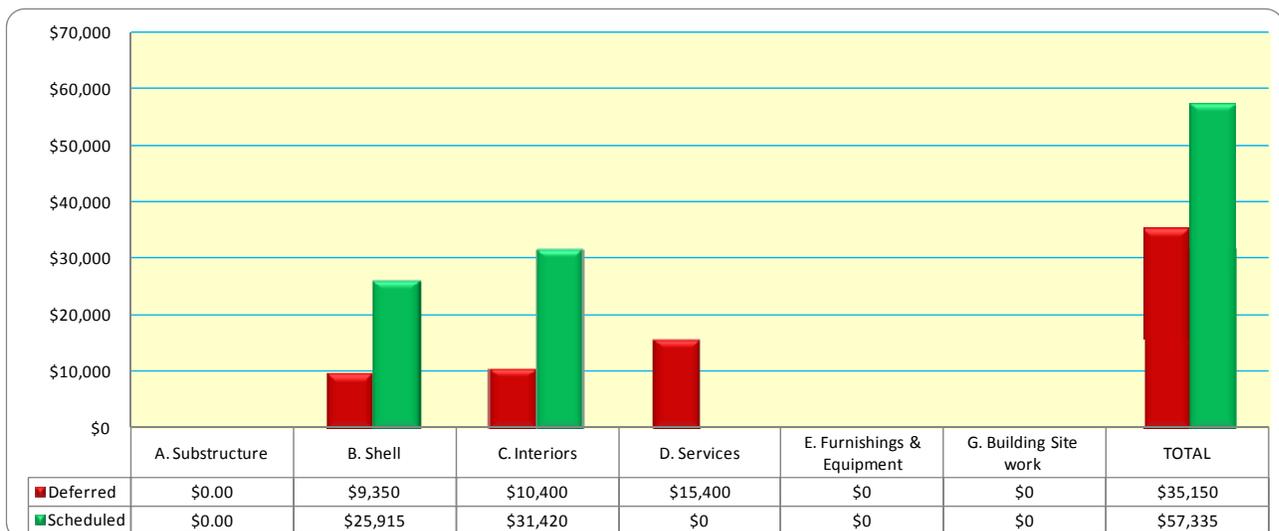
BUILDING EXPENDITURE SUMMARY

The building expenditure summary section provides an executive overview of the findings from the assessments. Charts EX-1 provides a summary of anticipated expenditures over the study period. In addition, we have scheduled key findings highlighting key items of significance and their anticipated failure year. Chart EX-2 provides a cursory review and assessment of the major site assets to further assist the City in understanding the condition of the park over all. In addition, we have scheduled key findings highlighting key items of significance and their anticipated failure year. Further details of these expenditures and others are included within each respective report section and within the expenditure forecast, in Appendix A of this report.

Office & Restrooms

The results illustrate a total anticipated expenditure over the study period of \$92,485.

Chart EX-1 Building Expenditure Summary ^{1 & 2}



KEY FINDINGS

-  B Shell: Replace the damaged wood trim at an estimated cost of \$3,500 in year 2013
-  B Shell: Repaint exterior wall surfaces at an estimated cost of \$5,850 in years 2013, 2017 and 2021
-  C Interiors: Repaint interior wall and ceiling surfaces at an estimated cost of \$10,400 in years 2013, 2017 and 2021

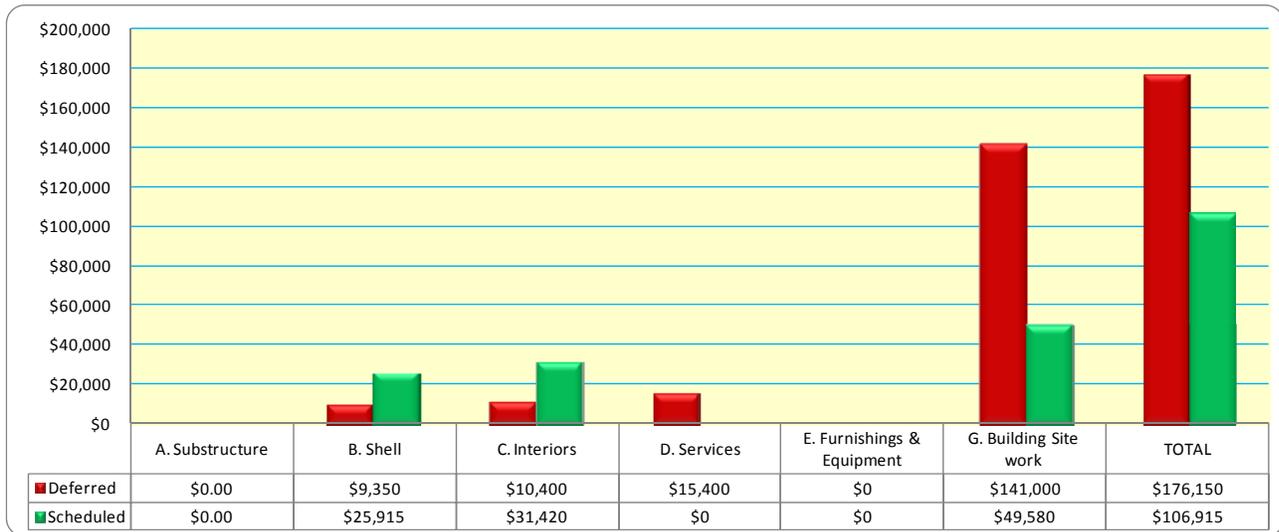
¹ All costs presented in present day values

² Costs represent total anticipated values over the 10 year study period

Site Systems

The results illustrate a total anticipated expenditure over the study period of circa \$190,580.

Chart EX-2 Building Expenditure Summary ^{1 & 2}



KEY FINDINGS

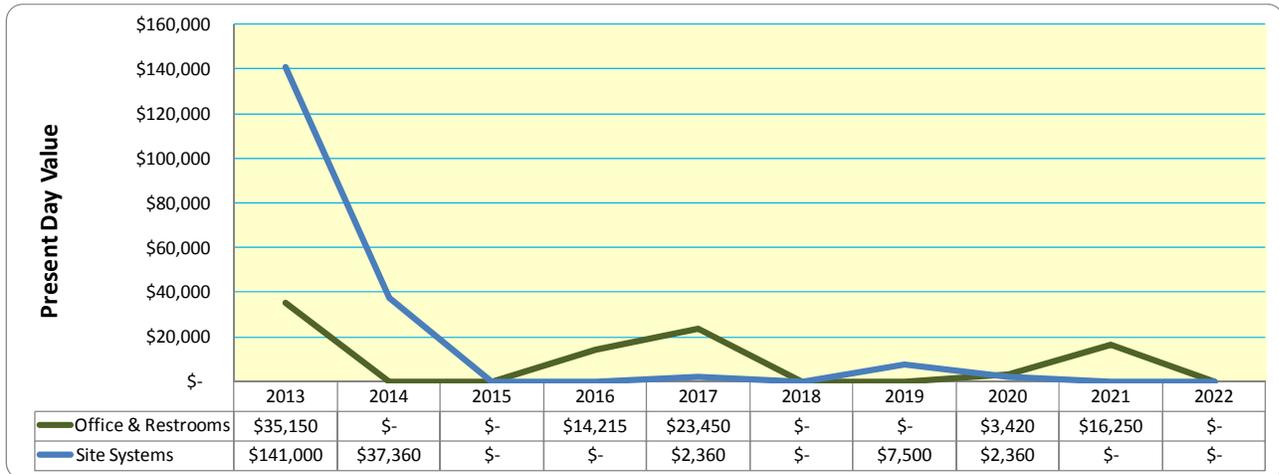
- ✦ G Building Sitework: Seal coating and striping to parking lot at an estimated cost of \$1,410 in years 2014, 2017 and 2020
- ✦ G Building Sitework: Replace wood stairway components at an estimated cost of \$105,000 in year 2013
- ✦ G Building Sitework: Replace wood retaining walls at an estimated cost of \$25,000 in year 2013
- ✦ G Building Sitework: Replace playground synthetic mat at an estimated cost of \$7,500 in years 2014 and 2019
- ✦ G Building Sitework: Replace the pole mounted fixtures with LED type fixtures at an estimated cost of \$6,500 in years 2014.
- ✦ G Building Sitework: Replace light posts with galvanized steel posts at an estimated cost of \$21,000 in years 2014.

¹ All costs presented in present day values

² Costs represent total anticipated values over the 10 year study period

Chart EX-3 illustrates a summary of yearly anticipated expenditures over the cost study period for the building. A detailed breakdown of anticipated expenditures is contained within Appendix A of this report.

Chart EX-3 Expenditure Forecast ^{1 & 2}



¹ All costs presented in present day values

² Costs represent total anticipated values over the 10 year study period

This chart highlights expenditure for the building within year 2013 due to the following systems which are expected to reach their Estimated Useful Life (EUL) and therefore due for replacement. The line represents the total expenditure for each year and is a useful tool to indicate the magnitude of the impending issues the building will face.

Office & Restrooms

Site Systems

Year 2013

-  Exterior repair works and repainting
-  Interior repainting

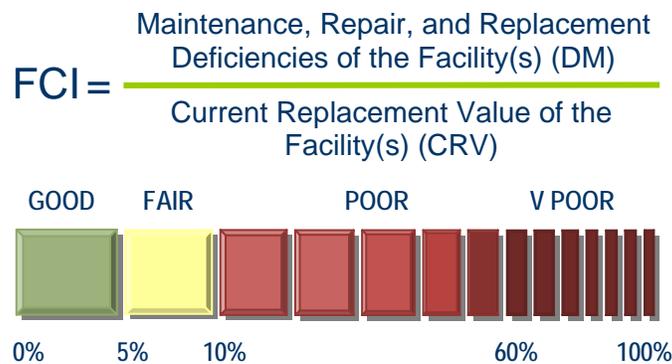
Year 2013

-  Install foot wash
-  Replace wood stairwell
-  Repair damaged wood retaining wall

INTERPRETING RESULTS

In this report we have calculated the **Facility Condition Index (FCI)** for the facility; illustrating the likely condition of the systems and equipment should the required funding not be expended over the cost study period. The FCI is used in Facilities Management to provide a benchmark to compare the relative condition of a group of facilities. The FCI is primarily used to support asset management initiatives of federal, state, and local government facilities organizations.

The FCI is the ratio of accumulated Deferred Maintenance (DM) (total sum of required and recommended works) to the Current Replacement Value (CRV) for a constructed asset calculated by dividing DM by CRV. The range is from zero for a newly constructed asset, to one for a constructed asset with a DM value equal to its CRV. Acceptable ranges vary by "Asset Type", but as a general guideline the FCI scoring system is as follows:



The FCI is a relative indicator of condition, and should be tracked over time to maximize its benefit. It is advantageous to define condition ratings based on ranges of the FCI. There are a set of ratings: GOOD (under 0.05 (under 5%)), FAIR (0.5 to 0.10 (5% to 10%)), POOR (over 0.10 (over 10%)) and V-POOR (over 0.60 (over 60%)) based on evaluating data from various clients at the time of the publication. Table EX-3 will help interpret the results:

Table EX-3 FCI Scoring System

| Condition | Definition | Score | Percentage Value |
|-----------|---|-------------------|------------------|
| GOOD | In a new or well maintained condition, with no visual evidence of wear, soiling or other deficiencies | 0.00 to 0.05 | 0% to 5% |
| FAIR | Subject to wear, and soiling but is still in a serviceable and functioning condition | 0.05 to 0.10 | 5% to 10% |
| POOR | Subjected to hard or long-term wear. Nearing the end of its useful or serviceable life. | Greater than 0.10 | Greater than 10% |
| V-POOR | Subjected to hard or long-term wear. Has reached the end of its useful or serviceable life. Renewal now necessary | Greater than 0.60 | Greater than 60% |

If the FCI rating is 60% or greater then replacement of the asset/building should be considered instead of renewal.

Table EX-4 provides a calculation of the FCI for the building illustrating both the current condition of the building and the likely condition of the building should the required funding not be expended over the study period. The results of the study indicate that currently the building contains a POOR facility condition index rating.

Table EX-4 Facility Condition Index

| Building Name | FCI | Gross Square Foot (GSF) | CRV per GSF | Current Replacement Value (CRV) | Deferred Maintenance Value (DM) | FCI Ratio | Property Condition |
|--------------------|-------------------|-------------------------|-------------|---------------------------------|---------------------------------|-----------|--------------------|
| Office & Restrooms | Current FCI Ratio | 681 | \$239 | \$162,747 | \$35,150 | 21.6% | POOR |
| Office & Restrooms | Year 10 FCI Ratio | 681 | \$239 | \$162,747 | \$92,485 | 56.8% | V.POOR |

Chart EX-4 indicates the effects of the FCI ratio per year, assuming the required funds and expenditures **ARE** made to address the identified works each year. As explained, the building has a POOR condition rating at the start of the study period.

Chart EX-4 Year by Year Effects of FCI over the Study Period

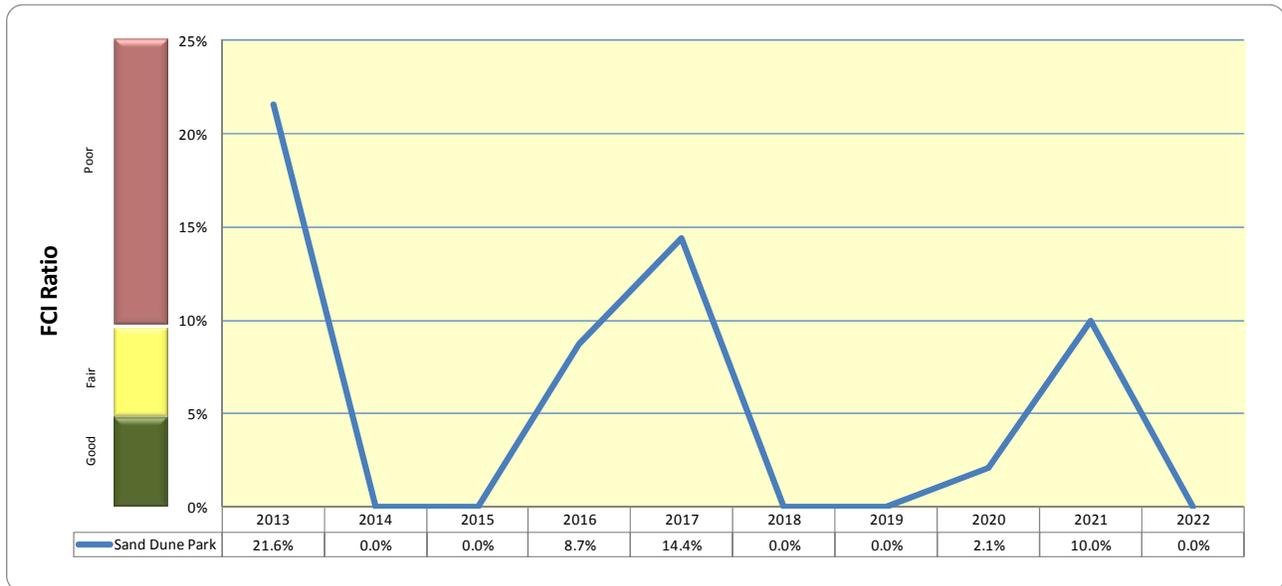
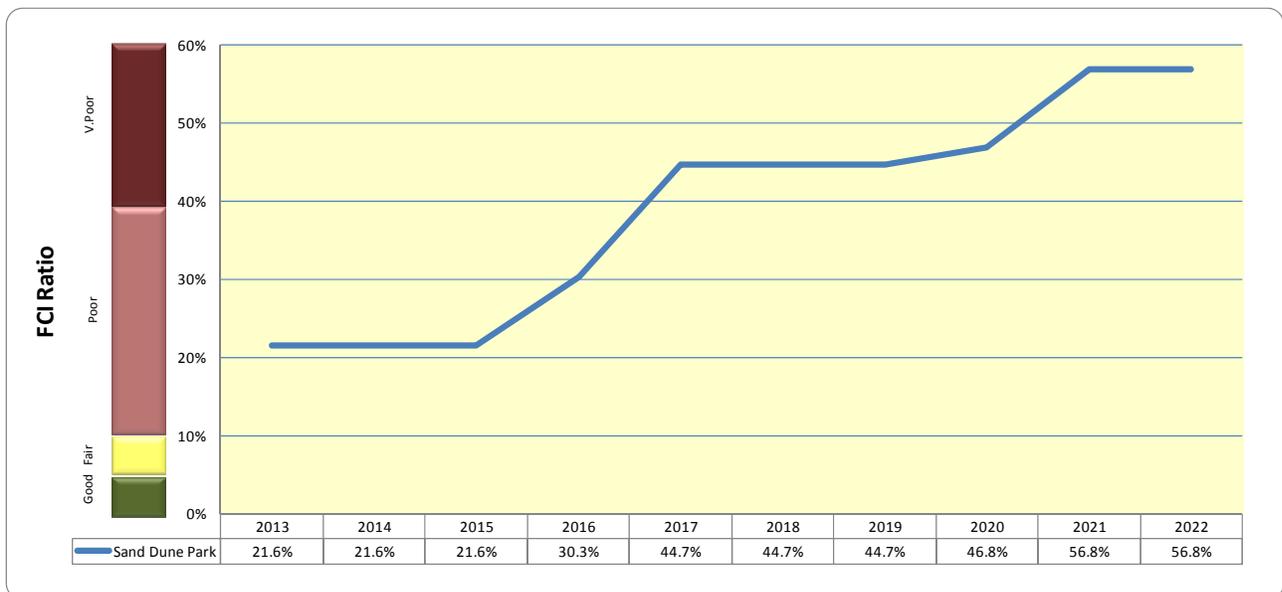


Chart EX-5 indicates the cumulative effects of the FCI ratio over the study period assuming the required funds and expenditures are **NOT** provided to address the identified works and deferred maintenance each year. The results of the study indicate at this current time the building POOR condition; and will continue into the V.POOR condition for the duration of the study period.

Chart EX-5 Cumulative Effects of FCI over the Study Period



PRIORITIZATION OF WORK

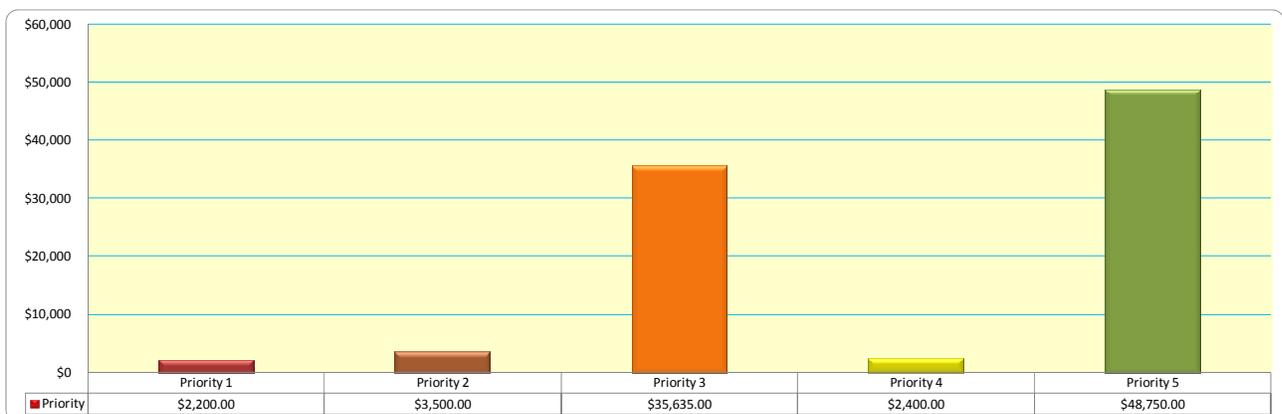
Faithful+Gould has prioritized the identified work in order to assist with analyzing the deficiencies found during the assessments. The following Priorities are shown below:

| | |
|---|--|
| Priority 1 - Life Safety/ Code Compliance/ADA: | •Compromises staff or public safety or when a system requires to be upgraded to comply with current codes and standards. |
| Priority 2 – Currently Critical: | •A system or component is inoperable or compromised and requires immediate action |
| Priority 3 – Necessary / Not Critical: | •Maintain the integrity of the facility or component and replace those items, which have exceeded their expected useful life |
| Priority 4 – Recommended: | •Necessary for optimal performance of the facility or component |
| Priority 5 – Appearance: | •Used when a system has degraded and requires refurbishment |

Charts EX-6 through EX-7 illustrates the breakdown of expenditure according the priority coding providing an opportunity to strategically plan and effectively direct funding to the highest priority.

Office & Restrooms

Chart EX-6 Cumulative Prioritization of Work



Priority 5 requires the most amount of expenditure in this study. These categories illustrate that the majority of the work, which needs to be undertaken is associated with the appearance of the building.

Site Systems

Chart EX-7 Cumulative Prioritization of Work



Priority 3 appears to require the most amount of expenditure in this study. The expenditure relates to compromised assets located at the site.

Charts EX-8 through EX-9 illustrates the expenditure per priority code, per each year within the 10 year study period.

Office & Restrooms

Chart EX-8 Year by Year Cumulative Prioritization of Work



Chart EX-8 illustrates Priority 3 and 5 require expenditure, throughout the study period.

Site Systems

Chart EX-9 Year by Year Cumulative Prioritization of Work



Chart EX-9 illustrates that there is one major year for Priority 3 at the start of the study period.

PLAN TYPES

Faithful+Gould has prioritized the identified work according to the Plan Type or deficiency categories in order to assist with analyzing the deficiencies found during the assessments. The following Plan Types are shown below:

| | |
|--|--|
| Plan Type 1 Deferred Maintenance | <ul style="list-style-type: none"> •Maintenance that was not performed when it was scheduled or past its useful life resulting in immediate repair or replacement |
| Plan Type 2 Routine Maintenance | <ul style="list-style-type: none"> •Maintenance that is planned and performed on a routine basis to maintain and preserve the condition |
| Plan Type 3 Capital Renewal | <ul style="list-style-type: none"> •Planned replacement of building systems that have reached the end of their useful life |
| Plan Type 4 Energy & Sustainability | <ul style="list-style-type: none"> •When the repair or replace of equipment or systems are recommended to improve energy and sustainability performance. |
| Plan Type 5 Security | <ul style="list-style-type: none"> •When a system requires replacement due to a security risk or requirement |

Charts EX-10 through EX-11 illustrate the breakdown of expenditure according to the Plan Type or deficiency categories providing an opportunity to strategically plan and effectively direct funding.

Office & Restrooms

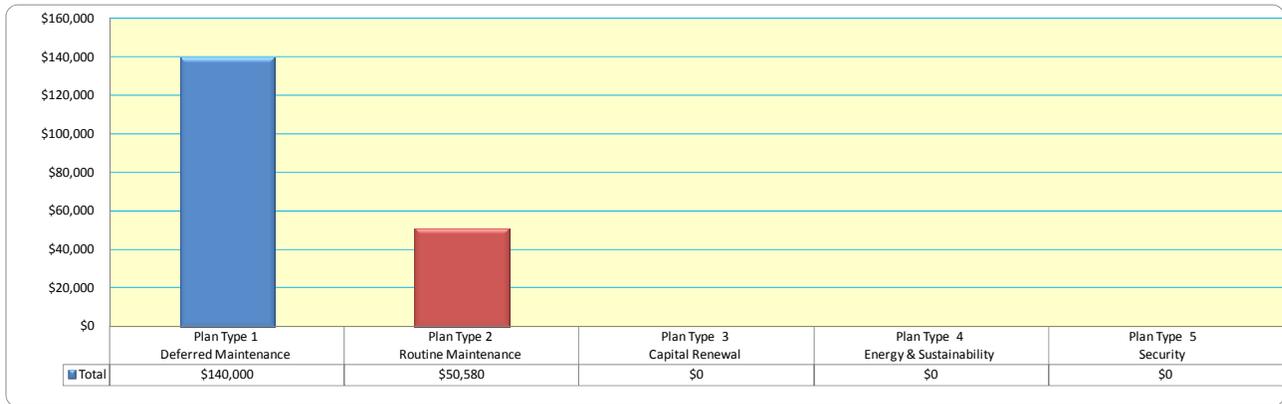
Chart EX-10 Cumulative Expenditure by Plan Type



Plan Type 1 – Deferred Maintenance requires the most amount of expenditure in this study.

Site Systems

Chart EX-11 Cumulative Expenditure by Plan Type



Plan Type 1 – Deferred Maintenance requires the most amount of expenditure in this study.

Charts EX-12 through EX-13 illustrates the amount of expenditure, per category, each year within the 10 year study period.

Office & Restrooms

Chart EX-12 Yearly Expenditure by Plan Type



Chart EX-12 illustrates that there is one key year for Plan Type 1 – Deferred Maintenance.

Site Systems

Chart EX-13 Yearly Expenditure by Plan Type

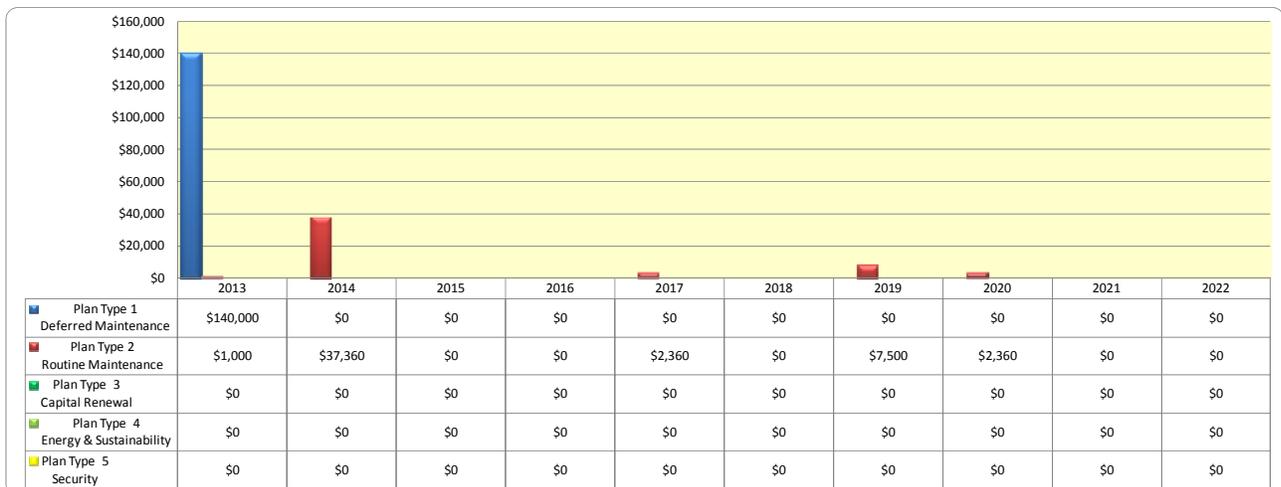


Chart EX-13 illustrates that there is one key year for Plan Type 1 – Deferred Maintenance.

SECTION 2 - A SUBSTRUCTURE

A10 FOUNDATIONS

DESCRIPTION

The description of the respective structural systems for the building is based upon our observation of exposed portions of the building structure. There were no structural drawings available to review.

A1010 STANDARD FOUNDATIONS

A1011 Wall Foundations

The exterior walls are supported by reinforced concrete spread footings. We are unaware of the designed compressive strength of the concrete.

A1030 SLABS-ON-GRADE

A1031 Standard Slab on Grade

The first floor level of the building consisted of cast-in-place concrete slab-on-grade, reinforced with welded wire fabric. We assume that the slabs are 4" thick over an aggregate base. The slabs are assumed to contain a thickened edge at their perimeter. We are unaware of the designed compressive strength of the concrete.

CONDITION

A1010 STANDARD FOUNDATIONS

A1011 Wall Foundations

The floor structure appeared to be in good condition therefore we assume that the masonry supports are also in good condition. We do not anticipate that any actions will be generated during the study period.

A1030 SLABS-ON-GRADE

A1031 Standard Slab-on-Grade

The cast-in-place concrete slab at the building appeared to be in good condition. We do not anticipate any expenditure during the cost study period, which relates to its replacement.



PROJECTED EXPENDITURES

No projected expenditures are identified for A Substructure during the study period.

SECTION 3 - B SHELL

B10 SUPERSTRUCTURE

DESCRIPTION

The description of the respective structural systems for the building is based upon our observation of exposed portions of the building structure. There were no drawings available to review.

B1020 ROOF CONSTRUCTION

B1021 Flat Roof Construction

The low-sloped roof sections consist of 2" x 8" wood joists which are also supported via the perimeter and interior load bearing walls and in turn support the plywood deck and roof covering (reference Photograph 5 in Appendix B). The wood beams and joists at roof level generally span north to south and the wood joists are spaced at 16" centers. The roof covering can be viewed in the roof covering section of this report.

B1030 STRUCTURAL FRAME

B1031 Wood Frame Structure

The eastern section of the building containing the office has a wood frame construction consisting of wood stud walls and wood joists.

CONDITION

B1020 ROOF CONSTRUCTION

B1021 Flat Roof Construction

The flat roof construction at the building appeared to be in fair condition. There were no visible signs of failure noted. However, we observed localized rot at the wood ceiling joists in the men's room. We understand that a number of the wood joists have been damaged and therefore we recommend that they are replaced at the time of the roof covering replacement to maintain the structural integrity of the roof.



B1030 STRUCTURAL FRAME

B1031 Wood Frame Structure

The wood framed structure appeared to be in fair condition. We do not anticipate the replacement of the wood structural elements during the cost study period.

B20 EXTERIOR ENCLOSURES

DESCRIPTION

The description of the respective exterior enclosures structural systems for the building is based upon our observation of exposed portions of the building structure. There were no drawings available to review.

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

The building is predominantly enclosed with Concrete Masonry Units (CMU) and wood trim (reference Photograph 3 in Appendix B). The eastern portion of the building containing the park office is enclosed with wood siding (reference Photograph 4 in Appendix B). The CMU, wood siding and wood trim contained a painted finish.

B2020 EXTERIOR WINDOWS

B2021 Windows

Windows at the building are limited to the two single glazed units at the office section. The windows consist of fixed type wood framed units with exterior shutters (reference Photograph 5 in Appendix B).

B2030 EXTERIOR DOORS

B2039 Other Doors & Entrances

The building contained single and double hollow metal door and frames at the office and park storage areas (reference Photograph 5 in Appendix B). Door hardware consisted of lever handles.

CONDITION

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

The exterior wall systems at the building appeared to be in fair condition with generally no major signs of deterioration, water ingress or general failure noted. However, we observed several locations where the wood fascia and soffit materials have deteriorated, predominantly at the office section of the building (reference Photographs 6 and 7 in Appendix B). The exterior painted walls do not appear to have been recently painted and therefore based on the typical EUL of 4 years for exterior paint at these buildings, as well as current observed conditions, wood trim repair or replacement and exterior re-painting will be necessary near-term in the study period to maintain the appearance and protect the exterior walls.



B2020 EXTERIOR WINDOWS

B2021 Windows

The exterior window units appeared to be in fair condition, they are single pane and there were no major deficiencies observed.

The caulking at the perimeter of the window units was generally in fair condition and sealant replacement has been included in the recommended exterior painting program.

B2030 EXTERIOR DOORS

B2039 Other Doors & Entrances

The hollow core doors appeared to be in fair condition and there were no observed issues. In general the operation of the doors was satisfactory and operated without any difficulty. Re-painting concurrent with the building exterior will be necessary to maintain the doors. Additionally, the doors appear to be compliant with the ADA.

B30 ROOFING

DESCRIPTION

B3010 ROOF COVERINGS

B3011 Roof Finishes

The building contained one low-sloped roof area; this roof area is shown on the following aerial plan:

Overview of Roof Locations & Configurations



The low-sloped roof at the Office and Restroom building contained asphaltic Built-Up Roof (BUR) with a mineral cap sheet surface with loose granules applied to the surface (reference Photograph 8 in Appendix B). The roof coverings are approximately eight-years of age. Roof drainage gutters and downspouts are provided at the rear service door and above the two main entrances. The remaining roof areas drain via edge drainage along the perimeter of the roof.

Table B30-1 provides a summary of the roof coverings:

Table B30-1 Summary of Roof Covering

| Roof Component | Office and Restrooms |
|---|--|
| Age | Circa 2004 |
| Roof Area (total / approx. square footage) | 681 |
| Application/ Membrane | BUR |
| Manufacturer / Model | Tremco |
| Surface | Mineral Surface Cap Sheet and Loose Granules |
| Deck Type | Plywood |
| Insulation | None |
| Cover Board | None |
| Drainage | Perimeter Drainage and 3" Gutters and Downspouts |
| Overflow Scuppers | None |
| Base Flashings | Aluminum |
| Cap Flashings | None |
| Perimeter Enclosure | None |
| Warranty (Manufacturer) | Unknown |
| Warranty (Contractor) | Unknown |

CONDITION

B3010 ROOF COVERINGS

B3011 Roof Finishes

The BUR areas appeared to be in fair overall condition. This type of roof covering has a typical EUL of 15 to 20-years and based on observed conditions and roof material ages we anticipate that the low-sloped roof would usually last beyond the study period. However, we have brought forward replacement of the roof covering so that the damaged joists can be replaced.

PROJECTED EXPENDITURES

Identified recommended works that are required during the 10 year study period are scheduled below. We recommend budgeting for additional project costs of between 25%-30% to allow for professional fees and general contractor overhead/profit and management costs.

| Element No. | Building Element | Recommendation | Qty | Unit | Rate | Cost | Year | Priority Code |
|---|----------------------------|---|-------|------|---------|----------|------|---------------|
| B1020 | Roof Construction | Repair or replace the 2" x 8" wood joists | 1 | LS | \$4,000 | \$4,000 | 2016 | 3 |
| B2011 | Exterior Wall Construction | Repair or replace wood trim materials | 100 | SF | \$35.00 | \$3,500 | 2013 | 2 |
| B2011 | Exterior Wall Construction | Repaint exterior painted surfaces | 1,800 | SF | \$3.25 | \$5,850 | 2013 | 5 |
| B2011 | Exterior Wall Construction | Repaint exterior painted surfaces | 1,800 | SF | \$3.25 | \$5,850 | 2017 | 5 |
| B2011 | Exterior Wall Construction | Repaint exterior painted surfaces | 1,800 | SF | \$3.25 | \$5,850 | 2021 | 5 |
| B3011 | Roof Finishes | Replace BUR roof covering | 681 | SF | \$15.00 | \$10,215 | 2016 | 3 |
| Total Anticipated Expenditure for B Shell | | | | | | \$35,265 | | |

SECTION 4 - C INTERIORS

C10 INTERIOR CONSTRUCTION

DESCRIPTION

C1010 PARTITIONS

C1011 Fixed Partitions

The buildings contained both CMU partitions and wood studs with gypsum board partitions at varying thicknesses. The CMU partitioning was present to separate the office and restroom sections of the building.

C1014 Site Built Toilet Partitions

The men's and women's section of the building have steel framed toilet partitions equipped with acrylic panels (reference Photograph 9 in Appendix B).

C1020 INTERIOR DOORS

C1021 Interior Doors

Interior doors at the building are limited to the single flush panel at the utility room with one directional swing operation.

C1023 Interior Door Hardware

The door contained a steel lever door handle. Door closers were not observed.

CONDITION

C1010 PARTITIONS

C1011 Fixed Partitions

The interior fixed partitions all appeared to be in fair to good condition. There were no deficiencies found in relation to the wall structures. The fixed partitions are suitable for the current use.



C1014 Site Built Toilet Partitions

The toilet partitions and doors all appeared to be in fair condition. There were no deficiencies found in relation to the wall structures. The partitions are suitable for the current use. There are ADA compliant stalls installed at each of the restrooms.

C1021 Interior Doors

The interior door appeared to be in fair to good condition with no deficiencies noted. We do not anticipate any expenditure in relation to the internal door during the cost study period.

C1023 Interior Door Hardware

The hardware at the door appeared satisfactory with no issues of deterioration or failure noted generally throughout the buildings. The operation of the door handle, locks and hinged swing were noted to be in fair to good condition. We do not anticipate any expenditure during the study period.



C30 INTERIOR FINISHES

DESCRIPTION

C3010 WALL FINISHES

C3012 Wall Finishes to Interior Walls

Interior walls at each of the building generally contained unfinished and painted CMU and painted gypsum wall board (reference Photographs 9 and 10 in Appendix B). The restrooms contained 4" x 4" ceramic tile wainscot.

C3020 FLOOR FINISHES

C3024 Flooring

The men's and women's restrooms have 1" x 1" ceramic tile floor coverings (reference Photograph 11 on Appendix B). The remainder of the building interior has floors consisting of the unfinished concrete slab-on-grade,

C3030 CEILING FINISHES

C3031 Ceiling Finishes

The building has ceilings consisting of the unfinished or painted underside of the wood roof sheathing.

CONDITION

C3010 WALL FINISHES

C3012 Wall Finishes to Interior Walls

Interior wall finishes appeared to be in fair condition generally throughout the building, with minor marks and damages observed. The EUL of interior painted walls is 4 years for this building, and based on our observations we recommend re-painting of all the previously painted walls near-term in the study period to maintain the appearance of the building and work areas.

The ceramic tiled walls within the restrooms appeared to be in fair condition. However, they were improperly installed on furred walls and replacement is required.

C3020 FLOOR FINISHES

C3024 Flooring

The ceramic tile flooring appeared to be in fair condition throughout the building. The typical EUL for ceramic tile floor coverings is 30 years and therefore with an age of more than 48 years, late-term replacement is recommended. The concrete floors appeared to be in fair condition and should remain serviceable throughout the study period.

C3030 CEILING FINISHES

C3031 Ceiling Finishes

The painted and unfinished ceilings appeared to be in fair condition. Painted surfaces usually have a typical EUL of 4 years; therefore painting of the ceilings is included with the walls above.

PROJECTED EXPENDITURES

Identified recommended works that are required during the 10 year study period are scheduled below. We recommend budgeting for additional project costs of between 25%-30% to allow for professional fees and general contractor overhead/profit and management costs.

| Element No. | Building Element | Recommendation | Qty | Unit | Rate | Cost | Year | Priority Code |
|---|---------------------------------|--|-------|------|---------|----------|------|---------------|
| C3012 | Wall Finishes to Interior Walls | Repaint interior wall and ceiling surfaces | 3,200 | SF | \$3.25 | \$10,400 | 2013 | 5 |
| C3012 | Wall Finishes to Interior Walls | Repaint interior wall and ceiling surfaces | 3,200 | SF | \$3.25 | \$10,400 | 2017 | 5 |
| C3012 | Wall Finishes to Interior Walls | Repaint interior wall and ceiling surfaces | 3,200 | SF | \$3.25 | \$10,400 | 2021 | 5 |
| C3012 | Wall Finishes to Interior Walls | Replace ceramic tile wall surfaces | 480 | SF | \$15.00 | \$7,200 | 2017 | 3 |
| C3024 | Flooring | Replace ceramic tile floor covering | 190 | SF | \$18.00 | \$3,420 | 2020 | 3 |
| Total Anticipated Expenditure for C Interiors | | | | | | \$41,820 | | |

SECTION 5 - D SERVICES

D20 PLUMBING

DESCRIPTION

D2010 PLUMBING FIXTURES

D2011 Water Closets

The building contained floor mounted stainless steel tank-less water closets with manual flush valves within the men's and women's restrooms (reference Photograph 11 in Appendix B).

D2012 Urinals

The building contained one vitreous china wall hung waterless urinal within the men's restroom (reference Photograph 12 in Appendix B).

D2013 Lavatories

The building contained wall mounted stainless lavatories comprised of one in the men's room and two in the women's restroom (reference Photograph 9 in Appendix B). The lavatories generally consisted of low-flow single-handle push type, non-metering faucets. Water is supplied via copper pipe work and drained through cast iron pipe work and fittings.

D2016 Wash Fountains

There is no exterior wash fountain present at the building for park users to wash their feet.

D2020 DOMESTIC WATER DISTRIBUTION

D2021 Cold Water Service

Cold water piping throughout the building consisted of a copper pipe system. We believe the cold water service for the facility is supplied directly from the street pressure. Taps are made to the water line downstream of the meter and routed to plumbing fixtures and equipment via copper pipe work. The water enters the facility at the east elevation.

D2030 SANITARY WASTE

D2031 Waste Piping

Waste piping observed at the building consisted of 2" and 4" diameter cast iron.

CONDITION

D2010 PLUMBING FIXTURES

D2011 Water Closets

The water closets and flush valves appeared to be in good condition. The water closets flushed properly and did not have damage. The water closets appear to be ADA compliant; however they are not low flow water saving compliant, and will remain serviceable beyond the study period.

D2012 Urinals

The urinal appeared to be in good condition. The urinals operated properly and did not have any cracks in the china. The urinal appears to be ADA compliant; however they are not low flow water saving compliant, and will remain serviceable beyond the study period.

D2013 Lavatories

The lavatories and faucets at each of the restrooms appeared to be in poor to fair condition. The sinks drained properly and did not have visible damage. The lavatories appeared to be ADA compliant with the exception of wrapping the drain pipes. We recommend that the drain pipe is properly wrapped to comply with ADA recommendations.

D2016 Wash Fountains

There is no exterior wash fountain present at the building. As park users use the restroom lavatories to wash their feet, an external foot shower with sand trap is recommended for installation with necessary plumbing. We have included for expenditure relating to this near-term in the study period.

D2020 DOMESTIC WATER DISTRIBUTION

D2021 Cold Water Service

The domestic water systems appeared to be in fair condition. We understand after discussions with City maintenance personnel that because of improper installation methods in the original plumbing the water supply system will need to be investigated further and additional works undertaken to correct the current issues. We have included for an assumed expenditure at this time at the start of the study period. In addition the replacement of the main shutoff and pressure regulator are necessary, and should be completed early in the study period also.



D2030 SANITARY WASTE

D2031 Waste Piping

No visually apparent problems with the sanitary waste piping were observed. After discussions with the City maintenance personnel we understand that a number of the City buildings have been having issues with sewer blockages and pipe deterioration, therefore we have been requested to include for camera inspections of the drainage/sewer system at the building.



D30 HVAC

DESCRIPTION

D3040 AIR DISTRIBUTION SYSTEMS

D3042 Exhaust Ventilation Systems

The building contained decorative CMU vents along the upper portion of the walls to allow for natural ventilation of the restrooms (reference Photograph 1 in Appendix B).

CONDITION

D3040 AIR DISTRIBUTION SYSTEMS

D3042 Exhaust Ventilation Systems

Ventilation throughout the building appears to be sufficient to meet the buildings current needs. No issues concerning ventilation was observed or mentioned.



D50 ELECTRICAL

DESCRIPTION

The following information was obtained through our visual observations of each of the building systems. The electrical systems include the service entrance equipment, panel boards, safety switches, motor controls, lighting fixtures, and security systems.

D5010 ELECTRICAL SERVICE & DISTRIBUTION

D5012 Low Tension Service & Dist.

The facility is serviced by a 100-amp, 120/240-Volt, single-phase, 3-wire metered panel which is located in the electrical closet (reference Photograph 13 in Appendix B).

D5020 LIGHTING & BRANCH WIRING

D5021 Branch Wiring Devices

The branch wiring devices at the building included switches, receptacles and other devices that would be generally associated with these types of buildings. Branch wiring was observed to typically be distributed in Electric Metallic Tubing (EMT) and flexible metal conduit.

D5022 Lighting Equipment

The interior lighting within the building is provided by surface mounted 4' fluorescent fixtures within the office and compact fluorescent lights (CFL) within the restrooms and storage areas. The florescent fixtures in the office contained T8 tubes and electronic ballasts. All of the in-room lighting is controlled via local switching in the respective rooms.

CONDITION

D5010 ELECTRICAL SERVICE AND DISTRIBUTION

D5012 Low Tension Service & Dist.

The electrical equipment was noted to be in fair condition; however the existing panel has one leg unconnected creating a code violation. We recommend that the panel is upgraded/replaced near-term in the study period to suit the incoming electrical power configuration.

D5020 LIGHTING & BRANCH WIRING

D5021 Branch Wiring Devices

The general receptacles and wiring appeared to be in fair condition within the buildings. We do not anticipate a requirement for their replacement during the cost study period.

D5022 Lighting Equipment

The interior lighting was observed in to be in fair to good fair to good condition and all fixtures were operating properly with no broken lenses or deteriorated housings. No actions will be generated during the study period and we anticipate the light fixtures will be replaced on an as needed basis.

PROJECTED EXPENDITURES

Identified recommended works that are required during the 10 year study period are scheduled below. We recommend budgeting for additional project costs of between 25%-30% to allow for professional fees and general contractor overhead/profit and management costs.

| Element No. | Building Element | Recommendation | Qty | Unit | Rate | Cost | Year | Priority Code |
|--|------------------------------|--|-----|------|---------|----------|------|---------------|
| D2013 | Lavatories | ADA drain wrapping and plumbing repairs | 1 | LS | \$2,200 | \$2,200 | 2013 | 1 |
| D2016 | Wash Fountains | Install external foot wash with sand trap | 1 | LS | \$6,500 | \$6,500 | 2013 | 3 |
| D2021 | Cold Water Service | Undertake works to correct water supply issues | 1 | LS | \$1,500 | \$1,500 | 2013 | 3 |
| D2021 | Cold Water Service | Replacement of main shutoff and pressure regulator | 1 | LS | \$1,800 | \$1,800 | 2013 | 3 |
| D2031 | Waste Piping | Undertake camera inspection of sewer lines | 1 | LS | \$1,000 | \$1,000 | 2013 | 3 |
| D5012 | Low Tension Services & Dist. | Replace main electrical panel | 1 | EACH | \$2,400 | \$2,400 | 2013 | 4 |
| Total Anticipated Expenditure for D Services | | | | | | \$15,400 | | |

SECTION 6 - G BUILDING SITEWORK

G20 SITE IMPROVEMENTS

In addition to the building located at the site, we have also undertaken a cursory review and assessment of the major site assets to further assist the City in understanding the condition of the site over all. The FCI calculations which are located in the Executive Summary do not include any likely cost that has been shown in this section.

DESCRIPTION

G2020 PARKING LOTS

G2021 Bases and Sub-Bases

Parking at the facility is minimal and consists of a parking lot located at the northern section of the site that can be accessed from Bell Avenue (reference Photograph 14 in Appendix B). The parking lot and paving around the site has an asphalt surface with white line striping denoting areas of parking stalls. We were not provided with the original specification details of the paving and therefore cannot comment on the specific asphalt mix type, classification or its suitability for its existing use.

Table G20-1 Schedule of Site Systems

| System Type | System Surface | Location | Measurement | No. of Parking Spaces | No. of Disabled Parking Spaces |
|---|----------------|-------------|-------------|-----------------------|--------------------------------|
| Parking Made up of two Maintenance Stalls and two ADA Stalls. Including ADA Parking Spaces. | Asphalt | Parking Lot | 60 SY | 4* | 2 |

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

The site contained cast-in-place concrete walkways throughout including at the perimeter of the building and at the hillside walkways (reference Photograph 15 in Appendix B).

G2033 Exterior Steps

The site contained wood steps allowing access to the walkways along the hillside. The steps were constructed with 6" x 6" timbers. The stairways contained aluminum tubular handrails at either side which have an anodized surface (reference Photograph 16 in Appendix B).

G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The facility contained several types of fencing including 4' to 6' in height chain link fencing including at the sand dune perimeter, western perimeter of the park, the rear of the restrooms and surrounding the playground (reference Photographs 17 and 18 in Appendix B). Additionally, a small section of wood fencing was located at the southern end of the site.

Metal railings are located at the perimeters of the walkways along the hillside (reference Photograph 19 in Appendix B).

G2042 Retaining Walls

There are variable height reinforced concrete, wood and concrete masonry unit retaining walls located adjacent to the walking trails and along the base of the hillside (reference Photographs 19 and 20 in Appendix B).

G2044 Signage

Wood property identification signage is located at north and south ends of the park along Bell Avenue (reference Photograph 21 in Appendix B).

G2045 Site Furnishings

There are several picnic tables located throughout the park. The tables are typically constructed of steel and synthetic materials (reference Photograph 2 in Appendix B).

G2047 Playing Fields

There is one playground structure at the site. The playground is located at the northern section of the site (reference Photograph 22 in Appendix B). The playground is comprised of metal and composite equipment. The ground surface at the play area is covered with sand and a synthetic mat.

G2049 Miscellaneous Structures

The site contained a concrete framed dumpster enclosure at the northern end. The enclosure has a wood roof and metal gates (reference Photograph 23 in Appendix B). The steel and wood framed pavilion contained a tubular steel framed gazebo at the west side of the site.

There is an approximately 15' x 20' canopy structure at the picnic pavilion that is constructed of wood rafters and roof framing supported by 5" x 7" steel posts wood framing with a wood joist framed roof with plywood framing (reference Photograph 2 in Appendix B). The steep-sloped roof area at the canopy contained asphalt shingles with mineral surface granules. We understand that the roof was installed in circa 2007. The location of the roof can be seen in section B3011.



G2050 LANDSCAPING

G2056 Planters

Landscaping consisted of shrubs and ground cover, with mature trees located throughout the site.

G2057 Irrigation Systems

The landscaped throughout the site are irrigated via a below grade automatic irrigation system. The irrigation system is supplied by below grade PVC piping and a wall mounted controller. Above ground sprinkler heads are scattered throughout the site.

CONDITION

G2020 PARKING LOTS

G2021 Bases and Sub-Bases

The asphalt paved areas the main site appeared to be in fair condition. The asphalt should undergo asphaltic-based seal coat and the re-application of surface markings every three-years to extend the life of the pavements beginning in year one.

G2031 Paving and Surfacing

The pedestrian walkways throughout the park appeared to be in fair condition with no issues observed and no reported instances of disrepair. The walkways will require routine maintenance and replacement and should be addressed on an as-needed basis as part of routine maintenance and funded as an operational expense.

G2033 Wood Stairway

The wood stairway appeared to be in poor to fair condition. We observed many areas of rot and decay at the wood timbers and recommend that all stairways are inspected followed by the replacement of all deteriorated 2" x 6" wood treads (reference Photograph 24 in Appendix B). The railings will require routine maintenance and should be addressed on an as-needed basis as part of routine maintenance and funded as an operational expense.



G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The fencing throughout the site appeared to be in fair overall condition. No major issues observed and no reported instances of disrepair. We do not anticipate replacement during the study period. However, localized areas of damaged fence were observed such as the fence along the southern perimeter of the dune area. The fencing should be addressed on an as-needed basis as part of routine maintenance and funded as an operational expense.

The metal railings will require routine maintenance and should be addressed on an as-needed basis as part of routine maintenance and funded as an operational expense.

G2042 Retaining Walls

The concrete and CMU retaining walls appeared to be in fair to good condition. No major issues observed and no reported instances of disrepair. We do not anticipate replacement of the concrete or CMU walls during the study period. However, many of the wood retaining walls and their wood piling supports exhibited various degrees of decay (reference Photograph 25 in Appendix B). Therefore, we recommend near-term replacement of the damaged and deteriorated sections of the wood retaining walls.

Furthermore we observed instances of termite deterioration and therefore we recommend that a termite inspection be undertaken to ascertain the extent of termite presence at the building/structures. No expenditure has been associated with this issue at this time.

G2044 Signage

The wood property identification signage appeared to be in fair overall condition. We understand that there is a requirement for standardizing all of the monument signage at each of the parks; therefore we have included for new signage at each of the parks to meet these requirements.

G2045 Site Furnishings

The picnic areas throughout the site appeared to be in good overall condition. Repairs should be addressed on an as-needed basis as part of routine maintenance and funded as an operational expense.

G2047 Playing Fields

The playground equipment is in good overall condition. The equipment is approximately five years of age and we do not anticipate its replacement during the study period. However, the rubber mat surface has an EUL of approximately five years and is in fair condition and will require near-term replacement with additional replacement mid-term.

G2049 Miscellaneous Structures

The concrete framed dumpster enclosure appeared to be in fair condition, however we understand that it is non-compliant and should be redesigned early in the study period to contain epoxy coated walls, berm and drainage to a suitable sewer. We have included a budgetary expenditure in the cost study period for these works.

The picnic area canopy appeared to be in good condition. There were no visible signs of failure noted and we do not anticipate any expenditure during the cost study period which relates to replacement of the canopy structure. The pitched roof at the canopy areas appeared to be in good overall condition. This type of roof covering has a typical EUL of 15 to 20 years and based on observed conditions and roof material ages we anticipate that the pitched will last beyond the study period without replacement necessary. We are unaware or could not visually see any possible areas of water ingress.

We do however recommend that both of the structures (dumpster and canopy) are repainted at regular intervals during the study period to maintain their appearance and protect their wooden structures.

G2050 LANDSCAPING

G2056 Planters

The planted materials are in fair overall condition. The plant materials will require routine maintenance and replacement and should be addressed on an as-needed basis as part of routine maintenance and funded as an operational expense.

G2057 Irrigation Systems

The irrigation system at the building is also in fair condition. No issues were observed and no reported instances of disrepair. We do not anticipate replacement during the study period.



G40 SITE ELECTRICAL UTILITIES

DESCRIPTION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

Exterior lighting at the building consisted of two building mounted HID wall pack fixtures along the northern elevation of the building.

Exterior lighting at the walkways along the hillside consist of pole mounted fixtures with single heads. The lights are approximately 12' and 15' high with a painted finish mounted on a concrete footing (reference Photograph 5 in Appendix B).

CONDITION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

The building mounted lights appeared to be approximately 5 years of age and in poor condition and should be replaced. The pole mounted lights appeared to be in fair overall condition. However due to the difficulties in maintenance as a result of ground conditions, they should be changed to LED fittings. However the painted surfaces are in poor condition and the poles are beginning to rust and corrode. We have included for replacement of fixtures and posts near-term in the study period to maintain suitable light levels.

PROJECTED EXPENDITURES

Identified recommended works that are required during the 10 year study period are scheduled below. We recommend budgeting for additional project costs of between 25%-30% to allow for professional fees and general contractor overhead/profit and management costs.

| Element No. | Building Element | Recommendation | Qty | Unit | Rate | Cost | Year | Priority Code |
|---|--------------------------|--|-------|------|----------|-----------|------|---------------|
| G2021 | Bases and Sub-Bases | Crack repair, seal coating and re-stripping at the parking lot | 940 | SY | \$1.50 | \$1,410 | 2014 | 3 |
| G2021 | Bases and Sub-Bases | Crack repair, seal coating and re-stripping at the parking lot | 940 | SY | \$1.50 | \$1,410 | 2017 | 3 |
| G2021 | Bases and Sub-Bases | Crack repair, seal coating and re-stripping at the parking lot | 940 | SY | \$1.50 | \$1,410 | 2020 | 3 |
| G2033 | Stairways | Replace the wood stairway components | 3,500 | SF | \$30.00 | \$105,000 | 2013 | 3 |
| G2042 | Retaining Walls | Replace the damaged wood retaining walls | 500 | SF | \$50.00 | \$25,000 | 2013 | 3 |
| G2044 | Signage | Replace monument signage | 1 | EACH | \$1,000 | \$1,000 | 2014 | 3 |
| G2047 | Playground | Replace the playground synthetic matt | 500 | SF | \$15.00 | \$7,500 | 2014 | 3 |
| G2047 | Playground | Replace the playground synthetic matt | 500 | SF | \$15.00 | \$7,500 | 2019 | 3 |
| G2049 | Miscellaneous Structures | Reconfigure concrete dumpster enclosure | 1 | LS | \$10,000 | \$10,000 | 2013 | 3 |
| G2049 | Miscellaneous Structures | Repaint the dumpster and canopy structures | 1 | LS | \$950 | \$950 | 2014 | 3 |
| G2049 | Miscellaneous Structures | Repaint the dumpster and canopy structures | 1 | LS | \$950 | \$950 | 2017 | 3 |
| G2049 | Miscellaneous Structures | Repaint the dumpster and canopy structures | 1 | LS | \$950 | \$950 | 2020 | 3 |
| G4021 | Fixtures & Transformers | Replace pole mounted lights fixtures with LED type fixtures | 10 | EACH | \$650 | \$6,500 | 2014 | 3 |
| G4021 | Fixtures & Transformers | Replace light posts with new galvanised steel posts | 10 | EACH | \$2,100 | \$21,000 | 2014 | 3 |
| Total Anticipated Expenditure for G Building Sitework | | | | | | \$190,580 | | |

Appendix A

Ten-Year
Expenditure Forecast
2013 - 2022

10 YEAR EXPENDITURE FORECAST

Sand Dune Park - Office and Restrooms
 3800 Bell Avenue
 Manhattan Beach, CA



| Element No. | Component Description | Estimated Useful Life or Replacement Cycle (Yrs) | Remaining Useful Life (Yrs) | Quantity | Unit of Measurement | Unit Cost | Plan Type | Priority | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Total | Total | Combined Total | | | | | | | | |
|--|--|--|-----------------------------|----------|---------------------|------------|----------------------|----------|----------|------|------|----------|----------|------|------|---------|----------|------|----------|-----------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | \$ | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Deferred | Scheduled | | | | | | | | | |
| A. SUBSTRUCTURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A. SUBSTRUCTURE SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | | | |
| B. SHELL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B1020 | Repair or replace 2" x 8" wood joists | 7 | 0 | 1.00 | LS | \$4,000.00 | Capital Renewal | 3 | \$0 | \$0 | \$0 | \$4,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$4,000 | \$4,000 | | | | | | | | |
| B2011 | Repair or replace wood trim materials | 7 | 0 | 100.00 | SF | \$35.00 | Deferred Maintenance | 2 | \$3,500 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$3,500 | \$0 | \$3,500 | | | | | | | | |
| B2011 | Repaint exterior painted surfaces | 4 | 0 | 1,800.00 | SF | \$3.25 | Deferred Maintenance | 5 | \$5,850 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$5,850 | \$0 | \$5,850 | | | | | | | | |
| B2011 | Repaint exterior painted surfaces | 4 | 4 | 1,800.00 | SF | \$3.25 | Routine Maintenance | 5 | \$0 | \$0 | \$0 | \$0 | \$5,850 | \$0 | \$0 | \$0 | \$5,850 | \$0 | \$0 | \$11,700 | \$11,700 | | | | | | | | |
| B3011 | Replace BUR roof covering | 20 | 3 | 681.00 | SF | \$15.00 | Capital Renewal | 3 | \$0 | \$0 | \$0 | \$10,215 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$10,215 | \$10,215 | | | | | | | | |
| B. SHELL SUB-TOTALS | | | | | | | | | \$9,350 | \$0 | \$0 | \$14,215 | \$5,850 | \$0 | \$0 | \$0 | \$5,850 | \$0 | \$9,350 | \$25,915 | \$35,265 | | | | | | | | |
| C. INTERIORS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C3012 | Repaint interior wall and ceiling surfaces | 4 | 0 | 3,200.00 | SF | \$3.25 | Deferred Maintenance | 5 | \$10,400 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$10,400 | \$0 | \$10,400 | | | | | | | | |
| C3012 | Repaint interior wall and ceiling surfaces | 4 | 4 | 3,200.00 | SF | \$3.25 | Routine Maintenance | 5 | \$0 | \$0 | \$0 | \$0 | \$10,400 | \$0 | \$0 | \$0 | \$10,400 | \$0 | \$0 | \$20,800 | \$20,800 | | | | | | | | |
| C3012 | Replace ceramic tile wall surfaces | 30 | 4 | 480.00 | SF | \$15.00 | Capital Renewal | 3 | \$0 | \$0 | \$0 | \$0 | \$7,200 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$7,200 | \$7,200 | | | | | | | | |
| C3024 | Replace ceramic tile floor covering | 30 | 7 | 190.00 | SF | \$18.00 | Capital Renewal | 3 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$3,420 | \$0 | \$0 | \$0 | \$3,420 | \$3,420 | | | | | | | | |
| C. INTERIORS SUB-TOTALS | | | | | | | | | \$10,400 | \$0 | \$0 | \$0 | \$17,600 | \$0 | \$0 | \$3,420 | \$10,400 | \$0 | \$10,400 | \$31,420 | \$41,820 | | | | | | | | |
| D. SERVICES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D2013 | ADA drain wrapping and plumbing repairs | 20 | 0 | 1.00 | LS | \$2,200.00 | Deferred Maintenance | 1 | \$2,200 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$2,200 | \$0 | \$2,200 | | | | | | | | |
| D2016 | Install external foot wash sand trap | 20 | 0 | 1.00 | LS | \$6,500.00 | Deferred Maintenance | 3 | \$6,500 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$6,500 | \$0 | \$6,500 | | | | | | | | |
| D2021 | Undertake works to correct water supply issues | N/A | 0 | 1.00 | LS | \$1,500.00 | Deferred Maintenance | 3 | \$1,500 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,500 | \$0 | \$1,500 | | | | | | | | |
| D2021 | Replacement of main shutoff and regulator | 20 | 0 | 1.00 | LS | \$1,800.00 | Deferred Maintenance | 3 | \$1,800 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,800 | \$0 | \$1,800 | | | | | | | | |
| D2031 | Undertake camera inspection of sewer lines | N/A | 0 | 1.00 | LS | \$1,000.00 | Deferred Maintenance | 3 | \$1,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,000 | \$0 | \$1,000 | | | | | | | | |
| D5012 | Replace main electrical panel | 30 | 0 | 1.00 | EACH | \$2,400.00 | Deferred Maintenance | 4 | \$2,400 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$2,400 | \$0 | \$2,400 | | | | | | | | |
| D. SERVICES SUB-TOTALS | | | | | | | | | \$15,400 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$15,400 | \$0 | \$15,400 | | | | | | | | |
| E. EQUIPMENT & FURNISHING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E. EQUIPMENT & FURNISHING SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | | |
| F. SPECIAL CONSTRUCTION AND DEMOLITION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| G. BUILDING SITEWORK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G. BUILDING SITEWORK SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| Z. GENERAL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z. GENERAL SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Expenditure Totals per Year | | | | | | | | | \$35,150 | \$0 | \$0 | \$14,215 | \$23,450 | \$0 | \$0 | \$3,420 | \$16,250 | \$0 | \$35,150 | \$57,335 | \$92,485 | | | | | | | | |
| Total Cost (Inflated @ 4% per Yr.) | | | | | | | | | \$35,150 | \$0 | \$0 | \$15,990 | \$27,433 | \$0 | \$0 | \$4,500 | \$22,239 | \$0 | \$35,150 | \$70,163 | \$105,313 | | | | | | | | |

10 YEAR EXPENDITURE FORECAST

Sand Dune Park - Site Systems
 3800 Bell Avenue
 Manhattan Beach, CA



| Element No. | Component Description | Estimated Useful Life or Replacement Cycle (Yrs) | Remaining Useful Life (Yrs) | Quantity | Unit of Measurement | Unit Cost | Plan Type | Priority | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Total | Total | Combined Total | | | |
|---|---|--|-----------------------------|----------|---------------------|-------------|----------------------|----------|-----------|----------|------|------|---------|------|---------|---------|------|------|-----------|-----------|----------------|-----|-----|--|
| | | | | | | \$ | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Deferred | Scheduled | | | | |
| A. SUBSTRUCTURE | | | | | | | | | | | | | | | | | | | | | | | | |
| A. SUBSTRUCTURE SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| B. SHELL | | | | | | | | | | | | | | | | | | | | | | | | |
| B. SHELL SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| C. INTERIORS | | | | | | | | | | | | | | | | | | | | | | | | |
| C. INTERIORS SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| D. SERVICES | | | | | | | | | | | | | | | | | | | | | | | | |
| D. SERVICES SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| E. EQUIPMENT & FURNISHING | | | | | | | | | | | | | | | | | | | | | | | | |
| E. EQUIPMENT & FURNISHING SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| F. SPECIAL CONSTRUCTION AND DEMOLITION | | | | | | | | | | | | | | | | | | | | | | | | |
| F. SPECIAL CONSTRUCTION AND DEMOLITION SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| G. BUILDING SITEWORK | | | | | | | | | | | | | | | | | | | | | | | | |
| G2021 | Crack repair, seal coating and re-striping at the parking lot | 3 | 1 | 940.00 | SY | \$1.50 | Routine Maintenance | 3 | \$0 | \$1,410 | \$0 | \$0 | \$1,410 | \$0 | \$0 | \$1,410 | \$0 | \$0 | \$0 | \$4,230 | \$4,230 | | | |
| G2033 | Replace the wood stairway components | 10 | 0 | 3,500.00 | SF | \$30.00 | Deferred Maintenance | 3 | \$105,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$105,000 | \$0 | \$105,000 | | | |
| G2042 | Replace the damaged wood retaining walls | 20 | 0 | 500.00 | SF | \$50.00 | Deferred Maintenance | 3 | \$25,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$25,000 | \$0 | \$25,000 | | | |
| G2044 | Replace monument signage | 10 | 1 | 1.00 | EACH | \$1,000.00 | Routine Maintenance | 3 | \$1,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$1,000 | \$0 | \$1,000 | | | |
| G2047 | Replace the playground synthetic mat | 5 | 1 | 500.00 | SF | \$15.00 | Routine Maintenance | 3 | \$0 | \$7,500 | \$0 | \$0 | \$0 | \$0 | \$7,500 | \$0 | \$0 | \$0 | \$0 | \$15,000 | \$15,000 | | | |
| G2049 | Reconfigure concrete dumpster enclosure | N/A | 0 | 1.00 | LS | \$10,000.00 | Deferred Maintenance | 3 | \$10,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$10,000 | \$0 | \$10,000 | | | |
| G2049 | Repaint the dumpster and canopy structures | 3 | 1 | 1.00 | LS | \$950.00 | Routine Maintenance | 3 | \$0 | \$950 | \$0 | \$0 | \$950 | \$0 | \$0 | \$950 | \$0 | \$0 | \$0 | \$2,850 | \$2,850 | | | |
| G4021 | Replace pole mounted light fixtures with LED type fixtures | 15 | 1 | 10.00 | EACH | \$650.00 | Routine Maintenance | 3 | \$0 | \$6,500 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$6,500 | \$6,500 | | | |
| G4021 | Replace light posts with new galvanized steel posts | 15 | 1 | 10.00 | EACH | \$2,100.00 | Routine Maintenance | 3 | \$0 | \$21,000 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$21,000 | \$21,000 | | | |
| G. BUILDING SITEWORK SUB-TOTALS | | | | | | | | | \$141,000 | \$37,360 | \$0 | \$0 | \$2,360 | \$0 | \$7,500 | \$2,360 | \$0 | \$0 | \$141,000 | \$49,580 | \$190,580 | | | |
| Z. GENERAL | | | | | | | | | | | | | | | | | | | | | | | | |
| Z. GENERAL SUB-TOTALS | | | | | | | | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | |
| Expenditure Totals per Year | | | | | | | | | \$141,000 | \$37,360 | \$0 | \$0 | \$2,360 | \$0 | \$7,500 | \$2,360 | \$0 | \$0 | \$141,000 | \$49,580 | \$190,580 | | | |
| Total Cost (Inflated @ 4% per Yr.) | | | | | | | | | \$141,000 | \$38,854 | \$0 | \$0 | \$2,761 | \$0 | \$9,490 | \$3,106 | \$0 | \$0 | \$141,000 | \$54,211 | \$195,211 | | | |

Appendix B

Photographs



Photograph No. 1

View of the roof framing system and vent.



Photograph No. 2

View of the canopy structure.



Photograph No. 3

View of the north elevation.



Photograph No. 4

View of exterior finishes at the office area.



Photograph No. 5

View of the window and door at the office.



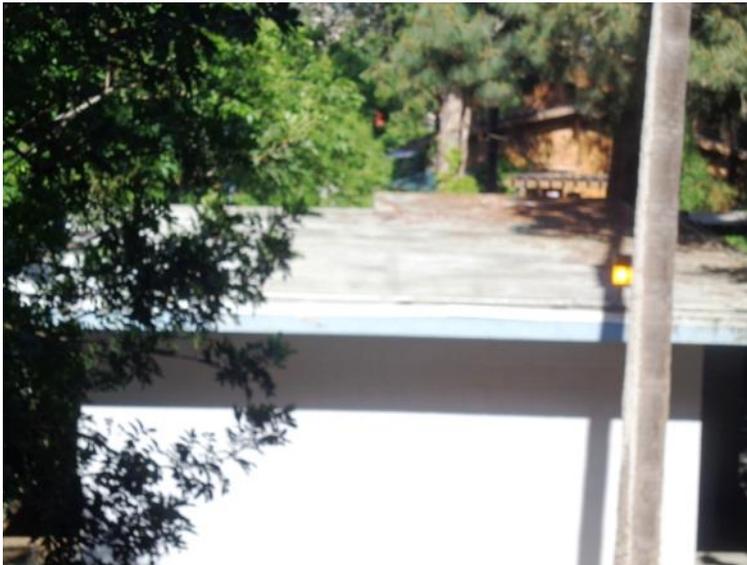
Photograph No. 6

View of deterioration observed at the soffit.



Photograph No. 7

Additional view of deterioration observed at the soffit.



Photograph No. 8

View of the low slope roof.



Photograph No. 9

View of a toilet partition.



Photograph No. 10

View of the office interior.



Photograph No. 11

View of a floor mounted water closet and ceramic tile flooring.



Photograph No. 12

View of the waterless urinal.



Photograph No. 13

View of the electrical panel and meter.



Photograph No. 14

View of the parking area.



Photograph No. 15

View of a concrete walkway.



Photograph No. 16

View of a typical wood stairway and metal railing.



Photograph No. 17

View of the chain link fencing at the sand dune.



Photograph No. 18

View of the chain link fencing.



Photograph No. 19

View of the wood retaining walls and metal walkway railings.



Photograph No. 20

View of a CMU retaining wall.



Photograph No. 21

View of the sign at the north end of the park.



Photograph No. 22

View of the playground.



Photograph No. 23

View of the dumpster enclosure.



Photograph No. 24

View of the typical deterioration at the wood steps.



Photograph No. 25

View of the deterioration observed at the wood retaining walls.



Photograph No. 26

View of a pole mounted light.



Photograph No. 27

View of typical rust at the pole mounted lights.

Appendix C

Asset Inventory

ASSET INVENTORY



G40 SITE ELECTRICAL UTILITIES

| Location | Equipment Type | Manufacturer | Model No. | Serial No. | Capacity / Rating | Year |
|-----------------|-----------------------|---------------------|------------------|-------------------|--------------------------|-------------|
| Utility Room | Panel | Cutler Hammer | NA | NA | 120/208 V 200 Amp | 2000 |
| Utility Room | Irrigation Control | Unknown | Unknown | Unknown | Unknown | Unknown |
| Utility Room | Light Control | Furnas | 40EP22AAD6 | Unknown | Unknown | Unknown |

Appendix D

Document Review and
Warranty Information



DOCUMENT REVIEW & WARRANTY INFORMATION

In addition to the completion of our visual evaluation, Faithful+Gould interviewed the various representatives from the City of Manhattan Beach (wherever possible), and reviewed the following documentation:

Sand Dune Park Floor Plan and Electrical Improvement Drawings dated 2001

Appendix E

Environmental Report:
Asbestos & Lead-Based Paint





LIMITED ASBESTOS & LEAD-BASED PAINT ASSESSMENT REPORT

Presented To:

Faithful & Gould
3400 North Central Avenue
Suite 2400
Pheonix, AZ 85014

Assessment Location:

Sand Dune Park
3800 Bell Ave.
Manhattan Beach, CA. 90266

Andersen Environmental Project No. 1304-584

Report Date: June 10, 2013

TABLE OF CONTENTS

| <u>DESCRIPTION</u> | <u>PAGE NO.</u> |
|---|-----------------|
| 1.0 INTRODUCTION..... | 3 |
| 2.0 SCOPE OF WORK..... | 3 |
| 3.0 PROPERTY DESCRIPTION..... | 3 |
| 4.0 INSPECTOR'S QUALIFICATIONS | 3 |
| 5.0 TESTING PROTOCOL..... | 4 |
| 6.0 METHOD OF TESTING | 5 |
| 7.0 SUMMARY OF RESULTS | 6 |
| 8.0 RECOMMENDATIONS..... | 6 |
| 9.0 RENOVATION, REPAIR AND PAINTING (RRP) RULE..... | 7 |
| 10.0 INSPECTION LIMITATIONS | 7 |

APPENDICES

| | |
|------------|-----------------------------|
| APPENDIX A | ASBESTOS ANALYTICAL RESULTS |
| APPENDIX B | XRF RESULTS |
| APPENDIX C | INSPECTOR'S CERTIFICATIONS |
| APPENDIX D | MAPS / FLOOR PLANS |
| APPENDIX E | DHS FORM 8552 |

1.0 INTRODUCTION

This report presents the results of Andersen Environmental's Limited Asbestos & Lead-Based Paint Assessment of 3800 Bell Ave., Manhattan Beach Ca. 90266 (referred to hereunder as the subject property). This document is prepared for the sole use of The City of Manhattan Beach and any regulatory agencies that are directly involved in this project. No other party should rely on the information contained herein without prior written consent of The City of Manhattan Beach scope of services, inspection methodology, and results are presented below.

2.0 SCOPE OF WORK

The purpose of this inspection and survey is to identify the Asbestos Containing Materials (ACM) and Lead-Based Paint (LBP) present within the interiors and exteriors of the subject property building. As the asbestos sampling is destructive in nature, and may void any roof warranties, the roofing materials of the building were not sampled during this assessment.

Asbestos

The purpose of this assessment was to perform bulk sampling of suspect materials in order to determine the presence or absence of ACM associated with the one building at the subject property. The scope of this assessment included reviewing any provided building records and/or previous investigation records, visually identifying homogeneous areas and functional spaces, collecting bulk samples of suspect ACM, interpreting the laboratory results, producing a written report of our findings, recommendations, floor plans and approximations of ACM quantities.

Lead-Based Paint

The purpose of this assessment was to perform an X-Ray Fluorescence (XRF) survey of the two buildings onsite in order to determine which components may be covered with lead laden coatings. To comply with Title 17, EPA and HUD guidelines, painted and varnished surfaces in every accessible "room equivalent" were sampled for the presence of lead-based paint (LBP) and the condition of the painted surfaces was assessed. The intent was to ascertain the presence of LBP above the Los Angeles County action level using X-Ray Fluorescence. If LBP was found, the inspection would identify individual architectural components and their respective concentrations of lead in such a manner that this report would be used to characterize the presence of LBP at this property. The scope of work also included producing a written report of our findings and recommendations.

3.0 PROPERTY DESCRIPTION

The subject property consists of a single story storage building and park restrooms. The construction of the buildings consists of CMU block walls on concrete pad foundations. The interior finishes include drywall partitions, unfinished concrete floors and wood framed roof canopies.

4.0 INSPECTOR'S QUALIFICATIONS

Andersen Environmental performed the lead inspection at the site using a Niton XRF spectrum analyzer instrument. Freddy Torres has completed an EPA approved curriculum in Lead in Construction Inspector / Risk Assessor Training.

Benjamin Curry and Lamont Leiva of Andersen Environmental performed the asbestos inspection at the site. Lamont Leiva is certified by the State of California Division of Occupational Safety and Health (DOSH) as Certified Site Surveillance Technician and worked under the supervision of Benjamin Curry, a DOSH Certified Asbestos Consultant.

Personnel certificates have been provided in *Appendix C*.

5.0 TESTING PROTOCOL

Asbestos

The sampling was performed in accordance with requirements of the following regulations:

- Asbestos Hazard Emergency Response Act (AHERA); 40 CFR 763 Subpart E
- Asbestos School Hazard Abatement Reauthorization Act (ASHARA); Section 206 of the Toxic Substance Control Act
- National Emissions Standards for Hazardous Air Pollutants (NESHAPS); 40 CFR 61 Subpart M.

This report is a record of activities, observations, analytical results and recommendations performed to date.

Lead-Based Paint

The sampling was performed in accordance with requirements of the following regulations:

- Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housingⁱ.
- Title 17, California Code of Regulations
- EPA Lead Based Paint Program

XRF Testing: Testing of the painted surfaces was patterned after the inspection protocol in Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housingⁱⁱ. In every “room equivalent” within the tested property, one representative surface of each “testing combination” was tested. Multiple readings were collected to resolve inconsistencies in the test results.

Regulatory Compliance: Several public (government) agencies have a published “regulatory action level” to classify LBP. To further complicate matters, some of the established “levels” are quantified in different units of measurement. Listed below are the current regulatory agencies that have defined LBP, along with the respective action level:

| <u>Agency</u> (ppm ⁱⁱⁱ) | <u>Ordinance #</u> | <u>Action level (mg / cm²)</u> | <u>Action level</u> |
|--|----------------------------------|---|-----------------------|
| HUD / EPA | 24 CFR 35.86 & 40 CFR 745.103 | 1.0 mg / cm ² | 5,000 ppm |
| L.A. County | Title 11, 11.28.010 | 0.7 mg / cm ² | 600 ppm ^{iv} |
| OSHA / CAL OSHA | 29 CFR 1926.62 & Title 8, 1532.1 | <i>Not Specified</i> | 600 ppm ^v |

HUD / EPA have recently issued the following guidance regarding units of measurement for paint samples:

“Report lead paint amounts in mg/cm² because this unit of measurement does not depend on the number of layers of non-lead-based paint and can usually be obtained without damaging the painted surface. All measurements of lead in paint should be in mg/cm², unless the surface area cannot be measured or if all paint cannot be removed from the measured surface area. In such cases, concentrations may be reported in weight percent (%) or parts per million by weight (ppm).”^{vi}

Furthermore, EPA has previously issued guidance on lead content classification as follows:

“... The rule, at 24 CFR 35.86 and 40 CFR 745.103 states that a lead-based paint free finding must demonstrate that the building is free of ‘paint or other surface coatings that contain lead in excess of 1.0 milligrams per square centimeter (1.0 mg / cm²) or 0.5 percent by weight (5000 ppm).’ The State standards are not applicable, whether more or less stringent, since a State cannot amend Federal requirements.”^{vii}

In recognition of the various action levels the testing results are classified as follows for this report:

- Painted surfaces with readings at or above 0.7 mg / cm² are considered - Positive
- Painted surfaces with readings below 0.7 mg / cm² are considered - Negative

The individual readings have been provided on all field data sheets. Any future change in action levels by one of the regulating agencies may affect the classification of results.

For purposes of this survey, any material containing any detectable level of lead is subject to OSHA’s Lead Exposure in Construction Rule (29 CFR Part 1926). Any work that disturbs these materials must be performed in accordance with these and any other applicable standards.

6.0 METHOD OF TESTING

Asbestos

All samples were collected using a clean knife, chisel or the appropriate tools. The sample location was first moistened with water in order to limit dust release. Each sample was extracted carefully so as not to disturb adjacent materials while still penetrating through all layers of the material sampled. Each sample was sealed in the appropriate sized plastic zip lock bag and the bag then labeled with a unique identification number. The sample number, description and location was then recorded on a log and plotted on a floor plan of the structure or area. Sampling tools were cleaned after collecting each sample. Any excess dust or debris from the sample location was cleaned using a moistened cloth. Whenever possible, samples were collected from previously damaged portions of the material in order to minimize damage to the material.

A total of fifteen (15) samples were submitted to LA Testing in South Pasadena, California. LA Testing is accredited under the NIST/NVLAP program for asbestos in bulk material by polarized light microscopy and the State of California for asbestos analysis.

The analyses of the samples in this report were performed using polarized light microscopy using the EPA method 600/R-93/116. The phase abundances provided are visually estimated and expressed as percent area. Total percentage of sample constituents may total greater than 100 due to trace amounts. The limit of detection for this analytical method is less than one percent. In multilayer samples, unless otherwise specified, the asbestos concentration is reported for the layer where asbestos is found. These results lie within the statistical limits of variability calculated for standard reference samples routinely analyzed in the laboratory. On a per sample basis, the accuracy and precision of the results depend on the type of sample and its asbestos content.

Lead-Based Paint

Paint Testing: The method employed was X-ray fluorescence (XRF) using a Niton XLp 303A by Thermo Scientific, this unit uses a radioactive source of Cadmium 109. It was calibrated to NIST standard lead concentration samples prior to and after its use. Uncoated surfaces and other bare materials were not tested. The instrument was operated in “Quick Mode,” where the duration for each test result is determined by a combination of:

- The actual reading relative to the designated action level;
- Age of the radioactive source;
- The substrate on which the test was taken.

The instrument’s calibration was verified according to the manufacturer's specifications in compliance with the Performance Characteristic Sheet (PCS) developed for this instrument.

The readings from this instrument produce a 95% confidence level that the “lead” reading accurately reflects the actual level of lead in the tested surfaces, relative to the federal action level.

7.0 SUMMARY OF RESULTS

Asbestos

The following materials are presumed to contain asbestos and are considered ACM unless further sampling proves otherwise:

| Material Description | Material Locations | Condition | Asbestos Percentage | Estimated Quantity* |
|---------------------------------------|---------------------------|------------------|----------------------------|----------------------------|
| Roofing Materials (Mastic & Felts) | Roof | Good | Presumed | 2,000 |

* These quantities are only approximations. The exact quantities should be measured by the abatement contractor during the bidding process.

All other suspect materials sampled during this assessment tested negative for asbestos.

Lead-Based Paint

Paint Sampling: All interior and exterior materials sampled during the inspection tested negative for lead concentrations.

8.0 RECOMMENDATIONS

Given the clients anticipated renovation of the subject property buildings, Andersen Environmental recommends the following:

Asbestos

If materials found to contain asbestos and/or presumed to contain asbestos are going to be disturbed or removed; by law, they must first be abated and properly disposed of by a licensed and Cal/OSHA registered asbestos abatement contractor prior to any renovation or demolition activities.

In as such that no destructive investigation has been performed during the survey, the report may not reveal concealed asbestos-containing materials. Subsequently, additional investigation including construction documents review and/or destructive investigation is recommended as a precaution to prevent accidental exposure when construction or demolition is planned for this facility. Any suspect materials that are uncovered during construction activities; that were not sampled during this assessment, should be considered asbestos containing, unless sampled to prove otherwise.

Lead-Based Paint

All analyzed lead paints and glazes are not considered to be lead-based. However, the removal of material containing any detectable level of lead is subject to OSHA's Lead Exposure in Construction Rule (29 CFR part 1926) and Title 8, Section 1542.1 of the California Code of Regulations.

9.0 RENOVATION, REPAIR AND PAINTING (RRP) RULE

Anyone performing renovation, repair and painting projects that disturb painted surfaces in residences, child care facilities, and schools built before 1978 must be EPA RRP certified and follow specific lead safe work practices to prevent lead contamination. The rule applies where more than 6 square feet per room or 20 square feet outside will be "disturbed" by workers(s) being compensated.

10.0 INSPECTION LIMITATIONS

This Assessment was planned, developed, and implemented based on Andersen Environmental previous experience in performing asbestos and lead-based paint assessments. This inspection was patterned after Chapter 7 of the *HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (1997 Revision)* and NESHAPS; 40 CFR 61 Subpart M. Andersen Environmental utilized state-of-the-art-practices and techniques in accordance with regulatory standards while performing this assessment. Andersen Environmental evaluation of the relative risk of exposure to lead identified during this inspection/risk assessment is based on conditions observed at the time of the inspection. Andersen Environmental cannot be responsible for changing conditions that may alter the relative exposure risk or for future changes in accepted methodology. Andersen Environmental uses only qualified personnel to perform building surveys. Reasonable effort was made to survey accessible suspect materials. Additional suspect materials may be located between walls, in voids, or in other inaccessible areas; caution should be exercised regarding these areas.

Andersen Environmental cannot warrant that these buildings do not contain LBP or ACM in locations other than those identified in this report.

Enclosed are the diagram(s), actual test results, and all relevant certifications and licenses.

Survey and Report by:

Benjamin Curry
DOSH Certified Asbestos Consultant No. 09-4549
CDPH Certified Lead Inspector/Assessor/Supervisor No. 20747

- i 1997 Revision
- ii 1997 Revision
- iii Parts per million
- iv Applies to sale and application of LBP.
- v Applies to construction related activities
- vi Chapter 7 of the HUD Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (1997 Revision).
- vii Office of Pollution Prevention and Toxics, (August 20, 1996)

Appendix F

Glossary of Terms

Acronyms & Glossary of Terms

| | |
|--------|--|
| CMU | Concrete Masonry Unit |
| BUR | Built-Up Roof |
| EIFS | Exterior Insulation and Finish System |
| EPDM | Ethylene Propylene Diene Monomer |
| SC | Solid Core Doors |
| HM | Hollow Metal Doors |
| MH | Man Holes |
| ABC | Aggregate Base Course |
| EMT | Electrical Metallic Conduit |
| | |
| EUL | Estimated Useful Life |
| RUL | Recommended Useful Life |
| EOL | End of Life |
| FCI | Facility Condition Index |
| CRV | Current Replacement Value |
| DM | Deferred Maintenance |
| | |
| SF | Square Foot |
| SY | Square Yards |
| PSF | Pounds-Per-Square-Foot |
| PSI | Pounds-Per-Square-Inch |
| | |
| NFPA | National Fire Protection Association |
| FACP | Fire Alarm Control Panel |
| NAC | Notification Appliance Circuit |
| FCC | Fire Command Center |
| HVAC | Heating Ventilating and Air conditioning |
| VAV | Variable Air Volume |
| AHU | Main Air Handling Units |
| HP | Horse Power |
| FSS | Fuel Supply System |
| MDP | Main Distribution Panel |
| SES | Service Entrance Switchboard's |
| NEMA | National Electrical Manufactures Association |
| HID | Intensity Discharge |
| EMT | Electrical Metallic Tubing |
| KVA | kilovolt-ampere |
| RO | Reverse Osmosis |
| BTU/HR | British Thermal Units per Hour |
| kW | Kilowatt |
| FPM | Feet per Minute (Elevator Speed) |
| Amp | Amperage |

Acronyms & Glossary of Terms

BTU – British Thermal Unit; the energy required to raise the temperature of one pound of water by one degree.

Building Envelope - The enclosure of the building that protects the building's interior from the outside elements, namely the exterior walls, roof and soffit areas.

Building Systems – Interacting or independent components or assemblies, which from single integrated units, that comprise a building and its site work, such as, pavement and flatwork, structural frame, roofing, exterior walls, plumbing, HVAC, electrical, etc.

Caulking – Soft, putty-like material used to fill joints, seams, and cracks.

Codes – See building codes.

Component – A fully functional portion of a building system, piece of equipment, or building element.

Deferred Maintenance – Physical deficiencies that cannot be remedied with routine maintenance, normal operating maintenance, etc., excluding de minimis conditions that generally do not present a material physical deficiency to the subject property.

Expected Useful Life (EUL) – The average amount of time in years that an item, component or system is estimated to function when installed new and assuming routine maintenance is practiced.

Facility – All or any portion of buildings, structures, site improvements, complexes, equipment, roads, walks, passageways, parking lots, or other real or personal property located on site.

Flashing – A thin, impervious sheet of material placed in construction to prevent water penetration or to direct the flow of water. Flashing is used especially at roof hips and valleys, roof penetrations, joints between a roof and a vertical wall, and in masonry walls to direct the flow of water and moisture.

Remaining Useful Life (RUL) – A subjective estimate based upon observations, or average estimates of similar items, components, or systems, or a combination thereof, of a number of remaining years that an item, component, or system is established to be able to function in accordance with its intended purpose before warranting replacement. Such period of time is affected by the initial quality of an item, component, or system, the quality of the initial installation, the quality and amount of preventative maintenance exercised, climatic conditions, extent of use, etc.

Thermal Resistance (R) – A unit used to measure a material's resistance to heat transfer. The formula for thermal resistance is: $R = \text{Thickness}(\text{in inches})/K$

Structural Frame – The components or building systems that support the building's nonvariable forces or weights (dead loads) and variable forces or weights (live loads).

Warranty – Legally enforceable assurance of quality or performance of a product or work, or of the duration of satisfactory performance. Warranty guarantee and guaranty are substantially identical in meaning; nevertheless, confusion frequently arises from supposed distinctions attributed to guarantee (or guaranty) being exclusively indicative of duration of satisfactory performance or of a legally enforceable assurance furnished by a manufacturer or other third party. The uniform commercial code provisions on sales (effective in all states except Louisiana) use warranty but recognize the continuation of the use of guarantee and guaranty.