

Citywide
Facility Condition Assessment

Report of
Facility Condition Assessment

For
City of Novato
New Hamilton Gym
530 Nave Drive, Novato, CA



March 4, 2013

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>16</u>
<u>SECTION 3 - B SHELL</u>	<u>18</u>
<u>SECTION 4 - C INTERIORS</u>	<u>25</u>
<u>SECTION 5 - D SERVICES</u>	<u>31</u>
<u>SECTION 6 - E EQUIPMENT & FURNISHINGS</u>	<u>43</u>
<u>SECTION 7 - G BUILDING SITEWORK</u>	<u>44</u>

APPENDICES

<u>APPENDIX A TWENTY-YEAR EXPENDITURE FORECAST</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 GLOSSARY OF TERMS</u>

SECTION 1 - EXECUTIVE SUMMARY

INTRODUCTION

In accordance with the agreement held between City of Novato, dated January 18, 2013 and Faithful+Gould Inc, this completed report provides a comprehensive Facility Condition Assessment of New Hamilton Gym located at 5530 Nave Drive, Novato, 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 20 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 twenty-year study period have been included with an allowance of 25% for professional fees and general contractor overhead/profit and management costs (where applicable).

Chart EX-1 provides a summary of the anticipated primary expenditures over the 20 year study period. Further details of these expenditures are included within each respective report section and within the 20 year expenditure forecast, in Appendix A.

The report also calculates the Facility Condition Index (FCI) of the building based upon the calculated FCI. Further discussion of the Facility Condition Index is detailed in the sections below.

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 January 22, 2013 Mr. Eric Whitworth and Mr. Mark Taylor 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 Steve Evans, Senior Facilities Custodian for the City of Novato.

Overview of the Building and Site



Note: Aerial taken from time of construction

BUILDING SUMMARY

Table EX-1 Facility Details

BUILDING NAME:	New Hamilton Gym	LAT/LONG:	38°03'15.53"N / -122°31'46.79"W
ADDRESS:	5530 Nave Drive, Novato, CA 94949	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:	16,640	GROSS SQUARE FOOTAGE OF LAND:	43,890 (estimated) Whole Facility
CURRENT REPLACEMENT VALUE:	\$7,000,000	YEAR OF CONSTRUCTION:	2012
BUILDING USE:	Recreational Facility	NUMBER OF STORIES:	1

BUILDING DESCRIPTION

New Hamilton Gym is located at 5530 Nave Drive and was originally built in circa 2012. We understand that the building is still undergoing some small punch list items from the original contractor but was substantially completed in 2012.

The building has a steel framed structure and is encapsulated with a metal stud framing walls and a painted exterior insulated finish system. The roof covering consists of a Thermoplastic roof membrane for the high portion of the roof and asphalt shingle roof covering for the low roof sections with stone gravel surface. Windows and storefront systems generally consisted of steel single pane units. Doors consisted of a swing operated glazed entrance doors and hollow metal personnel doors.

The interior finishes of the building contained a rolled vinyl sport court, epoxy coating and ceramic tile floor coverings, painted walls, and exposed suspended ceiling grid systems.

The HVAC for the building is provided through two rooftop packaged units located on the roof level and one inline packaged unit located in the city storage room. All three of these units were for heating only. Cool air was provided by nine large wall louvers which were connected to a thermostat. Hot water is provided by a variety of gas and electric instantaneous domestic water heaters.



The electrical supply to the school and gymnasium is provided by a 1,600-amp, 208/120 volt, 3-phase, 4-wire main switchboard located at the main school building. The interior lighting is provided generally by surface mounted recessed and suspended 4' strip fluorescent fixtures with T8 32 watt bulbs and electronic ballasts.

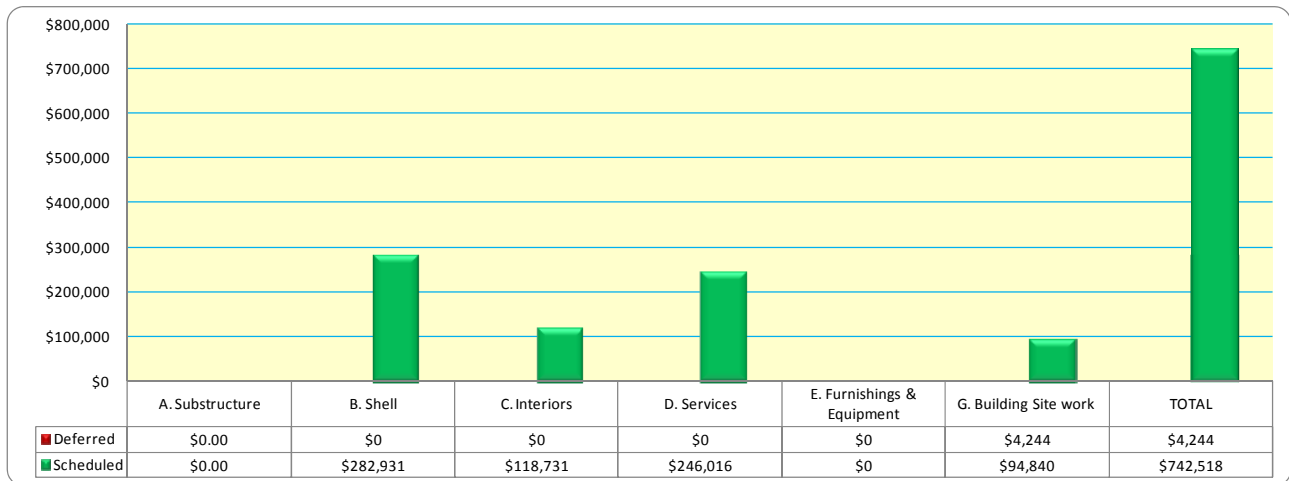
The building contains wet-pipe sprinkler and fire alarm system. There is no generator at the building.









BUILDING EXPENDITURE SUMMARY

The building expenditure summary section provides an executive overview of the findings from the assessments. Chart EX-1 provides a summary of anticipated expenditures over the study period. In addition, we have scheduled key findings highlighting key items of interest and their anticipated failure year. Further details of these expenditures are included within each respective report section and within the expenditure forecast, in Appendix A of this report. The results illustrate a total anticipated expenditure over the study period of circa \$746,762.

Chart EX-1 Building Expenditure Summary ^{1, 2, 3 & 4}



KEY FINDINGS

-  B Shell: Repaint exterior wall surfaces at an estimated cost of \$25,188 in years 2020 and 2028
-  B Shell: Replace thermoplastic roof membrane at an estimated cost of \$220,500 in year 2032
- C Interiors: Repaint interior wall and ceiling surfaces at an estimated cost of \$36,592 in years 2020 and 2028
-  C Interiors: Regrout floor & wall at tiled areas at an estimated cost of \$37,782 in year 2027
-  D Services: Replace exhaust fans at an estimated cost of \$24,477 in year 2027
-  D Services: Replace package units at an estimated cost of \$88,164 in year 2032
-  G Building Sitework: Asphalt mill and overlay to include re-striping at an estimated cost of \$58,050 in year 2032

¹ All costs presented in present day values

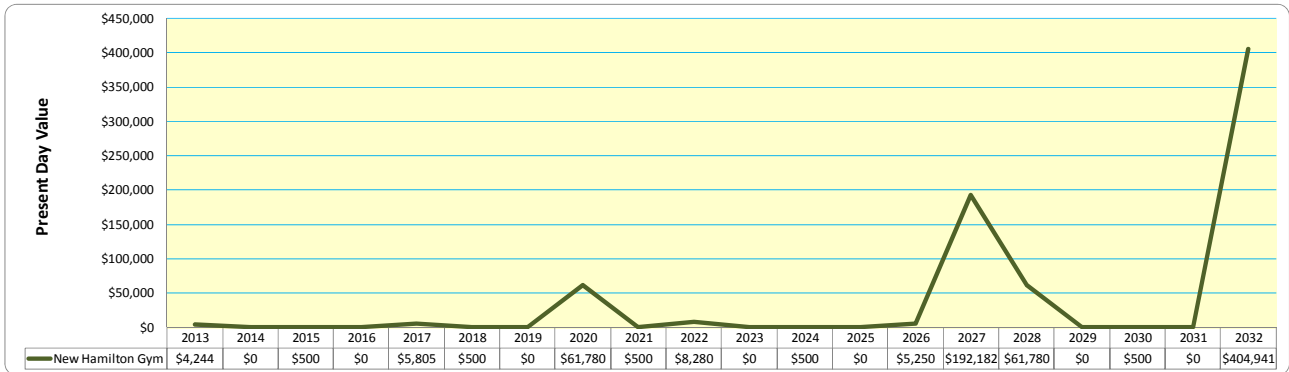
² Costs represent total anticipated values over the 20 year study period

³ 25% has been included for professional fees and general contractor overhead/profit and management costs

⁴ ADA Compliance was not examined as part of this project. The costs do not factor in bringing the recommended expenditures into compliance with current ADA rules.

Chart EX-2 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-2 Expenditure Forecast ^{1, 2, 3 & 4}





¹ All costs presented in present day values
² Costs represent total anticipated values over the 20 year study period
³ 25% has been included for professional fees and general contractor overhead/profit and management costs
⁴ ADA Compliance was not examined as part of this project. The costs do not factor in bringing the recommended expenditures into compliance with current ADA rules.

This chart highlights significant expenditure for New Hamilton Gym within years 2027 and 2032 primarily due to the 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.

RECOMMENDED WORKS UNDER \$500

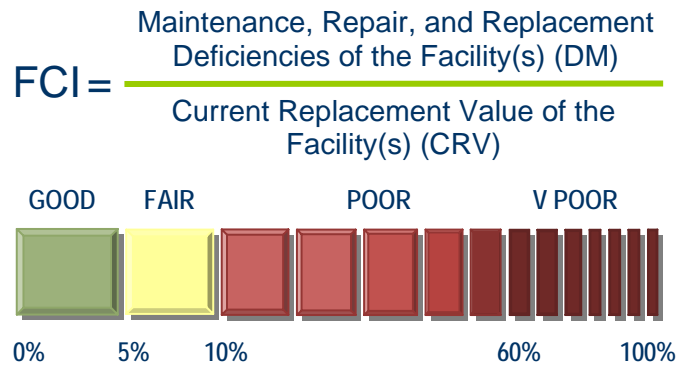
We have scheduled below recommended works that have not been included in the expenditure forecast or combined with other similar works that either fall below the threshold of \$500 or are recommended as industry best practice, represent efficiencies in maintenance, operations or energy.

-  D Services: Clean Ductwork in year 2015 and every three-years following
-  G Building Sitework: Routine Maintenance to irrigation systems

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%)), and poor (over 0.10 (over 10%)) based on evaluating data from various clients at the time of the publication. Table EX-2 will help interpret the results:

Table EX-2 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-3 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 GOOD facility condition index rating, therefore suggesting that the building is well maintained.

Table EX-3 Facility Condition Index

Building Name	FCI	Gross Square Foot (GSF)	CRV per GSF	Current Replacement Value (CRV)	Deferred Maintenance Value (DM) <small>1, 2, 3 & 4</small>	FCI Ratio	Property Condition Rating
New Hamilton Gym	Current FCI Ratio	16,640	\$421	\$7,000,000	\$4,244	0.1%	GOOD
New Hamilton Gym	Year 20 FCI Ratio	16,640	\$421	\$7,000,000	\$746,762	10.7%	POOR

¹ All costs presented in present day values

² Costs represent total anticipated values over the 20 year study period

³ 25% has been included for professional fees and general contractor overhead/profit and management costs

⁴ ADA Compliance was not examined as part of this project. The costs do not factor in bringing the recommended expenditures into compliance with current ADA rules.

Chart EX-3 indicates the affects 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 is in GOOD condition rating (below 5%) at the start of the study period and on a year by year basis , however falls into the FAIR condition rating at the end of the study period.

Chart EX-3 Year by Year Effects of FCI over the Study Period

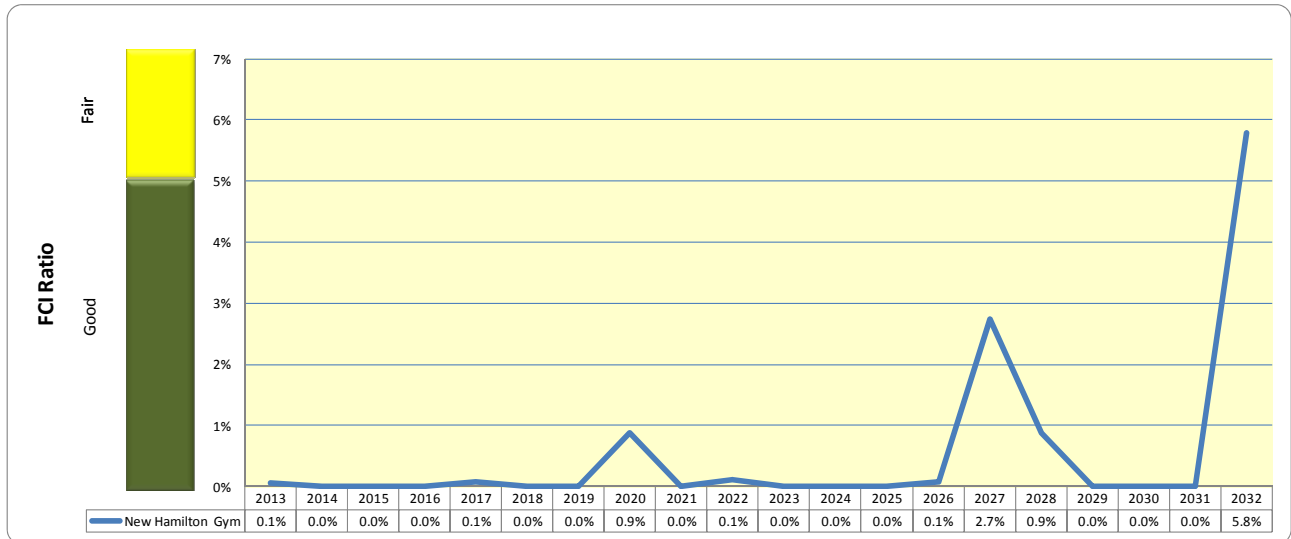
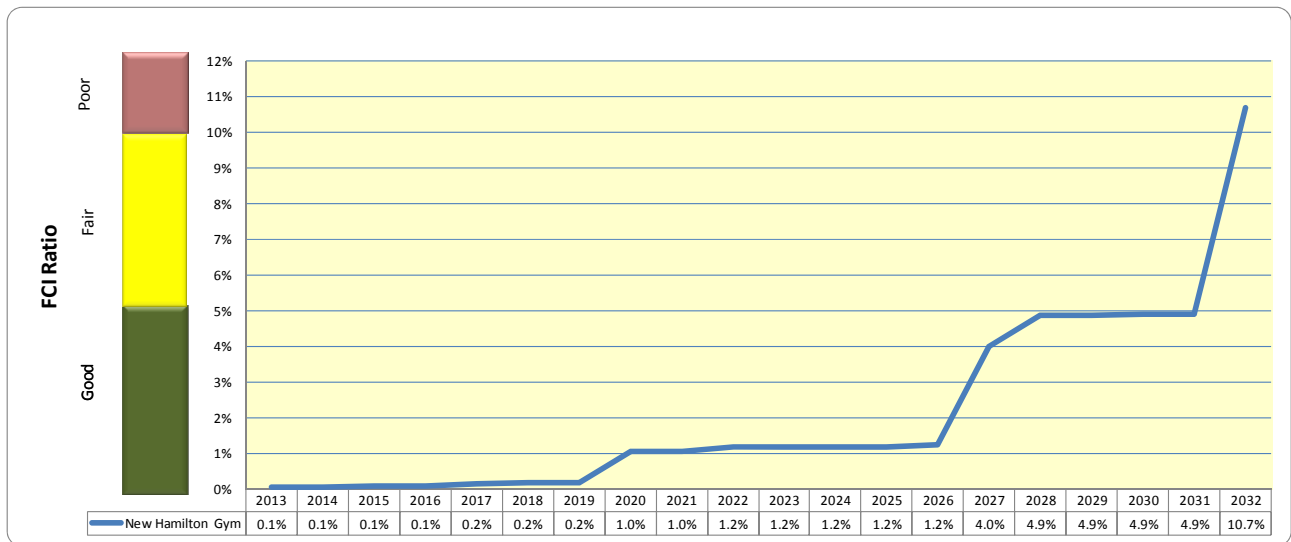


Chart EX-4 indicates the cumulative effects of the FCI ratio over the study period assuming the required funds and expenditures are **NOT** provided to address the identified works and deferred maintenance each year. The results of the study indicate at this current time the building is well maintained, with a facility condition index rating of GOOD condition; however this rating will fall into the POOR condition rating in 2032..

Chart EX-4 Cumulative Effects of FCI over the Study Period



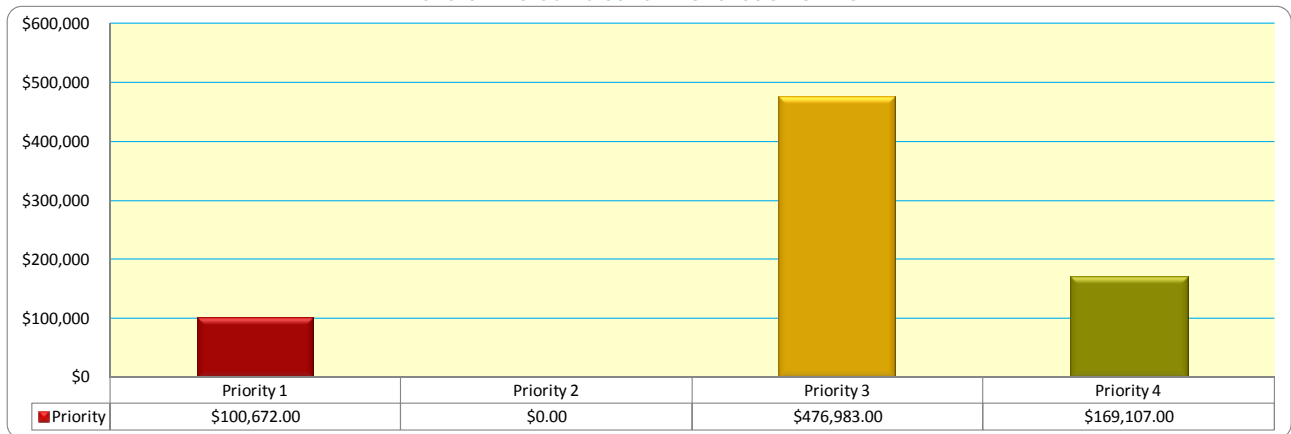
PRIORITIZATION OF WORK

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:	<ul style="list-style-type: none"> • Compromises staff or public safety or when a system requires to be upgraded to comply with current codes and standards
Priority 2 Currently Critical:	<ul style="list-style-type: none"> • A system or component is inoperable or compromised and requires immediate action
Priority 3 Necessary / Not Critical:	<ul style="list-style-type: none"> • Maintain the integrity of the facility or component and replace those items, which have exceeded their expected useful life
Priority 4 Image/Reputation:	<ul style="list-style-type: none"> • Used to maintain the appearance of a system due to image/reputation

Chart EX-5 illustrates the breakdown of expenditure according to the priority coding providing an opportunity to strategically plan and effectively direct funding to the highest priority.

Chart EX-5 Cumulative Prioritization of Work



Priority 3 appears to require the most amount of expenditure in this study. This category illustrates that the work which needs to be undertaken is associated with necessary works to maintain the integrity of the building and replace equipment that has exceeded their EUL.

Chart EX-6 Year by Year Cumulative Prioritization of Work

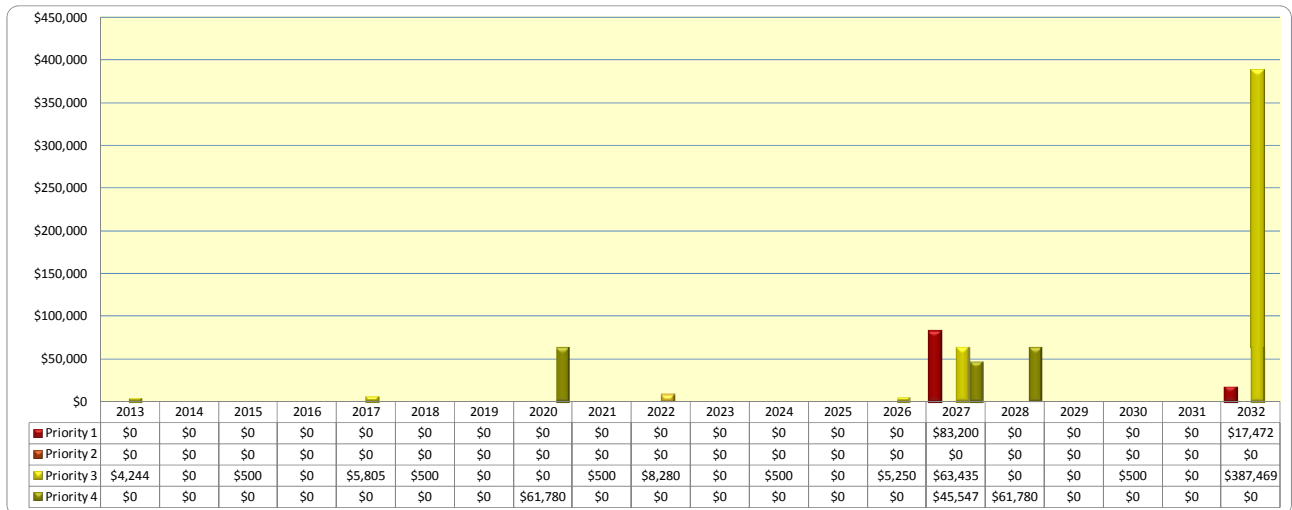


Chart EX-6 illustrates that there is one main expenditure year for Priority 3 coding at the end of the study period.

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:

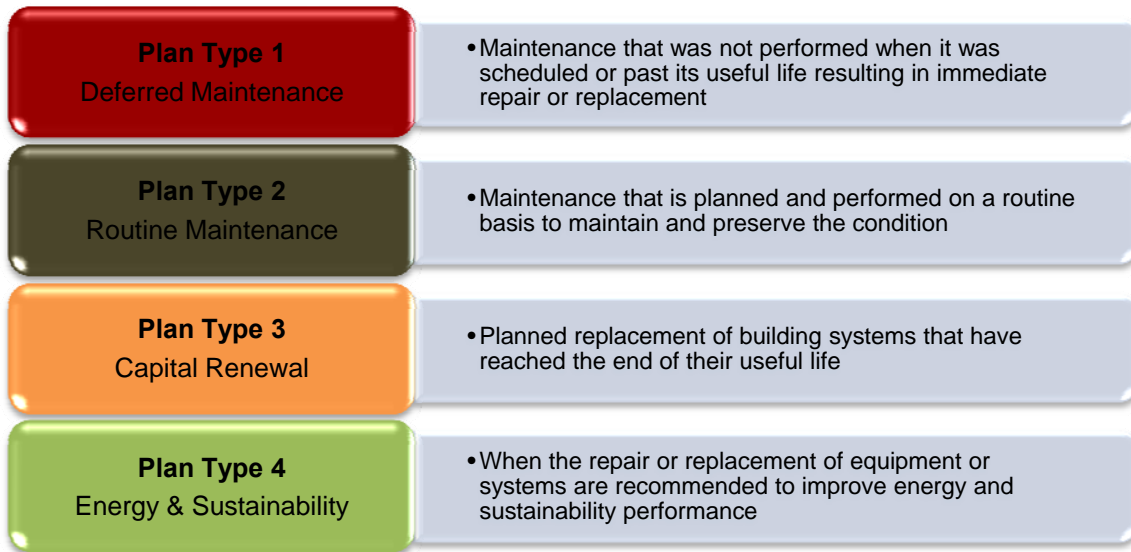
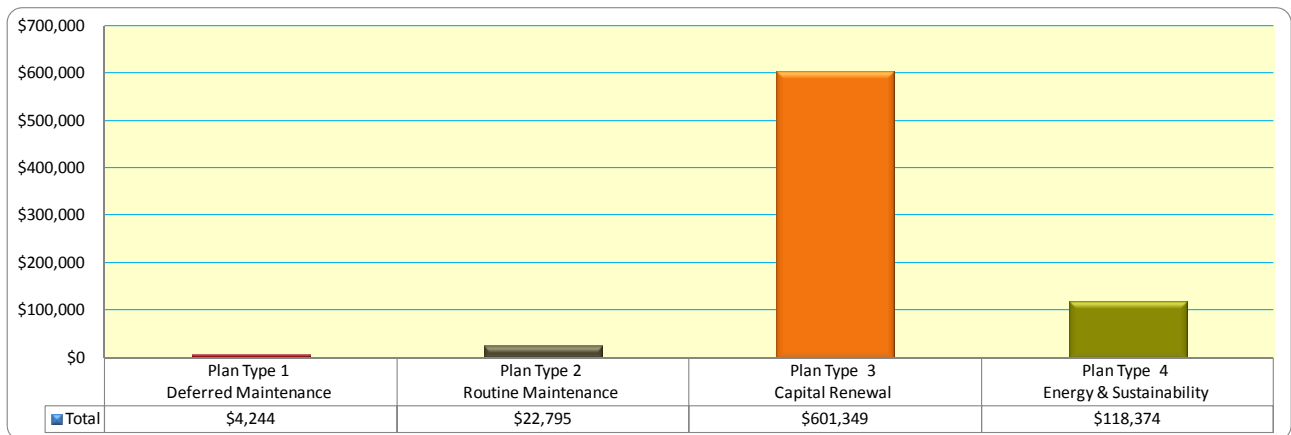


Chart EX-7 illustrates the breakdown of expenditure according to the Plan Type or deficiency categories providing an opportunity to strategically plan and effectively direct funding.

Chart EX-7 Cumulative Expenditure by Plan Type



Plan Type 3 – Capital Renewal appears to require the majority of the expenditure in this study.

Chart EX-8 illustrates the breakdown of expenditure per each year within the 20 year study period according to the Plan Type or deficiency categories.

Chart EX-8 Yearly Expenditure by Plan Type

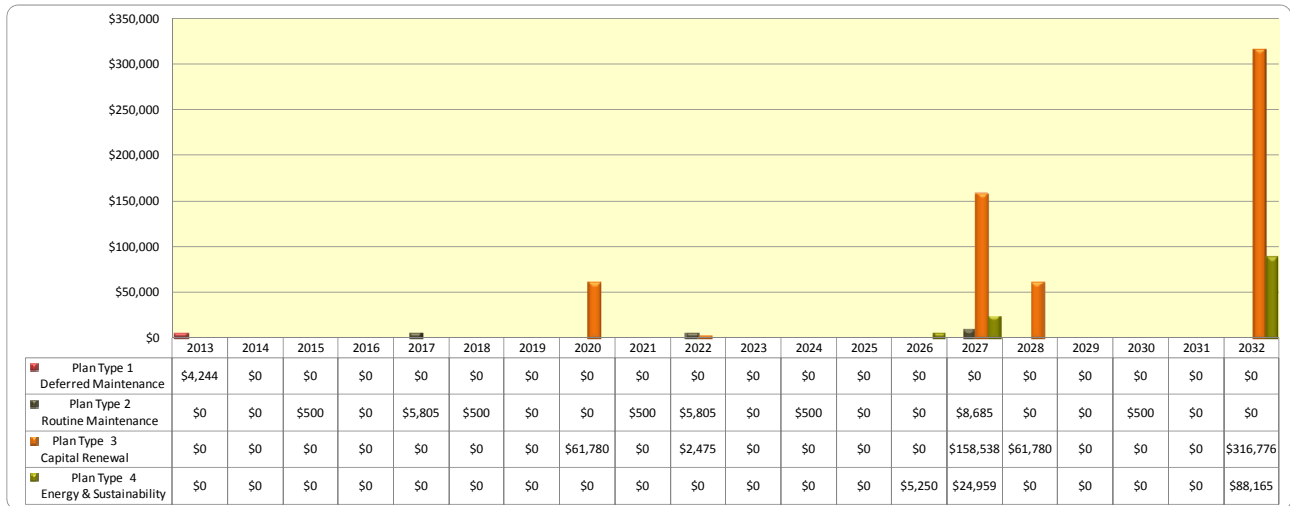


Chart EX-8 illustrates that there is one main expenditure year for Plan Type 3 at the end of the study period.

SECTION 2 - A SUBSTRUCTURE

A10 FOUNDATIONS

DESCRIPTION

The description of the respective structural systems for the building is based upon our review of available drawings, and our observation of exposed portions of the building structure. The drawings reviewed can be found in Appendix D.

A1010 STANDARD FOUNDATIONS

A1011 Wall Foundations

The exterior wall constructions are supported by reinforced concrete spread footings. The compressive strength of the concrete is unknown.

A1012 Column Foundations and Pile Caps

The building has a steel frame construction, with the vertical steel columns supported on concrete column foundations.

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 floor slab was placed over a vapor barrier and compacted gravel fill, with the thickness of the slab being approximately 5" laid over a 4" gravel bed. The compressive strength of the concrete is 4,000 pounds per square inch.

CONDITION

A1010 STANDARD FOUNDATIONS

A1011 Wall Foundations

The footings are not visible due to their location below the exterior wall construction. However there is no deterioration to the wall constructions that they are supporting, therefore we assume them to be in good condition and free from defects.

A1012 Column Foundations and Pile Caps

The column foundations are assumed to be in good condition, as there are no signs of failure throughout the structure which they support or the surrounding concrete floor slab. We do not anticipate any expenditure during the study period.



A1030 SLABS-ON-GRADE

A1031 Standard Slab on Grade

The slab-on-grade was observed to be in good condition. While the majority of the slab was not visible there were no signs of undue settling or major cracks noted.

PROJECTED EXPENDITURES

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

SECTION 3 - B SHELL

B10 SUPERSTRUCTURE

DESCRIPTION

The description of the respective structural systems for the building is based upon our review of available drawings, and our observation of exposed portions of the building structure. The drawings reviewed can be found in Appendix D.

B1020 ROOF CONSTRUCTION

B1021 Flat Roof Construction

The low-sloped roof sections of the New Hamilton Gym consisted of open-web steel truss joists running north to south generally spaced at 20'-0", with steel joist bracing running east to west spaced at 18'-0". The roof construction is supported by steel columns along the perimeter of the building (reference Photograph 1 in Appendix B).

B1022 Pitched Roof Construction

There are 7 steep-sloped roof sections on the lower portion of the building. The east and west elevations have 3 gable roof sections each with the south elevation having a lean-to roof section (reference Photograph 2 in Appendix B). The roof covering can be viewed in the roof covering section of this report.

B1030 STRUCTURAL FRAME

B1031 Steel Frame Structure

The building contains exposed steel frame structure with steel I section columns supporting open-web steel trusses and roof joists. The steel frame members are painted with an intumescent paint finish (reference Photograph 3 in Appendix B).

CONDITION

B1020 ROOF CONSTRUCTION

B1021 Flat Roof Construction

The low-sloped roof construction appeared to be in good condition. There were no visible signs of failure noted. We do not anticipate any expenditure during the cost study period.

B1022 Pitched Roof Construction

The steep- sloped roof construction appeared to be in good condition. There were no visible signs of failure noted. We do not anticipate any expenditure during the cost study period.

B1030 STRUCTURAL FRAME

B1031 Steel Frame Structure

The steel framed structure appeared to be in fair to good condition. We do not anticipate the replacement of such structural elements during the cost study period with exception to re-painting which is included in the interiors section of the report.

B20 EXTERIOR ENCLOSURES

DESCRIPTION

The description of the respective exterior enclosure for the building is based upon our review of available drawings, and our observation of exposed portions of the building structure. The drawings reviewed can be found in Appendix D.

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

The Hamilton Gym building was enclosed with a non load bearing 2" X 8" steel stud wall with R-19 insulation and a painted Exterior Insulated Finishing System (EIFS). EIFS is a lightweight multi-layered synthetic wall cladding that includes foam plastic insulation and thin synthetic stucco coatings which are colorfast and crack resistant and painted gypsum board to the interior (reference Photograph 4 in Appendix B).

B2020 EXTERIOR WINDOWS

B2021 Windows

At each of the elevations there were fixed steel framed windows with single pane glazing and a factory applied paint finish (reference Photographs 5 and 6 in Appendix B). The window frames contain caulking at the point where they meet the wall construction.

B2023 Storefronts

Located at the west of the building and used as the main entrance facing the parking lot the storefront contains 2 double hollow metal exterior doors with single pane glazing and a factory applied paint system (reference Photograph 7 in Appendix B).

B2030 EXTERIOR DOORS

B2031 Glazed Doors & Entrances

The building contained 3 double entrance doors sets. The doors consisted of tempered glass with hollow metal rails and stiles, set within hollow metal door frames. There are 3 double manually operated, one direction swinging doors at the east and west elevations (reference Photograph 8 in Appendix B). The doors generally contained grab handles vertically at their external surface, panic hardware with horizontal push bars internally and door closers.

B2039 Other Doors & Entrances

The building contained 10 single and double hollow metal doors and frames at the perimeter, mainly at the north and south elevation finished in a factory paint system (reference Photograph 9 in Appendix B). Door hardware consisted of a combination of push and pull handles, with emergency push bars at the interior and not all had door closers.

CONDITION

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

The exterior wall system construction and stucco surface appeared to be in good condition with no signs of deterioration, water ingress or general failure noted. We understand that the stucco walls and surfaces were last painted a year ago and therefore based on the typical EUL of eight-years repainting of the painted surfaces are due at the middle and end portion of the study period.

B2020 EXTERIOR WINDOWS

B2021 Windows

The exterior window units appeared to be in good condition. Not all of the windows were assessed, however overall we did not find any major deficiencies. We do not anticipate a requirement for their replacement as they do not require any actions during the study period. Even though the perimeter sealant is in good condition now we anticipate it will start to deteriorate due to exposure to the elements therefore with a typical EUL of fifteen-years for exterior sealant we anticipate replacement will be necessary late-term in the study period with a suitable polyurethane sealant.

B2023 Storefronts

The storefront system appeared to be in good condition. Even though the perimeter sealant is in good condition now we anticipate it will start to deteriorate due to exposure to the elements therefore with a typical EUL of fifteen-years for exterior sealant we anticipate replacement will be necessary late-term in the study period with a suitable polyurethane sealant.

B2030 EXTERIOR DOORS

B2031 Glazed Doors & Entrances

The glazed entrance doors appeared to be in good condition. Through regular maintenance and replacement of hardware on an as-needed basis the doors should last beyond the study period.

B2039 Other Doors & Entrances

The metal doors appeared to be in good condition with no observed issues noted. There is no anticipated requirement for replacement of the doors during the study period. The operation of the swing doors were satisfactory and operated without any difficulty. Repainting along with the exterior elevation repainting works will be necessary on a cyclical basis.

B30 ROOFING

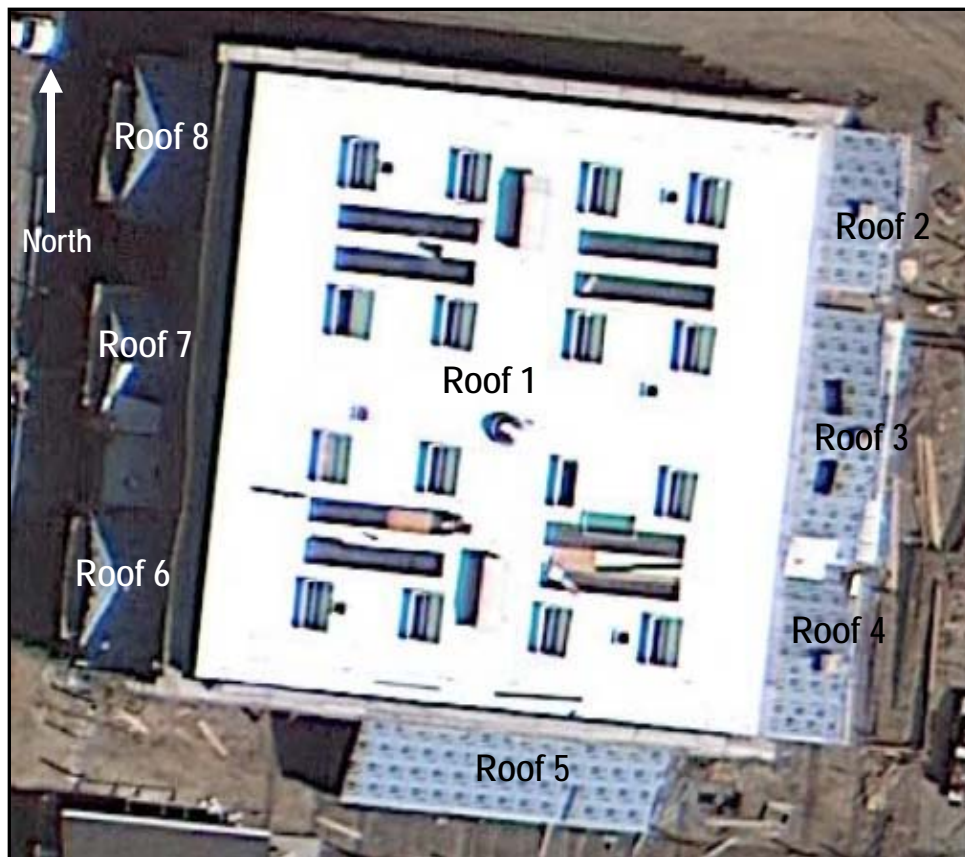
DESCRIPTION

B3010 ROOF COVERINGS

B3011 Roof Finishes

The facility contained seven steep-sloped roof areas along with a large low-sloped roof area; these roof areas are shown on the following aerial plan:

Overview of Roof Locations & Configurations



The low sloped roof area 1 contained an adhered Thermoplastic Polyolefin (TPO) single-ply membrane on a 1 ½" metal decking. The steep-sloped roof areas 2 through 8 contained an asphalt shingle roofing system with R-30 insulation and a vapor retarder on a plywood deck (reference Photographs 10 and 11 in Appendix B). The perimeter parapet wall constructions are finished with a 24 gauge galvanized sheet metal flashing.

All the roof levels contain 4" 24 gauge galvanized sheet metal perimeter roof gutters which discharge to either lower roof levels or ground levels where splash blocks are present.

CONDITION

B3010 ROOF COVERINGS

B3011 Roof Finishes

Faithful+Gould walked the entire field of the roofs and observed the condition of the membrane, seams, parapet membrane and flashing, rooftop mechanical equipment, plumbing vents/stacks.

The single-ply Thermoplastic membrane and asphalt shingle roof covering appeared to be in good condition at each of the roof areas, with no roof leaks reported. We were informed that repairs have recently been undertaken to the roof membrane, at the southwest corner of the gym which corrected the infiltration. We understand that the membrane and covering is approximately one year old. Based on the typical EUL of twenty-years for the asphalt shingle roof covering we recommend replacement late in the study period. Based on the typical EUL of twenty-years for The Thermoplastic Membrane the roof coverings will need to be replaced late in the study period.

The roof appears to drain well with adequate slope at all areas to allow water to run to the drains. The gutters and downspouts appear to be free from debris, adequately sized and spaced properly. We do not anticipate a requirement to complete significant repair or supplementing of the drainage system during the study period however based on the typical EUL of twenty-years for galvanized steel perimeter gutters replacement will be necessary at the end of the study period.

PROJECTED EXPENDITURES

Identified recommended works that are required during the twenty-year study period are detailed below. We have included a 25% allowance for professional fees and general contractor overhead/profit and management costs (where applicable).

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repaint exterior wall surfaces and soffits	13,398	SF	\$1.88	\$25,188	2020	4
B2011	Exterior Wall Construction	Repaint exterior wall surfaces and soffits	13,398	SF	\$1.88	\$25,188	2028	4
B2021	Windows	Replace sealant at perimeter of windows and door frames	469	LF	\$11.25	\$5,276	2027	3
B3011	Roof Finishes	Replace Thermoplastic membrane	11,760	SF	\$18.75	\$220,500	2032	3
B3016	Galvanized Perimeter Gutters and Downspouts	Replace perimeter gutters and downspouts	493	LF	\$13.75	\$6,779	2032	3
Total Anticipated Expenditure for B Shell						\$282,931		

SECTION 4 - C INTERIORS

C10 INTERIOR CONSTRUCTION

DESCRIPTION

C1010 PARTITIONS

C1011 Fixed Partitions

The building contained 4" steel stud interior partitions spaced at 16" centers with 5/8" type "X" gypsum board and 1/2" plywood where sheer walls occur.

C1013 RETRACTABLE PARTITIONS

The building contained one vinyl retractable partition running east to west between the playing courts.

C1020 INTERIOR DOORS

C1021 Interior Doors

The building generally contained single hollow metal doors which are housed within metal frames (reference Photograph 13 in Appendix B). The doors all appeared to be one directional swing operation.

C1023 Interior Door Hardware

The doors contained aluminum hardware consisting of lever door handles and door closers, with kick plates at restroom doors.

C1030 FITTINGS SPECIALTIES

C1031 Fabricated Toilet Partitions

The restrooms contained plastic laminate floor mounted fixed partition cubicles. We noted 1 cubicle to the men's restroom and 2 cubicles to the women's restrooms (reference Photograph 21 in Appendix B).



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.

C1020 INTERIOR DOORS

C1021 Interior Doors

The interior doors appeared to be in good condition with no deficiencies noted. We do not anticipate any expenditure in relation to the interior doors during the cost study period. The expenditure for repainting the interior doors will be reflected in the interior wall section of the report.

C1023 Interior Door Hardware

The hardware at each of the doors appeared satisfactory with no issues of deterioration or failure noted generally throughout the building. The operation of the door handles, locks and hinged swing were noted to be in good condition. We anticipate door hardware to be repaired or renewed on an individual basis throughout the study period.

C1030 FITTINGS SPECIALTIES

C1031 Fabricated Toilet Partitions

The fabricated cubicles appeared to be in good condition. We do not anticipate any expenditure during the study period.

C20 STAIRS

DESCRIPTION

C2010 STAIR CONSTRUCTION

C2011 Regular Stairs

Within the building there were two straight-run staircases leading up to the stage (reference Photograph 12 in Appendix B). The staircases are made of a wood construction with closed risers and painted metal handrails. There was also one interior fixed aluminum ladder located in the city storage room which gave access to the low roof portion of the roof and an exterior fixed aluminum ladder on the south side of the building which gave access to the high roof level.

CONDITION

C2010 STAIR CONSTRUCTION

C2011 Regular Stairs

The staircases and fixed ladder appeared to be in a good condition with no issues reported or identified. We do not anticipate any actions in association with the staircases during the study period.

C30 INTERIOR FINISHES

DESCRIPTION

C3010 WALL FINISHES

C3012 Wall Finishes to Interior Walls

Interior walls throughout the building contained a painted gypsum wall board surface (reference Photographs 13 in Appendix B). The public restrooms contained ceramic 4" x 4" wall tiles to mid height (reference Photograph 17 in Appendix B). The kitchen and utility areas of the building contained fiberglass reinforced wall panels to approximately 7' high (reference Photograph 14 in Appendix B).

C3020 FLOOR FINISHES

C3024 Flooring

The building contained a combination of floor coverings which consisted of synthetic vinyl roll sports court, epoxy coating as well as ceramic 1" x 1" floor tiles within the restrooms (reference Photographs 3, 15 and 16 in Appendix B). The stage floor which was constructed out of wood had a painted floor. The storage rooms had an exposed sealed concrete floor finish.

C3030 CEILING FINISHES

C3031 Ceiling Finishes

There were painted gypsum board ceilings throughout the restrooms locker rooms and storage areas and formed to create soffits at various locations throughout the building (reference Photograph 16 in Appendix B).

C3032 Suspended Ceilings

The building had a suspended ceiling system present which was generally an exposed grid system. The system was supported with wires from the underside of the roof construction above. The exposed ceiling system contained 2' x 4' acoustical tile panels (reference Photograph 17 in Appendix B). The ceiling system incorporated lighting and air-handling component.

CONDITION

C3010 WALL FINISHES

C3012 Wall Finishes to Interior Walls

Interior wall finishes appeared to be in good condition generally throughout the building. The painted walls had been recently painted in 2012 and therefore with a typical EUL of eight-years repainting would be required multiple times in the study period. However we understand that painting is undertaken on an as needed basis, which makes it difficult to provide a forecast of expenditure. Therefore we have made recommendations to repaint the interior walls on an eight-year cyclical basis throughout the study period.

The ceramic wall tiles and grout appeared to be in good condition with no issues noted as they have been recently installed. We anticipate that the ceramic wall tiles will last beyond the study period; however we do recommend re-grouting the tile later in the study period to maintain its appearance.

The fiberglass wall panels appeared to be in good condition with no issues noted as they have been recently installed. We anticipate that the fiberglass wall panels will last beyond the study period due to the EUL of thirty five-years if appropriate cleaning and care is provided.

C3020 FLOOR FINISHES

C3024 Flooring

The synthetic vinyl roll sports court, epoxy coating and tile flooring appeared to be in good condition as they have been recently installed. Ceramic tile flooring has a typical EUL of thirty-years and therefore based on the EUL and observed conditions the ceramic tile flooring will last beyond the study period without replacement necessary. However we do recommend re-grouting the ceramic floor tile late in the study period to maintain its appearance. The epoxy floor coating appeared to be in good condition with no issues noted. Epoxy flooring has a typical EUL of fifteen-years and therefore based on the EUL we anticipate the flooring to be replaced late in the study period. The synthetic vinyl roll sports court has a typical EUL of twenty-five years based on the EUL and observed condition we do not anticipate a replacement in the twenty- year study period.

C3030 CEILING FINISHES

C3031 Ceiling Finishes

The painted gypsum ceilings appeared to be in good condition as it was recently installed. Painted surfaces usually have a typical EUL of eight-years; therefore we recommend that they are repainted at the same time as the wall surfaces.

C3032 Suspended Ceilings

The suspended ceiling systems appeared to be in fair to good condition overall. We do not anticipate a requirement for its replacement during the study period.

PROJECTED EXPENDITURES

Identified recommended works that are required during the twenty-year study period are detailed below. We have included a 25% allowance for professional fees and general contractor overhead/profit and management costs (where applicable).

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	19,464	SF	\$1.88	\$36,592	2020	4
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	19,464	SF	\$1.88	\$36,592	2028	4
C3023	Hardeners and Sealers	Replace epoxy floor coating	1,553	SF	\$5.00	\$7,765	2027	4
C3024	Flooring	RegROUT ceramic floor tiles as well as isolated ceramic wall tile areas within restrooms and locker rooms	3,232	SF	\$11.69	\$37,782	2027	4
Total Anticipated Expenditure for C Interiors						\$118,731		

SECTION 5 - D SERVICES

D10 CONVEYING SYSTEMS

DESCRIPTION

D1090 OTHER CONVEYING SYSTEMS

D1094 Conveyors

The building contained one short rise vertical wheelchair elevating system which serves the stage located at the east side of the gymnasium. The wheelchair lift is manufactured by Garaventa Lift and has a capacity of 750 lbs or 2 persons (reference Photograph 18 in Appendix B). Refer to the following table D10-1 for further details of the lift.

Table D10-1 Summary of the Lift

Equipment Type	Manufacturer	Model No.	Serial No.	No. of Landings	Speed (FPM)	Capacity (Pounds)	Year Install
Wheelchair Lift	Garaventa Lift	45946	Unknown	1	Unknown	750 lbs or 2 Persons	2012

Unknown = Access limited or equipment had no name plates present.

CONDITION

D1010 ELEVATORS AND LIFTS

D1094 Conveyors

The wheelchair lift appeared to be in good condition as it was recently installed. The typical EUL of a wheelchair lift is twenty-years however this lift does not appear to get a lot of use so we do not see any further action beyond routine maintenance and inspections through the end of the study period.

Performance measurements were not taken to evaluate system performance to industry standards as published by the National Elevator Industry Inc. (N.E.I.I.).

D20 PLUMBING

DESCRIPTION

D2010 PLUMBING FIXTURES

D2011 Water Closets

The building generally contains wall mounted vitreous china water closets which are tankless and have their own manual flush valves (reference Photograph 19 in Appendix B).

D2012 Urinals

The building contained vitreous china wall hung urinals with manual flush valves, within the men's restrooms (reference Photograph 20 in Appendix B).

D2013 Lavatories

The building contained wall hung vitreous china lavatories (reference Photograph 21 in Appendix B). The lavatories generally consisted of swan neck metering faucets with push type handles. Water is supplied via copper pipe and assumed drained through cast iron pipe work and fittings.

D2014 Sinks

We noted a stainless steel single and two three compartment sinks within the kitchen area (reference Photograph 22 in Appendix B). The sink generally contained double lever handle non-metering faucet.

D2020 DOMESTIC WATER DISTRIBUTION

D2021 Cold Water Service

Cold water piping throughout the building consisted of copper. 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 northwest side of the building.

D2022 Hot Water Service

Domestic hot water was generated via instantaneous electric and natural gas water heaters located in the custodial rooms, changing areas, and public restrooms (reference Photographs 23 and 24 in Appendix B).

Table D20-1 provides a summary of the water heaters:

Table D20-1 Summary of the Domestic Water Heating Equipment

Location	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	≈ Year of Installation
Kitchen storage room	Stiebel Eltron	Tempra 24 Plus	224199 8737 000770	Electric	N/A	2012
Custodial Closet	Stiebel Eltron	Mini 6	Unknown	Electric	N/A	2012
Custodial Room	Rinnai	RL94i	REU- VC2837FFUD -US	Natural Gas	N/A	2012
Unisex Restroom	Eemax	EX8208	578313	Electric	N/A	2012
Girls Restroom	Eemax	EX8208	Unknown	Electric	N/A	2012
Boys Restroom	Eemax	EX8208	Unknown	Electric	N/A	2012

Unknown = Access limited or equipment had no name plates present.

D2030 SANITARY WASTE

D2031 Waste Piping

Waste piping was not directly inspected, however based on typical construction methods available at the time of construction, the piping is suspected to be PVC and 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 any cracks in the china, therefore based upon observed conditions and with a typical EUL of thirty-five-years, we anticipate that there will be no requirement for their replacement during the study period. However we do recommend the flush valves are rebuilt mid to late term during the study period to maintain optimal performance.

D2012 Urinals

The urinal's and flush valves appeared to be in good condition. The urinals flushed properly and did not have any cracks in the china therefore based upon observed conditions and with a typical EUL of thirty-five-years, we anticipate that there will

be no requirement for their replacement during the study period. However we do recommend the flush valves are rebuilt mid to late term during the study period to maintain optimal performance.

D2013 Lavatories

The lavatories and faucets appeared to be in good condition. The sinks drained properly and did not have any cracks in the china, therefore based upon observed conditions and with a typical EUL of thirty-five-years, we anticipate that there will be no requirement for their replacement during the study period. However we do recommend the faucets are replaced mid to late term during the study period to maintain optimal performance.

D2014 Sinks

The sinks appeared to be in good condition. We anticipate that there will be no requirement for replacement within the study period. However we do recommend the faucets are replaced mid to late term during the study period to maintain optimal performance.

D2020 DOMESTIC WATER DISTRIBUTION

D2021 Cold Water Service

The domestic water system appeared to be in good condition. No major problems were observed that could be attributed to age and deferred maintenance.

D2022 Hot Water Service

The domestic water heaters appeared to be in good condition. They were observed to be functional and operating correctly, however insta-hot water heaters generally have a typical EUL of fifteen-years in therefore each water heater will require replacement to maintain efficiency after mid-term in the study period.

The hot water distribution pipes appeared to be in fair to good condition. We do not anticipate any expenditure within the cost study period.

D2030 SANITARY WASTE

D2031 Waste Piping

No visually apparent problems with the sanitary waste piping were observed.

D30 HVAC

DESCRIPTION

D3010 FUEL ENERGY SUPPLY SYSTEMS

D3012 Gas Supply System

There is natural gas service to the building. The pressure reducing station is located at the south east corner. Gas service is routed to the furnaces and water heater.

D3040 HEAT HVAC DISTRIBUTION SYSTEMS

D3041 Air Distribution Systems

The heated air is distributed throughout the building via metal ductwork. The air is routed through 8 rooftop mounted solar duct unit supplying preheated air to the package units which is then distributed throughout the building through metal grills recessed in the ceilings (reference Photograph 2 in Appendix B)..

D3042 Exhaust Ventilation Systems

The building contains eight turbine vent exhaust fans at roof level which are designed to remove air from the gymnasium as well as large vents at the north side of the gym connected to a thermostat used to let in fresh outside air (reference Photograph 25 in Appendix B).

D3050 HEAT TRANSFER TERMINAL AND PACKAGED UNITS

D3052 Package Units

Heating at the building is provided by three package rooftop units, which are manufactured by Reznor and have a range of 32,000 to 283,000 BTU/HR's of heating (reference Photograph 25 in Appendix B). Refer to the following table D30-1 for further details of the package units.

Table D30-1 provides a summary of the HVAC equipment:

Table D30-1 Summary of the HVAC Equipment

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year
Roof Level	Exhaust Fan	Greenheck	Unknown	Unknown	855 CFM	Electric	2012
Roof Level	Exhaust Fan	Greenheck	Unknown	Unknown	855 CFM	Electric	2012
Roof Level	Exhaust Fan	Greenheck	Unknown	Unknown	550 CFM	Electric	2012
Roof Level	Exhaust Fan	Greenheck	Unknown	Unknown	300 CFM	Electric	2012
Roof Level	Exhaust Fan	Greenheck	Unknown	Unknown	270 CFM	Electric	2012
Roof Level	Exhaust Fan	Greenheck	Unknown	Unknown	500 CFM	Electric	2012
Roof Level	Exhaust Fan	Greenheck	Unknown	Unknown	12,600 CFM	Electric	2012
Roof Level	Exhaust Fan	Greenheck	Unknown	Unknown	60 CFM	Electric	2012
Roof Level	Packaged Unit	Reznor	RDH350-S-2	EBLD78Y9N 04389	16 TON	Gas	2012
Roof Level	Packaged Unit	Reznor	RDH350-S-2	S0206U0 1044	16 TON	Gas	2012
Custodian Room	Inline Packaged Unit	Reznor	Unknown	Unknown	Unknown	Gas	2012

Unknown = Access limited or equipment had no name plates present.

D3060 HVAC INSTRUMENTATION AND CONTROLS

D3069 Other Controls & Instrumentation

The building users are able to control the room temperature via wall mounted electronic thermostats (reference Photograph 26 in Appendix B).

CONDITION

D3010 FUEL ENERGY SUPPLY SYSTEMS

D3012 Gas Supply System

No visually apparent problems with the gas distribution piping were observed at the building. No issues have been reported regarding performance; therefore we believe the supply will be serviceable, through the end of the study period.

D3040 HEAT HVAC DISTRIBUTION SYSTEMS

D3041 Air Distribution Systems

Only a small proportion of the ducting in the building was reviewed but that portion was noted to be in good condition with no deficiencies. We recommend that the duct work is cleaned every five-years. As the building only has a small amount of ductwork present, therefore cost of this work is anticipated to fall below the threshold level and therefore has not been included in the study period.

D3042 Exhaust Ventilation Systems

The exhaust fans appeared to be in good condition as they were just installed. The units are less than one-year old and appear to be functional, operational and well maintained. Based on a typical EUL of fifteen to twenty-years replacement will be necessary towards the end of the study period.

D3050 HEAT TRANSFER TERMINAL AND PACKAGED UNITS

D3052 Package Units

The package units appeared to be in good condition. The units are less than one-year old and appear to be functional, operational and well maintained. Based on a typical EUL of twenty-years replacement will be necessary towards the end of the study period.

D3060 HVAC INSTRUMENTATION AND CONTROLS

D3069 Other Controls & Instrumentation

The thermostat controls appeared to be in good condition and functional as they have recently been installed. We are unaware of any issues and therefore we do not anticipate their replacement during the cost study period.

D40 FIRE PROTECTION

DESCRIPTION

D4010 SPRINKLERS

D4011 Sprinkler Water Supply

The building is protected with an automatic wet-pipe fire suppression system utilizing standard pendent commercial sprinkler heads fixed to fire-line pipes which are supported via the upper structure. The system is monitored by water flow and tamper switches connected to the fire alarm system. The sprinkler main enters the building at the north elevation. The water main incoming is a 6" line at the point of service (reference Photograph 27 in Appendix B).

D4030 FIRE PROTECTION SPECIALTIES

D4031 Fire Extinguishers

Multipurpose portable wall mounted handheld fire extinguishers were provided throughout the building (reference Photograph 28 in Appendix B).

CONDITION

D4010 SPRINKLERS

D4011 Sprinkler Water Supply

The sprinkler system was observed to be in good condition and all inspections up to date. No visible corrosion or leaks were observed however with the sprinkler heads having a typical EUL of twenty-years and with time the fire sprinkler heads can decrease in functionality and therefore lessen the efficiency of the entire sprinkler system. We anticipate that there will be a requirement for their replacement late in the study period.

D4030 FIRE PROTECTION SPECIALTIES

D4031 Fire Extinguishers

Fire extinguishers appeared to be in good condition. We do not anticipate a requirement to replace any fire extinguishers during the study period, as we expect that they will be replaced on an as-needed basis.

D50 ELECTRICAL

DESCRIPTION

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

D5010 ELECTRICAL SERVICE & DISTRIBUTION

D5012 Low Tension Service & Dist.

The electrical supply to the school and gymnasium is provided by a 1,600-amp, 208/120-volt, 3-phase, 4-wire main switchboard located at the main school building.

The power supply then feeds to an 800-amp outdoor distribution panel located at the school which splits the power via disconnection switches, to the occupied space via multiple panel boards. Branch circuits run from these panel boards via wire/conduit to their respective devices (reference Photograph 29 in Appendix B). The Main Distribution Panel (MDP) is manufactured by Square D and is rated at 120/208 volts at 800 amps and is located at building L's patio. Branch panels are typically General Electric panelboards throughout the building and are rated at varying amps.

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 this type of building. 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 gym is provided by suspended 2' x 4' 6 lamp 32watt T8 fixtures with electronic ballasts. The remainder of the building's lighting is provided by other various pendants recessed and surface mounted fluorescent fixtures (reference Photographs 1, 14 and 16 in Appendix B). The fluorescent fixtures all contained T8 lamps and electronic ballasts. All of the in-room lighting is controlled via local switching in the respective rooms.

D5030 COMMUNICATIONS & SECURITY

D5033 Telephone Systems

Telephone and data system was present at the north side of the building within the storage room (reference Photograph 30 in Appendix B).

D5037 Fire Alarm Systems

The building is protected by a digital automatic fire detection alarm system. The main Fire Alarm Control Panel (FACP) is located within the school and is manufactured by Faraday. The FACP model is MPC-6000. An annunciation panel is located in the storage room and was also manufactured by Faraday. Addressable devices are located throughout the building such as smoke detectors, pull stations and fire bell. We understand that the system is monitored by Bay Alarm Company (reference Photograph 31 in Appendix B).

D5090 OTHER ELECTRICAL SYSTEMS

D5092 Emergency Light & Power Systems

Emergency exit signs are provided at exit routes from the building.

CONDITION

D5010 ELECTRICAL SERVICE AND DISTRIBUTION

D5012 Low Tension Service & Dist.

The major electrical equipment items appeared to be in fair condition and assumed original to the building. There was no indication of damage from short circuit or overload conditions. We were not provided preventative maintenance records for the main electrical equipment, and therefore we do recommend further evaluation of the equipment via an infrared electrical inspection which will highlight if high temperatures, excessive electrical resistance, failing components, ground faults and short circuiting issues exist.

We recommend budgeting for a cyclical allowance above and beyond normal annual electrical maintenance expenditures for cleaning the interiors of all enclosures, and infrared scans of connections, fuses, and breakers in switches, panel boards, and motor starters beginning at the start of the study period and repeated no more than every three-years thereafter. Any items identified as abnormal during the infrared scans should be corrected at that time.

Electrical panel boards generally have a EUL of thirty-years and based on the age of the panel boards present and their observed conditions we anticipate that there will be no requirement for their replacement during the study period.

D5020 LIGHTING & BRANCH WIRING

D5021 Branch Wiring Devices

The general receptacles and wiring appeared to be in good condition as it was just installed. We do not anticipate a requirement for their replacement during the cost study period.

D5022 Lighting Equipment

The interior lighting was observed in good condition and all fixtures were operating properly with no broken lenses or deteriorated housings. We understand that all of the light fixtures were newly installed and therefore apart from re-lamping and replacement of fixtures on an individual basis, no actions are anticipated during the study period.

D5030 COMMUNICATIONS & SECURITY

D5033 Telephone Systems

The existing telephone and data equipment was observed to be in good condition. Based on a typical EUL of fifteen-years replacement is recommended based on industry standards the final year in the study period.

D5037 Fire Alarm Systems

The fire detection and alarm systems are in good condition and installed in accordance with the code in effect at the time of construction. The date of when the fire alarm system devices were last tested was not reported to us, but is typically an annual requirement. Based on a typical EUL of twenty-years replacement is recommended based on industry standards the final year in the study period.

D5090 OTHER ELECTRICAL SYSTEMS

D5092 Emergency Light & Power Systems

Emergency exit signs appeared to be in good condition. Based on a typical EUL of twenty-years replacement is recommended based on industry standards the final year in the study period.

PROJECTED EXPENDITURES

Identified recommended works that are required during the twenty-year study period are detailed below. We have included a 25% allowance for professional fees and general contractor overhead/profit and management costs (where applicable).

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
D2011	Water Closets	Rebuild flush valves	8	EACH	\$238	\$1,904	2027	3
D2012	Urinals	Rebuild flush valves	2	EACH	\$238	\$476*	2027	3
D2013	Lavatories	Replace faucets	11	EACH	\$225	\$2,475	2022	3
D2013	Lavatories	Replace faucets	11	EACH	\$225	\$2,475	2032	3
D2022	Hot Water Service	Replace insta-hot water heaters	6	EACH	\$875	\$5,250	2026	3

D3042	Exhaust Ventilation System	Replace exhaust fans (8)	15,990	CFM	\$1.56	\$24,959	2027	3
D3052	Package Units	Replace package unit	16	TONS	\$2,449	\$39,344	2032	3
D3052	Package Units	Replace package unit	16	TONS	\$2,449	\$39,344	2032	3
D3052	Package Units	Replace inline package unit	4	TONS	\$2,449	\$9,796	2032	3
D4011	Sprinkler Water Supply	Replace sprinkler heads	16,640	SF	\$1.05	\$17,472	2032	1
D5033	Telephone System	Replace telephone system	16,640	SF	\$1.00	\$16,640	2027	3
D5037	Fire Alarm Systems	Replace fire alarm system	16,640	SF	\$5.00	\$83,200	2027	1
Total Anticipated Expenditure for D Services						\$246,016		

* Works to be undertaken with other flush valve replacements.

** Works to be undertaken with other exhaust ventilation system replacements.

SECTION 6 - E EQUIPMENT & FURNISHINGS

E20 FURNISHINGS

DESCRIPTION

E2010 FIXED FURNISHINGS

E2015 Fixed Multiple Seating

The building contained metal and wood constructed pull out bleacher style seating. The bleacher seating generally consisted of hardwood seats and metal treads (reference Photograph 32 in Appendix B).

CONDITION

E2010 FIXED FURNISHINGS

E2015 Fixed Multiple Seating

The fixed multiple seating appeared to be in good condition and functioned properly as it was recently installed. Fixed multiple seating usually have a typical EUL of twenty-years. With proper maintenance and care we expect the bleacher seating to last longer than twenty-years therefore replacement will not be anticipated during the cost study period.

PROJECTED EXPENDITURES

There are no projected expenditures for E Equipment & Furnishings during the study period.

SECTION 7 - G BUILDING SITEWORK

G20 SITE IMPROVEMENTS

DESCRIPTION

G2020 PARKING LOTS

G2021 Bases and Sub-Bases

The gymnasium buildings parking lot is located west of the building and is shared with the school. The parking lot has an asphalt surface with three central drains and white line striping denoting areas of parking stalls (reference Photograph 33 in Appendix B).

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 provides a summary of the site systems.

Table G20-1 Schedule of Site Systems

System Type	System Surface	Location	Measurement	No. of Parking Spaces	No. of ADA Parking Spaces
Parking Lot	Asphalt	West Parking Lot	3,870 SY	42	2

G2023 Curbs, Rails, & Barriers

The parking area was accented with integral curb and gutter sections. Integral curbs were 6" thick with a height of seven inches placed over a compacted sub grade.

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

Cast-in-place concrete paving was present throughout the school and gymnasium. We assume the concrete is supported via a flexible base of sand setting bed and compacted sub grade.

G2033 Exterior Steps

The building contained straight-run exterior staircases at the north and east elevations which allows emergency escape from the mezzanine level. The staircases are a reinforced cast in place concrete construction with safety tread. Tubular guard rails are present at either side of the staircase and top landing area. Both the steel structure and guard rails have a galvanized finish.

G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The Gymnasium contained a metal post chain link fence at the perimeter of the playing fields and parking area.

G2050 LANDSCAPING

G2056 Planters

Landscaping consisted of newly planted beds around the buildings perimeter and pedestrian walkways. The playing fields were lined with a number of mature hedges along the main roadway (reference Photograph 34 in Appendix B).

G2057 Irrigation Systems

The landscaped areas throughout the property are irrigated via an automatic drip irrigation system with ½" line. The irrigation system is supplied by below grade ½" PVC piping and controllers.

CONDITION

G2020 PARKING LOTS

G2021 Bases and Sub-Bases

The asphalt paved areas throughout the site appeared to be in good condition; there were no major signs of surface deterioration such as alligator cracking. All areas of the asphalt should undergo asphaltic-based seal coat and the re-application of surface markings every five-years to extend the life of the pavements and a full asphalt mill overlay and restriping at twenty-years.

G2023 Curbs, Rails, & Barriers

The concrete integral curb and gutter sections are in good condition. We do not anticipate replacement within the cost study period. However we do recommend installing approximately 97 linear feet of new curbing at the planted beds to the northwest entrance and southwest side of the parking area to prevent soil erosion. It appears there has been an effort made to prevent erosion with the use of temporary barriers.

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

The concrete pavements appeared to be in good condition. There are no major instances of cracking to the pavements. We recommend that the caulking is removed and new applied late in the study period, we have calculated one replacement period into the buildings expenditures.

G2033 Exterior Steps

The cast-in-place concrete steps appeared to be in good condition with no issues observed and no reported instances of disrepair. We do not anticipate replacement during the study period.

G2050 LANDSCAPING

G2056 Planters

The planted materials are in good 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 was observed to be in good condition, however not tested. No issues were observed and no reported instances of disrepair. We do not anticipate replacement during the study period only as-needed repair and replacement which is anticipated to fall below the threshold level.

G40 SITE ELECTRICAL UTILITIES

DESCRIPTION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

Exterior lighting at the building consisted of pole, surface and wall mounted light fixtures. The fixtures create a safe and well-illuminated environment at the perimeter of the building and parking area. We noted the following light fixtures at the building:

- + Surface mounted fixtures fixed to the metal canopies (reference Photograph 35 in Appendix B).
- + Surface mounted wall pack type fixtures generally located at the west elevation of the building (reference Photograph 36 in Appendix B).
- + Pole fixed flood light fixtures which are mounted on a metal pole with a 2' high concrete base which we estimate to be 26'-0" high in the parking lot.

CONDITION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

The exterior lights fixtures appeared to be in good condition as they were recently installed. Based on a typical EUL of twenty-years replacement is recommended based on industry standards the final year in the study period.

PROJECTED EXPENDITURES

Identified recommended works that are required during the twenty-year study period are detailed below. We have included a 25% allowance for professional fees and general contractor overhead/profit and management costs (where applicable).

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
G2021	Bases and Sub-Bases	Undertake seal coating including re-striping at the parking lot	3,870	SY	\$1.50	\$5,805	2017	3
G2021	Bases and Sub-Bases	Undertake seal coating including re-striping at the parking lot	3,870	SY	\$1.50	\$5,805	2022	3
G2021	Bases and Sub-Bases	Undertake seal coating including re-striping at the parking lot	3,870	SY	\$1.50	\$5,805	2027	3
G2021	Bases and Sub-Bases	Asphalt mill and overlay to include re-striping	3,870	SY	\$15.00	\$58,050	2032	3
G2023	Curbs, Rails & Barriers	Install concrete curb and gutter at parking area	97	LF	\$43.75	\$4,244	2013	3
G2031	Concrete Paving Sealant	Repair and replace concrete paving sealant	700	LF	\$11.25	\$7,875	2027	3
G4021	Fixtures & Transformers	Replace pole lighting	4	EACH	\$2,875	\$11,500	2032	3
Total Anticipated Expenditure for G Building Sitework						\$99,084		

Appendix A

Twenty-Year
Expenditure Forecast
2013 - 2032

20 YEAR EXPENDITURE FORECAST

New Hamilton Gym
5530 Nave Drive
Novato, 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	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total	Total	Combined Total												
						\$			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	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	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0									
B. SHELL																																											
B2011	Repaint exterior wall surfaces and soffits	8	7	13,398.00	SF	\$1.88	Capital Renewal	4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,188	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,376	\$50,376												
B2021	Replace sealant at perimeter of windows and door frames	15	14	469.00	LF	\$11.25	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,276	\$0	\$0	\$0	\$0	\$0	\$5,276	\$5,276													
B3011	Replace TPO roof membrane	20	19	11,760.00	SF	\$18.75	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$220,500	\$220,500	\$220,500													
B3016	Replace perimeter gutters and downspouts	20	19	493.00	LF	\$13.75	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,779	\$6,779	\$6,779													
B. SHELL SUB-TOTALS									\$0	\$0	\$0	\$0	\$0	\$0	\$25,188	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,276	\$25,188	\$0	\$0	\$0	\$227,279	\$0	\$282,931	\$282,931							
C. INTERIORS																																											
C3012	Repaint interior wall and ceiling surfaces	8	7	19,464.00	SF	\$1.88	Capital Renewal	4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,592	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73,184	\$73,184												
C3023	Replace epoxy floor covering	15	14	1,553.00	SF	\$5.00	Capital Renewal	4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,765	\$7,765												
C3024	RegROUT ceramic floor tiles as well as isolated ceramic wall tile areas within restrooms and locker rooms	15	14	3,232.00	SF	\$11.69	Capital Renewal	4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$37,782	\$37,782												
C. INTERIORS SUB-TOTALS									\$0	\$0	\$0	\$0	\$0	\$0	\$36,592	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,547	\$36,592	\$0	\$0	\$0	\$0	\$0	\$118,731	\$118,731	
D. SERVICES																																											
D2011	Rebuild flush valves	15	14	10.00	EACH	\$238.00	Routine Maintenance	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,380	\$2,380	\$2,380											
D2013	Replace faucets	10	9	11.00	EACH	\$225.00	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,475	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,475	\$0	\$4,950	\$4,950											
D2022	Replace insta-hot water heaters	15	14	6.00	EACH	\$875.00	Energy & Sustainability	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,250	\$0	\$0	\$0	\$0	\$0	\$0	\$5,250	\$5,250												
D3042	Replace exhaust fans (8)	15	14	15,990.00	CFM	\$1.56	Energy & Sustainability	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$24,959	\$24,959	\$24,959											
D3052	Replace rooftop package unit	20	19	16.00	TONS	\$2,449.00	Energy & Sustainability	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39,184	\$39,184	\$39,184											
D3052	Replace rooftop package unit	20	19	16.00	TONS	\$2,449.00	Energy & Sustainability	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39,184	\$39,184	\$39,184											
D3052	Replace inline package unit	20	19	4.00	TONS	\$2,449.00	Energy & Sustainability	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,797	\$9,797	\$9,797											
D4011	Replace sprinkler heads	20	19	17,472.00	SF	\$1.05	Capital Renewal	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,472	\$17,472	\$17,472												
D5012	Preventative maintenance of electrical equipment	3	2	1.00	LS	\$500.00	Routine Maintenance	3	\$0	\$0	\$500	\$0	\$0	\$500	\$0	\$0	\$500	\$0	\$0	\$500	\$0	\$0	\$500	\$0	\$0	\$500	\$0	\$0	\$0	\$3,000	\$3,000	\$3,000											
D5033	Replace telephone system	15	14	16,640.00	SF	\$1.00	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16,640	\$16,640												
D5037	Replace fire alarm system	15	14	16,640.00	SF	\$5.00	Capital Renewal	1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$83,200	\$83,200	\$83,200											
D. SERVICES SUB-TOTALS									\$0	\$0	\$500	\$0	\$0	\$500	\$0	\$0	\$500	\$2,475	\$0	\$500	\$0	\$5,250	\$127,679	\$0	\$0	\$500	\$0	\$0	\$500	\$0	\$0	\$0	\$108,112	\$0	\$246,016	\$246,016							
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	\$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	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
G. BUILDING SITEWORK																																											
G2021	Undertake seal coating including re-striping at the parking lot	5	4	3,870.00	SY	\$1.50	Routine Maintenance	3	\$0	\$0	\$0	\$0	\$5,805	\$0	\$0	\$0	\$0	\$5,805	\$0	\$0	\$0	\$0	\$0	\$5,805	\$0	\$0	\$0	\$0	\$0	\$17,415	\$17,415												
G2021	Asphalt mill and overlay to include re-striping	20	19	3,870.00	SY	\$15.00	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,050	\$58,050	\$58,050												
G2023	Install concrete curb and gutter at parking area	40	0	97.00	LF	\$43.75	Deferred Maintenance	3	\$4,244	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,244	\$0	\$4,244												
G2031	Replace sealant to paving construction joints	15	14	700.00	LF	\$11.25	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,875	\$7,875	\$7,875											
G4021	Replace pole lighting	20	19	4.00	EACH	\$2,875.00	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,500	\$11,500	\$11,500												
G. BUILDING SITEWORK SUB-TOTALS									\$4,244	\$0	\$0	\$0	\$5,805	\$0	\$0	\$0	\$5,805	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,880	\$0	\$0	\$0	\$0	\$69,550	\$4,244	\$94,840	\$99,084
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	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Expenditure Totals per Year									\$4,244	\$0	\$500	\$0	\$5,805	\$500	\$0	\$61,780	\$500	\$8,280	\$0	\$500	\$0	\$5,250	\$192,182	\$61,780	\$0	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$404,941	\$4,244	\$742,518	\$746,762				
Total Cost (Inflated @ 4% per Yr.)									\$4,244	\$0	\$541	\$0	\$6,791	\$608	\$0	\$81,298	\$684	\$11,785	\$0	\$81,298	\$684	\$11,785	\$0	\$770	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$974	\$0	\$853,150	\$4,244	\$1,409,402	\$1,413,646			

Appendix B

Photographs



Photograph No. 1

View of the steel roof construction supporting the low flat roof over the main hall. Also shows suspended 2' x 4' T8 lights.



Photograph No. 2

View of some ductwork supplying the building. Also shows the underside of the pitched roof construction in the background.



Photograph No. 3

View of the exposed steel frame showing both wall and roof members. Also shows the vinyl roll floor for the sports court.



Photograph No. 4

View of the exterior walls. Non load bearing with a painted exterior insulated finish system.



Photograph No. 5

View of a vaulted steel framed window with single pane glazing. Also shows site paving.



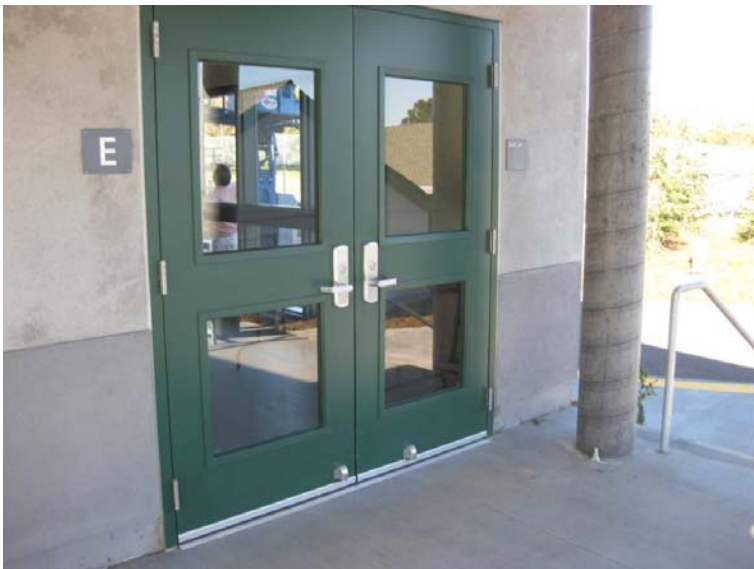
Photograph No. 6

View of two steel framed window units.



Photograph No. 7

View of the storefront serving as the main building entrance on the west side.



Photograph No. 8

View of a double hollow metal exterior glazed door.



Photograph No. 9

View of a single hollow metal exterior non-glazed door.



Photograph No. 10

View of the low sloped roof covering consisting of the TPO membrane adhered to metal decking.



Photograph No. 11

View of the pitched lean to roof with asphalt shingle covering attached over insulation to a plywood deck.



Photograph No. 12

View of the wood staircase with tubular metal handrails.



Photograph No. 13

View of an interior single hollow metal door with code access system.



Photograph No. 14

View of the fiberglass reinforced wall panels and wall mounted light fixtures.



Photograph No. 15

View of the epoxy floor coating in the kitchen.



Photograph No. 16

View of the ceramic floor tiles, wall tiles, painted gypsum board ceilings and light fixtures in the women's restroom



Photograph No. 17

View of the suspended ceiling system with 2'x4' acoustical tile panels.



Photograph No. 18

View of the short rise vertical wheelchair elevating system.



Photograph No. 19

View of the vitreous china ADA compliant water closet.



Photograph No. 20

View of the vitreous china urinals and fixed toilet partition within men's restroom.



Photograph No. 21

View of the vitreous china lavatories in men's restroom.



Photograph No. 22

View of one of the three compartment stainless steel sinks in the kitchen.



Photograph No. 23

View of the natural gas water heater located in a custodial room.



Photograph No. 24

View of an electric water heater serving the restrooms.



Photograph No. 25

View of one of the rooftop packaged air conditioning units and centrifugal exhaust fan.



Photograph No. 26

View of a typical electronic thermostat located throughout the building allowing the occupants to adjust the temperature.



Photograph No. 27

View of a pendant sprinkler head, part of the wet pipe sprinkler system serving the building.



Photograph No. 28

View of a typical fire extinguisher located throughout the building.



Photograph No. 29

View of a panelboard occupying a custodial space.



Photograph No. 30

View of the enclosed telephone system located in a custodial room.



Photograph No. 31

View of the fire alarm control panel.



Photograph No. 32

View of one of the multiple seating benches situated in the main hall.



Photograph No. 33

View of the parking lot serving the gymnasium and neighboring school. Also shows pole mounted parking lot lights.



Photograph No. 34

View of a planter along the north side of the building.



Photograph No. 35

View of an external surface mounted canopy light.



Photograph No. 36

View of an external wall mounted light.

Appendix C

Asset Inventory

Location	Facility	Location of Asset	Life Cycle Code	Type	Equipment Type	Manufacturer	Model No.	Serial No.	Tag	Fuel Type	Capacity / Rating	Speed (FPM)	No. of Landings	Year Manufacture
New Hamilton Gym	New Hamilton Gym	Stage Area	D1094	Conveyors	Wheelchair Lift	Garaventa Lift	45946	Unknown		Electric	750lbs or 2 persons	Unknown		2012
New Hamilton Gym	New Hamilton Gym	Kitchen Storage Room	D2022	Hot Water Service	Water Heater	Stiebel Eltron	Tempra 24 Plus	2241998737000770		Electric	N/A			2012
New Hamilton Gym	New Hamilton Gym	Custodial Closet	D2022	Hot Water Service	Water Heater	Stiebel Eltron	Mini 6	Unknown		Electric	N/A			2012
New Hamilton Gym	New Hamilton Gym	Custodial Room	D2022	Hot Water Service	Water Heater	Rinnai	RL94i	REU-VC2837FFUD-US		Natural Gas	N/A			2012
New Hamilton Gym	New Hamilton Gym	Unisex Restroom	D2022	Hot Water Service	Water Heater	Eemax	EX8208	578313		Electric	N/A			2012
New Hamilton Gym	New Hamilton Gym	Girls Restroom	D2022	Hot Water Service	Water Heater	Eemax	EX8208	Unknown		Electric	N/A			2012
New Hamilton Gym	New Hamilton Gym	Boys Restroom	D2022	Hot Water Service	Water Heater	Eemax	EX8208	Unknown		Electric	N/A			2012
New Hamilton Gym	New Hamilton Gym	Roof Level	D3042	Exhaust System	Exhaust Fan	Greenheck	Unknown	Unknown		Electric	855 CFM			2012
New Hamilton Gym	New Hamilton Gym	Roof Level	D3042	Exhaust System	Exhaust Fan	Greenheck	Unknown	Unknown		Electric	855 CFM			2012
New Hamilton Gym	New Hamilton Gym	Roof Level	D3042	Exhaust System	Exhaust Fan	Greenheck	Unknown	Unknown		Electric	550 CFM			2012
New Hamilton Gym	New Hamilton Gym	Roof Level	D3042	Exhaust System	Exhaust Fan	Greenheck	Unknown	Unknown		Electric	300 CFM			2012
New Hamilton Gym	New Hamilton Gym	Roof Level	D3042	Exhaust System	Exhaust Fan	Greenheck	Unknown	Unknown		Electric	270 CFM			2012
New Hamilton Gym	New Hamilton Gym	Roof Level	D3042	Exhaust System	Exhaust Fan	Greenheck	Unknown	Unknown		Electric	500 CFM			2012
New Hamilton Gym	New Hamilton Gym	Roof Level	D3042	Exhaust System	Exhaust Fan	Greenheck	Unknown	Unknown		Electric	12,600 CFM			2012
New Hamilton Gym	New Hamilton Gym	Roof Level	D3042	Exhaust System	Exhaust Fan	Greenheck	Unknown	Unknown		Electric	60 CFM			2012
New Hamilton Gym	New Hamilton Gym	Roof Level	D3052	Exhaust System	Package Unit	Reznor	RDH350-S-2	EBLD78Y9N04389		Gas	16 TON			2012
New Hamilton Gym	New Hamilton Gym	Roof Level	D3052	Exhaust System	Package Unit	Reznor	RDH350-S-2	S0206U01044		Gas	16 TON			2012
New Hamilton Gym	New Hamilton Gym	Custodian Room	D3052	Exhaust System	Inline Package Unit	Reznor	Unknown	Unknown		Gas	Unknown			2012

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 Novato (where possible), and reviewed the following documentation:

New Construction at the Hamilton Elementary School

Construction Drawings dated November 18, 2010 (Electronic Format) T-1 through 12B

.

Appendix E

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: $R = \text{Thickness (in inches)} / K$

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.