Citywide
Facility Condition Assessment

Report of

Facility Condition Assessment

For
City of Novato
Council Chambers
901 Sherman Avenue, Novato, CA

March 4, 2013

Provided By:

Faithful+Gould, Inc.

Provided For:

City of Novato

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APPENDICES

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 the Council Chambers building located at 901 Sherman Avenue, 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. Andrew McClintock 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 Nick R. Reposa, Custodial Supervisor for the City of Novato.

Overview of the Building and Site

BUILDING SUMMARY

Table EX-1 Facility Details

BUILDING NAME:	Council Chambers		LAT/LONG:	38°.06'22.00"N / 122°.34'05.95"W	
ADDRESS:	901 Sherman Avenue, Novato, CA 94945		OCCUPANCY STATUS: OCCUPIED ☒ VACANT ☐ PARTIALLY ☐		
HISTORIC DISTRICT:	YES ☐	NO ☒	HISTORIC BUILDING:	YES ☒	NO ☐
GROSS SQUARE FOOTAGE OF BUILDING:	4,475		GROSS SQUARE FOOTAGE OF LAND:	22,500 (estimated) Whole Facility	
CURRENT REPLACEMENT VALUE:	$2,560,000		YEAR OF CONSTRUCTION:	1896 (major renovation in 2010)	
BUILDING USE:	Community Events / Council Meetings		NUMBER OF STORIES:	1	

BUILDING DESCRIPTION

Council Chambers is located at 901 Sherman Avenue and was originally built in circa 1896 and was the site of Novato's first Presbyterian Church. The church was built in the Victorian gothic style of architecture. The building was fully renovated in 2010 and is now used for community use, City Council meetings and other public events. The building also incorporates an outdoor patio area and civic green, as well as being a major historic building within the City of Novato.

The building has a wood framed structure supported by newly installed concrete grade beam footings with drilled piers. The first floor constructions consist of raised wood floors which are supported by a combination of helical piers and wood beams. The exterior walls are of wood stud with acoustical insulation and wood siding at the exterior. The roof covering consists of a composite slate shingle which also incorporates photovoltaic solar modules. Windows consisted of a combination of single pane historic arched wood units and aluminum insulated double hung units. Doors consisted of wood entrance doors and aluminum glazed doors.

The interior finishes of the building contained a wood plank, ceramic tile and vinyl floor coverings, painted walls and ceiling, as well as acoustical wall and ceiling panels.

The HVAC for the building is provided through three split-systems with outdoor air handler units and indoor furnaces. The audio and visual room has

its own dedicated air conditioning split-system. Hot water is provided by one domestic instant water heater.

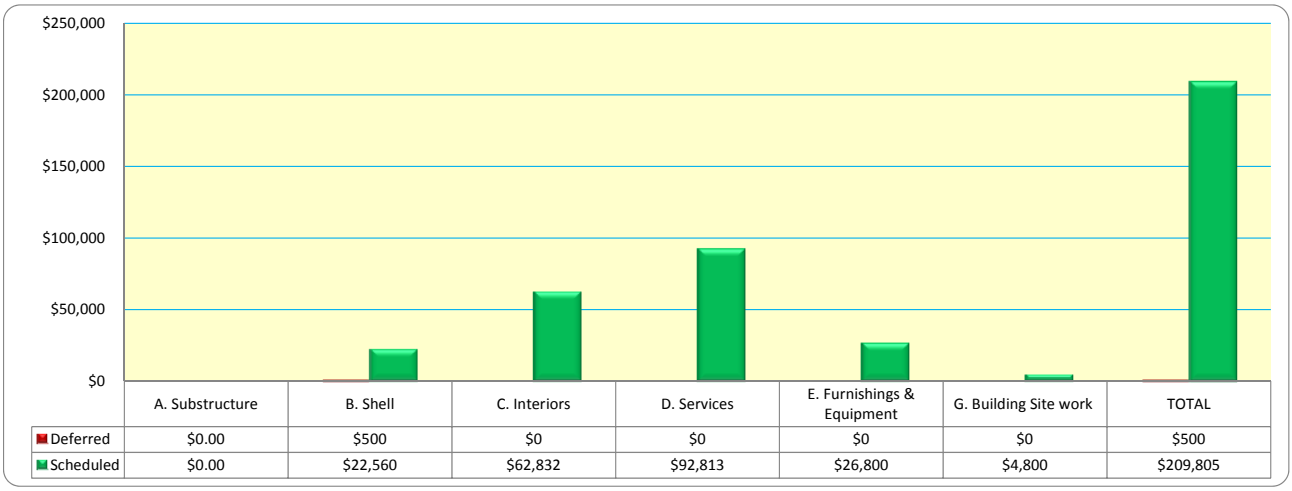
The Main Distribution Panel is a Square D unit that is rated at 120/240 volts at 600-amps, 1-phase, 3-wire. The interior lighting is provided by recessed and surface mounted 2' x 4', 1' x 4', and 2' fluorescent fixtures with F32 T8 32W lamps watt bulbs and electronic ballasts. In addition there are also compact fluorescent 6" and 4" white open lensed recessed down lights.

The building contains wet-pipe sprinkler, fire alarm and intruder security alarm systems. 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 $210,305.

Chart EX-1 Building Expenditure Summary [1, 2, 3 & 4]



	A. Substructure	B. Shell	C. Interiors	D. Services	E. Furnishings & Equipment	G. Building Site work	TOTAL
Deferred	$0.00	$500	$0	$0	$0	$0	$500
Scheduled	$0.00	$22,560	$62,832	$92,813	$26,800	$4,800	$209,805

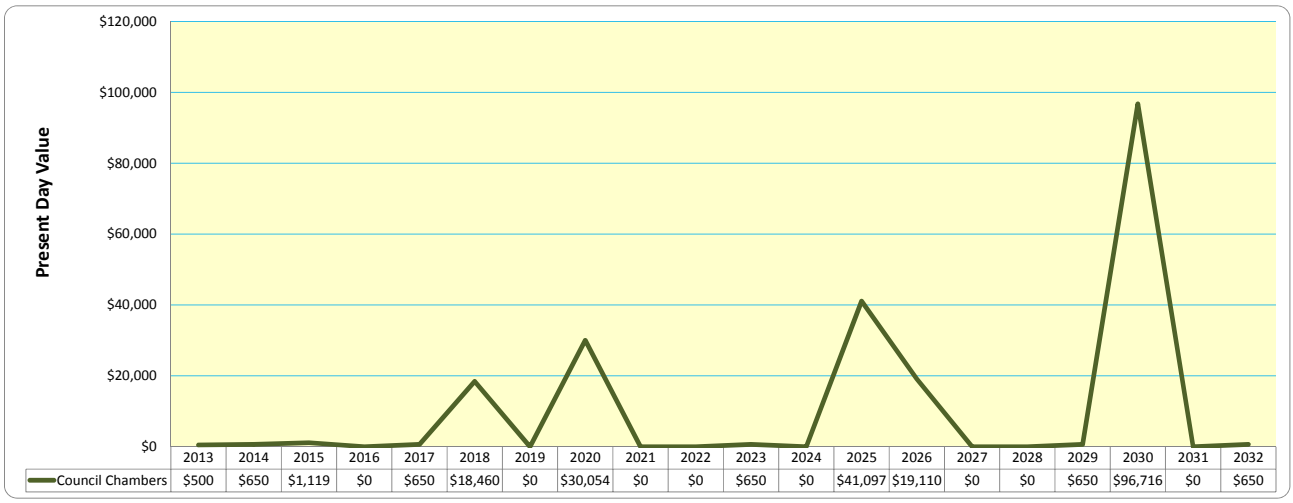
KEY FINDINGS

- B Shell: Repaint exterior wall surfaces at an estimated cost of $11,280 in years 2018 and 2026
- C Interiors: Repaint interior wall surfaces at an estimated cost of $6,580 in years 2018 and 2026
- C Interiors: Refinish wood plank floor covering at an estimated cost of $20,160 in years 2020 and 2030
- D Services: Replace HVAC equipment at a combined estimated cost of $28,086 in year 2030
- D Services: Replace sprinkler heads at an estimated cost of $4,699 in year 2030
- D Services: Replace telephone, fire alarm and data systems at a combined estimated cost of $34,950 in year 2025

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 20 year study period
[3] An allowance of 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]



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Council Chambers	$500	$650	$1,119	$0	$650	$18,460	$0	$30,054	$0	$0	$650	$0	$41,097	$19,110	$0	$0	$650	$96,716	$0	$650

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 20 year study period
[3] An allowance of 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 Council Chambers within year 2030 primarily due to 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 impeding 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.

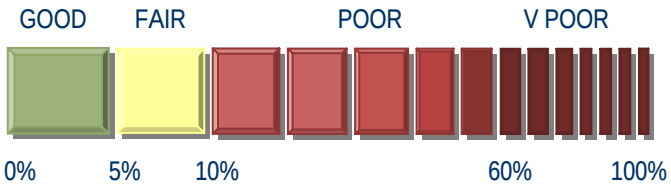
- G Building Sitework: As-needed component repair and replacement to irrigation systems

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:

$$FCI = \frac{\text{Maintenance, Repair, and Replacement Deficiencies of the Facility(s) (DM)}}{\text{Current Replacement Value of the Facility(s) (CRV)}}$$



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) [1, 2, 3 & 4]	FCI Ratio	Property Condition Rating
Council Chambers	Current FCI Ratio	4,475	$572	$2,560,000	$500	0.0%	GOOD
Council Chambers	Year 20 FCI Ratio	4,475	$572	$2,560,000	$210,305	8.2%	FAIR

[1] All costs presented in present day values
[2] Costs represent total anticipated values over the 20 year study period
[3] An allowance of 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 stays in the GOOD condition rating throughout the study period.

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

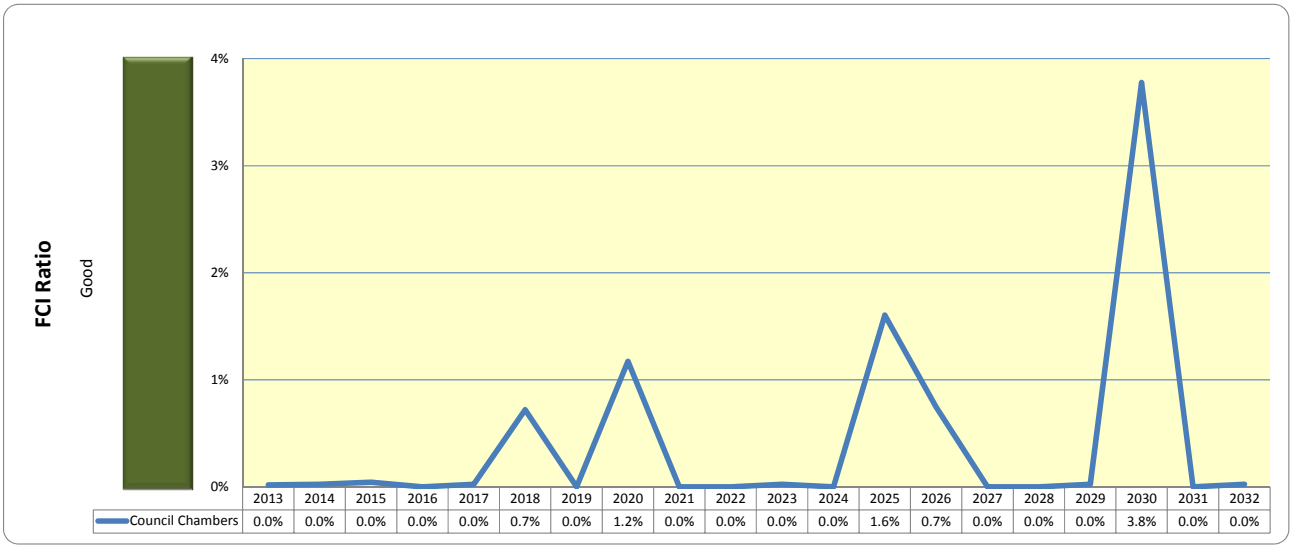
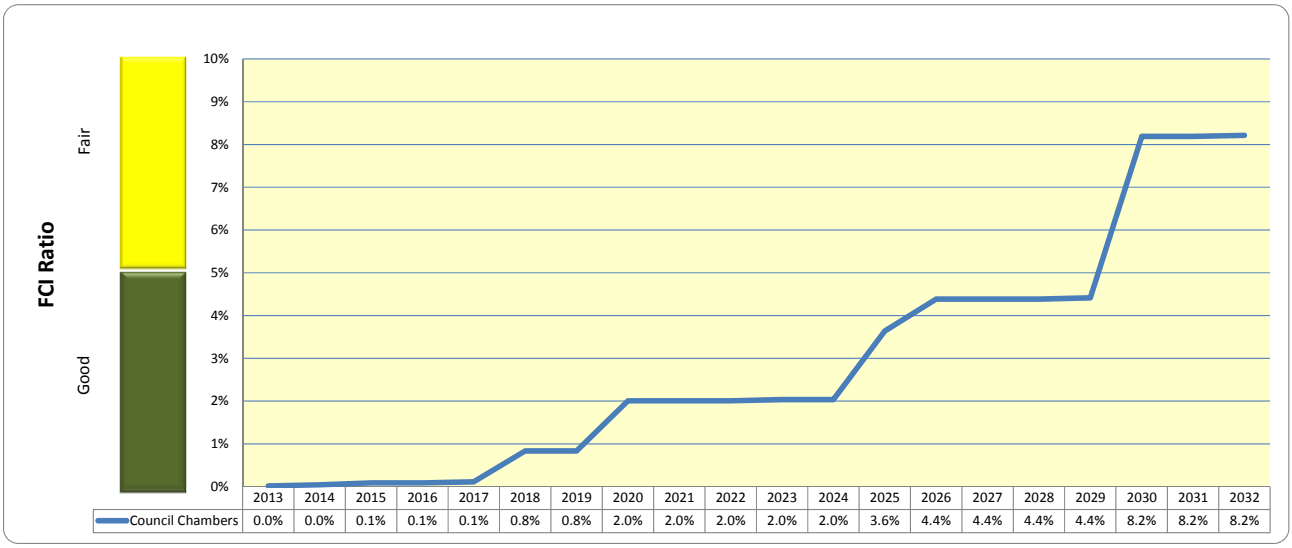


Chart EX-4 indicates the cumulative effects of the FCI ratio over the study period assuming the required funds and expenditures are NOT provided to address the identified works and deferred maintenance each year. The results of the study indicate at this current time the building is well maintained, with a facility condition index rating within the GOOD condition; however this rating will fall into the FAIR condition rating in 2030, where it will remain for the rest of the study period.

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



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Council Chambers	0.0%	0.0%	0.1%	0.1%	0.1%	0.8%	0.8%	2.0%	2.0%	2.0%	2.0%	2.0%	3.6%	4.4%	4.4%	4.4%	4.4%	8.2%	8.2%	8.2%

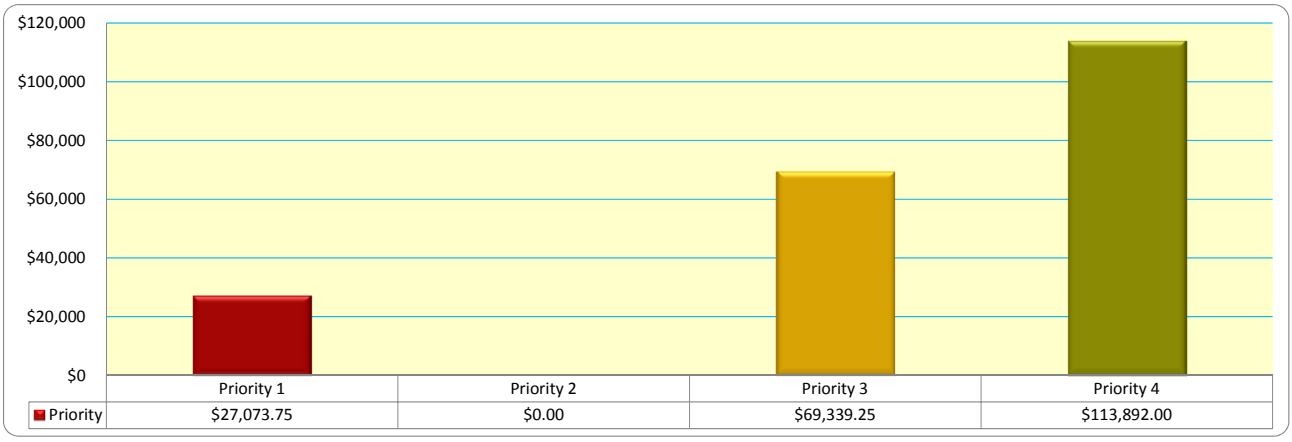
PRIORITIZATION OF WORK

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 Image/Reputation:	• Used to maintain the appearance of a system due to image/reputation

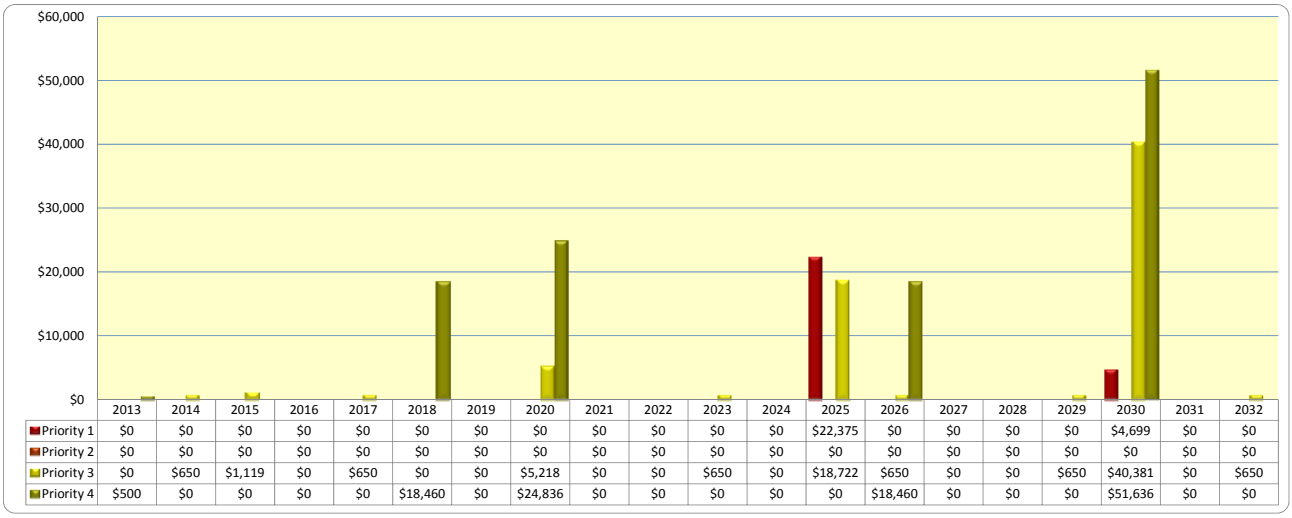
Chart EX-5 illustrates the breakdown of expenditure according the priority coding providing an opportunity to strategically plan and effectively direct funding to the highest priority.

Chart EX-5 Cumulative Prioritization of Work



Priority 4 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 maintaining the appearance of the building.

Chart EX-6 Year by Year Cumulative Prioritization of Work



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Priority 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$22,375	$0	$0	$0	$0	$4,699	$0	$0
Priority 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Priority 3	$0	$650	$1,119	$0	$650	$0	$0	$5,218	$0	$0	$650	$0	$18,722	$650	$0	$0	$650	$40,381	$0	$650
Priority 4	$500	$0	$0	$0	$0	$18,460	$0	$24,836	$0	$0	$0	$0	$0	$18,460	$0	$0	$0	$51,636	$0	$0

Chart EX-6 illustrates that there is one main expenditure year for Priority 3 and 4, both towards the end of the study period.

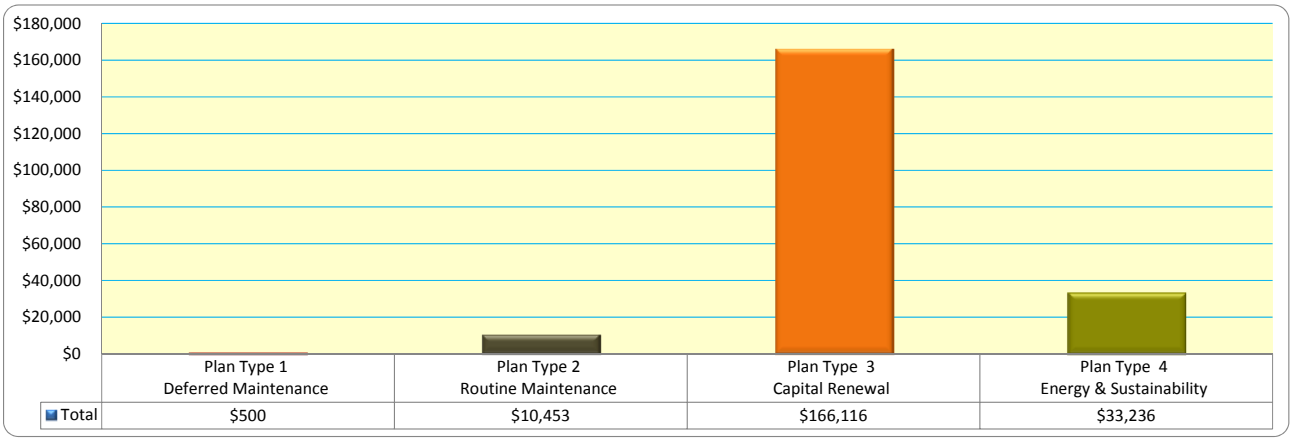
PLAN TYPES

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:

Plan Type 1 Deferred Maintenance	• 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	• Maintenance that is planned and performed on a routine basis to maintain and preserve the condition
Plan Type 3 Capital Renewal	• Planned replacement of building systems that have reached the end of their useful life
Plan Type 4 Energy & Sustainability	• When the repair or replacement of equipment or systems are recommended to improve energy and sustainability performance

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.

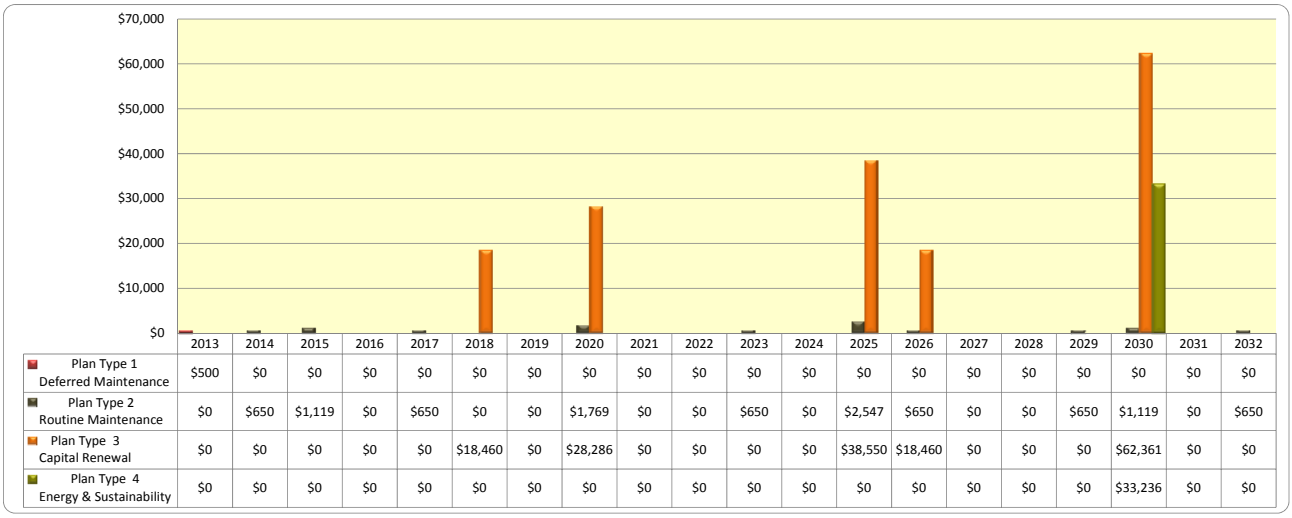
Chart EX-7 Cumulative Expenditure by Plan Type



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



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Plan Type 1 Deferred Maintenance	$500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Plan Type 2 Routine Maintenance	$0	$650	$1,119	$0	$650	$0	$0	$1,769	$0	$0	$650	$0	$2,547	$650	$0	$0	$650	$1,119	$0	$650
Plan Type 3 Capital Renewal	$0	$0	$0	$0	$0	$18,460	$0	$28,286	$0	$0	$0	$0	$38,550	$18,460	$0	$0	$0	$62,361	$0	$0
Plan Type 4 Energy & Sustainability	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$33,236	$0	$0

Chart EX-8 illustrates that there is a number of expenditure years for Priority 3 coding, throughout 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 wall footings/grade beams. The grade beams are supported by reinforced concrete driller piers that are 18" in diameter. The reviewed drawings detail the compressive strength of the concrete is 3,000 pounds per square inch (psi). We understand that the grade beam concrete footing at the perimeter of the council chamber section of the building has a waterproofing and drainage membrane added to the exterior surface below grade, with a drainage channel at the base of the footing.

A1030 SLABS-ON-GRADE

A1031 Standard Slab on Grade

The annex section of the building within the basement crawl space consisted of cast-in-place concrete slab-on-grade, reinforced with welded wire fabric (reference Photograph 1 in Appendix B). The reviewed drawings detailed that the raised first floor support posts rest of the slab-on-grade. We assume this concrete slab was the original first floor construction before the first floor was raised during the renovation in 2010. We assume that the concrete floor slab consisted of cast-in-place concrete slab-on-grade, reinforced with welded wire fabric. Due to the absence of structural drawings we are unable to confirm its thickness; however we assume it to be 4" thick with reinforcement at 16" centers incorporating sand bedding with a membrane.

CONDITION

A1010 STANDARD FOUNDATIONS

A1011 Wall Foundations

The footings are partly visible at the exterior, and fully visible within the crawl space below the annex section of the building, and therefore the sections that were observed were in good condition having been constructed as part of a major renovation in 2010. There are no anticipated replacement actions during the study period.

A1030 SLABS-ON-GRADE

A1031 Standard Slab on Grade

The slab-on-grade was observed to be in good condition. 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.

B1010 FLOOR CONSTRUCTION

B1012 Upper Floor Construction

The first floor level of the building consisted of a raised wood floor construction. The floor within the council chamber section of the building contains helical anchors that are positioned on a grid configuration, that support 4" x 8" wood beams which in turn support 2" x 10" wood floor joists, spaced at 16" centers. The raised wood floor construction at the annex section of the building is supported via the exterior grade beam and also two centrally located 8" x 4" beams supported by 4" x 4" wood posts (reference Photographs 1 and 2 in Appendix B). These two wood beams support floor joists that are 1'-0" x 2" that are spaced at 1'-2" centers. We understand as part of the construction of the floor within the annex section of the building that it was raised 4'-7".These two types of raised wood floor constructions both have crawl spaces below, however only the annex section appeared to be accessible through a vented access door at the north elevation.

B1020 ROOF CONSTRUCTION

B1022 Pitched Roof Construction

The steep-sloped roof sections consist of pre-engineered roof trusses which are generally spaced at 24" centers at each section of the building forming a gable end roof detail at the council chamber and hip roof detail at the annex building (reference Photographs 3 and 4 in Appendix B). The roof covering can be viewed in the roof covering section of this report.

The council chamber section of the building contained a clock tower and the annex section a cupola, both are of wood framed construction and have hip roof constructions.

CONDITION

B1010 FLOOR CONSTRUCTION

B1012 Upper Floor Construction

The raised wood floor constructions appeared to be in good condition, and fully visible within the crawl space below the annex section of the building, and therefore the sections that were observed were in good condition having been constructed as part of a major renovation in 2010. There are no anticipated replacement actions during the study period.

B1020 ROOF CONSTRUCTION

B1022 Pitched Roof Construction

The steep-sloped roof as well as the clock tower and cupola constructions appeared to be in good condition. There were no visible signs of failure noted and therefore the sections that were observed were in good condition having been constructed as part of a major renovation in 2010. There are no anticipated replacement actions during the study period.

B20 EXTERIOR ENCLOSURES

DESCRIPTION

The description of the respective exterior 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.

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

The building was enclosed with load bearing wood stud wall constructions which contained horizontal wood siding at the exterior. The reviewed drawings detailed that the exterior walls at the council chamber section of the building were double wood stud walls with two layers of 5/8" gypsum board at the interior, batt insulation between the inner set of wood frame studs, a 1" air space, ½" plywood sheathing, batt insulation between the outer set of wood frame, vapor barrier and then outer wood siding. The annex section of the building consisted of a single wood frame studs wall construction with 5/8" gypsum board ½" plywood sheathing, batt insulation between the wood frame studs, vapor barrier and outer wood siding. The size of the wood studs at both of the wall constructions could not be ascertained; however we assume that they are 2" x 8" studs that are spaced at 16" centers.

The horizontal wood siding at the council chamber side of the building consists of a drop detail which is composed of boards narrowed along the upper edges to fit into grooves in the lower edges. The siding at the annex section of the building contained shiplap detail which is comprised of boards joined edge to edge with overlapping joints. Both of the wood siding has a painted finish applied (reference Photographs 6 through 8 in Appendix B).

At high level we noted wooden wide vented soffits and fascias which are part of the underside of the overhanging roof structures at each section of the building (reference Photographs 6 and 7 in Appendix B). Some of the detailing is original and decorative with the fascia made from redwood. The soffits contained sheet slotted vent strip to allow and promote cross ventilation through the roof space.

B2020 EXTERIOR WINDOWS

B2021 Windows

The building contained a mixture of window units, with the historic section of the building (council chamber) containing wood arched fixed sash window units with single pane glazing (reference Photographs 6, 7 and 10 in Appendix B) and the lobby and annex sections containing white anodized aluminum window units with fixed transom type and double hung type openable sections with insulated glazing (reference Photographs 11 and 12 in Appendix B).

B2030 EXTERIOR DOORS

B2031 Glazed Doors & Entrances

The lobby contained glazed aluminum doors with a white factory finish at both the north and south elevations (reference Photograph 11 in Appendix B). The doors contained pull handles at the exterior and emergency push bars at the interior and door closing devices.

B2039 Other Doors & Entrances

The building contained one solid double wood entrance doors at the council chambers and one single hollow metal door at the electrical room (reference Photographs 13 and 42 in Appendix B). The entrance contained pull handles at the exterior and emergency push bars at the interior and the electrical room contained lever handles.

CONDITION

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

The exterior wall construction appeared to be in good condition with no signs of deterioration, water ingress or general failure noted. We understand that the wood siding, soffits and fascia surfaces were last painted in 2010 at the time of the renovation and therefore based on their current observed conditions and the typical EUL of eight-years repainting of the painted surfaces are recommended towards mid-term in the study period and then every eight-years after to maintain the exterior appearance of the building. One exception was observed opposite the outdoor condenser units belonging to the split-system air conditioners. The painted surface has started to deteriorate in this section with blistering and peeling paint present (reference Photograph 9 in Appendix B). We recommend that this section is isolated, prepared and repainted immediately to maintain the appearance of the building as a one off re-painting action.

B2020 EXTERIOR WINDOWS

B2021 Windows

The exterior window units appeared to be in good condition, although the single-pane design of the majority of the window units offers limited thermal insulation. Not all of the windows were assessed, however overall we did not find any major deficiencies and no areas of water ingress through the system. We understand that the aluminum window units were newly installed and the historic arched windows restored in 2010 at the time of the renovation and therefore based on a typical EUL of thirty-years these window units will last beyond the study period with no major replacement actions necessary. We do recommend that the wood windows are repainted during the study period to maintain their appearance. The cost of this work has been included within the exterior wood siding repainting works.

B2030 EXTERIOR DOORS

B2031 Glazed Doors & Entrances

The aluminum glazed entrance doors appeared to be in good condition. We do not anticipate a requirement for their replacement during the study period based on a typical EUL of thirty-years, however we recommend that the doors are regularly maintained and refinished as needed along with the exterior wall construction.

B2039 Other Doors & Entrances

The wood and 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 based on a typical EUL of thirty-years, however we recommend that the doors are regularly maintained and refinished as needed along with the exterior wall construction.

B30 ROOFING

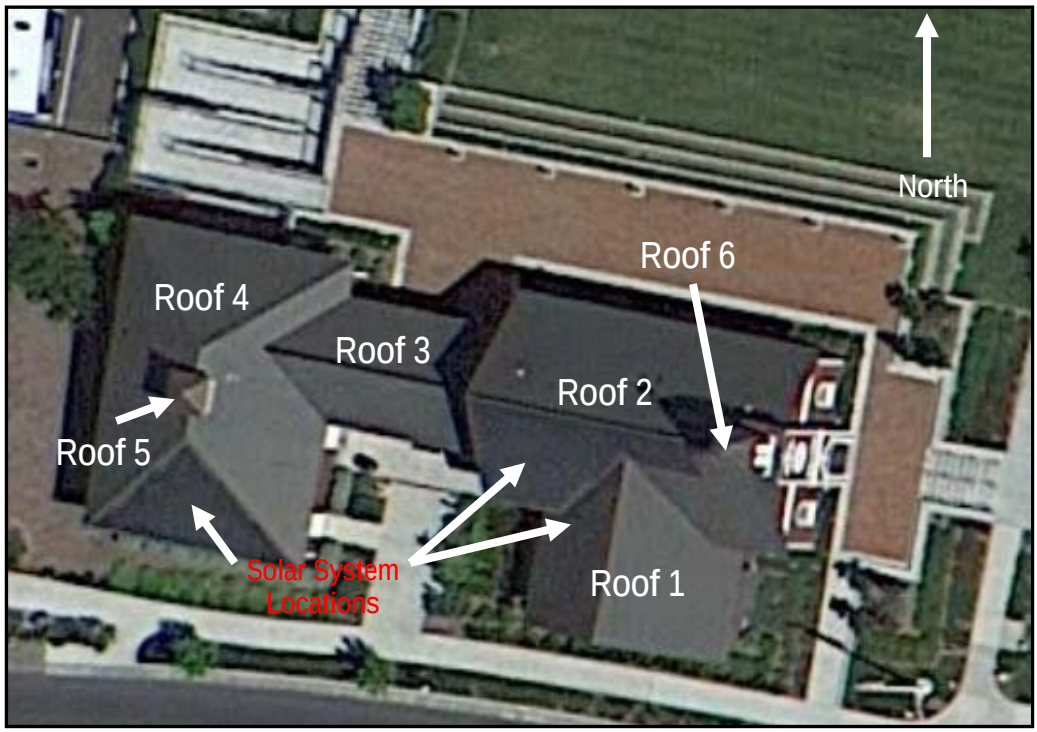
DESCRIPTION

B3010 ROOF COVERINGS

B3011 Roof Finishes

The facility contained six steep-sloped roof areas; these roof areas are shown on the following aerial plan:

Overview of Roof Locations & Configurations



The steep-sloped roof areas 1 through 4 contained a composite fiber cement slate shingle roof covering with a back-up of felt underlayment and battens (reference Photographs 14 and 15 in Appendix B). The ridges contain ridge vents to assist with the cross ventilation from the soffits. The roof constructions have R-30 batt insulation present. The shingle roof covering has photovoltaic solar modules integrated within it at the south facing slopes; these are shown on the aerial plan above. The Roof areas 5 and 6 both contain standing seam copper roof panels.

Storm water drainage consists of perimeter copper gutters and downspouts and discharge to the vegetation surrounding the building.

CONDITION

B3010 ROOF COVERINGS

B3011 Roof Finishes

The fiber cement slate shingle and the standing seam copper panel roof coverings appeared to be in good condition at each of the roof areas, with no roof leaks reported. However we noted a few slipped shingles which we recommend are re-fixed immediately (reference Photographs 14 and 15 in Appendix B). Both of these roof coverings have a typical EUL of more than thirty-years therefore as they were installed as part of the renovation works in 2010; no replacement actions have been included for within this study. We recommend that the shingle roof covering is monitored periodically to assess if any shingle has slipped, so that they can be re-fixed accordingly.

The roof appears to drain well with adequate slope at all areas to allow water to run to the perimeter gutters and downspouts, which were observed to be adequately sized and spaced.

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 deteriorated section at the south elevation only	1	LS	$500	$500	2013	4
B2011	Exterior Wall Construction	Repaint all exterior previously painted surfaces	6,000	SF	$1.88	$11,280	2018	4
B2011	Exterior Wall Construction	Repaint all exterior previously painted surfaces	6,000	SF	$1.88	$11,280	2026	4
		Total Anticipated Expenditure for B Shell				$23,060		

SECTION 4 - C INTERIORS

C10 INTERIOR CONSTRUCTION

DESCRIPTION

C1010 PARTITIONS

C1011 Fixed Partitions

The building contained wood stud partitions with 5/8" gypsum board either side and acoustical insulation between the studs which we assume are spaced at 16" centers. The restrooms have cementitious backer board behind ceramic tile and thinset.

C1020 INTERIOR DOORS

C1021 Interior Doors

The building generally contained single flush wood doors which are housed within wood frames. 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.

C1030 FITTINGS SPECIALTIES

C1031 Fabricated Toilet Partitions

The restrooms contained metal floor and wall mounted fixed partition cubicles (reference Photograph 19 in Appendix B).

CONDITION

C1010 PARTITIONS

C1011 Fixed Partitions

The interior fixed partitions all appeared to be in 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.

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 fair to good condition. We do not anticipate any expenditure during 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.

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 17 and 18 in Appendix B). The public restrooms contained a wainscot consisting of ceramic 6" x 6" wall tiles to mid height (reference Photograph 19 in Appendix B). The council chamber contains wood panel wainscot at the perimeter walls with stool and trim detailing at its top edge, with acoustical wall panels above that span to the height of the window units (reference Photograph 17 in Appendix B).

C3020 FLOOR FINISHES

C3024 Flooring

The building contained a combination of floor coverings which consisted of vinyl sheet within the custodial room; 12" x 12" ceramic floor tiles within the restrooms and stained wood plank flooring within the council chamber, lobby, kitchen and storage area (reference Photographs 17 through 21 in Appendix B).

C3030 CEILING FINISHES

C3031 Ceiling Finishes

The ceiling construction at the building consisted of 2" x 6" wood joists that are spaced at 16" centers with 5/8" type X gypsum board that is generally containing a painted surface throughout the building. One exception was within the council chamber where there was also acoustical ceiling on 1 ½" furring over the gypsum board (reference Photographs 17 and 18 in Appendix B).

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 2010 at the time of renovation and therefore with a typical EUL of eight-years repainting would be required prior to mid-term and then every eight-years during 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 on an as needed basis to maintain its appearance; this is suggested at the time when the floor tile is re-grouted.

The acoustical wall panels and wood wainscot both appeared to be in good condition with no issues noted as they have been recently installed. We anticipate that they will last beyond the study period as long as they are cleaning and care is provided.

C3020 FLOOR FINISHES

C3024 Flooring

The floor finishes each appeared to be in good condition as they have all been recently installed in 2010 as part of the renovation. The wood plank floor covering has a typical EUL of forty-years depending on how it's treated. We recommend that the wood floor is refinished every ten-years to maintain the appearance of the surface.

Vinyl flooring has a typical EUL of eighteen-years and therefore based on observed conditions and likely light usage we have extended the RUL of the vinyl sheet and therefore it is anticipated to last beyond the study period without replacement necessary.

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 tiles every fifteen-years, therefore we have included for an action relating to this later in the study period to maintain its appearance.

C3030 CEILING FINISHES

C3031 Ceiling Finishes

The painted gypsum and acoustical ceiling systems both appeared to be in good condition. 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. The acoustical ceiling system is anticipated to last beyond the study period without any actions necessary.

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	3,500	SF	$1.88	$6,580	2018	4
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	3,500	SF	$1.88	$6,580	2026	4
C3024	Flooring	Regrout ceramic floor tiles as well as isolated ceramic wall tile areas within restrooms	400	SF	$11.69	$4,676	2020	4
C3024	Flooring	Regrout ceramic floor tiles as well as isolated ceramic wall tile areas within restrooms	400	SF	$11.69	$4,676	2030	4
C3024	Flooring	Refinish wood plank floor	3,500	SF	$5.76	$20,160	2020	4
C3024	Flooring	Refinish wood plank floor	3,500	SF	$5.76	$20,160	2030	4
		Total Anticipated Expenditure for C Interiors				$62,832		

SECTION 5 - D SERVICES

D20 PLUMBING

DESCRIPTION

D2010 PLUMBING FIXTURES

D2011 Water Closets

The building contains floor mounted vitreous china water closets which are tank-less and have their own manual flush valves (reference Photograph 21 in Appendix B). The flush valves are water saving duel function types that are manufactured by Sloan.

D2012 Urinals

The building contained a waterless vitreous china wall hung urinal, within the men's restroom (reference Photograph 22 in Appendix B).

D2013 Lavatories

The building contains wall mounted vitreous china lavatories (reference Photograph 23 in Appendix B). The lavatories generally consisted of a single neck non-metering mixing faucet with automatic operation. Water is supplied via copper pipe and assumed drained through PVC pipe work and fittings as this was all replaced during the renovation in 2010.

D2014 Sinks

The break room contained a double stainless steel sink. The sink contained non-metering single lever handle faucet. The stainless steel sink is self rimming and is mounted within a counter that consisted of a plastic laminated faced counter top.

The Janitor's room contains a floor mounted PVC sink (reference Photograph 20 in Appendix B).

D2018 Drinking Fountains and Coolers

The building contained one duel height wall mounted stainless steel drinking fountains which is located opposite the restrooms. The water fountain is wall mounted with front-mounted push-button valves (reference Photograph 24 in Appendix B).

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.

D2022 Hot Water Service

Domestic hot water was generated via one instantaneous tank-less natural gas water heater located in the janitor's room (reference Photograph 25 in Appendix B). This type of water heater is used in instances of light commercial use.

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

Table D20-1 Summary of the Domestic Water Heating Equipment

Location	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	≈ Year of Installation
Custodial Room	Takagi	T-H1	25000588	Natural Gas	Input 199,000 BTU	2010

D2030 SANITARY WASTE

D2031 Waste Piping

Waste piping was not directly inspected, however based on typical construction methods available at the time of the original construction and what was assumed changed out during the renovation, the piping is suspected to be cast iron pipe with newer PVC added.

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 appeared to be in good condition. The urinal operated 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 its replacement during the study period.

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 stainless steel counter top sinks and janitors floor mounted sinks appeared to be in good condition. Based on typical EUL of thirty-years for the janitors sink we anticipate that it will last beyond the study period without replacement necessary. The stainless steel sinks of this type have a typical EUL of twenty-years, therefore we have included for its replacement later in the study period, as the same time as the cabinet replacements.

D2018 Drinking Fountains and Coolers

The drinking fountains appeared to be in good condition. These types of dual mounted units have a typical EUL of twenty-years; therefore we anticipate that there will be a requirement for their replacement within the cost study period.

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 heater appeared to be in good condition. It was observed to be functional and operating correctly, however insta-hot water heaters generally have a typical EUL of twenty-years therefore each water heater will require replacement to maintain efficiency at the end of the study period.

The hot water distribution pipes appeared to be in 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 and gas meter are located at the south corner (reference Photograph 26 in Appendix B). Gas service is routed to the water heater.

D3030 COOLING GENERATING SYSTEMS

D3032 Direct Expansion Systems

The building is heated and cooled via three split-systems which are manufactured by Trane. The exterior units are located at the south side of the building and are from the XB13 range of energy-efficient air conditioners (reference Photograph 27 in Appendix B). At the interior located at attic and also basement crawl space are furnace units which are condensing gas furnaces (reference Photograph 28 in Appendix B).

The audio and visual room has its own dedicated split system which is manufactured by Sanyo. The outdoor condenser unit is located at the west side of the building and there is a wall mounted fan unit located at the interior of the room (reference Photographs 29 and 30 in Appendix B).

D3040 HEAT HVAC DISTRIBUTION SYSTEMS

D3041 Air Distribution Systems

The conditioned air is distributed throughout the building via metal ductwork located above the ceilings and through metal flexible duct connections to ceiling diffusers/grills recessed in the ceilings.

D3042 Exhaust Ventilation Systems

The building contained two indoor centrifugal belt driven inline relief fans within the attic space which serve the council chamber and are referenced REF 1 & 2 (reference Photograph 32 in Appendix B). In addition there are also three ceiling exhaust fans which are designed for clean air applications and low sound requirements. These are referenced EF-1 through 3. Each of the fans was manufactured by Greenheck.

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
South Elevation	Split-System Outdoor Heat Pump Unit (CU-1)	Trane (XB13)	2TTB3060A 1000AA	9354THX4F	4 Tons	Electric	2010
South Elevation	Split-System Outdoor Heat Pump Unit (CU-2)	Trane (XB13)	2TTB3060A 1000AA	9354S5H4F	5 Tons	Electric	2010
South Elevation	Split-System Outdoor Heat Pump Unit (CU-3)	Trane (XB13)	2TTB3048A 1000AA	9325WNH4F	5 Tons	Electric	2010
West Elevation	Split-System Outdoor Condenser Unit	Sanyo	CH3682	0004301	Assumed 2 Tons	Electric	2010
Attic Mechanical Space (Serves Lobby & Kitchen)	Furnace (F-1)	Trane	TUX1C100 A9H41BA	851414DL7G	4 Tons (1,597 CFM)	Natural Gas	2010
Attic Mechanical Space (Serves Council Chamber)	Furnace (F-2)	Trane	TDX1D120 A9601AB	72820SK76	5 Tons (1,946 CFM)	Natural Gas	2010
Attic Mechanical Space (Serves Lobby & Kitchen)	Furnace (F-3)	Trane	TDX1D120 A9601AB	811AT3A7G	5 Tons (1,943 CFM)	Natural Gas	2010

Audio / Visual Room	Split-System Indoor Fan Unit	Sanyo	Unknown	Unknown	Assumed 2 Tons	Electric	2010
Attic Mechanical Space (Serves Council Chamber)	Centrifugal Inline Fan (REF-1)	Greenheck	BSQ-100-4-X	116998160908	1,050 CFM	Electric	2010
Attic Mechanical Space (Serves Council Chamber)	Centrifugal Inline Fan (REF-2)	Greenheck	BSQ-100-4-X	116998150908	1,050 CFM	Electric	2010
Ceiling (Serves Men's Restroom)	Exhaust Fan (EF-1)	Greenheck	SP-A700-QD	11664840	470 CFM	Electric	2010
Ceiling (Serves Women's Restroom)	Exhaust Fan (EF-2)	Greenheck	SP-570-QD	1170089	360 CFM	Electric	2010
Ceiling (Serves Janitor's Closet)	Exhaust Fan (EF-3)	Greenheck	SP-A250-QD	11662989	230 CFM	Electric	2010

Unknown = Access limited or equipment had no name plates present.
Assumed = Based on size of unit and area it serves / or possible year installed.

D3060 HVAC INSTRUMENTATION AND CONTROLS

D3069 Other Controls & Instruments

The buildings HVAC system is controlled by individual wall mounted digital thermostats located in the areas the units serve (reference Photograph 31 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.

D3030 COOLING GENERATING SYSTEMS

D3032 Direct Expansion Systems

The split-systems appeared to be in good condition and as they were installed at the time of the renovation in 2010 we anticipate that along with regular maintenance they will only require replacement late-term. This is based the typical EUL of twenty-years to maintain efficient and unobstructed operation of the building.

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 fair to good condition with no deficiencies. We recommend that the duct work is cleaned every five-years starting in this instance five-years after the building was last renovated.

D3042 Exhaust Ventilation Systems

The exhaust fans appeared to be in good condition as they were just installed. The units are only 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 during 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 south side with the riser within the storage room (reference Photograph 33 in Appendix B). The water main incoming is a 6" line at the point of service.

D4030 FIRE PROTECTION SPECIALTIES

D4031 Fire Extinguishers

Multipurpose portable wall mounted handheld fire extinguishers were provided throughout the building.

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 the sprinkler heads have 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 mid-term during the study period. The five-yearly test will be due in 2015.

D4030 FIRE PROTECTION SPECIALTIES

D4031 Fire Extinguishers

Fire extinguishers appeared to be in good condition. We understand they are maintained on a yearly basis. The fire extinguishers were last tested in May of 2012. 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 Main Distribution Panel (MDP) is manufactured by Square D and is rated at 120/240 volts at 600 amps, 1-phase, 3-wire and is located within the electrical room at the south side of the building. Branch panels are typically Square D panelboards throughout the building and are rated at varying amps (reference Photograph 34 in Appendix B).

The building also contained a photovoltaic aray consisting of integrated roof level PV modules and control units manufactured by iPower Pure Energy within the electrical room (reference Photograph 35 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 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 building is provided by recessed and surface mounted 2’ x 4’, 1’ x 4’, and 2’ fluorescent fixtures. The fluorescent fixtures all contained F32 T8 32W lamps and electronic ballasts. In addition there are also compact fluorescent 6” and 4” white open lensed recessed downlights. All of the in-room lighting is controlled via local switching in the respective rooms and also Lutron system light control panel within the electrical room which is manufactured by Smartwired Switching Systems.

D5030 COMMUNICATIONS & SECURITY

D5033 Telephone Systems

A telephone system is mounted on a plywood board within the audio and visual room and provides voice lines to the telephone switch panel and is patched to the structured voice cabling to the various telephone voice plates throughout the building (reference Photograph 38 in Appendix B).

D5037 Fire Alarm Systems

The building is protected by a digital automatic fire detection alarm system which consists of 5 zones. The main Fire Alarm Control Panel (FACP) is located within the electrical room, and is manufactured by Silent Knight by Honeywell. The FACP model is an IntelliKnight model 5820XL (reference Photographs 36 and 37 in Appendix B). An annunciation panel is located in the lobby. Addressable devices are located throughout the building such as smoke detectors, pull stations and fire bell. The system is monitored by Bay Cities Fire Protection, tel: 707-579-8694.

D5038 Security and Detection Systems

The building contains an intruder alarm system, which consists of a programmable security alarm panel and motion sensors (reference Photograph 36 in Appendix B). The alarm panel is located within the lobby and the motion sensors are located throughout the building. We understand that the security system is also monitored 24/7 by Quality Systems Company, tel: 925-586-4112.

D5039 Local Area Network

The data system is present within the audio and visual room.

D5090 OTHER ELECTRICAL SYSTEMS

D5092 Emergency Light & Power Systems

Emergency exit signs are provided at exit routes from the building (reference Photograph 39 in Appendix B).

CONDITION

D5010 ELECTRICAL SERVICE AND DISTRIBUTION

D5012 Low Tension Service & Dist.

The major electrical equipment items appeared to be in good condition and recently installed as part of the renovation in 2010. 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, and panel boards 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 replacement during the study period.

The solar PV system also appeared to be in good condition with no operational issues reported. Based on a typical EUL of twenty to twenty-five years replacement of the rooftop modules is anticipated beyond the study period. Warning signs are present at the main electrical disconnect with white background and red letters indicating that the building is supplied with an alternative power source; to comply with Fire Ordinance Code 605.11.2.

D5020 LIGHTING & BRANCH WIRING

D5021 Branch Wiring Devices

The general receptacles and wiring appeared to be in good condition. 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. Light fixtures of this type typically have an EUL of twenty-years and therefore based on their observed condition and the environment that they are situated in we do not anticipate a requirement for their replacement during the study period. However we do anticipate a requirement for re-lamping and replacement of fixtures on an individual basis, no actions are recommended during the study period.

D5030 COMMUNICATIONS & SECURITY

D5033 Telephone Systems

The existing telephone system equipment was observed to be in good condition. The typical EUL of these systems is fifteen-years, therefore based on changing and innovating technology we have included for replacement after mid-term in the study period. There are no reported operating issues at this time which will require immediate action.

D5037 Fire Alarm Systems

The fire alarm system appeared to be in good condition. We are unaware of any operating issues with the system and we assume it receives regular testing. Fire alarm systems have a typical EUL of fifteen-years therefore we have included for full system replacement after mid-term in the study period.

D5038 Security and Detection Systems

The intruder alarm system appeared to be in good condition. We are unaware of any operating issues with the systems; however this type of system has a typical EUL of ten-years, therefore we have included for its replacement prior to mid-term in the study period.

D5039 Local Area Network

The existing LAN system equipment was observed to be in good condition. The typical EUL of these systems is fifteen-years, therefore based on changing and innovating technology we have included for replacement after mid-term in the study period. There are no reported operating issues at this time which will require immediate action.

D5090 OTHER ELECTRICAL SYSTEMS

D5092 Emergency Light & Power Systems

Emergency exit signs appeared to be in good condition. We do not anticipate their replacement during the cost study period, apart from replacement of the signs on an individual basis, no actions are recommended 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
D2011	Water Closets	Rebuild flush valves	6	EACH	$238	$1,428	2025	3
D2013	Lavatories	Replace faucets	3	EACH	$225	$675	2020	3
D2013	Lavatories	Replace faucets	3	EACH	$225	$675	2030	3
D2014	Sinks	Replace kitchen sink and faucet	1	EACH	$2,170	2,170	2030	3
D2018	Drinking Fountains and Coolers	Replace dual mounted drinking fountain	1	EACH	$3,181	$3,181	2030	3
D2022	Hot Water Service	Replace insta-hot water heaters	1	EACH	$1,200	$1,200	2030	3
D3032	Direct Expansion Systems	Replace combined Trane split-system (CU-1/F-1)	4	TONS	$1,812	$7,248	2030	3
D3032	Direct Expansion Systems	Replace combined Trane split-system (CU-2/F-2)	5	TONS	$1,812	$9,060	2030	3
D3032	Direct Expansion Systems	Replace combined Trane split-system (CU-3/F-3)	5	TONS	$1,812	$9,060	2030	3
D3032	Direct Expansion Systems	Replace combined Sanyo split-system	1.5	TONS	$1,812	$2,718	2030	3
D3041	Air Distribution	Clean ductwork	4,475	SF	$0.25	$1,119	2015	3

	Systems							
D3041	Air Distribution Systems	Clean ductwork	4,475	SF	$0.25	$1,119	2020	3
D3041	Air Distribution Systems	Clean ductwork	4,475	SF	$0.25	$1,119	2025	3
D3041	Air Distribution Systems	Clean ductwork	4,475	SF	$0.25	$1,119	2030	3
D3042	Exhaust Ventilation Systems	Replace centrifugal inline fans (2 no.)	2,100	CFM	$1.25	$2,625	2030	3
D3042	Exhaust Ventilation Systems	Replace ceiling exhaust fans (3 no.)	1,060	CFM	$1.25	$1,325	2030	3
D4011	Sprinkler Water Supply	Replace sprinkler heads	4,475	SF	$1.05	$4,699	2030	1
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$750	$750	2014	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$650	$650	2017	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$650	$650	2020	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$650	$650	2023	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$650	$650	2026	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$650	$650	2029	3
D5012	Low Tension Service & Dist	Preventative Maintenance of Electrical Equipment	1	LS	$650	$650	2032	3
D5033	Telephone System	Replace telephone system	4,475	SF	$1.00	$4,475	2025	3
D5037	Fire Alarm System	Replace fire alarm system	4,475	SF	$5.00	$22,375	2025	1

D5038	Security and Detection System	Replace security system	4,475	SF	$0.62	$2,775	2020	3
D5039	Local Area Network	Replace LAN system	4,475	SF	$1.81	$8,100	2025	3
		Total Anticipated Expenditure for D Services				$92,488		

SECTION 6 - E EQUIPMENT & FURNISHINGS

E20 FURNISHINGS

DESCRIPTION

E2010 FIXED FURNISHINGS

E2012 Fixed Casework

The building contained wood constructed fixed floor and wall mounted casework within the kitchen. The wood cabinets generally consisted of hardwood frames and plywood panels with wooden door panels. The worktop consisted of a plywood counter (reference Photograph 41 in Appendix B). Furthermore there was a fixed wooden desk within the council chambers (reference Photograph 40 in Appendix B).

CONDITION

E2010 FIXED FURNISHINGS

E2012 Fixed Casework

The fixed cabinets and desk appeared to be in good condition and functional. Fixed cabinets and desk tend to have a typical EUL of twenty-years particularly for aesthetics; therefore replacement is anticipated towards 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
E2012	Fixed Casework	Replace kitchen floor mounted cabinets (inc countertops)	8	LF	$600	$4,800	2030	4
E2012	Fixed Casework	Replace kitchen wall cabinets	8	LF	$250	$2.000	2030	4
E2012	Fixed Casework	Replace council chamber fixed desk	1	LS	$20,000	$20,000	2030	4
		Total Anticipated Expenditure for E Equipment & Furnishings				$26,800		

SECTION 7 - G BUILDING SITEWORK

G20 SITE IMPROVEMENTS

DESCRIPTION

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

The building contained interlocking pavers with a broom in planting soil between their joints immediately opposite the main entrance and also opposite the north elevation. These pavers are supported via a flexible base of ¾" – 1" of sand setting bed and 4" class 2 aggregate base and compacted sub grade. In addition there is also cast-in-place concrete pavement slabs with an assumed thickness of 3" – 4" also supported on a compacted subgrade at the perimeter areas of the building (reference Photographs 42 and 43 in Appendix B). The outdoor air conditioning units are also mounted on individual concrete equipment pads. The concrete paving contained a flexible sealant at the locations of the construction joints (reference Photograph 45 in Appendix B).

G2033 Exterior Steps

The building contained cast-in-place concrete steps at the east side of the building, immediately opposite the main entrance and also a concrete ramped access at the north-west corner. The steps and ramp contained steel tubular handrails at either side (reference Photograph 42 in Appendix B).

G2050 LANDSCAPING

G2056 Planters

Landscaping consisted of shrubs; succulents and ground cover.

G2057 Irrigation Systems

The landscaped areas throughout the property are irrigated via a below grade automatic irrigation system. The irrigation system is supplied by below grade PVC piping and controllers. Pop-up type sprinkler heads are scattered throughout the site. The irrigation areas contained PVC basin and tee type drains with light duty iron ductile dome grate, which we assume removes any additional storm water from the landscaped areas.

CONDITION

G2030 PEDESTRIAN PAVING

G2031 Paving & Surfacing

The interlocking pavers and the concrete areas appeared to be in good condition and will not require replacement during the cost study period. The sealant at the construction joints and edge detail of the slabs will deteriorate over time and with a typical EUL of fifteen-years for this type of sealant we recommend that it is replaced towards the end of the study period with a suitable sealant.

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. We recommend that the sealant is replaced at the same time as the paving sealant. Furthermore the painted finish at the steps and ramp handrails will also require repainting as the painted surface has a typical EUL of eight-years and over time will blister and peel.

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 site mounted flood light fixtures, step and site bollards. The fixtures create a safe and well-illuminated environment at the perimeter of the building (reference Photograph 45 in Appendix B).

CONDITION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

The exterior lights fixtures appeared to be in good condition. Along with regular maintenance and lamp replacements we do not anticipate a requirement for full replacement, only replacement on an as-needed basis.

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
G2031	Paving & Surfacing	Replace paving sealant	400	LF	$9	$3,600	2025	3
G2031	Paving & Surfacing	Repaint handrails	1	LS	$600	$600	2018	4
G2031	Paving & Surfacing	Repaint handrails	1	LS	$600	$600	2026	4
		Total Anticipated Expenditure for G Building Sitework				$4,800		

Appendix A

Twenty-Year Expenditure Forecast 2013 - 2032

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

20 YEAR EXPENDITURE FORECAST

Council Chambers
901 Sherman Avenue
Novato, CA

FAITHFUL+GOULD

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	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	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
B. SHELL																															
B2011	Repaint exterior wall surfaces and soffits	N/A	0	1.00	LS	$500.00	Deferred Maintenance	4	$500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$500	$0	$500
B2011	Repaint exterior wall surfaces and soffits	8	5	6,000.00	SF	$1.88	Capital Renewal	4	$0	$0	$0	$0	$0	$11,280	$0	$0	$0	$0	$0	$0	$0	$11,280	$0	$0	$0	$0	$0	$0	$0	$22,560	$22,560
							B. SHELL SUB-TOTALS		$500	$0	$0	$0	$0	$11,280	$0	$0	$0	$0	$0	$0	$0	$11,280	$0	$0	$0	$0	$0	$0	$500	$22,560	$23,060
C. INTERIORS																															
C3012	Repaint interior wall and ceiling surfaces	8	5	3,500.00	SF	$1.88	Capital Renewal	4	$0	$0	$0	$0	$0	$6,580	$0	$0	$0	$0	$0	$0	$0	$6,580	$0	$0	$0	$0	$0	$0	$0	$13,160	$13,160
C3024	Regrout ceramic floor tiles as well as isolated ceramic wall tile areas within restrooms	10	7	400.00	SF	$11.69	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$4,676	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,676	$0	$0	$0	$9,352	$9,352
C3024	Refinish wood plank floor	10	7	3,500.00	SF	$5.76	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$20,160	$0	$0	$0	$0	$0	$0	$0	$0	$0	$20,160	$0	$0	$0	$40,320	$40,320
							C. INTERIORS SUB-TOTALS		$0	$0	$0	$0	$0	$6,580	$0	$24,836	$0	$0	$0	$0	$6,580	$0	$0	$0	$0	$24,836	$0	$0	$0	$62,832	$62,832
D. SERVICES																															
D2011	Rebuild flush valves	15	12	6.00	EACH	$238.00	Routine Maintenance	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,428	$0	$0	$0	$0	$0	$0	$0	$0	$1,428	$1,428
D2013	Replace faucets	10	7	3.00	EACH	$225.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$675	$0	$0	$0	$0	$0	$0	$0	$0	$0	$675	$0	$0	$0	$1,350	$1,350
D2014	Replace kitchen sink and faucet	20	16	1.00	EACH	$2,170.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,170	$0	$0	$0	$2,170	$2,170
D2018	Replace dual mounted drinking fountain	20	16	1.00	EACH	$3,181.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,181	$0	$0	$0	$3,181	$3,181
D2022	Replace instant-hot water heater	20	16	1.00	EACH	$1,200.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,200	$0	$0	$0	$1,200	$1,200
D3032	Replace combined Trane split-system (CU-1/F-1)	20	16	4.00	TONS	$1,812.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,248	$0	$0	$0	$7,248	$7,248
D3032	Replace combined Trane split-system (CU-2/F-2)	20	16	5.00	TONS	$1,812.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,060	$0	$0	$0	$9,060	$9,060
D3032	Replace combined Trane split-system (CU-3/F-3)	20	16	5.00	TONS	$1,812.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$9,060	$0	$0	$0	$9,060	$9,060
D3032	Replace combined Sanyo split-system	20	16	1.50	TONS	$1,812.00	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,718	$0	$0	$0	$2,718	$2,718
D3041	Clean ductwork	5	2	4,475.00	SF	$0.25	Routine Maintenance	3	$0	$0	$1,119	$0	$0	$0	$0	$1,119	$0	$0	$0	$0	$0	$1,119	$0	$0	$0	$0	$1,119	$0	$0	$0	$4,475	$4,475
D3042	Replace centrifugal inline fans (2 no.)	20	16	2,100.00	CFM	$1.25	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,625	$0	$0	$0	$2,625	$2,625
D3042	Replace ceiling exhaust fans (3 no.)	20	16	1,060.00	CFM	$1.25	Energy & Sustainability	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,325	$0	$0	$0	$1,325	$1,325
D4011	Replace sprinkler heads	20	16	4,475.00	SF	$1.05	Capital Renewal	1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,699	$0	$0	$0	$4,699	$4,699
D5012	Preventative Maintenance of Electrical Equipment	3	1	1.00	EACH	$650.00	Routine Maintenance	3	$0	$650	$0	$0	$650	$0	$0	$650	$0	$0	$650	$0	$0	$650	$0	$0	$650	$0	$0	$650	$0	$4,550	$4,550
D5033	Replace telephone system	15	12	4,475.00	SF	$1.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,475	$0	$0	$0	$0	$0	$0	$0	$0	$4,475	$4,475
D5037	Replace fire alarm system	15	12	4,475.00	SF	$5.00	Capital Renewal	1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$22,375	$0	$0	$0	$0	$0	$0	$0	$0	$22,375	$22,375
D5038	Replace security system	10	7	4,475.00	SF	$0.62	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$2,775	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,775	$2,775
D5039	Replace LAN system	15	12	4,475.00	SF	$1.81	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,100	$0	$0	$0	$0	$0	$0	$0	$0	$8,100	$8,100
							D. SERVICES SUB-TOTALS		$0	$650	$1,119	$0	$650	$0	$0	$5,218	$0	$0	$650	$0	$37,497	$650	$0	$0	$650	$45,080	$0	$650	$0	$92,813	$92,813
E. EQUIPMENT & FURNISHING																															
E2012	Replace kitchen floor cabinets (inc countertops)	20	16	8.00	LF	$600.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,800	$0	$0	$0	$4,800	$4,800
E2012	Replace kitchen wall cabinets	20	16	8.00	LF	$250.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,000	$0	$0	$0	$2,000	$2,000
E2012	Replace/modernize reception desk	20	16	1.00	LS	$20,000.00	Capital Renewal	4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$20,000	$0	$0	$0	$20,000	$20,000
							E. EQUIPMENT & FURNISHING SUB-TOTALS		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$26,800	$0	$0	$0	$26,800	$26,800
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
G. BUILDING SITEWORK																															
G2031	Replace paving sealant	15	12	400.00	LF	$9.00	Capital Renewal	3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,600	$0	$0	$0	$0	$0	$0	$0	$0	$3,600	$3,600
G2031	Repaint handrails	8	5	1.00	LS	$600.00	Capital Renewal	4	$0	$0	$0	$0	$0	$600	$0	$0	$0	$0	$0	$0	$0	$600	$0	$0	$0	$0	$0	$0	$0	$1,200	$1,200
							G. BUILDING SITEWORK SUB-TOTALS		$0	$0	$0	$0	$0	$600	$0	$0	$0	$0	$0	$0	$3,600	$600	$0	$0	$0	$0	$0	$0	$0	$4,800	$4,800
Z. GENERAL																														$0	
							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
							Expenditure Totals per Year		$500	$650	$1,119	$0	$650	$18,460	$0	$30,054	$0	$0	$650	$0	$41,097	$19,110	$0	$0	$650	$96,716	$0	$650	$500	$209,805	$210,305
							Total Cost (Inflated @ 4% per Yr.)		$500	$676	$1,210	$0	$760	$22,459	$0	$39,549	$0	$0	$962	$0	$65,797	$31,820	$0	$0	$1,217	$188,392	$0	$1,369	$500	$354,213	$354,713

Appendix B
Photographs

FAITHFUL+GOULD
CONSTRUCTIVE EXPERTISE

Photograph No. 1

View of the floor construction at the west section (Annex) of the building.

Photograph No. 2

View of the supporting beams and joists at the west section (Annex) of the building.

Photograph No. 3

View of the roof construction.

Photograph No. 4

View of the roof construction.

Photograph No. 5

View of the equipment section between the ceiling and attic levels.

Photograph No. 6

View of the entrance at the east elevation of the building.

Photograph No. 7

View of the exterior siding and roof covering.

Photograph No. 8

View of the exterior wood siding profile.

Photograph No. 9

View of the section of the exterior paint that has started to blister and deteriorate.

Photograph No. 10

View of the wood sash window units.

Photograph No. 11

View of the newer aluminum window units.

Photograph No. 12

View of the newer window unit opening catch.

Photograph No. 13

View of the single hollow metal door at the electrical room.

Photograph No. 14

View of the roof construction.

Photograph No. 15

View of the roof construction and the solar tiles.

Photograph No. 16

View of the roof construction and the solar tiles.

Photograph No. 17

View of the interior finishes within the council chamber.

Photograph No. 18

View of the wood floor, painted walls and ceiling systems.

Photograph No. 19

View of the restrooms ceramic floor and wall coverings. Also the toilet cubicles.

Photograph No. 20

View of the vinyl sheet within the janitors room. Also the floor mounted sink.

Photograph No. 21

View of one of the floor mounted water closet.

Photograph No. 22

View of the wall mounted urinal.

Photograph No. 23

View of one of the wall mounted lavatory.

Photograph No. 24

View of the duel mounted drinking fountains.

Photograph No. 25

View of the water heater.

Photograph No. 26

View of the gas meter/supply.

Photograph No. 27

View of of the three outdoor units.

Photograph No. 28

View of AH-1 at basement level.

Photograph No. 29

View of the outdoor unit.

Photograph No. 30

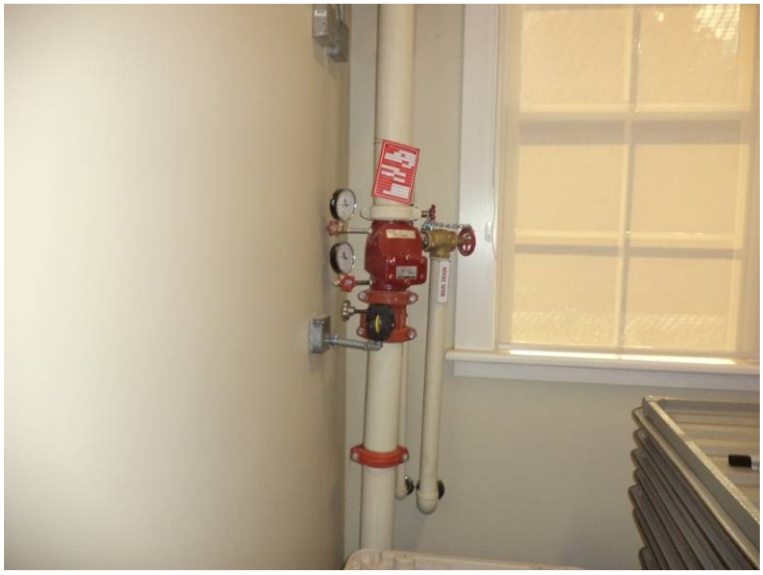
View of the indoor unit.

Photograph No. 31

View of one of the digital thermostats.

Photograph No. 32

View of one of the exhaust fans.



Photograph No. 33

View of the fire riser.

Photograph No. 34

View of the MDP.

Photograph No. 35

View of the solar system.

Photograph No. 36

View of the fire annunciator panel and security panel.

Photograph No. 37

View of the fire alarm control panel.

Photograph No. 38

View of the telephone system.

Photograph No. 39

View of the exit lights.

Photograph No. 40

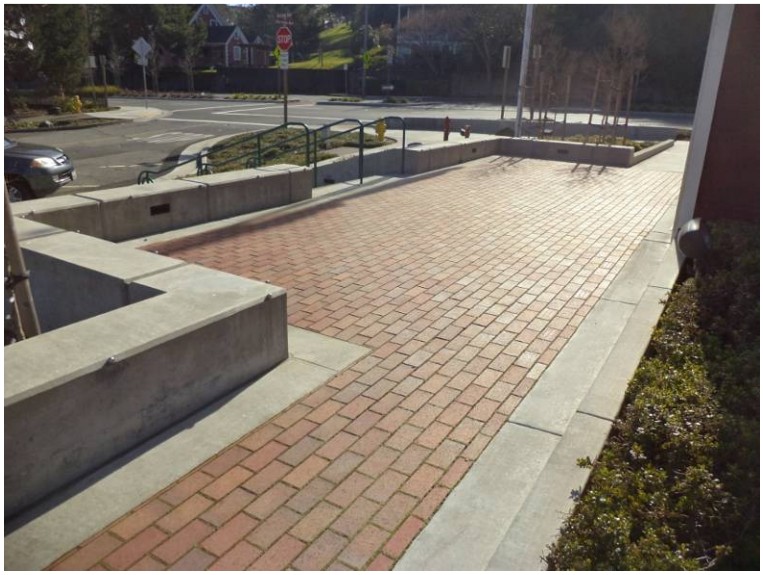
View of fixed chamber desk.

Photograph No. 41

View of the fixed cabinets.

Photograph No. 42

View of padestrian paving at the main entrance.



Photograph No. 43

View of padestrian block paving at the main entrance.

Photograph No. 44

View of the ground mounted exterior uplight fixtures.

Photograph No. 45

View of the sealant between the concrete slab.

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
Council Chambers	Council Chambers	Custodial Room	D2022	Hot Water Service	Water Heater	Takagi	T-H1	25000588		Natural Gas	Input 199,000 BTU			2010
Council Chambers	Council Chambers	South Elevation	D3032	Cooling / Heating Generating Systems	Split-System Outdoor Heat Pump Unit	Trane	2TTB3060A1000AA	9354THX4F	CU-1	Electric	4 Tons			2010
Council Chambers	Council Chambers	South Elevation	D3032	Cooling / Heating Generating Systems	Split-System Outdoor Heat Pump Unit	Trane	2TTB3060A1000AA	9354S5H4F	CU-2	Electric	5 Tons			2010
Council Chambers	Council Chambers	South Elevation	D3032	Cooling / Heating Generating Systems	Split-System Outdoor Heat Pump Unit	Trane	2TTB3060A1000AA	9325WNH4F	CU-3	Electric	5 Tons			2010
Council Chambers	Council Chambers	West Elevation	D3032	Cooling / Heating Generating Systems	Split-System Outdoor Condenser Unit	Sanyo	CH3682	4301		Electric	Assumed 2 Tons			2010
Council Chambers	Council Chambers	Audio / Visual Room	D3032	Cooling / Heating Generating Systems	Split-System Indoor Fan Unit	Sanyo	Unknown	Unknown		Electric	Assumed 2 Tons			2010
Council Chambers	Council Chambers	Attic Mechanical Space (Serves Lobby & Kitchen)	D3032	Cooling / Heating Generating Systems	Furnace	Trane	TUX1C100A9H41BA	851414DL7G	F-1	Natural Gas	4 Tons (1,597 CFM)			2010
Council Chambers	Council Chambers	Attic Mechanical Space (Serves Council Chamber)	D3032	Cooling / Heating Generating Systems	Furnace	Trane	TDX1D120A9601AB	72820SK76	F-2	Natural Gas	5 Tons (1,946 CFM)			2010
Council Chambers	Council Chambers	Attic Mechanical Space (Serves Lobby & Kitchen)	D3032	Cooling / Heating Generating Systems	Furnace	Trane	TDX1D120A9601AB	811AT3A7G	F-3	Natural Gas	5 Tons (1,946 CFM)			2010
Council Chambers	Council Chambers	Attic Mechanical Space (Serves Council Chamber)	D3042	Exhaust Ventilation Systems	Centrifugal Inline Fan	Greenheck	BSQ-110-4-X	116998160908	REF-1	Electric	1,050 CFM			2010
Council Chambers	Council Chambers	Attic Mechanical Space (Serves Council Chamber)	D3042	Exhaust Ventilation Systems	Centrifugal Inline Fan	Greenheck	BSQ-110-4-X	116998150908	REF-2	Electric	1,050 CFM			2010

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
Council Chambers	Council Chambers	Ceiling (Serves Men's Restroom)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Greenheck	SP-A700-QD	11664840	EF-1	Electric	470 CFM			2010
Council Chambers	Council Chambers	Ceiling (Serves Women's Restroom)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Greenheck	SP-570-QD	1170089	EF-2	Electric	360 CFM			2010
Council Chambers	Council Chambers	Ceiling (Serves Janitor's Closet)	D3042	Exhaust Ventilation Systems	Exhaust Fan	Greenheck	SP-A250-QD	11662989	EF-3	Electric	230 CFM			2010

Appendix D

Document Review and
Warranty Information

FAITHFUL+GOULD

DOCUMENT REVIEW & WARRANTY INFORMATION

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

901 Sherman Ave Renovation Drawings:

Architectural Drawings A0.1 through A9.1, dated 2007 by Interactive Resources

Structural Drawings S0.1 through S6.6, dated 2007 by Interactive Resources

Mechanical Drawings M0.1, M2.1, M5.1 & M7.1, dated 2007 by Winzler & Kelly

Plumbing Drawings P0.1, P2.1, P2.2 & P5.1, dated 2007 by Interactive Resources

Electrical Drawings E0.1 through E7.3, dated 2007 by Winzler & Kelly

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 = 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.