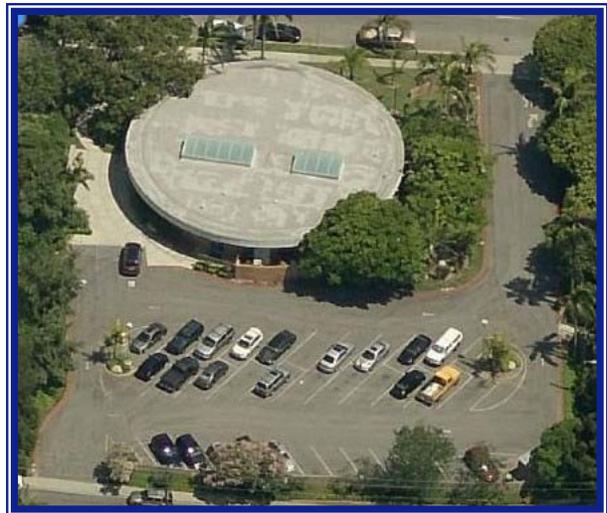


Citywide
Facility Condition Assessment

Report of
Facility Condition Assessment

For
City of Manhattan Beach
Creative Arts Center
1560 Manhattan Beach Boulevard, Manhattan Beach, CA



*August 23, 2013
(Rev A)*

Provided By:

Faithful+Gould, Inc.

Provided For:



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SECTION 1 - EXECUTIVE SUMMARY

INTRODUCTION

In accordance with the agreement held between City of Manhattan Beach, dated May 9, 2013 and Faithful+Gould Inc, this completed report provides a comprehensive Facility Condition Assessment of the Creative Arts Center located at 1560 Manhattan Beach Boulevard, Manhattan Beach, CA (The Facility).

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

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

Charts EX-1 and EX-2 provides a summary of the anticipated primary expenditures over the 10 year study period. Further details of these expenditures are included within each respective report section and within the 10 year expenditure forecast, in Appendix A.

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

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

PROJECT DETAILS

On May 16, 2013, Mr. Jeffrey Dillon of Faithful+Gould visited the facility to observe and document the condition of the building and the site components. During our site visit, Faithful+Gould was assisted by Mr. Doug Foster, Senior Facilities Maintenance Technician for the City of Manhattan Beach.

Overview of the Building at the Facility



— Assumed site boundary

BUILDING SUMMARY

Table EX-1 Facility Details

BUILDING NAME:	Creative Arts Center	LAT/LONG:	33° 88' 78" N / -118° 38' 54" W
ADDRESS:	1560 Manhattan Beach Boulevard Manhattan Beach, CA 90266	OCCUPANCY STATUS:	
HISTORIC DISTRICT:	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	OCCUPIED <input checked="" type="checkbox"/> VACANT <input type="checkbox"/> PARTIALLY <input type="checkbox"/>	
HISTORIC BUILDING:	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		
GROSS SQUARE FOOTAGE OF BUILDING:	5,832	GROSS SQUARE FOOTAGE OF LAND:	46,800 (estimated)
CURRENT REPLACEMENT VALUE:	\$1,345,799	YEAR OF CONSTRUCTION:	1962
		BUILDING EUL:	60 Years
		BUILDING RUL:	9 Years
BUILDING USE:	Recreation	NUMBER OF STORIES:	1

BUILDING DESCRIPTION

The Creative Arts Center, also known as the Manhattan Heights Annex, is located at 1560 Manhattan Beach Boulevard adjacent to the Manhattan Heights Park and across Manhattan Beach Boulevard from Polliwog Park and was constructed in circa 1962 and renovated in 2000.



The building has wood joist roof construction which is supported via the brick masonry unit perimeter walls. The low-sloped roof contained a BUR roof covering. The floor consisted of a cast-in-place reinforced slab-on-grade concrete slab. Windows consisted of anodized aluminum framed single pane units and doors consisted of storefront entrance doors and steel service doors.

The interior finishes of the building contained vinyl ceramic tile floor coverings, painted gypsum wallboard, exposed brick and ceramic tiled walls and painted ceilings or exposed roof framing.



The heating and cooling for the building is provided via one outdoor packaged unit with natural gas heat. The unit is controlled via an individual thermostat. Conditioned air is distributed throughout the building via metal ductwork. Hot water is provided by a domestic water heater with a capacity of 40 US gallons.

The Main Distribution Panel is a Murray unit that is rated at 200-amp, 120/208-Volt, 3-phase, 4-wire. The interior lighting is generally provided by

suspended 4' fluorescent fixtures with T8 watt bulbs and electronic ballasts.

The building does not contain a wet-pipe sprinkler system, fire alarm system, intruder security alarm or emergency generator. However, the interior spaces have battery operated smoke detectors throughout.



ENVIRONMENTAL REVIEW

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

The following material at the building was presumed to contain asbestos and considered ACM:

Table EX-2 Summary of Asbestos Results

Material Description	Material Location	Condition	Asbestos Percentage	Estimated Quantity*
Roofing Materials	Roof	Good	Presumed	3,500

* These quantities are only approximations

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

Lead-Based Paint was also identified at the building. Through sampling of several paint components the presence of LBP was indicated at or above the action level at the following locations:

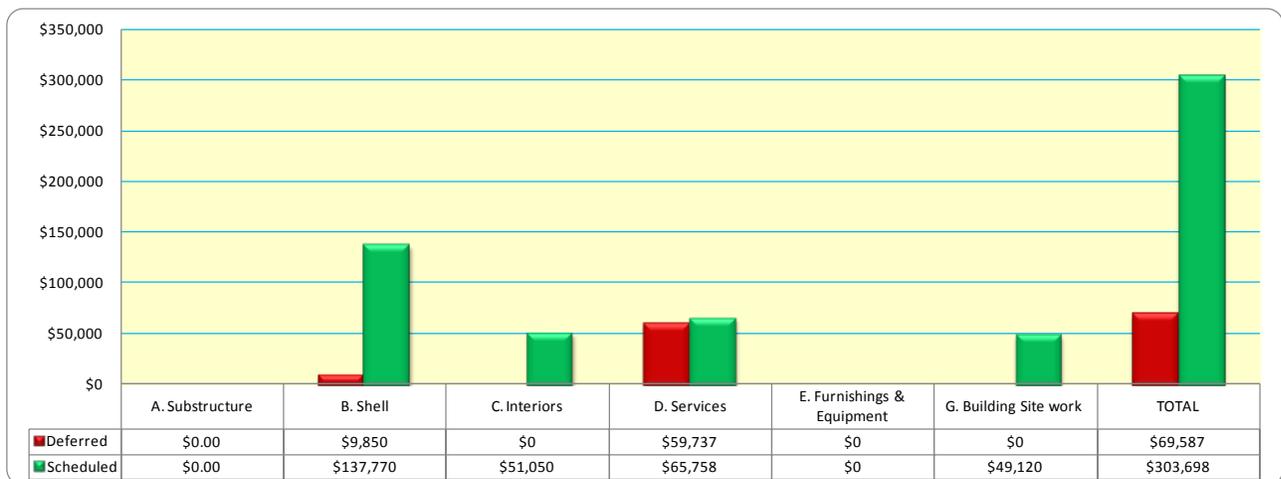
- Main Hall, Steel I Beams & Columns
- Restroom, Ceramic Tile

The areas where LBP was found, it was observed to be intact (good condition). LBP components in good condition may remain in place subsequent to renovation/demolition or they may be removed intact by lead trained personnel in accordance with all applicable federal, state and local regulations. Expenditure relating to the removal of the LBP has not been provided within this report.

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 significance 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 \$373,285.

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



KEY FINDINGS

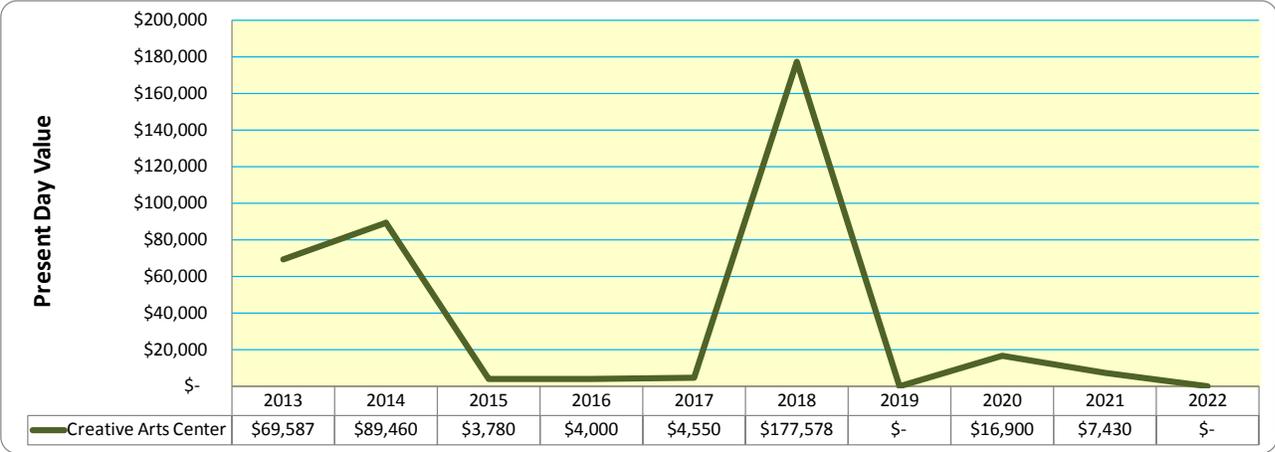
- + B Shell: Repaint exterior wall surfaces at an estimated cost of \$4,550 in years 2013, 2017 and 2021
- + B Shell: Replace exterior sealants at an estimated cost of \$10,920 in year 2018
- + B Shell: Replace BUR roofing system at an estimated cost of \$117,750 in year 2018
- + C Interiors: Repaint interior wall surfaces at an estimated cost of \$16,900 in years 2014 and 2020
- + C Interiors: Replace vinyl tile floor covering at an estimated cost of \$17,250 in year 2018
- + D Services: Replace the HVAC packaged units at a combined estimated cost of \$58,750 in year 2014
- + G Building Sitework: Seal and stripe the asphalt pavement at an estimated cost of \$2,880 in years 2015 and 2021
- + G Building Sitework: Mill and overlay asphalt pavement at an estimated cost of \$28,800 in year 2018

¹ All costs presented in present day values

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

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}



¹ All costs presented in present day values
² Costs represent total anticipated values over the 10 year study period

This chart highlights expenditure for the building within years 2014 and 2018 due to the following systems which are expected to reach their Estimated Useful Life (EUL) and therefore due for replacement. The line represents the total expenditure for each year and is a useful tool to indicate the magnitude of the impending issues the building will face.

Year 2014

- + Exterior repainting
- + Replace HVAC units
- + Replace exterior lighting systems

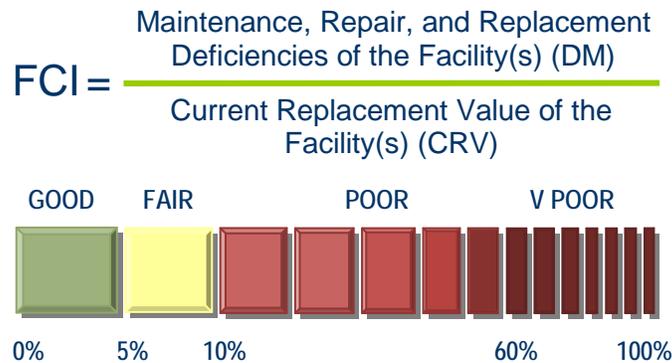
Year 2018

- + Replace roof covering
- + Undertake parking lot resurfacing

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 (0.05 to 0.10 (5% to 10%)), POOR (over 0.10 (over 10%)) and V-POOR (over 0.60 (over 60%)) based on evaluating data from various clients at the time of the publication. Table EX-3 will help interpret the results:

Table EX-3 FCI Scoring System

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

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

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

Table EX-4 Facility Condition Index

Building Name	FCI	Gross Square Foot (GSF)	CRV per GSF	Current Replacement Value (CRV)	Deferred Maintenance Value (DM) ^{1 & 2}	FCI Ratio	Property Condition Rating
Creative Arts Center	Current FCI Ratio	5,832	\$231	\$1,345,799	\$69,587	5.2%	FAIR
Creative Arts Center	Year 10 FCI Ratio	5,832	\$231	\$1,345,799	\$373,285	27.7%	POOR

¹ All costs presented in present day values

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

Chart EX-3 indicates the effects of the FCI ratio per year, assuming the required funds and expenditures **ARE** made to address the identified works each year. As explained, the building has a FAIR condition rating (above 5% / below 10%) at the start and during the study period and maintains this on a year by year basis with exception to year 2018 where it briefly falls into POOR condition.

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

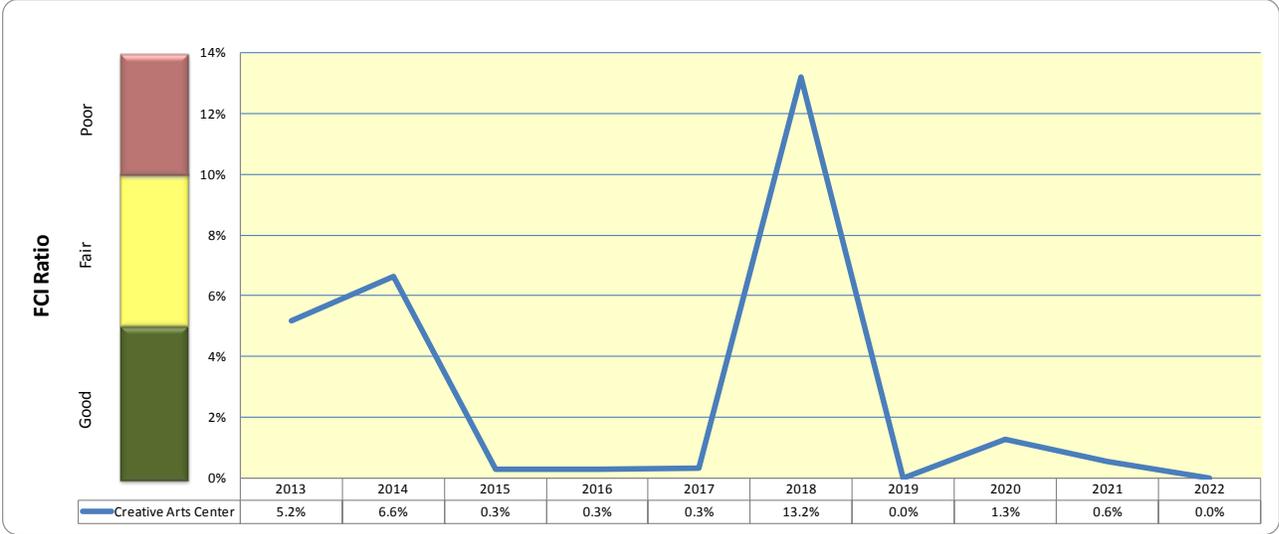


Chart EX-4 indicates the cumulative effects of the FCI ratio over the study period assuming the required funds and expenditures are **NOT** provided to address the identified works and deferred maintenance each year. The results of the study indicate at this current time the building is maintained with a facility condition index rating within the FAIR condition. In year 2014 the facility will fall into POOR condition for the remainder of the study.

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



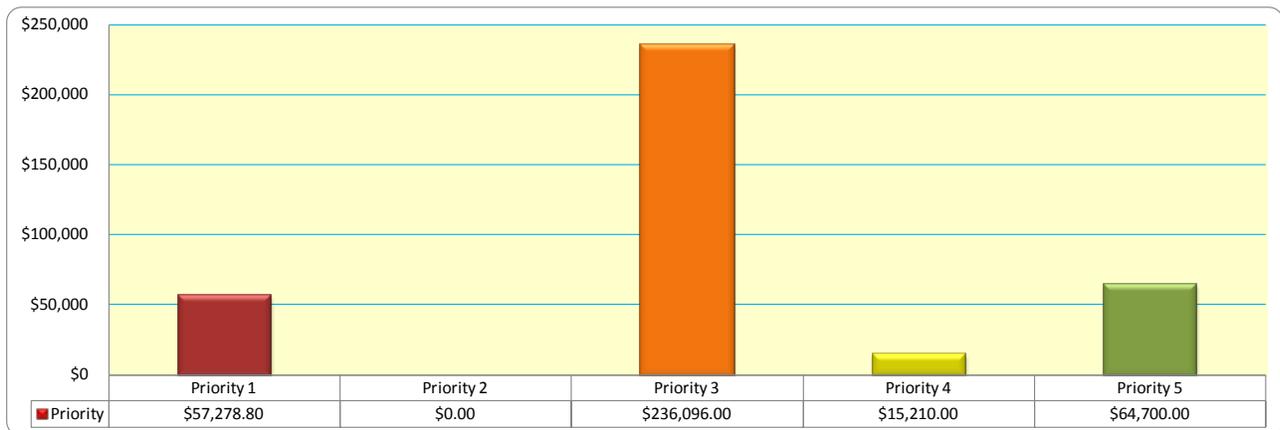
PRIORITIZATION OF WORK

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

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 but not critical works to maintain 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 are two key years for Priority 3 within 2014 and 2018; and one key year for Priority 1 in year 2013.

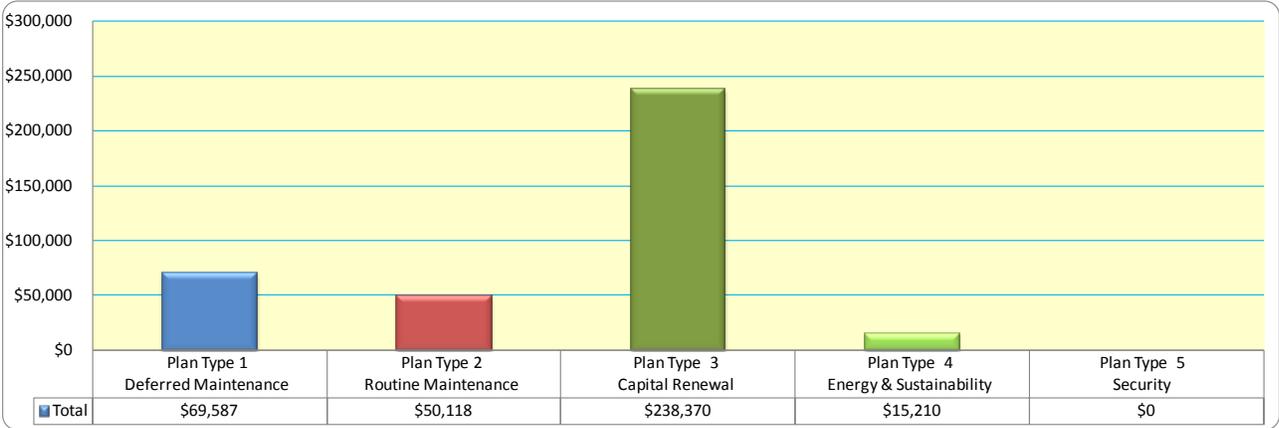
PLAN TYPES

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

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

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 most expenditure in this study.

Chart EX-8 illustrates the breakdown of expenditure per each year within the 10 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 expenditure required for Plan Types during the study period with Plan Type 3 requiring most expenditure in 2014, 2015, 2018, and 2020.

SECTION 2 - A SUBSTRUCTURE

A10 FOUNDATIONS

DESCRIPTION

The description of the respective structural systems for the building is based upon our observation of exposed portions of the building structure. There were limited structural drawings available for review.

A1010 STANDARD FOUNDATIONS

A1011 Wall Foundations

The exterior walls are supported by a combination reinforced concrete spread footings. The concrete footings were designed with a compressive strength of 2,500 pounds per square inch (psi).

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 and supported by and reinforced concrete grade beams. The floor slab is 6" thick over a vapor barrier and 4" pea gravel base. The slabs contain a thickened edge at their perimeter and were constructed utilizing concrete with a compressive strength of 3,000 psi and the grade beams utilized 3,000 psi concrete.

CONDITION

A1010 STANDARD FOUNDATIONS

A1011 Wall Foundations

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

A1030 SLABS-ON-GRADE

A1031 Standard Slab on Grade

The cast-in-place concrete slab at the building appeared to be in good condition therefore we assume the grade beams are also functioning as designed. We do not anticipate any expenditure during the cost study period, which relates to its replacement.

PROJECTED EXPENDITURES

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

SECTION 3 - B SHELL

B10 SUPERSTRUCTURE

DESCRIPTION

The description of the respective structural systems for the building is based upon our observation of exposed portions of the building structure. There were limited structural drawings available for review.

B1020 ROOF CONSTRUCTION

B1021 Flat Roof Construction

The low-sloped roof sections consist of 2" x 8" wood rafters which are supported by W16X45 steel beams which rest upon the perimeter load bearing walls and 3 ½" steel columns and in turn support the plywood deck and roof covering (reference Photograph 1 in Appendix B). The wood joists at roof level spaced at 2' centers and generally span east to west. The roof covering can be viewed in the roof covering section of this report.

B1030 STRUCTURAL FRAME

B1032 Steel Frame Structure

The building has steel members constructed of steel columns and beams.

B1033 Wood Frame Structure

The building has a steel and wood frame construction consisting of steel beams and wood joists.

CONDITION

B1020 ROOF CONSTRUCTION

B1021 Flat Roof Construction

The flat roof construction at the building 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 which relates to replacement of the roof structure.

B1030 STRUCTURAL FRAME

B1032 Steel Frame Structure

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



B1033 Wood Frame Structure

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

B20 EXTERIOR ENCLOSURES

DESCRIPTION

The description of the respective exterior enclosures structural systems for the building is based upon our review of available drawings, and our observation of exposed portions of the building structure. There were limited structural drawings available for review.

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

The building is predominantly enclosed with brick masonry (reference Photographs 2 and in Appendix B). The soffits are finished with cementitious stucco with a painted finish and a portion of the front elevation has vertical metal siding.

B2020 EXTERIOR WINDOWS

B2021 Windows

All windows at the building are single glazed units. The windows consist of fixed and awning type anodized aluminum framed units (reference Photograph 2 in Appendix B).

B2023 Storefront Systems

The building contained main entrances at the east and west elevations with each entrance containing two single glazed unfinished anodized aluminum storefront systems with double swinging doors (reference Photograph 4 in Appendix B). An entrance for disabled individuals at the southwest portion of the building adjacent to the restrooms was equipped with a single glazed unfinished anodized aluminum storefront system with two swinging doors (reference Photograph 5 in Appendix B).

B2030 EXTERIOR DOORS

B2039 Other Doors & Entrances

The building contained single and double hollow metal doors and frames at the service entrances and the entrances to the mechanical rooms and receiving (reference Photograph 6 in Appendix B). Door hardware consisted of a combination of knob and level handles.

CONDITION

B2010 EXTERIOR WALLS

B2011 Exterior Wall Construction

The exterior wall systems at the building appeared to be in fair to good condition with generally no major signs of deterioration, water ingress or general failure noted. The exterior painted surfaces were reportedly last painted in circa 2009 and therefore based on the typical EUL of 4 years for exterior paint, as well as current observed conditions, re-painting will be necessary near-term in the study period and at future 4 year intervals to maintain the appearance and protect the exterior walls.

B2020 EXTERIOR WINDOWS

B2021 Windows

The exterior window units appeared to be in fair condition. They were installed in circa 2000 and there were no major deficiencies observed. We do not anticipate any actions for their replacement as they will last beyond the study period, however consideration should be made for their replacement to insulated units for energy efficiency and improve thermal resistance.

The caulking at the perimeter of the window units was generally in fair to good condition. We recommend that the caulking at the window perimeters is replaced near-term in the study period concurrent with exterior painting.

B2023 Storefront Systems

The storefront systems appeared to be in good condition. We do not anticipate any replacement during the study period. Perimeter sealant replacement is included with the windows above.

B2030 EXTERIOR DOORS

B2039 Other Doors & Entrances

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

B30 ROOFING

DESCRIPTION

B3010 ROOF COVERINGS

B3011 Roof Finishes

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

Overview of Roof Locations & Configurations



The low-sloped roof contained an asphaltic Built-Up Roof (BUR) with a mineral cap sheet surface with loose granules applied to the surface. We understand that the roof covering is approximately 12 years of age. Roof surface mounted drains with downspout leaders are provide at several locations around the building perimeter. The downspouts discharge below grade, presumably to the municipal drainage system.

Table B30-1 Summary of Roof Covering

Roof Component	Description
Age	Circa 2001
Roof Area (total / approx. square footage)	7,850
Application/ Membrane	BUR
Manufacturer / Model	Tremco
Surface	Mineral Surface Cap Sheet and Loose Granules
Deck Type	Plywood
Insulation	25/32" Fiberboard
Cover Board	Unknown
Drainage	Internal Drains
Overflow Scuppers	None
Base Flashings	Single Ply
Cap Flashings	Single Ply
Perimeter Enclosure	Gravel Stop
Warranty (Manufacturer)	Tremco
Warranty (Contractor)	Tremco



B3020 ROOF OPENINGS

B3021 Glazed Roof Openings

There are two skylights located above the main lobby of the building (reference Photograph 7 in Appendix B). The skylights at 9'2" x 24'3" and 9'2" x 16'2" and are constructed with fixed laminated glass glazing set in anodized aluminum framing.

B3022 Roof Hatches

There is no access to the roof available. See Condition section below.

CONDITION

B3010 ROOF COVERINGS

B3011 Roof Finishes

The roof was not accessible; however we did not visually see any evidence of water ingress through interior observations of the roof framing system. This type of roof covering has a typical EUL of 15 to 20 years and based on observed conditions and a roof age of approximately 12 years, we anticipate mid-term replacement of the roofing system. We are unaware or could not visually see any possible areas of water ingress.

B3020 ROOF OPENINGS

B3021 Glazed Roof Openings

The skylights were replaced in circa 2000 during the building renovation. Skylights of this type have a typical EUL of 30 years and based on observed conditions and an age of 13 years we anticipate that both of the skylights will last beyond the study period without replacement necessary. We did not see any areas of water ingress.

B3022 Roof Hatches

We are unable to comment on the condition of the roof access hatch as there was none present. As there was no access to the roof provided at the building we recommend that access is installed. This will allow safe access to roof level to undertake roof inspections to check on condition of the roof covering, allow tree debris to be removed as there are overhanging trees and also allow maintenance to be performed on the rooftop package units.

We recommend that a lockable roof hatch be installed and also a fixed vertical steel access ladder in a location that won't cause interference with the operation of the building.

PROJECTED EXPENDITURES

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

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
B2011	Exterior Wall Construction	Repaint exterior stucco surfaces and doors	1,400	SF	\$3.25	\$4,550	2013	5
B2011	Exterior Wall Construction	Repaint exterior stucco surfaces and doors	1,400	SF	\$3.25	\$4,550	2017	5
B2011	Exterior Wall Construction	Repaint exterior stucco surfaces and doors	1,400	SF	\$3.25	\$4,550	2021	5
B2020	Exterior Windows	Replace sealant at perimeter of windows and curtainwall	910	LF	\$12.00	\$10,920	2018	3
B3011	Roof Finishes	Replace the BUR roof	7,850	SF	\$15.00	\$117,750	2018	3
B3022	Roof Hatch	Install new lockable roof hatch	1	EACH	\$2,500	\$2,500	2013	3
B3022	Roof Hatch	Install new roof hatch access ladder	1	LS	\$2,800	\$2,800	2013	3
Total Anticipated Expenditure for B Shell						\$147,620		

SECTION 4 - C INTERIORS

C10 INTERIOR CONSTRUCTION

DESCRIPTION

C1010 PARTITIONS

C1011 Fixed Partitions

The building contained partitions constructed with 2" x 4" metal studs spaced at 16" on-center with 5/8" gypsum board partitions at varying thicknesses (reference Photograph 8 in Appendix B). The partitioning was present to separate the various sections of the building including the classrooms, kitchen, office, restrooms and lobby area.

C1013 Retractable Partitions

There is a folding leaf type retractable partition located at the main lobby area of the building. The partition is stored in a closet along the southern end of the lobby (reference Photograph 9 in Appendix B).

C1014 Site Built Toilet Partitions

The men's and women's restrooms have faux slate acrylic partitions mounted on stainless steel frames (reference Photograph 10 in Appendix B).

C1020 INTERIOR DOORS

C1021 Interior Doors

The building generally contained single flush solid core wood doors which are housed within steel 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. Some of the doors were equipped with mechanical closers.

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.

C1013 Retractable Partitions

The retractable partitions appeared to be in good condition and are suitable for the current use.

C1014 Site Built Toilet Partitions

The toilet partitions appeared to be in good condition and are suitable for the current use.

C1020 INTERIOR DOORS

C1021 Interior Doors

The interior doors appeared to be in fair to good condition with no deficiencies noted. We do not anticipate any expenditure in relation to the internal 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 buildings. 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.

C30 INTERIOR FINISHES

DESCRIPTION

C3010 WALL FINISHES

C3012 Wall Finishes to Interior Walls

Interior walls at the building generally contained painted gypsum wall board with sections of exposed brick utilized at the perimeter walls (reference Photograph 8 in Appendix B). The three restrooms contained 4" x 4" ceramic tile wainscot (reference Photograph 11 in Appendix B).

C3020 FLOOR FINISHES

C3023 Hardeners and Sealers

The storage and office areas were observed to have concrete floors sealed with an epoxy based sealant.

C3024 Flooring

The majority of the building interior contained 3' x 3' resilient vinyl tile floor coverings (reference Photograph 12 in Appendix B). The kitchen area has a 2" x 2" ceramic tile floor and the three restrooms have 1" x 1" ceramic tile floor coverings. Storage and office areas were observed to have sealed concrete floors.

C3030 CEILING FINISHES

C3031 Ceiling Finishes

The ceilings throughout the building predominantly consisted of the exposed roof framing and sheathing systems (reference Photograph 1 in Appendix B). The restroom ceilings were smooth painted wallboard.

CONDITION

C3010 WALL FINISHES

C3012 Wall Finishes to Interior Walls

Interior wall finishes appeared to be in fair to good condition generally throughout the building, with minor marks and damages observed. The EUL of interior painted walls is 5 years in this instance, and based on our observations we recommend re-painting of all the previously painted walls and ceilings near-term in the study period to maintain the appearance of the building and work areas.

The ceramic tiled walls within the restrooms appeared to be in fair to good condition. The typical EUL for ceramic tile wall coverings is 30-years and therefore with an age of 13-years, replacement should not be required.

C3020 FLOOR FINISHES

C2034 Hardeners and Sealer

The sealed concrete floor surfaces are in fair to good condition. The epoxy sealant has an EUL of approximately 18 to 20 years and the floors will require resealing during the term. However, due to the size of the sealed floors and the cost to reseal, replacement will fall below the threshold of \$500 and therefore it has not been included within this cost study.

C3024 Flooring

The vinyl and ceramic tile flooring appeared to be in fair to good condition throughout the building. Vinyl flooring has a typical EUL of 18 years and therefore based on the RUL and observed conditions we recommend that it is replaced mid-term in the study to maintain the interior appearance. The typical EUL for ceramic tile floor coverings is 30 years and therefore with an age of 13 years, replacement should not be required.

C3030 CEILING FINISHES

C3031 Ceiling Finishes

The painted gypsum ceilings appeared to be in fair to good condition. Painted surfaces have an EUL of 5 years in this instance and therefore painting of the restroom ceilings has been include with repainting of the walls above. The exposed framing at the majority of the ceilings is in good condition and should not require repair or refinishing during the study period.

PROJECTED EXPENDITURES

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

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	5,200	SF	\$3.25	\$16,900	2014	5
C3012	Wall Finishes to Interior Walls	Repaint interior wall and ceiling surfaces	5,200	SF	\$3.25	\$16,900	2020	5
C3024	Flooring	Replace vinyl tile floor covering	4,600	SF	\$3.75	\$17,250	2027	5
Total Anticipated Expenditure for C Interiors						\$51,050		

SECTION 5 - D SERVICES

D20 PLUMBING

DESCRIPTION

D2010 PLUMBING FIXTURES

D2011 Water Closets

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

D2012 Urinals

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

D2013 Lavatories

The building contained wall mounted and vanity vitreous china lavatories (reference Photograph 12 in Appendix B). The lavatories generally consisted of single-handle lever type, non-metering faucets. Water is supplied via copper pipe work and drained through cast iron pipe work and fittings.

D2020 DOMESTIC WATER DISTRIBUTION

D2021 Cold Water Service

Cold water piping throughout the building consisted of a 1" and 2" diameter copper pipe system. 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 west elevation.

D2022 Hot Water Service

Domestic hot water is generated via one natural gas-fired water heater located in a mechanical room adjacent to the kitchen area (reference Photograph 13 in Appendix B).

Table D20-1 Summary of the Domestic Water Heating Equipment

Location	Manufacturer	Model #	Serial #	Fuel/ Rating	Capacity	Year of Installation
Mechanical Closet	American ProLine	062-40T343H	0044125225	Natural Gas	40 GAL	2007



D2030 SANITARY WASTE

D2031 Waste Piping

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

CONDITION

D2010 PLUMBING FIXTURES

D2011 Water Closets

The water closets and flush valves appeared to be in good condition. The water closets flushed properly and did not have any cracks in the china, therefore based upon observed conditions and with a typical EUL of 35 years, we anticipate that there will be no requirement for their replacement during the study period. The restrooms contain ADA compliant water closets with low flow flush valves.

D2012 Urinals

The waterless urinal valve 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 35 years, we anticipate that there will be no requirement for their replacement during the study period. The restrooms contain ADA compliant urinals.

D2013 Lavatories

The lavatories and faucets at each of the restrooms appeared to be in fair to good condition. The lavatories drained properly and did not have any cracks in the china, therefore based upon observed conditions and with a typical EUL of 35 years, we anticipate that there will be no requirement for their replacement during the study period. The restrooms contain ADA compliant lavatories with water saving faucets.

D2020 DOMESTIC WATER DISTRIBUTION

D2021 Cold Water Service

The domestic water systems 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 fair condition and is an inefficient model. Water heaters generally have a typical EUL of 10 years; therefore with an age of 6 years and inefficient design, we recommend near-term replacement with a high efficiency water heater.



D2030 SANITARY WASTE

D2031 Waste Piping

The waste piping is assumed to be in fair condition. After discussions with the City maintenance personnel we understand that a number of the City buildings have been having issues with sewer blockages and pipe deterioration, therefore we have been requested to include for camera inspections of the drainage/sewer system at the building.

D30 HVAC

DESCRIPTION

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 an enclosure at the rear exterior of the building. Gas service is routed to the gas-fired water heater and the packaged HVAC unit.

D3040 AIR DISTRIBUTION SYSTEMS

D3041 Air Distribution Systems

The conditioned air is distributed throughout the building via metal ductwork suspended from the roof framing and through metal flexible duct connections to ceiling diffusers/grills recessed in the restroom ceilings (reference Photograph 14 in Appendix B). The ductwork is sheet metal, except for flexible duct connections to ceiling diffusers in suspended ceiling areas

D3042 Exhaust Ventilation Systems

The building contained four ceiling mounted exhaust fans located in the restrooms and mechanical spaces. The building also has one make-up air unit which is located in a rear mechanical closet (reference Photograph 15 in Appendix B).

D3050 HEAT TRANSFER TERMINAL AND PACKAGED UNITS

D3052 Package Units

Cooling and heating at the building is provided by one constant volume standard efficiency package rooftop Trane unit with approximately 25 tons of cooling and 203,000 BTU/HR's of heating (reference Photograph 16 in Appendix B). The unit was installed in 2000. Refer to the following table D30-1 for further details of the package unit.

Table D30-1 Summary of the HVAC Equipment

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Fuel Type	Year
Rear Enclosure	Packaged Unit	Trane	YCH300	R43104144	25 Tons Cooling 203,000 Btu Heat	Electric / Natural Gas	2000
Mechanical Room	Fan Unit	Unknown	Unknown	Unknown	Unknown	Electric	Assumed 2000
Roof Level	Exhaust Fan	Greenheck	SP7	Unknown	Assumed 95 CFM	Electric	Assumed 2000
Roof Level	Exhaust Fan	Greenheck	SP7	Unknown	Assumed 95 CFM	Electric	Assumed 2000
Roof Level	Exhaust Fan	Greenheck	SP7	Unknown	Assumed 95 CFM	Electric	Assumed 2000
Roof Level	Exhaust Fan	Greenheck	SP7	Unknown	Assumed 95 CFM	Electric	Assumed 2000
Roof Level	Exhaust Fan	Greenheck	SP7	Unknown	Assumed 95 CFM	Electric	Assumed 2000

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

D3068 Building Automation Systems

The building HVAC is controlled via Trane Tracker Building Management system (reference Photograph 17 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 AIR DISTRIBUTION SYSTEMS

D3041 Air Distribution Systems

The metal ductwork appears to be in good condition and therefore we do not anticipate their replacement during the cost study period. 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 5 years starting at the start of the study period, as it was unclear when they were last cleaned.

D3042 Exhaust Ventilation Systems

The exhaust fans and make-up air units appeared to be in fair condition. Exhaust fans of this type have a EUL of 15 to 20 years, therefore based on the current observed condition and the future usage; we recommend replacement of the exhaust fans towards the end of the study period. The make-up air unit also appeared to be in fair condition and will remain serviceable beyond the study period.

D3050 HEAT TRANSFER TERMINAL AND PACKAGED UNITS

D3052 Package Units

The package unit appeared to be in fair condition and appears to be approximately 13 years of age and has and EUL of 15 years. Additionally, the unit has a low Energy Efficiency Rating (EER). Therefore, we recommend near-term replacement of the packaged unit.

We understand from discussions with the City maintenance personnel that the unit is undersized for the area it service and the controls do not adequately meet the needs of the users. For instance we further understand that the classrooms do not get enough cooled air supply. We recommend that a HVAC consultant is employed by the City to further assess the needs at the building and establish if the current supply capacity is adequate or if addition capacity is required.

We have undertaken the following calculation to understand approximately what this building needs in tonnage for it to be cooled satisfactory:

The package unit has a capacity of approximately 25 tons or 233 square feet per ton of cooling. The recommended average cooling capacity for office uses is within the range of 280 to 360 square feet per ton of cooling. The Property's total area of 5,832 square feet would require 20 tons of cooling capacity (if taken at 280 sqft per ton of cooling), which suggests that the current package unit is sufficient.

D3060 HVAC INSTRUMENTATION AND CONTROLS

D3068 Building Automation Systems

The building HVAC controls appeared to be in fair condition and functional. We understand that there are issues regarding the control of the rooftop package unit. The controls will be replaced at the time of the unit replacement, and therefore this should remove any issues the users currently face.

D40 FIRE PROTECTION

DESCRIPTION

D4010 SPRINKLERS

D4011 Sprinkler Water Supply

There is no form of fire suppression system at the building.

D4030 FIRE PROTECTION SPECIALTIES

D4031 Fire Extinguishers

Multipurpose portable wall mounted handheld fire extinguishers were provided throughout the building (reference Photograph 18 in Appendix B).

CONDITION

D4010 SPRINKLERS

D4011 Sprinkler Water Supply

The building does not contain any life safety systems and therefore after discussions with City maintenance personnel we have recommended the installation of a fire suppression system. Due to the nature of the building use we suggest that the system is a dry-pipe and not wet-pipe so that if there is a sprinkler head that is defective then the water that is in the piping can not affect the art exhibitions and gallery. The dry-pipe system consists of the piping being under air pressure instead of water pressure. We understand this will also help with building insurance costs, but it is not clear to what extent.

D4030 FIRE PROTECTION SPECIALTIES

D4031 Fire Extinguishers

Fire extinguishers appeared to be in good condition. We understand they are maintained on a yearly basis by DCS Testing & Equipment. The fire extinguishers were last tested in February of 2013. We do not anticipate a requirement to replace any fire extinguishers during the study period.

D50 ELECTRICAL

DESCRIPTION

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

D5010 ELECTRICAL SERVICE & DISTRIBUTION

D5012 Low Tension Service & Dist.

The facility is serviced by a 200-amp, 120/208-Volt, 3-phase, 4-wire metered panel which is located in an exterior cabinet at the rear exterior of the building (reference Photograph 19 in Appendix B).

D5020 LIGHTING & BRANCH WIRING

D5021 Branch Wiring Devices

The branch wiring devices at the building included switches, receptacles and other devices that would be generally associated with these types of buildings (reference Photograph 20 in Appendix B). 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 4' fluorescent fixtures suspended from the exposed roof framing system. The florescent fixtures all contained T8 lamps and electronic ballasts. All of the in-room lighting is controlled via local switching in the respective rooms. There are also eight 350 watt spotlights located in the lobby area that are controlled with the sound system.

D5030 COMMUNICATIONS & SECURITY

D5033 Telephone Systems

The telephone system was contained in an interior closet.

D5037 Fire Alarm Systems

The building has battery powered smoke detectors located throughout the interior spaces (reference Photograph 5 in Appendix B). There is no full fire alarm system present at the building.



D5090 OTHER ELECTRICAL SYSTEMS

D5092 Emergency Light & Power Systems

Emergency lighting and egress exit lighting signs are provided at exit routes from the building (reference Photograph 21 in Appendix B).

CONDITION

D5010 ELECTRICAL SERVICE AND DISTRIBUTION

D5012 Low Tension Service & Dist.

The electrical equipment was noted to be in fair condition. We recommend that the exterior enclosure be painted during the exterior painting program. Electrical distribution systems generally have a typical EUL of thirty-years, however the panels were replaced in 2000 and due to observed conditions and an estimated remaining life of 17-years we anticipate that there will be no replacement actions required during the study period. Individual panels at the building are also anticipated to be serviceable throughout the study period.

D5020 LIGHTING & BRANCH WIRING

D5021 Branch Wiring Devices

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

D5022 Lighting Equipment

The interior lighting was replaced in 2000 and observed in to be in fair to good fair to good condition and all fixtures were operating properly with no broken lenses or deteriorated housings. No actions will be generated during the study period regarding the fluorescent fixtures and we anticipate the light fixtures will be replaced on an as needed basis. However, we recommend that the manual switches be replaced with occupancy sensors at the classrooms, kitchen and restrooms. Additionally, with the abundance of natural light through the skylights, a photocell should be installed at the lobby area to control the lighting system. However, the cost to install a photocell will fall below the threshold of \$500 and therefore it has not been included within this cost study.

D5030 COMMUNICATIONS & SECURITY

D5033 Telephone Systems

The existing telephone and data equipment was observed to be in fair condition. We do not anticipate any replacement during the cost study period.

D5037 Fire Alarm Systems

The limited smoke detectors located in the building is understood not sufficient to meet insurance requirements and also current code. We recommend that a full fire alarm system is installed throughout the building with the necessary addressable devices such as smoke detectors, manual pull stations and fire bell. We have included for this installation at the start of the study period.

D5090 OTHER ELECTRICAL SYSTEMS

D5092 Emergency Light & Power Systems

Emergency egress exit lighting signs appeared to be in fair condition, however at the end of their EUL. We recommend that they are upgraded and therefore replaced with more suitable LED exit lighting.

PROJECTED EXPENDITURES

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

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
D2022	Water Heater	Replace domestic water heater	40	GAL	\$35.00	\$1,400	2018	4
D2031	Waste Piping	Undertake camera inspection of sewer lines	1	LS	\$1,000	\$1,000	2013	3
D3041	Air Distribution Systems	Clean ductwork	5,832	SF	\$0.25	\$1,458	2013	3
D3041	Air Distribution Systems	Clean ductwork	5,832	SF	\$0.25	\$1,458	2018	3
D3042	Exhaust Ventilation Systems	Replace exhaust fans	5	EACH	\$180	\$900	2015	3
D3052	Package Unit	Replace rooftop package unit	25	TONS	\$2,350	\$58,750	2014	3
D4011	Sprinkler Water Supply	Install dry-pipe suppression system throughout building	5,832	SF	\$4.65	\$27,119	2013	1
D5022	Lighting	Install motion sensor switches	10	EACH	\$325	\$3,250	2014	4
D5037	Fire Alarm System	Install new fire alarm system	5,832	SF	\$5.00	\$29,160	2013	1
D5092	Emergency Light &	Replace exit lights with new LED type fixtures	1	LS	\$1,000	\$1,000	2013	1



	Power Systems							
		Total Anticipated Expenditure for D Services				\$125,495		

SECTION 6 - E EQUIPMENT & FURNISHINGS

E20 FURNISHINGS

DESCRIPTION

E2010 FIXED FURNISHINGS

E2012 Fixed Casework

The building contained wood constructed floor and wall mounted fixed casework within the break rooms, storage rooms and the reception desk. The wood cabinets generally consisted of hardwood frames with oriented strand board panels and doors. The counters observed were plastic laminate.

CONDITION

E2010 FIXED FURNISHINGS

E2012 Fixed Casework

The fixed floor and wall cabinets along with the reception counter appeared to be in good condition and although 13-years old they were observed to be functional and suitable for their intended use. Fixed cabinets such as these have a typical EUL of 20-years; however due to the current condition light usage, the replacement will not be necessary during the study period, so no replacement actions are anticipated.

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 parking lot is located at the rear of the site and can be access from Manhattan Beach Boulevard to the North and from Eleventh Street to the South along the rear of the site (reference Photographs 22 and 23 in Appendix B). The parking lot and paving around the site has an asphalt surface with white line striping denoting areas of parking stalls. We were not provided with the original specification details of the paving and therefore cannot comment on the specific asphalt mix type, classification or its suitability for its existing use. Table G20-1 provides a summary of the site systems.

Table G20-1 Schedule of Site Systems

System Type	System Surface	Location	Approximate Measurement	No. of Parking Spaces	No. of Disabled Parking Spaces
Drive Aisle and Parking	Asphalt	Rear Parking Lot	1,755 SY	36*	2

* Including ADA Parking Spaces.

G2030 PEDESTRIAN PAVEMENT

G2031 Paving and Surfacing

Variable width concrete walkways are located throughout the site (reference Photograph 24 in Appendix B). Additionally, a concrete patio is located along the rear of the building. We were not provided with the original specification details of the paving and therefore cannot comment on the specific concrete mix type, classification or its suitability for its existing use.

G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The building contained a brick masonry mechanical enclosure at the rear elevation of the building (reference Photograph 25 in Appendix B). The enclosure was accessed through metal gates. Brick masonry walls and fences were located at the front elevation of the building and at the rear of the building surrounding the patio area. A concrete masonry unit (CMU) fence is located at the rear of the parking area along Eleventh Street.

A CMU enclosure is located at the southeast corner of the site and houses the dumpster.

G2046 Fountains, Pools & Watercourses

There is a water feature located in the patio enclosure at the rear of the building (reference Photograph 26 in Appendix B). The fountain is supplied water from Sta-Rite filter and pump unit located at the rear of the building (reference Photograph 27 in Appendix B).

G2050 LANDSCAPING

G2056 Planters

Landscaping consisted of shrubs and ground cover, with a number of mature trees located in Concrete Masonry Unit (CMU) and stone planters at several locations throughout the site.

G2057 Irrigation Systems

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

CONDITION

G2020 PARKING LOTS

G2021 Bases and Sub-Bases

The asphalt paved areas throughout the main site appeared to be in fair overall condition. All areas of the asphalt should undergo asphaltic-based seal coat and the re-application of surface markings every three-years to extend the life of the pavements beginning in two years. Additionally due to the age and condition of the asphalt pavement at the parking area we recommend asphalt milling and overlay including restriping of the parking area towards the end of the study period.

G2030 PEDESTRIAN PAVEMENT

G2031 Paving and Surfacing

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

G2040 SITE DEVELOPMENT

G2041 Fences & Gates

The brick and CMU walls and fences appeared to be in fair condition with no issues observed and no reported instances of disrepair. We do not anticipate replacement during the study period.

G2046 Fountains, Pools & Watercourses

The fountain, pump and filtration system appear to be in poor to fair overall condition. The water feature will remain serviceable throughout the study period; however, the filtration and pumping system has reached the end of their EUL and therefore we recommend that they are replaced prior to mid-term in the study period.

In addition to this the water proofing system is understood to have started to deteriorate. We also recommend the replacement of the waterproofing system prior to mid-term in the study period at the same time at the fountain equipment.

G2050 LANDSCAPING

G2056 Planters

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

G2057 Irrigation Systems

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

G40 SITE ELECTRICAL UTILITIES

DESCRIPTION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

Exterior lighting at the building consisted of fascia and soffit mounted fluorescent lights as well as planter, walkway, signage and pole mounted parking lot lighting (reference Photographs 28 through 30 in Appendix B).

CONDITION

G4020 SITE LIGHTING

G4021 Fixtures & Transformers

The exterior light fixtures appeared to be in poor to fair condition. There are continuing issues regarding their operation and they are nearing their EUL and therefore we have recommended that they are replaced prior to mid-term in the study period. The projected expenditure table below details the light fixtures that are to be replaced.

PROJECTED EXPENDITURES

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

Element No.	Building Element	Recommendation	Qty	Unit	Rate	Cost	Year	Priority Code
G2021	Bases and Sub-Bases	Crack repair, seal coating and re-striping at the parking lot	1,920	SY	\$1.50	\$2,880	2015	3
G2021	Bases and Sub-Bases	Crack repair, seal coating and re-striping at the parking lot	1,920	SY	\$1.50	\$2,880	2021	3
G2021	Bases and Sub-Bases	Asphalt mill and overlay including restriping	1,920	SY	\$15.00	\$28,800	2018	3
G2046	Fountains, Pools & Watercourse	Replace the fountain pump and filtration system	1	EACH	\$1,500	\$1,500	2016	3
G2046	Fountains, Pools & Watercourse	Replace waterproofing system	1	LS	\$2,500	\$2,500	2016	3
G4021	Fixtures & Transformers	Replace parking lot light fixtures	2	EACH	\$1,200	\$2,400	2014	4

G4021	Fixtures & Transformers	Replace planter light fixtures	15	EACH	\$80.00	\$1,200	2014	4
G4021	Fixtures & Transformers	Replace walkway light fixtures	12	EACH	\$200	\$2,400	2014	4
G4021	Fixtures & Transformers	Replace soffit light fixtures	13	EACH	\$120	\$1,560	2014	4
G4021	Fixtures & Transformers	Replace sign and accent lighting	1	LS	\$3,000	\$3,000	2014	4
Total Anticipated Expenditure for G Building Sitework						\$49,120		

Appendix A
Ten-Year
Expenditure Forecast
2012 - 2021

10 YEAR EXPENDITURE FORECAST

Creative Arts Center
1560 Manhattan Beach Boulevard
Manhattan Beach, CA
Rev A



Element No.	Component Description	Estimated Useful Life or Replacement Cycle (Yrs)	Remaining Useful Life (Yrs)	Quantity	Unit of Measurement	Unit Cost	Plan Type	Priority	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total	Total	Combined Total	
						\$			1	2	3	4	5	6	7	8	9	10	Deferred	Scheduled		
A. SUBSTRUCTURE																						
A. SUBSTRUCTURE SUB-TOTALS									\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
B. SHELL																						
B2011	Repaint exterior stucco surfaces and doors	4	0	1,400.00	SF	\$3.25	Deferred Maintenance	5	\$4,550	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,550	\$0	\$4,550	
B2011	Repaint exterior stucco surfaces and doors	4	4	1,400.00	SF	\$3.25	Routine Maintenance	5	\$0	\$0	\$0	\$0	\$4,550	\$0	\$0	\$0	\$4,550	\$0	\$0	\$9,100	\$9,100	
B2020	Replace sealant at perimeter of windows and curtain wall	15	5	910.00	LF	\$12.00	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$10,920	\$0	\$0	\$0	\$0	\$0	\$10,920	\$10,920	
B3011	Replace BUR covering	20	5	7,850.00	SF	\$15.00	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$117,750	\$0	\$0	\$0	\$0	\$0	\$117,750	\$117,750	
B3022	Install new roof hatch access ladder	20	0	1.00	EACH	\$2,500.00	Deferred Maintenance	3	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500	\$0	\$2,500	
B3022	Install new roof hatch access ladder	20	0	1.00	LS	\$2,800.00	Deferred Maintenance	3	\$2,800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,800	\$0	\$2,800	
B. SHELL SUB-TOTALS									\$9,850	\$0	\$0	\$0	\$4,550	\$128,670	\$0	\$0	\$4,550	\$0	\$9,850	\$137,770	\$147,620	
C. INTERIORS																						
C3012	Repaint interior wall and ceiling surfaces	6	1	5,200.00	SF	\$3.25	Routine Maintenance	5	\$0	\$16,900	\$0	\$0	\$0	\$0	\$0	\$16,900	\$0	\$0	\$0	\$33,800	\$33,800	
C3024	Replace vinyl tile floor covering	18	5	4,600.00	SF	\$3.75	Capital Renewal	5	\$0	\$0	\$0	\$0	\$0	\$17,250	\$0	\$0	\$0	\$0	\$0	\$17,250	\$17,250	
C. INTERIORS SUB-TOTALS									\$0	\$16,900	\$0	\$0	\$0	\$17,250	\$0	\$16,900	\$0	\$0	\$0	\$51,050	\$51,050	
D. SERVICES																						
D2022	Replace domestic water heater	10	5	40.00	GAL	\$35.00	Energy & Sustainability	4	\$0	\$0	\$0	\$0	\$0	\$1,400	\$0	\$0	\$0	\$0	\$0	\$1,400	\$1,400	
D2031	Undertake camera inspection of sewer lines	N/A	0	1.00	LS	\$1,000.00	Deferred Maintenance	3	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$1,000	
D3041	Clean ductwork	5	0	5,832	SF	\$0.25	Deferred Maintenance	3	\$1,458	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,458	\$0	\$1,458	
D3041	Clean ductwork	5	5	5,832	SF	\$0.25	Routine Maintenance	3	\$0	\$0	\$0	\$0	\$0	\$1,458	\$0	\$0	\$0	\$0	\$0	\$1,458	\$1,458	
D3042	Replace exhaust fans	15	2	5.00	EACH	\$180.00	Capital Renewal	3	\$0	\$0	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$900	\$900	
D3052	Replace rooftop packaged unit	15	1	25.00	TONS	\$2,350.00	Capital Renewal	3	\$0	\$58,750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58,750	\$58,750	
D4011	Install dry-pipe suppression system throughout the building	25	0	5,832.00	SF	\$4.65	Deferred Maintenance	1	\$27,119	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$27,119	\$0	\$27,119	
D5022	Install motion sensor light controls	10	1	10.00	EACH	\$325.00	Energy & Sustainability	4	\$0	\$3,250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,250	\$3,250	
D5037	Install new fire alarm system	15	0	5,832.00	SF	\$5.00	Deferred Maintenance	1	\$29,160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29,160	\$0	\$29,160	
D5092	Replace exit lights with new LED type fixtures	20	0	1.00	LS	\$1,000.00	Deferred Maintenance	1	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$1,000	
D. SERVICES SUB-TOTALS									\$59,737	\$62,000	\$900	\$0	\$0	\$2,858	\$0	\$0	\$0	\$0	\$59,737	\$65,758	\$125,495	
E. EQUIPMENT & FURNISHING																						
E. EQUIPMENT & FURNISHING SUB-TOTALS									\$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	
G. BUILDING SITEWORK																						
G2021	Crack repair, seal coating and re-striping at the parking lot	3	2	1,920.00	SY	\$1.50	Routine Maintenance	3	\$0	\$0	\$2,880	\$0	\$0	\$0	\$0	\$0	\$2,880	\$0	\$0	\$5,760	\$5,760	
G2021	Asphalt pavement milling and overlay including re-striping	20	5	1,920.00	SY	\$15.00	Capital Renewal	3	\$0	\$0	\$0	\$0	\$0	\$28,800	\$0	\$0	\$0	\$0	\$0	\$28,800	\$28,800	
G2046	Replace the fountain pump and filtration system	10	3	1.00	EACH	\$1,500.00	Capital Renewal	3	\$0	\$0	\$0	\$1,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500	\$1,500	
G2046	Replace waterproofing system	10	3	1.00	LS	\$2,500.00	Capital Renewal	3	\$0	\$0	\$0	\$2,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500	\$2,500	
G4021	Replace parking lot light fixtures	20	1	2.00	EACH	\$1,200.00	Energy & Sustainability	4	\$0	\$2,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,400	\$2,400	
G4021	Replace planter light fixtures	20	1	15.00	EACH	\$80.00	Energy & Sustainability	4	\$0	\$1,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200	\$1,200	
G4021	Replace walkway light fixtures	20	1	12.00	EACH	\$200.00	Energy & Sustainability	4	\$0	\$2,400	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,400	\$2,400	
G4021	Replace soffit light fixtures	20	1	13.00	EACH	\$120.00	Energy & Sustainability	4	\$0	\$1,560	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,560	\$1,560	
G4021	Replace sign and accent lighting	20	1	1.00	EACH	\$3,000.00	Energy & Sustainability	4	\$0	\$3,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,000	\$3,000	
G. BUILDING SITEWORK SUB-TOTALS									\$0	\$10,560	\$2,880	\$4,000	\$0	\$28,800	\$0	\$0	\$2,880	\$0	\$0	\$49,120	\$49,120	
Z. GENERAL																						
Z. GENERAL SUB-TOTALS									\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
Expenditure Totals per Year									\$69,587	\$89,460	\$3,780	\$4,000	\$4,550	\$177,578	\$0	\$16,900	\$7,430	\$0	\$69,587	\$303,698	\$373,285	
Total Cost (Inflated @ 4% per Yr.)									\$69,587	\$93,038	\$4,088	\$4,499	\$5,323	\$216,051	\$0	\$22,239	\$10,168	\$0	\$69,587	\$355,408	\$424,994	

Appendix B

Photographs



Photograph No. 1

View of the roof framing system.



Photograph No. 2

View of finishes and windows at the front elevation.



Photograph No. 3

View of the rear elevation and finishes.



Photograph No. 4

View of the storefront system at the main entrance.



Photograph No. 5

View of the side entrance.



Photograph No. 6

View of a metal service door.



Photograph No. 7

View of one of the two skylights.



Photograph No. 8

View of the typical interior partitions.



Photograph No. 9

View of the closet containing the retractable partition.



Photograph No. 10

View of the typical toilet partitions.



Photograph No. 11

View of the restroom finishes.



Photograph No. 12

View of a lavatory and waterless urinal.



Photograph No. 13
View of the water heater.



Photograph No. 14
View of the typical metal ductwork.



Photograph No. 15
View of the fan unit.



Photograph No. 16

View of the packaged unit.



Photograph No. 17

View of the automated HVAC controls.



Photograph No. 18

View of a typical fire extinguisher.



Photograph No. 19

View of the main electrical service panel.



Photograph No. 20

View of a typical electric panelboard.



Photograph No. 21

View of one of the emergency lighting units.



Photograph No. 22

View of the main driveway.



Photograph No. 23

View of rear parking area.



Photograph No. 24

View of a typical concrete walkway.



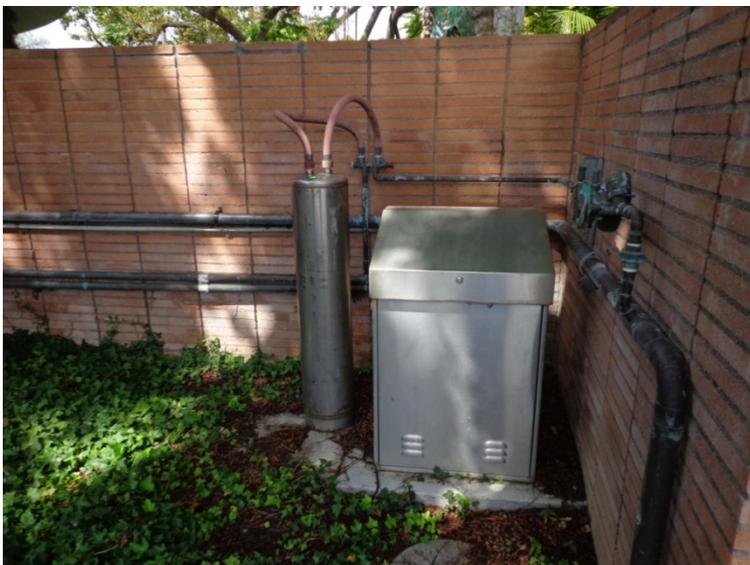
Photograph No. 25

View of the typical brick fencing.



Photograph No. 26

View of the water feature.



Photograph No. 27

View of the fountain pump and filtration system.



Photograph No. 28

View of the bollard light.



Photograph No. 29

View of a pole mounted light.



Photograph No. 30

View of the soffit and fascia mounted lighting.

Appendix C

Asset Inventory

G40 SITE ELECTRICAL UTILITIES

Location	Equipment Type	Manufacturer	Model No.	Serial No.	Capacity / Rating	Year
Rear Cabinet	Main Panel	Murray	VZ440R	NA	400A 120/208-Volt	2000
Kitchen	Panelboard	Murray	NA	NA	200A 120/208-Volt	2000
Kitchen	Pump Relay	WireGuard	Unknown	Unknown	Unknown	2000
Rear Mechanical Room	Switched Disconnect	Murray	Unknown	Unknown	200 A 240 V	2000

Appendix D

Document Review and
Warranty Information

DOCUMENT REVIEW & WARRANTY INFORMATION

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

Plans for the Manhattan Heights Annex dated 200, drawn by the City of Manhattan Beach DPW.

Floor plans and site plan, undated and provided by the City of Manhattan Beach DPW.

Appendix E

Environmental Report:
Asbestos & Lead-Based Paint





LIMITED ASBESTOS & LEAD-BASED PAINT ASSESSMENT REPORT

Presented To:

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

Assessment Location:

Creative Arts Center
1560 Manhattan Beach Boulevard
Manhattan Beach, CA 90266

Andersen Environmental Project No. 1304-584

Report Date: June 5, 2013

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APPENDICES

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

1.0 INTRODUCTION

This report presents the results of Andersen Environmental's Limited Asbestos & Lead-Based Paint Assessment of 1560 Manhattan Beach Boulevard, Manhattan Beach CA 90266 (referred to hereunder as the subject property). This document is prepared for the sole use of The City of Manhattan Beach and any regulatory agencies that are directly involved in this project. No other party should rely on the information contained herein without prior written consent of The City of Manhattan Beach scope of services, inspection methodology, and results are presented below.

2.0 SCOPE OF WORK

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

Asbestos

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

Lead-Based Paint

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

3.0 PROPERTY DESCRIPTION

The subject property consists of a single story concrete masonry unit (CMU) building. Currently, the property is utilized as a creative arts center. The exterior finishes consist of CMU walls, stucco soffits with metal framed doors and windows, and flat built up roof. The interior finishes include drywall walls and ceilings with vinyl sheet flooring or vinyl floor tiles.

4.0 INSPECTOR'S QUALIFICATIONS

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

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

Personnel certificates have been provided in *Appendix C*.

5.0 TESTING PROTOCOL

Asbestos

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

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

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

Lead-Based Paint

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

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

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

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

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

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

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

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

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

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

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

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

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

6.0 METHOD OF TESTING

Asbestos

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

A total of eighteen (39) samples were submitted to LA Testing in South Pasadena, California. LA Testing is accredited under the NIST/NVLAP program for asbestos in bulk material by polarized light microscopy and the State of California for asbestos analysis.

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

Lead-Based Paint

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

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

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

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

7.0 SUMMARY OF RESULTS

Asbestos

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

Material Description	Material Locations	Condition	Asbestos Percentage	Estimated Quantity*
Roofing Materials	Roof	Good	Presumed	3,500

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

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

Lead-Based Paint

Paint Sampling: Throughout the subject property, several of the painted components indicated the presence of lead-based paint (LBP) at or above the action level. The following summary lists the specific components that tested above the action level and their respective locations:

- Main Hall, Steel I Beams & Columns – 4.3 – 6.4 mg / cm²
- Restroom, Ceramic Tile – 9.4 – 11.6 mg / cm²

Sampling for this inspection was representative and any components that were not tested but similar to those components that tested positive for LBP should be considered and treated as lead laden.

8.0 RECOMMENDATIONS

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

Asbestos

Samples that were found to contain less than one percent (<1%) asbestos by PLM analysis should be further analyzed using the 1000 point count method. This analysis method has a lower detection limit and may if performed yield results lower than the regulatory levels of Cal-OSHA.

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

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

It is highly recommended that abatement monitoring be performed by the asbestos consultant (Andersen Environmental) if asbestos abatement is to be performed while non-abatement persons (employees, tenants, other building occupants, or general public) are present in adjacent areas. Abatement monitoring included the collection of air samples in adjacent areas to demonstrate that asbestos fibers are not migrating out of the regulated areas. In addition to air sampling, the monitoring includes oversight of the abatement contractor to ensure that the work is being conducted in compliance with all applicable regulations and in accordance with the scope of work and abatement specifications. Such abatement monitoring serves to limit the legal liabilities of the building owner.

Lead-Based Paint

Numerous components and painted surfaces throughout the interior of the subject property were determined to contain lead concentrations above the regulated amount. LBP was found to be intact (good condition).

LBP components in good condition may remain in place subsequent to renovation/demolition or they may be removed intact by lead trained personnel in accordance with all applicable federal, state and local regulations.

Should the contractor choose not to remove the lead-based paint materials and remove the materials in their entirety with the lead-paint components in place, it is recommended that samples representative of the entire mass of the prospective waste stream be collected by the contractor. These samples should then be analyzed according to the CAL EPA protocols for waste characterization as follows:

To characterize all waste streams, the following should be performed:

- Collect a representative sample of the waste material.
- For a pile of waste take one sample of a proportionate combination of Component in the pile. If a large quantity of waste is generated no less than four samples may be required.

Analysis for the waste characterization samples shall be performed as follows:

- Waste generated by chemical stripping shall, in addition to the requirements for determining the solid and soluble lead concentrations, shall be tested for corrosiveness and other contaminants, as applicable, resulting from the chemical stripping process.
- Analyze samples for Total Threshold Limit Concentration (TTLC)
 - If results are less than 50 mg/kg, the waste is not hazardous and shall be disposed as general construction waste.
 - If sample results are between 50 and 1,000 mg/kg the waste shall be tested for Soluble Threshold Limit Concentration (STLC).
 - If the sample results are above 1,000 mg/kg the waste is considered California Regulated Hazardous Waste, and no further testing is needed.

Where waste is required to be tested for STLC, the following shall apply:

- If the STLC results are less than 5 mg/L and had a TTLC of less than 350 mg/kg, the material shall be disposed at a Class II waste landfill. Evidence of such results of the STLC testing will be required by the landfill before waste is accepted. No further testing is required.
- If the STLC results are 5 mg/L or greater, or had a TTLC between 350 mg/kg and 1,000 mg/kg, the waste is a California regulated waste and the material shall be tested using the federally mandated Toxicity Characterization Leaching Procedure (TCLP)

Where waste is required to be tested by TCLP the following shall apply:

- If the TCLP is less than 5 mg/L, the waste is California regulated hazardous solid waste (non-RCRA). This material shall be disposed in a Class I hazardous waste landfill.
- If the TCLP is equal to or greater than 5 mg/L, the waste is a federally regulated hazardous waste solid (RCRA). The waste will then require treatment before being disposed in a Class I hazardous waste landfill.

The removal of material containing any detectable level of lead is subject to OSHA's Lead Exposure in Construction Rule (29 CFR part 1926) and Title 8, Section 1542.1 of the California Code of Regulations.

9.0 RENOVATION, REPAIR AND PAINTING (RRP) RULE

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

10.0 INSPECTION LIMITATIONS

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

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

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

Survey and Report by:

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

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

Appendix F

Glossary of Terms

Acronyms & Glossary of Terms

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

Acronyms & Glossary of Terms

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

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

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

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

Codes – See building codes.

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

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

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

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

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

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

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

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

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