MUNICIPAL BUILDINGS FACILITY CONDITION ASSESSMENT

CITY OF BERKLEY, MICHIGAN

AUGUST 2014

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EXECUTIVE SUMMARY

Background

The City of Berkley contracted with Stantec to perform a building condition evaluation of six municipal sites comprised of the City Hall complex (three attached buildings), the Parks & Recreation facility (two attached buildings), the Public Works complex (five buildings), the Public Library and the Public Safety buildings.

Purpose of the Study

This Facilities Assessment was performed to accomplish the following objectives:

- Provide a systems-level inventory of the City's facilities, allowing quick access to facilities information.
- Determine the general condition of the City's buildings and provide the data in a concise format, allowing quick determination of the current replacement value and condition of each facility.
- Determine the Facilities Condition Index (FCI) for each building and all City facilities collectively, allowing the City to quantify and prioritize projects for planning purposes.
- Assist the City in meeting its goals through an understanding of the condition of its assets and the maintenance required to maintain those assets.

Assessment Scope

This assessment included interviews with facility staff, visual inspections of each assessed facility and a review of previously developed reports and record drawings. The assessment focused on buildings only, without invasive or destructive testing, and did not include land, parking lots, roadways or infrastructure between buildings. Existing conditions, maintenance history, potential problems, and projected life expectancy of systems and components (including structural, mechanical, and electrical systems) were recorded.

Collected information was analyzed to develop estimates of repair and replacement costs in a spreadsheet format for record-keeping, long-range planning, prioritizing and cost projection.

This assessment also presents energy saving recommendations and a feasibility study of the City Hall complex, which includes the City Offices building, the District 45A court building and the historic Fire House.

Disclaimer

Stantec's evaluation of the City of Berkley facilities was limited to visible and accessible spaces and did not include any destructive testing or removal of equipment, materials or ceiling tiles to ascertain the existence of concealed conditions within the building.

Due to the highly specialized nature of hazardous material inspections, Stantec did not review or address the presence or absence of hazardous materials within the facilities as part of this evaluation.

Observations and Recommendations

The condition of the City buildings varies considerably, dependent on age, use and construction quality. Most building systems, including heating, cooling, plumbing and electrical are near or past the end of their useful service life. Despite maintenance efforts, these components have a limited lifespan, and the point has been reached where repairs have a diminishing return.

General Observations
The data and observations show that the Library is in the best condition of all facilities, benefitting from the quality of its construction, more recent expansion, gentle use and level of maintenance. The Ice Arena and Public Works buildings show signs of their age and the expected high level of wear they receive. The Court Building is in the worst overall shape. Constructed in 1973 underneath the roof and structure of a carport, it was originally the second police station before being converted to its current use. Many building systems, especially the cladding, are well past the end of their expected service life. This building may be beyond the point where repairs are practical.

Structure
Structural issues are typically very rare, and most City of Berkley buildings are no exception, showing no sign of structural problems. This includes buildings from many eras - the Library, Public Safety Building, original Ice Arena (main rink only), City Hall Building, Historic Fire Hall and the main buildings of the Public Work Complex.

Buildings showing signs of potential structural issues include:

- The Ice Arena where the floor in the small rink has settled, damaging the ice coils
- The Recreation Center, where settlement has caused the northwest exterior wall to move and crack
- The Court Building, where the condition of the exterior walls has deteriorated considerably since it was built.
- The Salt Dome, where the prefabricated roof has leaked in the past and caused the wood roof deck and framing to become water-damaged.

Envelope condition
The building envelope includes exterior walls, roof and windows, all of which have the primary function of separating the interior from the exterior elements. The condition of buildings envelopes of City buildings varies mostly based on the material and construction.

The brick cladding on the Library, Public Safety, several Public Works buildings, City Hall and the historic Fire Hall is in good condition for age of the buildings, with only typical maintenance needed.

Facilities with other types of exterior walls show different types of problems:

- The block wall cladding at the Community Center is showing signs of paint and mortar damage from water and structural movement.
- Metal siding at the Ice Arena shows typical damage from trucks, maintenance equipment and the piling of ice against the building.
- The wood cladding on the Court Building is well past the end of its life, is significantly deteriorated and is not effectively keeping water out of the building.

Roof condition also varies at each building. The sign of roof leaks – ceiling and wall damage – is visible in many buildings, including portions of Public Safety, Animal Shelter, Salt Dome, City Hall, Ice Arena, Community Center and City Hall. A detailed inspection by a roofing company is recommended.

Windows are generally in good condition, with many replaced over the years. There are minor issues from building to building, with the older windows at the Public Works complex soon due for replacement. The one building exhibiting the most problems is the Court Building, with air and water infiltration, as well as failed hardware.

Water infiltration
Site drainage problems, combined with areas where surface water can easily enter a building is an issue at the City Hall and especially the Public Safety Building. The police car garage entry and the underground electrical conduits are two problem locations. Water entering the building in these areas ends up basement storage areas that contain important records, and has caused electrical problems in the past.

Electrical systems condition
Electrical systems vary considerably from building to building, with the major concerns being systems that are well past the end of their expected service life or do not meet current codes. Panels in the Public Works buildings and the historic Fire Hall are both aged and heavily modified. These systems should be considered for replacement. The electrical system in the Public Safety Building has been damaged from water in the past and continues to be a point of entry for ground water during rain. The electrical system at the Ice Arena is original to the building and should also be considered for replacement.

Mechanical systems condition
Mechanical systems vary from fully operational to non-functional. Many systems in City Hall, the historic Fire Hall and the Court Building are past the end of their useful lives, providing poor air distribution, humidity control, and user comfort. Heating and cooling in the Ice Arena and Community Center is aged and unable to meet demand, despite maintenance, especially in the locker areas. Similar issues are found at the Public Works Complex.

The Library has a well-functioning system, but it is 15 years old, inefficient and nearing the end of its expected service life.

The Public Safety Building systems are nearing 20 years old and are inefficient, providing poor control and user comfort. The back-up cooling system in the dispatch area is in poor condition and very loud, creating a noise issue when answering emergency calls.

Plumbing condition varies similarly, with fixture condition dependent on the age and use of the building. Most buildings, outside the Library, show signs of fixture wear and age, with the Ice Arena and Public Works facilities showing greater signs of wear. The toilet room in the Fire Hall has been decommissioned.

Budgetary Implications and Recommendations
The Priority 1 Facilities Condition Index, including immediate issues, for all city buildings combined is just under 4%, totaling approximately $850,000 in issues that have a higher potential for failure or collateral damage. This FCI is not atypically low, as there are few high-cost systems (structure, HVAC, Electrical, etc.) that are in imminent danger of failure.

When a longer view is taken, the picture changes considerably. Looking forward approximately five years, the cumulative FCI increases to over 12% for all buildings (individual building FCIs range from 0.7% to 27%). This value is considered in the “poor” range and is indicative of systems that are past the end of their lifespan, as well as issues that have been deferred for a number of years due to the cost of repair or replacement.

As stated in the Deferred Maintenance Backlog Background, the investment solution has two facets:

- The funds needed for immediate repair projects – repairs and/or replacements that will prevent further deterioration of the buildings and infrastructure.
- The funds required to maintain and/or improve the condition of the buildings. These funds need to be budgeted in advance to allow for repairs at the appropriate time - before items become critical or cause additional damage. The following is proposed:

Short Term Recommendation
The City should review the items that comprise the Priority 1 Deferred Maintenance Backlog of $850,000 and first address those affecting life/safety issues, those having the greatest potential for future damage to other building components, those that are code compliance issues, and critical mechanical and electrical issues.

Long Term Recommendation
With the potential that the FCI may increase to over 12% within five years, the City should consider budgeting up to $600,000 annually for the next five years to reduce significantly the anticipated Priority 2 Deferred Maintenance Backlog of approximately $2.8 million. This plan should also provide an adequate base for future equipment and system replacement. Alternately, a capital improvement program that would either renovate or replace buildings would address some of these issues while improving the building efficiency and community use, essentially providing two benefits for the same dollar invested.

Maintenance Recommendation
Once issues are resolved, the ideal recommendation is to allocate approximately $450,000 annually to maintain the new, lower FCI. This amount is equal to approximately 2% of the Current Replacement Value of the facilities (a national benchmark value considered adequate to maintain the condition of a typical building). It is understood that this level of planned maintenance budgeting is significant and difficult to attain, especially for public entities. It is nonetheless a worthy target.

By allocating 2% of the Current Replacement Value annually, the City should be able to do the following:

- Fund annual building maintenance, exclusive of catastrophic and atypical equipment failure.
- Save for future equipment replacement and expected building system replacement (i.e. roofs, boilers, etc.)

Energy Efficiency

Utility bills, provided by the City of Berkley, were analyzed on a building by building basis to compare the actual energy usage of city buildings versus similar peer buildings. One year of utility bills were provided as the basis of this analysis. In a few cases, missing utility bills were estimated based on the consumption trends inferred from the utility bills.

The United States Department of Energy (DOE) compiles a database of results from its *Commercial Buildings Energy Consumption Survey* (CBECS). Consumption data from this survey is compiled in to peer groups for each building. In some cases, there are many different peer buildings' energy consumption data available in a particular data set. However, for some of the city's buildings, either a discrete peer building classification type is not available, or the sample size of buildings reporting their energy consumption is not very large. In cases where there is not a direct building classification (e.g., the ice arena), the most representative grouping of building types was used as the basis of comparison.

Energy data is reported to the DOE's CBECS in standard units of consumption for electricity (kWh) and natural gas (MMBTU, Therms, MCF, or CCF). The survey database then converts these utility consumption values, along with the square foot area of the reporting buildings, in units of kBTU/ft^2/year. The amount of energy, in kBTU/ft^2/year, is referred to the **Energy Usage Intensity (EUI).**

Overall, all of the city's buildings EUI greatly exceeds their peer groups' EUI. See each building's specific write-up for more detail.

IMPORTANT DEFINITIONS

The following terms are used in this report to describe assessment findings.

Current Replacement Value (CRV)

The cost to construct a typical replacement building in today's dollars, based on the square footage of the current facility and the estimated current construction cost for that type of building. Buildings comprised of significantly different uses, such as a library with a theater component, will have the CRV based on a blend of costs for each use type.

Facilities Condition Index (FCI)

Simply put, the Facilities Condition Index (FCI) is the total estimate of the cost to resolve all facility deficiencies building divided by the Current Replacement Value of that building. The resulting percentage provides a benchmark to compare building conditions and communicate the issue clearly to the residents of the City.

The recommended FCI ranges for building conditions are as follows:

0-5%: Good – a building with an FCI in this range is considered in good condition. Building systems are operating as intended; the structure and envelope are uncompromised and solid; finishes and hardware are not worn; and maintenance efforts have been successful in offsetting the typical issues of aging buildings

6-10%: Fair – a building with an FCI in this range is typical of many facilities over 20 years of age. Building systems, while functioning, are showing signs of aging that maintenance can slow but not stop. HVAC components may need replacement or repair, plumbing may be showing signs of deterioration and some replacement parts may be difficult to locate. Wear items, such as hardware, finishes, roofing and windows will be nearing the end of their expected lifespans and should be budgeted for replacement.

11%+: Poor – a building in this FCI range is typically older, with many of its systems past the end of their expected lifespans and failures in one system causing damage to others. Roofing may be overdue for replacement, water infiltration may be causing deterioration of multiple other items, such as ceilings, walls, flooring, lighting and structure. The rating of "Poor" indicates that the building needs urgent attention to prevent the existing problems from affecting other building systems and compounding future repair costs.

The FCI typically increases over time – buildings age, and more systems will deteriorate in the future. When looking at immediate needs and critical items only (those items currently in need of repair or replacement), the FCI is often in the good range since few high-value systems (structure, HVAC, plumbing, etc.) are ever in immediate danger of failure.

When looking forward, however, the FCI often increases considerably, driven by major systems past the end of their useful service life. This increase is common on buildings over 40 years old with original windows, doors, HVAC systems, electrical components, and plumbing fixtures.

Priority 1 Project Total and FCI

Project Totals are the value of all maintenance issues that are deferred or projected to require addressing immediately in order to safely maintain facilities and related infrastructure for their current use. The Priority One amounts shown are for items requiring immediate attention to fix critical problems. A long-term investment strategy should also include items that require repair or replacement within 5 years, thus avoiding the increased repair costs resulting from deferred repairs (i.e. leaky roof damaging interior finishes).

The Priority One Facility Condition Index is reported separately to indicate the immediate condition of the building. This number is usually much lower than the FCI projected for lower priority items, as high-cost systems, such as HVAC, are seldom in danger of immediate failure.

Priorities 1+2 Cumulative Project Total and FCI

The Priority 1+2 Cumulative Project represents the total value of projects, in today's dollars, that are projected to require attention within approximately the next five years, including those that fall under the Priority 1 Project Total. This value is included to help determine the investment required in the near future to resolve issues before they become critical or adversely impact operations.

This long-term FCI is often more telling of a buildings' condition than the One Year value, since the first year number focuses primarily on life safety, code compliance and immediate collateral damage. Most maintenance issues are not so critical that they require immediate repair, but often become so within 5 years.

Projected Annual Maintenance Budget

The projected annual maintenance budget is the estimated cost to maintain the current FCI in a stable state. The number is based on a reinvestment range of 2% of the CRV, and assumes that building components have an average 50-year renewal cycle and depreciate along a straight line. The assumptions were made to simplify calculations; in reality, building components do not expire according to straight-line depreciation, and many components require replacement within 30-40 years (excluding structure and foundation).

Two important points to consider:

- This annual investment is not intended to replace the funds required to resolve past deficiencies, but to provide the funds for continued maintenance.
- It is understood that sufficient facilities maintenance funding is difficult to attain for public institutions. Typically, the FCI is a clear indicator of the result of insufficient long-term funding for maintenance.

End of Useful Service Life

This term is used throughout the report to indicate when a system has reached its expected life span, regardless of whether it is operating as designed. All building systems have a life span which varies greatly depending on the system and how it is used. For example, a building structure can last several hundred years, while door hardware or HVAC systems last 25-40 years depending on quality and type. A rubber roof might have a 15-20 year lifespan, while carpet in high traffic areas seldom survives 10 years.

INFORMATION RECORDED

Information recorded by the assessing teams includes the following data and is used in database calculations, including the Current Replacement Value and Facility Condition Index for each building and the entire institution.

General Building Information

- Building Name
- Year Built
- Building Area (in square feet)
- Number of Floors
- General Building Notes (building description, special circumstances, etc.)
- Major Renovations/Additions (year and brief description)

Building Systems

Details about each major building system, including construction, system type, current operation and general condition are recorded from the interviews and observations. For each system, specific deficiencies are also listed, including description, maintenance priority and potential cost implications.

These building systems are the basic components having a major influence on the replacement value of a building.

Category	System			
Code Compliance/Safety	ADA	Fire Alarm Systems	Fire Sprinklers	Emergency Lighting
Site	Immediately Adjacent Site			
Structure	Structure			
Shell	Roof	Cladding	Glazing/Windows	
Interior Construction	Ceilings	Interior Partitions	Doors	Floors
HVAC Systems	HVAC Generation, Distribution and Controls			
Plumbing Systems	Domestic Water, Piping, Fixtures			
Electrical Systems	Electrical Power	Lighting	Data/Telecom System	
Conveying Systems	Elevators			

Building System Rating

Each building system is given a number rating indicating its general condition and need for repair or replacement. These ratings are as follows:

Code	Condition	Description
0	Missing and Needed (If ADA related-not compliant)	System missing, but required in facility. For ADA compliance, indicates that system DOES NOT comply.
1	Unreliable	System is unreliable and needs to be fixed or replaced.
2	Poor	System in poor condition, operating at minimal ability or past expected end of life. Budget for repair/replacement in next renovation.
3	Adequate (If ADA related-compliant when built)	System functioning, but nearing expected end of life with increasing number of maintenance issues. Review for repair/replacement in next renovation. For ADA compliance, indicates system was compliant when constructed, review compliance for next renovation
4	Functional (If ADA related-currently compliant)	System functioning well and maintained as intended, with no major reported issues. For ADA compliance, indicated system complies with current codes.
5	Excellent	System in excellent operating condition. No reported issues.

Observed Issues

Beyond reviewing the general condition of each building system, when specific issues are observed, details regarding the particular issue for that system are recorded. Each is prioritized and an order-of-magnitude resolution cost estimate is made.

Observed Issue Priority

Each Observed Issue is given a priority to record how critical the issue is and to group work into time frames. This information is used to calculate the Facility Condition Index for each time frame. Priorities used are as follows:

Code	Priority	Description
1	Currently Critical (Immediate)	Item requires immediate attention, has failed or is failing.
2	Potentially Critical (Year 1)	Item has potential for failure or will require extensive work within the year.
3	Not yet Critical (Year 2-5)	Item is not yet critical, but is near the end of its useful life or near major repair, maintenance or replacement.
4	Long Term (Year 6-10)	Item is in good condition and at least 6-10 away from major repair, maintenance or replacement.
5	Does not meet current codes (Grandfathered)	Item does not meet current codes, but is functioning as designed. May be grandfathered.

Items that are typically listed as Currently Critical include systems that are failed or those that could cause collateral damage, such as a leaking roof that is damaging ceilings, floors and electrical system or equipment that is a potential safety hazard to occupants. Certain systems, such as structure or HVAC are seldom listed as Currently Critical as they are seldom in imminent danger of immediate failure

Resolution Budget

Each observed issue is evaluated to determine an order-of-magnitude cost to resolve the issue, whether through repair or replacement.

FACILITY EVALUATIONS

The following pages include a description of each building assessed, budgetary recommendations and system-by-system observations. For additional detail regarding specific observed issues, the criticality and resolution cost for each, as well as recommendations, refer to the spreadsheets for each building. This data was used to determine the total Deferred Maintenance Backlog and Facility Condition Index.

The City of Berkley owns and operates a number of properties and buildings, some dating back to the 1920s. The scope of this assessment includes evaluation of the condition of the following buildings and complexes:

Public Library

Public Safety Building

Public Works Complex: Main Garage; Office and Auxiliary Garage; Salt Storage; Animal Facility

Recreation Center and Ice Rink

City Hall Complex: City Hall; 45a District Court; Historic Fire Hall

PUBLIC LIBRARY

Description

The Public Library building is a single story steel structure with brick exterior. Originally constructed in 1964, with an addition/renovation in 1998. The building is in excellent condition and is in the best condition of all of the City buildings assessed as part of this study.

The brick exterior is well maintained and solid, with only limited areas of deterioration from salt and water exposure. Doors and windows are in good condition, with only one area of water infiltration observed along a window sill. The roof is new, replaced in 2013.

Interior finishes are in good condition, except for some expected wear in the main entry and lobby.

The majority of the HVAC system is approximately 16 years old and in good condition. Funds should be set aside in preparation of expected repairs and replacement as the systems near the end of the expected life.

The electrical and plumbing systems are in good condition for their age, but include older fixtures that could be more efficient.

Additional detail can be found on the following pages and in the included spreadsheet.

Year Built	1964
Additions/Major Renovations	1998
Approximate Area	16,200 SF
Number of Floors	1 (no bsmt)
Current Replacement Value	$4,050,000
Project Totals - Priority 1 Issues	$5,500
FCI - Priority 1 Issues	0.1%
Projects Totals - Cumulative Priority 1-2 Issues	$29,000
FCI - Cumulative Priority 1-2 Issues	0.7%

System Observations

Immediate Priority Issues

- Parking lot signage and arrows are confusing to drivers, causing many to enter and exit the wrong way.
- A wet-pipe fire suppression system protects the entire building. The concealed head covers are no longer in place on many fire sprinkler heads (these concealed head covers were painted to the ceiling). These should be repaired or replaced

Code Compliance

ADA
The building met code when constructed, but will require modifications to meet ADA if renovated.

Immediately Adjacent Site

The parking lot is asphalt with concrete curbs. Concrete walks are on the west and south sides of the building. Grass and landscaping are on the East and North. The site is in good condition.

Structural System

The building structure is steel columns on a concrete slab, with steel roof joists. The structure appears to be in good condition with no reported or observed issues.

Architectural Systems

Roof
The roof is a loose laid, ballasted, rubber membrane roof. The roof was replaced in fall of 2013 and is in good condition with no reported or observed issues.

Exterior Walls
The exterior walls are brick on masonry wall back-up and in good condition.

Glazing/Windows
The exterior glazing is insulated glass in aluminum storefront framing. Operable units are located at the sill. Interior glazing is wood framed glazing. Overall condition of windows is good.

Interior Partitions
Interior walls are gypsum board and stud construction. Casework is solid wood construction at Circulation and Resources desk. Kitchenette has plastic laminate casework and countertops. Interior partitions and fixed furnishings are in good condition with no reported or observed issues.

Doors
Exterior doors are aluminum storefront system at the main entry. Hollow metal doors and frames are used at employee entrances and emergency exit locations. Interior doors are wood doors with wood frames. Doors are in good condition with no reported or observed issues.

Ceilings
Typical ceiling consists of acoustical lay-in 2'x2' panels in metal grid. Open to deck in children's section. Gypsum board, painted ceilings in the lobby. Ceilings are in good condition.

Floors
Floors are concrete slab on grade with the following finishes: carpet tiles, carpet sheet good, and ceramic tile. Floors are in good condition.

HVAC Systems

All portions of the building are served by constant volume air handling units with hot water and chilled water coils and electronic microprocessor controls. These systems were installed 15 years ago and appear to be functioning properly. Systems and equipment are in good condition, however there are opportunities to improve energy efficiency.

Plumbing Systems

Domestic Water, Piping, Fixtures
The majority of the plumbing fixtures appear original to the building or to the renovation 15 years ago and are not water efficient. They are functioning adequately for their age.

Fire Protection
Building is protected by a wet-pipe fire suppression system throughout. The system appears to be in good working condition, however some sprinkler head covers are no longer in place and require repair.

Electrical Systems

Electrical Power
Building electrical service is 208/120v wye fed from a 150KVA DTE pad mounted transformer. The system is in good condition with no reported or observed issues.

Lighting
General lighting is fluorescent. Accent lighting is incandescent. Some metal halide direct/indirect is also used in one area. Exterior building and parking lot lighting is HID. The system is in good condition and operating as designed. There are opportunities to improve energy efficiency.

Emergency Lighting
Emergency lighting is present and in good condition, however the lighting levels along the established paths of egress should be evaluated to ensure compliance with NFPA.

Fire Alarm Systems
An addressable fire alarm system does not exist within this facility.

Data/Telecom System
Library has data infrastructure throughout the building, but it is dated. The Wi-Fi is planned for an upgrade. There is no dedicated data closet.

Energy Efficiency

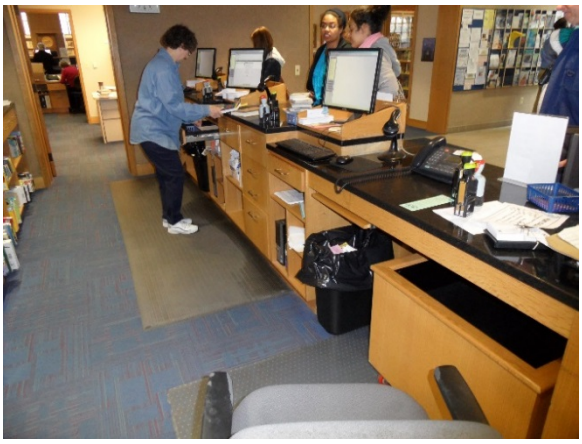
Refer to Page 4 for definitions of the energy efficiency terms in the following section

The Library's EUI for June 2012 through May 2013 is 80 kBTU/ft^2/year. This exceeds the CBECS peer group EUI of 56 kBTU/ft^2/year by 43%. A number of upgrades at the Library could improve the building's EUI to more closely match peer buildings:

- Upgrade the existing standard efficiency heating hot water boiler to a high-efficiency condensing boiler system.
- Upgrade the existing constant volume air handling system to a variable air volume system with economizer. The current system does not have economizer capability – this means that the system is unable to utilize cool outside air for low-cost cooling.
- Replace the existing air-cooled chiller with a more efficient model, and provide a new variable water flow pumping system for this chiller.
- A number of lighting upgrades have already been implemented in the building such as T8 lamp upgrades and some daylight harvesting zones. Occupancy-based sensors could improve energy efficiency.
- If a major renovation is planned, consider additional envelope upgrades such as higher efficiency windows, entry doors, and exterior wall insulation.

Example Images of Existing Conditions

Deteriorating walk-off mat at main entry.



Circulation desk is not ADA compliant.

Stack areas appear to be over-lit, a potential waste of electricity.

Some windows allowing water infiltration. Raised grade may be a contributing factor.

Data cabling is exposed and cable management is recommended.

Observation Highlights

Building Name:	**Library**
General Notes:	Single story steel structure with brick exterior. Originally constructed in 1964 with an addition/renovation in approximately 1998
Current Replacement Value	$4,050,000

Year Built	1964
Area (SF)	16,200
Replacement Cost/SF	$250
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$5,500	0.1%
Priority 2 Issues	$23,500	0.6%
Priority 1+2 Combined Facility Condition Issues	**$29,000**	**0.7%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Code Issues	The building met code when constructed, but will require modifications to meet ADA if renovated.	3					
			Accessibility at counters.	lobby	Existing Circulation and Help desk height is 36" and does not meet current accessibility codes.	2	$ 7,000.00
			Safety at roof hatch	roof	Existing roof hatch is not equipped with adequate lighting, locking mechanism, safety extension pole or guard rail at roof deck. Building could be accessed from roof due to lack of locking mechanism.	1	$ 500.00
Site and Parking	The parking lot is asphalt with concrete curbs. Concrete walks are on the west and south sides of the building. Grass and landscaping are on the East and North. The site is in good condition.	4					
			Parking lot signage is confusing	parking lot	Signage and arrows are confusing to drivers. The current one-way layout of the lot is not well understood, causing people to enter and exit the wrong way.	1	$ 2,000.00
Structure	The building structure is steel columns on a concrete slab, with steel roof joists. The structure appears to be in good condition.	5					
			No Issues Reported				
Roof	Loose laid, ballasted, rubber membrane roof. The roof was replaced in fall of 2013 and is in good condition	5					
			No Issues Reported				
Cladding	The exterior walls are brick on masonry wall back up and in good condition.	4					
			Masonry weep holes noticed on only half of the building	exterior perimeter of facility	Only half of the brick walls were constructed with masonry weep holes at the base, allowing moisture with in the wall to escape.	N/A	
			Efflorescence on masonry	west wall, base course	Efflorescence noticed on the masonry course along the side walk on the West wall. This is typically a sign of moisture or excessive salts on the masonry block. The block should be clean and sealed.	2	$ 2,000.00
Glazing	The exterior glazing is insulated glass in aluminum storefront framing. Operable units located at the sill. Interior glazing is wood framed glazing.	5					
			water damage at window sills	East wall	A few windows allowing water infiltration, causing paint to peel. Cause is likely due to planting bed being sloped up to window sill. Water appears to be wicking into walls.	2	$ 2,500.00
			uncontrolled sunlight	south entry	Sunlight causes glare in building during winter months when the sun is low in the sky. Shading devices could reduce this issue.	4	$ 1,000.00
Ceilings	Acoustical lay-in 2'x2' panels in metal grid typical. Open to deck in children's section, gypsum board, painted ceilings in the lobby.	4					

Observation Highlights

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Year Assessed	2014

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Priority 1 Issues	$5,500	0.1%
Priority 2 Issues	$23,500	0.6%
Priority 1+2 Combined Facility Condition Issues	**$29,000**	**0.7%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			lay-in ceilings discolored, sagging	throughout building	ceiling tiles discolored, with some sagging due to age. Refinishing recommended for discolored ceilings, replacement should be budgeted for sagging panels	3	$ 12,000.00
			No access panels in plaster ceiling	main lobby	There are no access panels in the ceiling to permit access to areas above ceiling for maintenance.	3	$ 1,000.00
Walls and Casework	Interior walls are gypsum board and stud construction. Casework is solid wood construction at Circulation and Resources desk. Kitchenette in has plastic laminate casework and countertops.	5					
			No reported issues				
Doors	Exterior doors are aluminum storefront system at the main entry. Hollow metal doors and frames are used at employee entrances and emergency exit locations. Interior doors are wood doors with wood frames.	5					
			No reported issues				
Floors	Floors are concrete slab on grade with the following finishes: carpet tiles, carpet sheet good, and ceramic tile.	4					
			walk off matt deteriorated	main entry	carpet/metal walk off mat at main entry is discolored and worn due to age and salt exposure. Due for replacement	3	$ 2,500.00
HVAC	All portions are served by constant volume air handling units with hot water and chilled water coils and electronic microprocessor controls. These systems were installed 15 years ago and appear to be functioning properly.	4					
			No air-side economizer for "free" cooling	Penthouse	While this system is relatively modern, it does not have provisions for an economizer function to provide low-energy cooling when outdoor air conditions allow. Energy efficiency upgrade potential.	3	$ 25,000.00
			Standard efficiency boiler	Penthouse	Heating hot water boiler is standard efficiency, but in good working order. Replace with a high-efficiency model during next renovation or when replacement is needed, or replace immediately if energy savings wish to be realized sooner.	3	$ 18,000.00
			Standard efficiency chiller	Roof	Air-cooled water chiller for air conditioning is approximately 15 years old, and operating as designed due to good maintenance. Continue maintaining. Replace with more efficient model when replacement is needed or if energy savings wish to be realized.	3	$ 35,000.00
			Single chilled water pumps	Penthouse	The chilled water system has a single circulating pump - there is no backup pump should this pump fail or be down for service. A loss of air conditioning would result in this case.	2	$ 12,000.00
Plumbing	The majority of the plumbing fixtures appear original to the building or to the renovation 15 years ago and are not water efficient. They are functioning adequately for their age.	4					

Observation Highlights

Building Name:	**Library**
General Notes:	Single story steel structure with brick exterior. Originally constructed in 1964 with an addition/renovation in approximately 1998
Current Replacement Value	$4,050,000

Year Built	1964
Area (SF)	16,200
Replacement Cost/SF	$250
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$5,500	0.1%
Priority 2 Issues	$23,500	0.6%
Priority 1+2 Combined Facility Condition Issues	**$29,000**	**0.7%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Plumbing fixtures not water efficient	Throughout	The majority of the plumbing fixtures appear original to the building or to the renovation 15 years ago and are not water efficient. They are functioning adequately for their age.	4	$ 12,000.00
			Building is protected by FP	Throughout	A wet-pipe fire suppression system protects the entire building. The concealed head covers are no longer in place on many fire sprinkler heads (these concealed head covers were painted to the ceiling). These should be repaired or replaced	1	$ 3,000.00
Electrical	Building electrical service is 208/120v wye fed from a 150KVA DTE pad mounted transformer.	4					
			No reported issues				
Lighting	General lighting is fluorescent ,accent lighting is incandescent. Some metal halide direct/indirect is also used in one area. Exterior building and parking lot lighting is HID. The system is in good condition and operating as designed.	4					
			2'x4' recessed ,4 lamp T8	Throughout	local switch control, some keyed switches, occupancy sensors should be provided per ASHRAE 90.1 . Lighting power densities should be recalculated to comply with new ASHRAE standards. Should consider switching to LED lighting to save energy	4	
			Recessed fluorescent downlights, PL lamps	Adult library, computer area, lobby, front desk	local switch control only, occupancy sensors should be provided per ASHRAE 90.1. Lighting fixture daylight harvesting feature near windows should have dimming capability, not just "on-off". Should consider switching to LED lighting to save energy.	4	
			8' Linear fluorescent T8	Children's library	local switch control only, occupancy sensors should be provided per ASHRAE 90.1. Lighting power densities should be recalculated to comply with ASHRAE standards. Should consider switching to LED lighting to save energy.	4	
			metal halide direct/indirect	Children's library	Replace with LED fixture ,provide occupancy sensor per ASHRAE 90.1	4	
			Incandescent track/accent lighting	Library areas	Replace with LED fixture or lamp ,provide occupancy sensor per ASHRAE 90.1	4	
			Emergency/Exit lighting	Throughout	Re-evaluate lighting levels along established means of egress to comply with NFPA	4	
			Exterior lighting		Replace with LED to save energy	4	
Voice and Data	Library has data infrastructure throughout building, but it is dated. The Wi-Fi is planned for an upgrade. There is no dedicated data closet.	3					
			no IT closet	work room	IT rack currently in open area in work room. Proposed to be located in dedicated closet with dedicated cooling system	3	$ 5,000.00
			WIFI System	throughout	WIFI planned for upgrade - budgeted.	4	$ -
Other Reported Issues	Other observed items and user comments						

PUBLIC SAFETY BUILDING

Description

The Public Safety Building is a 2 story load-bearing masonry/steel structure on partial basement. This facility houses Police Department offices, Fire Department offices, training space, storage, a conference room and the fire truck garage. Most building systems and components are original, are many are nearing the point where the return on maintenance expenditures will be limited.

The structure and brick exterior are in good condition, but the roof shows signs of leaking near roof height transitions. Water infiltration also occurs at the main electrical feed from the transformer and at the garage door to the police car bay. These areas are allowing significant water into the basement and the electrical conduits.

The electrical system is compromised by excessive water infiltration through the conduits that run from the transformer to the main switchgear. Past problems have included a short circuit which melted the metal cover to a main junction box. This is an issue which should be addressed.

The dispatch are suffers from poor ventilation, cooling and noise control. The fan unit was reported as making it difficult to hear incoming phone calls. The fire truck bay also lacks a vehicle exhaust system. The HVAC system is original and functional, but many parts are nearing the end of their expected lifespan.

Additional detail can be found on the following pages and in the included spreadsheet.

Year Built	1989
Additions/Major Renovations	N/A
Approximate Area	20,200 SF
Number of Floors	2 + Bsmt
Current Replacement Value	$4,040,000
Project Totals - Priority 1 Issues	$146,000
FCI - Priority 1 Issues	3.6%
Projects Totals - Cumulative Priority 1-2 Issues	$571,000
FCI - Cumulative Priority 1-2 Issues	14.1%

System Observations

Immediate Priority Issues

- Handrails should be checked for secure attachment and repaired as needed.
- Public Address system in facility is not operational and needs to be repaired or replaced.
- Grading around facility ranges from flat to pitched toward the building, leading to water infiltration.
- Significant water infiltration issue at west foundation wall. During heavy rains water pours down the interior face of wall.
- Primary electrical gear serving DPS and City Hall/Court floods with water during heavy rains. Water getting in through underground conduit. Makeshift drainage system has been installed to alleviate the problem, but root-cause needs to be addressed. Major safety concern.
- Fire garage is lacking ventilation/exhaust and fire protection.
- Shooting range exhaust system is not adequate.
- A dedicated, computer room cooling unit is in the dispatch area. The intent of the unit was to satisfy concentrated equipment loads, however, it barely functions and is so loud that dispatch cannot perform their job duties.
- No vehicle exhaust system is present in the fire garage.
- No fire suppression noticed in the vehicle garage.

Code Compliance

Life Safety
Water entering the electrical conduit in the basement poses a safety hazard.

Storage of materials should be monitored to keep egress pathways clear.

ADA
The building was accessible when newly built and is generally compliant now. Some relatively minor modifications would be required to bring the facility into compliance with current codes.

Immediately Adjacent Site

Immediately adjacent site consists of concrete slabs, access walks and minimal landscaping. Site elements are in good condition.

Structural System

The structure is a masonry load bearing building with steel joists. The structure is in good condition, however there is water infiltration along the west foundation wall that needs immediate attention.

Architectural Systems

Roof
The roof is a standing seam metal roof. Downspouts are present in some areas. Roof is in adequate condition and requires some repairs and maintenance.

Exterior Walls
The building is clad with a brick veneer with limestone accent bands. No weep holes appear to be present. Brick in in good condition, but mortar is deteriorating near grade. Some tuck-pointing is required.

Glazing/Windows
The glazing is insulated glass in aluminum storefront framing and is in adequate condition. Some weatherization and sealing is required at windows with visible leakage.

Interior Partitions
Interior walls are painted masonry block at exterior and painted gypsum board on interior partitions. Walls are generally in good condition. Casework is plastic laminate / OSB cabinetry. Counters are plastic laminate. Interior walls and casework are in good condition with no reported or observed issues.

Doors
The exterior doors at the main entries are aluminum frame glass doors. The secondary entries are hollow metal doors. Overhead sectional doors on fire truck garage are serviced twice a year. Interior doors are a mix of solid core wood and hollow metal. Hardware is original and functioning, but not ADA compliant. Exterior and interior doors are in good condition for their age with no reported or observed issues.

Ceilings
The ceilings are acoustical lay-in ceilings, 2'x2'. Garage area and basement are open to deck. Plaster ceilings in locker areas are in fair condition.

Floors
Floors are composite concrete slab with metal deck. Floor finish is carpet in offices and meeting room, ceramic tile in toilet and lockers rooms and VCT in basement and holding cell. Carpet and VCT are worn and past their useful life.

HVAC Systems
A constant volume, hot deck/cold deck multi-zone air handling unit serves most of the occupied spaces. A heating hot water coil and direct expansion cooling coil are found within this unit. Dated and improperly functioning pneumatic controls are present in this system. A few dedicated areas have precision cooling units, but these are not in use due to noise. A standard efficiency, heating hot water boiler (basement) provides heating energy. HVAC equipment is in adequate condition for its age but requires some repairs and maintenance.

Plumbing Systems
Domestic Water, Piping, Fixtures
The plumbing fixtures throughout the facility appear to be original to the building and are not considered water efficient. The users note that fixtures and valving are beginning to fail and are in need of replacement.

Fire Protection
Fire protection sprinklers are found in office areas, with none located in the truck garage. A Halon fire-suppression system is present in the data closet on level 2 and appears to be in good working order.

Electrical Systems
Electrical Power
Building electrical service is 208/120v wye fed from a 300KVA DTE pad mounted transformer. Electrical system as a whole appears to be in good condition, except for the 1200 amp service feeder and 4" conduits located in the basement electrical room. Water is making its way into the conduits and feeders, causing significant damage and life safety hazard.

Lighting
General lighting is recessed 2'x4' fluorescent with 4- T8 lamps. Lighting is in adequate condition for its age, but light levels are low.

Emergency Lighting
Emergency lighting appears to be integrated with the night light system. Light levels are low.

Fire Alarm Systems
No pull stations or strobes were observed outside of the Halon system in the computer room.

Data/Telecom System
Dispatch area has complex wiring needs and has been extensively modified since new. Cabling should be evaluated and reconfigured.

Energy Efficiency

Refer to Page 4 for definitions of the energy efficiency terms in the following section

From an energy analysis standpoint, Public Safety, City Hall, District Court and the Historic Fire Hall are required to be analyzed together since there are not discrete utility meters for each building. Two natural gas meters serve this building group, and one single electric meter serves this building group. The CBECS peer group utilized as the basis of comparison for this building group closely matches the four building functions. This building group's EUI for June 2012 through May 2013 is 305 kBTU/ft^2/year. This is incredibly excessive when compared to the peer group's EUI of 85 kBTU/ft^2/year. This building group exceeds its peer's EUI by 360%. The 24-hour nature of the Public Safety building is factored in to this comparison.

The extremely high EUI measured for these buildings suggests that verification of the accuracy / meter factors for the building's utility meters would be a logical first step. Even if a discrepancy was found, it is still likely that this building group's EUI would exceed the CBECS peer group EUI.

A number of factors at the Public Safety Building were observed that contribute to this high EUI:

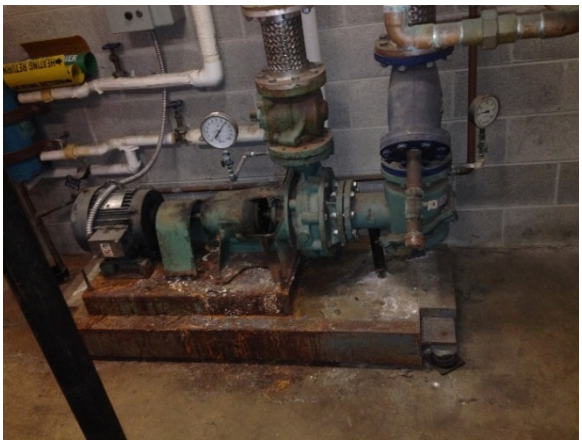
- The main HVAC system serving the building is a constant volume, multizone HVAC system. This system type simultaneously heats and cools, and does not have an outdoor air economizer. These systems are generally associated with very high energy usage. A direct-expansion compressor and condensing unit, located outdoors, provides cooling to this unit and is minimally efficient. This air conditioning unit was observed as running during cool to cold outside air temperatures – a condition that is expected when systems are not provided with economizer functions.
- The building occupants indicated that the building's temperature controls are not properly zoned and ineffective. Improperly zoned and malfunctioning controls can lead to increased energy usage.
- There are two 100% outside air make-up air units in the basement for the shooting range and other exhaust purposes. The operational schedules of these units should be monitored to ensure that they operate only when necessary, as conditioning pure outside air consumes a significant amount of energy.
- The building's heating hot water boiler, while in fair condition, is minimally efficient. An upgraded, modulating condensing boiler system can greatly improve the efficiency of the heating system.
- Occupancy-based sensors for lighting control could improve energy efficiency in the lighting system.

Example Images of Existing Conditions

Water infiltration and damage at the main electrical conduits into the basement.

Damaged junction box on main electrical feed between Public Safety and City Hall. Water infiltration indicated as continuing.

Piping and gutter system added to redirect water flow from conduit.



Vibration isolation base on water pump severely deteriorated due to water exposure.

Stair handrails have separated from the wall and should be reattached.

The joint between the police car garage slab and the exterior slab is a point of entry for rain water, causing damage to the basement walls, structure and stored items in the evidence room below. This joint should be repaired.

Ceiling tile damage is indicative of roof leaks. The standing seam metal roof appears to be leaking at roof height transitions.

Water damage in the basement evidence storage room. This is directly below the police car garage door shown above.

Observation Highlights

Building Name:	**Public Safety**
General Notes:	2 story load-bearing masonry/steel structure on partial basement. Houses Police Department offices, Fire Department offices, training space, storage, conference room and fire truck garage.
Current Replacement Value	$4,040,000

Year Built	1989
Area (SF)	20,200
Replacement Cost/SF	$200
Floors	2
Basement (y/n)	Y
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$145,500	3.6%
Priority 2 Issues	$425,000	10.5%
Priority 1+2 Combined Facility Condition Issues	**$570,500**	**14.1%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Code Issues	The building was accessible when new, generally compliant now. Other safety code issues involve storage in egress corridors.	2					
			Stairwell handrail	stairwells	handrails should be check for secure attachment and repaired as needed.	1	$ 500.00
			ADA accessibility	Entire Facility	Interior door hardware is typically knob-type and not accessible by those with limited grip.	2	$ 30,000.00
			ADA accessibility	Entire Facility	Records transaction counter top height is 44". Casework / Counters are 36". Dispatch room is not accessible due to raise access floor. Locker rooms (showers, toilets, etc.) are not accessible.	3	$ 28,000.00
			No functioning PA system	Entire Facility	Public address system in building is not operational. Radio signal / transmission is limited in the basement level. System should be repaired.	1	$ 5,000.00
			Items stored in egress areas	stairwell	Wood items stored in egress stair.	1	$ -
Site and Parking	Concrete slab, access walks, minimal landscaping	4					
			Site grading very flat.	police garage door	Water enters building at police garage during heavy rain events, leaks into basement - see structure note.	1	see structure note
Structure	The structure is a masonry load bearing building with steel joists.	4					
			Water infiltration	basement records room	Water entering room through wall below overhead garage door where police vehicles enter building. Basement wall shows signs of long term exposure to water. Concrete slab joint where water enters building is directly above wall and will require regular maintenance to keep it sealed if a more permanent solution of extending the slab is not implemented.	1	$ 2,000.00
Roof	The roof is a standing seam metal roof. Downspouts are present in some areas.	3					
			Roof leaks at roof transitions and seams	throughout	roof leaks causing damage to ceiling tiles. Likely locations of leaks are at where roofs meet walls and at joints along roof edges. Insufficient flashing most likely cause. Roof repairs have been made in the past with limited success. Comprehensive roof repair recommended.	2	$ 4,000.00
			Leaks occur at the roof gutters resulting in ice build up occurs at concrete areas.	gutters	Leaks occur at the roof gutters resulting in ice build up occurs at concrete areas. Gutter seams are not sealed to prevent water leaks.	2	$ 1,000.00
Cladding	The building is clad with a brick veneer with limestone accent bands. No weep holes appear to be present. Brick in in good condition, but mortar is deteriorating near grade.	4					
			deteriorating mortar	near grade	Exposure to salt and water causing mortar to deteriorate at grade along walks. Brick is in good condition, but due for tuck-pointing.	3	$ 2,000.00
Glazing	The glazing is insulated glass in aluminum storefront framing.	3					

Observation Highlights

Building Name:	**Public Safety**
General Notes:	2 story load-bearing masonry/steel structure on partial basement. Houses Police Department offices, Fire Department offices, training space, storage, conference room and fire truck garage.
Current Replacement Value	$4,040,000

Year Built	1989
Area (SF)	20,200
Replacement Cost/SF	$200
Floors	2
Basement (y/n)	Y
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$145,500	3.6%
Priority 2 Issues	$425,000	10.5%
Priority 1+2 Combined Facility Condition Issues	**$570,500**	**14.1%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Aluminum framing not air tight	Second floor	Visible light at joints, allowing air infiltration into building. Window framing should be resealed	2	$ 500.00
Ceilings	The ceilings are acoustical lay-in ceilings, 2'x2'. Garage area and basement are open to deck. Plaster ceilings in locker areas in fair condition.	3					
			Acoustic ceiling pads have a noticeable sag and discoloration.	throughout	Lay-in ceiling tiles are original and showing sings of age - discolored, dirty, damaged and sagging. Several shows stains for roof leaks. Ceiling should be budgeted for refinishing where discolored and replacement where damaged.	2	$ 35,000.00
Walls and Casework	Interior walls are painted masonry block at exterior and painted gypsum board on interior partitions. Walls are generally in good condition. Casework is plastic laminate / OSB cabinetry. Counters are plastic laminate.	4					
			no reported issues				
Doors	The exterior doors at the main entries are aluminum frame glass doors. The secondary entries are hollow metal doors. Overhead sectional doors on fire truck garage are serviced twice a year. Interior doors are a mix of solid core wood and hollow metal. Hardware is original and functioning, but not ADA compliant. Exterior and interior doors are in good condition for their age.	4					
			no reported issues				
Floors	Floors are composite concrete slab with metal deck. Floor finish is carpet in offices and meeting room, ceramic tile in toilet and lockers rooms and VCT in basement and holding cell. Carpet and VCT are worn.	3					
			Carpet due for replacement	throughout	Carpet worn, stained and past end of life and due for replacement.	2	$ 22,000.00
			VCT worn and discolored	throughout	VCT flooring is due for refinishing	3	$ 1,500.00
HVAC	A constant volume, hot deck/cold deck multizone air handling unit serves most of the occupied spaces. A heating hot water coil and direct expansion cooling coil are found within this unit. Dated and improperly functioning pneumatic controls are present in this system. A few dedicated areas have precision cooling units, but these are not in use due to noise. A standard efficiency, heating hot water boiler (basement) provides heating energy.	3					
			The overhead back up HVAC cooling system in Dispatch is loud and minimally functional	Dispatch	A dedicated, computer room cooling unit is in the dispatch area. The intent of the unit was to satisfy concentrated equipment loads, however, it barely functions and is so loud that dispatch cannot perform their job duties. Remove and replace this unit to restore functionality and proper cooling to this area.	1	$ 15,000.00

Observation Highlights

Building Name:	**Public Safety**
General Notes:	2 story load-bearing masonry/steel structure on partial basement. Houses Police Department offices, Fire Department offices, training space, storage, conference room and fire truck garage.
Current Replacement Value	$4,040,000

Year Built	1989
Area (SF)	20,200
Replacement Cost/SF	$200
Floors	2
Basement (y/n)	Y
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$145,500	3.6%
Priority 2 Issues	$425,000	10.5%
Priority 1+2 Combined Facility Condition Issues	**$570,500**	**14.1%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			AHU-2 in basement surging	Basement	AHU-2, which appears to be a make-up air unit for spaces in the basement, sounds like it is surging and should have service done by a qualified Test and Balance contractor to determine the cause.	1	$ 8,000.00
			No vehicle exhaust system is present in the fire garage.	Garage	Drive-away vehicle exhaust not in place in the garage. These systems are generally in place to capture diesel soot and CO when vehicles start-up. No system is in place and these pollutants could make their way back in to the occupied spaces of the attached building. The garage has a general exhaust fan, but this is not automatically controlled to reduce pollutants.	1	$ 10,000.00
			Shooting range exhaust insufficient if range recomissioned	Basement	The arrangement of the shooting range's exhaust system is such that lead dust builds up on the walls of the room the exhaust fan is located, creating a hazardous situation. Also, the termination point of the exhaust fan needs to be reviewed relative to building air intakes and prevailing winds. The shooting range is currently decommissioned, however, upon re-commissioning the exhaust system needs to be reviewed to ensure that it maintains the proper air velocity over the shooters to prevent a hazardous situation from being created.	1	$ 75,000.00
			HVAC controls or zones improperly functioning	Throughout	Users noted that it is very difficult to obtain temperature control, and that some rooms that are generally unoccupied have thermostats in them that control regularly occupied spaces.	2	$ 50,000.00
			Minimally efficient heating and cooling plants	Basement and outdoors	The heating and cooling plants (boiler and DX condensers) are 25 years old, near the end of life and minimally efficient, resulting in increase utility cost relative to modern efficiency heating and cooling plants.	2	$ 90,000.00
			Multi-zone HVAC unit	2nd Level	The multizone HVAC unit is 25 years old and near the end of its life, and should also be replaced due to excessive energy consumption. This unit has a constant volume fan, and also simultaneously heats and cools does not meet current energy code). No economizer is present on the main air handling unit, resulting in the air conditioning compressors to be required when outside air temperatures could allow for free cooling.	2	$ 150,000.00
			Dirty air diffusers	Throughout	Air diffusers and adjacent ceiling tiles dirty, suggesting that the system could benefit from a thorough duct cleaning.	3	$ 10,000.00

Observation Highlights

Building Name:	**Public Safety**
General Notes:	2 story load-bearing masonry/steel structure on partial basement. Houses Police Department offices, Fire Department offices, training space, storage, conference room and fire truck garage.
Current Replacement Value	$4,040,000

Year Built	1989
Area (SF)	20,200
Replacement Cost/SF	$200
Floors	2
Basement (y/n)	Y
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$145,500	3.6%
Priority 2 Issues	$425,000	10.5%
Priority 1+2 Combined Facility Condition Issues	**$570,500**	**14.1%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Plumbing	The plumbing fixtures throughout the facility appear to be original to the building and are not considered water efficient. The users note that fixtures and valving are beginning to fail and are in need of replacement. Fire protection sprinklers in office areas, none in truck garage. Halon system present in data closet on level 2 appears to be in good working order.	3					
			Truck garage fire suppression	Garage	No fire suppression noticed in the vehicle garage. This should be installed to protect equipment and occupants and may result in reduced insurance premiums.	1	$ 10,000.00
			older plumbing fixtures and controls	Throughout	The plumbing fixtures throughout the facility appear to, generally, be original to the building and are not considered water efficient. The users note that they are beginning to fail and are in need of replacement.	2	$ 15,000.00
			Standard efficiency water heating	Basement	The water heater was recently replaced with a standard efficiency, tank-type model. This unit will continue to operate for many years, but at a higher energy consumption rate than is possible with higher efficiency models.	4	$ 15,000.00
Electrical	Building electrical service is 208/120v wye fed from a 300KVA DTE pad mounted transformer. Electrical system as a whole ,appears to be in good condition, except for the 1200 amp service feeder and 4" conduits.	4					
			Building electrical service conduits are filling with water and leaking into the Main Switchboard	Basement	Water migration has recently caused a short circuit in the electrical service. This condition needs attention immediately. Repair or replace building service feeder to prevent water leakage. Main switchboard should be inspected and tested to assure proper operation, as water migration may have caused damaged.	1	$20,000.00
			electrical outlets	Dispatch room	Users have required the addition of several electrical outlets for miscellaneous devices	2	$5,000.00
Lighting	General lighting is recessed 2'x4' fluorescent with 4- T8 lamps	3					
			Insufficient lighting levels	Dispatch	Replace with LED fixtures (dimmable)	2	$12,500.00
			General lighting	Throughout	local switch control only, occupancy sensors should be provided per ASHRAE 90.1. Lighting power densities should be recalculated to comply with new ASHRAE standards. General lighting fixtures should be updated to 2 or 3 lamp (T8 or T5) with program start electronic ballasts. Existing garage fixtures with T12 lamps should be replaced with T8 or T5 fixtures.	3	$ 110,000.00
			low light levels in egress corridors	Throughout	recalculate lighting levels along the means of egress to comply with NFPA	2	$ 5,000.00
			Exterior lighting (HPS)		Replace with LED fixtures	3	$10,000.00
Voice and Data	Dispatch area has complex wiring needs and has been extensively modified since new.	4					

Observation Highlights

Building Name:	**Public Safety**
General Notes:	2 story load-bearing masonry/steel structure on partial basement. Houses Police Department offices, Fire Department offices, training space, storage, conference room and fire truck garage.
Current Replacement Value	$4,040,000

Year Built	1989
Area (SF)	20,200
Replacement Cost/SF	$200
Floors	2
Basement (y/n)	Y
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$145,500	3.6%
Priority 2 Issues	$425,000	10.5%
Priority 1+2 Combined Facility Condition Issues	**$570,500**	**14.1%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			communication cabling	dispatch area	cabling in dispatch area should be reviewed and reorganized to simplify operation and maintenance. Cost to reconfigure is rough estimate	2	$ 5,000.00
Other Reported Issues	Other observed items and user comments						
			HVAC system noise	Dispatch	HVAC system noise makes hearing emergency calls difficult.		
			Entry layout is poor	Main entry	Current vestibule configuration separates the lobby into two areas, making it difficult to access dispatch window.		
			Fire truck garage too small	Fire Truck Garage	Future expansion of garage will be required for longer fire engine.		
			Lack of Security at the Records desk	Records	Current desk has no BR glass/plastic between lobby and office.		
			Lack of overall security control throughout building.	Entire Facility	Any person can access the entire building if they are able to enter the main corridor. The second floor conference room is often used for Community meetings, and the public has access to all Public Safety operations.		

PUBLIC WORKS COMPLEX

Due to the significantly different construction types and support systems in each of the three major buildings on this site, the complex was assessed as three distinct facilities.

PUBLIC WORKS MAIN GARAGE

Description

The Public Works Main Garage is a single story garage, storage and workshop facility. Originally built in 1935, it has been modified as needed over time. An Animal Shelter was added in the 1980s.

The condition of this building is typical for its age. Brick exterior walls are in good condition, block walls show signs of damage and age. Doors show signs of wear from equipment damage, but are functional.

The HVAC, plumbing and electrical systems are old, some dating back to the original construction. The electrical system has been modified multiple times of the years and as a result is inefficient and overly complex to maintain. A new system is recommended to provide reliable power.

Details on the issues with egress doors is included on the following pages.

The entire complex is surrounded by walls, with an automatic gate. The use of the facility by other municipalities occasionally leaves the complex open and unlocked.

Additional detail can be found on the following pages and in the included spreadsheet.

Year Built	1935
Additions/Major Renovations	1980s
Approximate Area	12,650 SF
Number of Floors	1 (no bsmt)
CRV	$1,898,000
Project Totals - Priority 1 Issues	$65,000
FCI - Priority 1 Issues	3.4%
Projects Totals - Cumulative Priority 1-3 Issues	$255,000
FCI - Cumulative Priority 1-3 Issues	13.4%

System Observations

Immediate Priority Issues

- Egress doors swing wrong way, have incorrect hardware.
- Inadequate ventilation throughout facility.
- Lack of separate storage space for fuels and chemicals.
- Chemical storage areas are lacking containment curbs.
- Facility is lacking fire protection.
- Electrical gear is past its useful life and should be scheduled for replacement.
- Emergency lighting appears to be inadequate. More emergency lighting fixtures may be required.

Code Compliance

Life Safety
Several doors with exit signs wing inward and have locks and lever hardware, which is not allowed on egress doors. These should be evaluated for either replacement with the correct door and hardware type, or egress should be reconfigured to eliminate the need for these doors to be labeled as egress (if possible).

ADA
The age of the building precludes it from meeting many current egress and ADA codes. If significantly renovated, modifications will be needed to meet current codes.

Immediately Adjacent Site

Site consists of concrete and asphalt areas. The perimeter of the yard is surrounded by a brick site wall. The masonry is in fair condition, with minor tuck pointing required.

Structural System

The structure is load bearing masonry with wood bowstring trusses. The system is in good condition with no reported or observed issues.

Architectural Systems

Roof
The roof is an EPDM membrane roof in good condition with no reported or observed issues.

Exterior Walls
The exterior cladding is brick and painted masonry block. The exterior cladding is in fair condition with no reported or observed issues.

Glazing/Windows
The windows are typically glass block replacement units, with some single pane in metal frame. Glass block is in good condition.

Interior Partitions
The walls of the garage are painted, masonry block. Walls are in good condition for their age.

Doors
The doors are painted, hollow metal doors and frames. The overhead garage doors are insulated metal doors. Egress doors have the wrong hardware and swing in the wrong direction. Doors are in poor condition.

Ceilings
The ceilings of the main garage are exposed construction. The ceiling of the staff lounge and locker area is a 2'x4' acoustical lay in ceiling system. Acoustical ceilings are in poor condition and should be scheduled for replacement.

Floors
The floor is concrete in the main garage. The staff lounge area has vinyl composite tile. Floors are in adequate condition and there are no reported or observed issues.

HVAC Systems
The majority of the main garage area is served by gas-fired infrared radiant heaters, with old gas-fired unit heaters serving some of the smaller enclosed storage or work rooms. These systems are past their useful life and are in poor condition.

Plumbing Systems

Domestic Water, Piping, Fixtures
The facility's plumbing fixtures are old, worn, and not water efficient. The facility's water heater is minimally efficient. Plumbing systems are in poor condition.

Fire Protection
Fire protection has been added in the main garage area to protect the wood "bowstring truss" construction. System appears to be in good working condition.

Electrical Systems

Electrical Power
Main garage electrical service is 120/240v fed from a DTE pole mounted transformer. It appears this service also feeds the attached Animal Shelter. Generator back-up has recently been added. Power systems and equipment are in poor condition.

Lighting
Lighting is a combination of fluorescent and HID. Lighting systems are in adequate condition.

Emergency Lighting
Emergency/exit lighting should be tested. Means of egress lighting levels should be recalculated and fixtures added if required to meet NFPA standards

Fire Alarm Systems
An addressable fire alarm system was not observed at this facility.

Data/Telecom System
The data/voice panel is outdated and difficult to access, with wiring that could easily be damaged.

Energy Efficiency

Refer to Page 4 for definitions of the energy efficiency terms in the following section

The DPW building's EUI for June 2012 through May 2013 is 169 kBTU/ft^2/year. This exceeds the CBECS peer group EUI of 92 kBTU/ft^2/year by 83%. The main factors at the DPW building that are contributing to this excessive energy use are:

- The age of the building and its HVAC equipment is very old. The building envelope is deteriorating, generally uninsulated, and allowing high amounts of infiltration.
- The HVAC equipment serving the building is aged, but functioning, and is not energy efficient.
- The utility bill analysis confirms that the primary energy use in this building is natural gas for heating.
- A major renovation of all building systems and the building envelope would be required for this building to achieve an EUI similar to that of its peers. Given the extent and scope of the renovations required, it is unlikely that there would be an agreeable ROI timeframe for these upgrades.

Example Images of Existing Conditions

The electrical system is difficult to access, heavily modified, complex and obsolete.

Flammable items are stored inside the building.

Several doors in the building are labeled as exit doors, but swing inward and have non-egress door hardware. This issue should be resolved be installing new doors or reconfiguring the path of egress to not require these doors as part of the path.

The storage mezzanine railings and stair rail are very low and open.

Observation Highlights

Building Name:	**Main Garage - Public Works**
General Notes:	Single Story garage, storage and workshop facility. Originally built in 1935, modified as needed. Animal Shelter added in 1980s.
Current Replacement Value	$1,897,500

Year Built	1935
Area (SF)	12,650
Replacement Cost/SF	$150
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$65,000	3.4%
Priority 2 Issues	$190,000	10.0%
Priority 1+2 Combined Facility Condition Issues	**$255,000**	**13.4%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Code Issues	The age of the building precludes it from meeting many current egress and ADA codes. If significantly renovated, will need modifications to meet current codes.	3					
			ADA accessibility	Throughout Facility	Door hardware does not meet code. Steps are present at several means of egress.	2	$ 7,500.00
			Guardrail does not meet codes	Mezzanine areas	Guardrails on the mezzanine stairs and mezzanine are wood construction, very open and low. Correcting this condition will improve occupant safety.	2	$ 15,000.00
Site and Parking	Refer to Office and Aux Garage						
			No Reported Issues				
Structure	The structure is load bearing masonry with wood bowstring trusses.	4					
			No Reported Issues				
Roof	The roof is a EPDM membrane roof.	4					
			No Reported Issues				
Cladding	The exterior cladding is brick and painted masonry block. The exterior cladding is in fair condition	3					
			No Reported Issues				
Glazing	The windows are typically glass block replacement units, with some single pane in metal frame. Glass block is in good condition.	2					
			Single pane windows are poor insulators	Entire facility	The metal frame, single pane windows are poor insulating. Replacement efforts have started.	3	$ 5,000.00
Ceilings	The ceilings of the main garage are exposed construction. The ceiling of the staff lounge and locker area is a 2'x4' acoustical lay in ceiling system.	3					
			Acoustical ceiling tiles are sagging.	Staff lounge.	The acoustical ceiling tiles are sagging and damaged, and should be scheduled for replacement	3	$ 7,500.00
Walls and Casework	The walls of the garage are painted, masonry block. Walls are in good condition for their age.	3					
			Lockers are inadequate.	Staff Lounge.	The metal lockers do not meet the needs of staff to be able to secure their work gear.	3	$ 5,000.00
Doors	The doors are painted, hollow metal doors and frames. The overhead garage door are insulated metal doors.	2					
			Marked egress doors swing inward, have incorrect hardware	Entire facility	Egress doors swing inward against direction of travel and should be modified to swing in the direction of egress. Hardware includes locks which require additional effort to exit.	3	$ 5,000.00
Floors	The floor is concrete in the main garage. The staff lounge area has vinyl composite tile.	3					
			No reported issues				

Observation Highlights

Building Name:	**Main Garage - Public Works**
General Notes:	Single Story garage, storage and workshop facility. Originally built in 1935, modified as needed. Animal Shelter added in 1980s.
Current Replacement Value	$1,897,500

Year Built	1935
Area (SF)	12,650
Replacement Cost/SF	$150
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$65,000	3.4%
Priority 2 Issues	$190,000	10.0%
Priority 1+2 Combined Facility Condition Issues	**$255,000**	**13.4%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
HVAC	The majority of the main garage area is served by gas-fired infrared radiant heaters, with old gas-fired unit heaters serving some of the smaller enclosed storage or work rooms.	2					
			No means of adequate ventilation	Throughout	There are no means of consistently introducing ventilation air in to the occupied spaces of this building	2	$ 65,000.00
			Main garage zoning	Garage	Gas heaters in main garage noticed all to be firing at the same time, suggesting they are all on a single thermostat. A space this large should have multiple HVAC zones.	3	$ 8,000.00
			Exhaust systems	Shower/locker areas	Some exhaust exists in toilet rooms, but no exhaust (or inadequately-functioning exhaust) was noted in the locker and shower areas.	2	$ 7,500.00
			Fuel storage / exhaust	Main garage	A number of jerry-cans were noticed in a corner of the main garage. If these are to be stored inside, they are to be in a separate, exhausted area. Generally, these are stored in a dedicated shed or shelter outdoors to reduce the chance of property damage and injury if an explosion occurs.	1	$ 500.00
			No means of adequate ventilation or exhaust	animal shelter	There are no consistent means of adequate ventilation or constant exhaust. A facility of this type requires consistent exhaust.	2	$ 5,000.00
			Window AC for cooling	animal shelter	A window-type air conditioning unit is mounted through an exterior wall above an animal cage to provide cooling for the space. Air distribution from this unit is not likely able to adequately cover all spaces within the building, which could result in local overheating during peak times.	2	$ 8,000.00
Plumbing	The facility's plumbing fixtures are old, worn, and not water efficient. The facility's water heater is minimally efficient. Fire protection has been added in the main garage area to protect the wood "bowstring truss" construction.	2					
			Worn plumbing fixtures	Throughout	Plumbing fixtures throughout the facility are old, worn, and not water efficient. They should be replaced.	2	$ 10,000.00
			Fire suppression	Throughout	No fire-suppression was found throughout the facility, except in the main repair garage area. This use type should have complete fire protection.	1	$ 45,000.00
			Chemical containment	Garage Areas	Chemical storage bunks are noticed throughout but no containment curbs are noticed. Chemical spills would not be controlled.	1	$ 4,000.00
			Oil interception	Garage Areas	No oil interceptor was found. While not required when constructed, floor drains in vehicle repair areas should have oil interception to prevent oil from entering sewer system.	2	$ 45,000.00
			Gas cylinder storage inside	Repair garage vestibule	Welding gas cylinders are stored inside adjacent to an entry point. Cylinders could be damaged, which could lead to personal injury. Flammable or oxidizing gases should be stored in a dedicated room or outdoors in a shed.	1	$ 500.00

Observation Highlights

Building Name:	**Main Garage - Public Works**
General Notes:	Single Story garage, storage and workshop facility. Originally built in 1935, modified as needed. Animal Shelter added in 1980s.
Current Replacement Value	$1,897,500

Year Built	1935
Area (SF)	12,650
Replacement Cost/SF	$150
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$65,000	3.4%
Priority 2 Issues	$190,000	10.0%
Priority 1+2 Combined Facility Condition Issues	**$255,000**	**13.4%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Electrical	Main garage electrical service is 120/240v fed from a DTE pole mounted transformer. It appears this service also feeds the attached Animal Shelter. Generator back-up has recently been added.	2					
			Secondary electrical service outdated, complex	Garage electrical closet	Secondary electrical service distribution within the building is outdated, complex and expanded upon repeatedly over the years - should be replaced.	2	$20,000.00
			Branch electrical panels in garage outdated	Garage	Branch electrical panels in garage are past end of service life and should be replaced	2	$2,000.00
Lighting	Lighting is a combination of fluorescent and HID	3					
			Garage HID fixtures older, inefficient.	Garage	Garage HID should be replaced with Fluorescent high bay fixtures for energy savings and "instant on" capability. Add occupancy sensors per ASHRAE 90.1	3	$12,000.00
			Emergency/exit lighting	Throughout	Emergency/exit lighting- All units should be tested. Means of egress lighting levels should be recalculated and fixtures added if required to meet NFPA standards	1	$15,000.00
Voice and Data	System is outdated and poorly organized	2					
			system outdated	Electrical closet (garage)	The data/voice panel is difficult to access, with wiring that could easily be damaged.	2	$5,000.00
Other Reported Issues	Other observed items and user comments						

PUBLIC WORKS COMPLEX

Due to the significantly different construction types and support systems in each of the three major buildings on this site, the complex was assessed as three distinct facilities.

OFFICE AND AUXILIARY GARAGE

Description

The Public Works Office and Auxiliary Garage is a single story office, garage, storage and workshop facility. Originally built in 1935, it has been modified as needed over time.

The structure and the envelope are in fair condition for their use and age, especially on the office building. The HVAC and electrical systems are compromised by their age and numerous changes over the years. Details on the issues with fire separation and egress doors is included on the following pages.

The entire complex is surrounded by walls, with an automatic gate. The use of the facility by other municipalities occasionally leaves the complex open and unlocked.

Additional detail can be found on the following pages and in the included spreadsheet.

Year Built	1935
Additions/Major Renovations	N/A
Approximate Area	4,600 SF
Number of Floors	1 (no bsmt)
Current Replacement Value	$690,000
Project Totals - Priority 1 Issues	$78,000
FCI - Priority 1 Issues	11.3%
Projects Totals - Cumulative Priority 1-2 Issues	$169,500
FCI - Cumulative Priority 1-2 Issues	24.6%

System Observations

Immediate Priority Issues

- There is minimal protection around fuel storage tanks.
- The facility is lacking a continuous fire separation between the office area and the garage area.
- Boiler flue is deteriorating and potentially leaking products of combustion.
- Facility is lacking fire protection.
- Egress doors swing wrong way, have incorrect hardware
- Inadequate ventilation throughout facility.
- Boiler is not located in a dedicated room and storage and IT equipment is located near the appliance.

Code Compliance

Life Safety
Fire separation between the office and the garage is not continuous.

Several doors with exit signs wing inward and have locks and lever hardware, which is not allowed on egress doors. These should be evaluated for either replacement with the correct door and hardware type, or egress should be reconfigured to eliminate the need for these doors to be labeled as egress (if possible).

ADA
The age of the building precludes it from meeting many current egress and ADA codes. If significantly renovated, modifications will be needed to meet current codes.

Immediately Adjacent Site

Site consists of concrete and asphalt areas. The perimeter of the yard is surrounded by a brick site wall. The masonry is in fair condition, with minor tuck pointing required.

Structural System

The office structure is wood frame and masonry residential style structure. The auxiliary garage is a load bearing masonry structure, with wood roof structure. The structure is in adequate condition for its age with no reported or observed issues.

Architectural Systems

Roof
The roof is an asphalt shingle roof at the office area. The auxiliary garage is a built up roofing system. The building is composed of several additions and the roof framing is complex in several areas. The roof is in adequate condition for its age with no reported or observed issues.

Exterior Walls
The exterior cladding of the office building is brick. The exterior cladding of the auxiliary garage is painted masonry block. Several locations of the façade show previous infills, additions, and renovations over the years. Brick is in good condition. Painted concrete block is due for repainting.

Glazing/Windows
The office has both single pane and double pane residential grade windows. The aux garage has glass block infill windows and factory sash. Windows are in adequate condition for their age. Single pane units are poor insulators and are due for replacement.

Interior Partitions
The interior walls are paneling on 2x4 wood stud and masonry block, painted. Interior casework is wood cabinets with plastic laminate counters. The office area lacks fire separation from the garage area.

Doors
The exterior doors are hollow metal doors and frames. The interior doors are wood doors and frames. Doors are in adequate condition for their age. Marked egress doors swing the wrong direction and have incorrect hardware.

Ceilings
The ceiling is acoustic lay-in 2'x4' panels in a suspended grid and painted paneling in the storage area. Ceiling finishes are in adequate condition for their age but are past their useful life and due for replacement.

Floors
The flooring in the office is vinyl composite tile on concrete floor. Garage floors are concrete. Floor finishes are worn and will soon need to be replaced.

HVAC Systems
No central HVAC system serves all areas. The office area is a combination of window AC units and hot water baseboard heat. Some parts of the auxiliary garage area are served by gas-fired unit heaters. Equipment is in poor condition.

Plumbing Systems

Domestic Water, Piping, Fixtures
The facility's plumbing fixtures are old, worn, and not water efficient. The facility's water heater is minimally efficient. Plumbing system equipment is in poor condition.

Fire Protection
Fire protection was not observed in this facility.

Electrical Systems

Electrical Power
Office electrical service is 120/240 v single phase fed from a DTE pole mounted transformer. Electrical system is in poor condition.

Lighting
General lighting is fluorescent and in adequate condition for its age.

Emergency Lighting
Integral battery back-up units should be tested and replaced if necessary. Means of egress lighting levels should be recalculated, and if required, new fixtures and exit signs should be added to comply with NFPA standards.

Fire Alarm Systems
An addressable fire alarm system was not observed at this facility.

Data/Telecom System
Data equipment is currently located near the heating hot water boiler and should be relocated.

Energy Efficiency
Refer to the Public Works Main Garage for more information. The utilities for the Public Works Main Garage, Office and Auxiliary Garage, and Salt Dome are recorded by common meters and were therefore analyzed together.

Example Images of Existing Conditions

Much of the parking lot is showing signs of wear and deterioration.

Data equipment is located near the boiler, and should be relocated.

Several doors in the building are labeled as exit doors, but swing inward and have non-egress door hardware. This issue should be resolved be installing new doors or reconfiguring the path of egress to not require these doors as part of the path.

Electrical equipment is antiquated and located in places where access is limited and damage is likely (too near the floor).

Observation Highlights

Building Name:	**Office and Auxiliary Garage - Public Works**
General Notes:	Single Story office, garage, storage and workshop facility. Originally built in 1935, modified as needed.
Current Replacement Value	$690,000

Year Built	1935
Area (SF)	4,600
Replacement Cost/SF	$150
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$78,000	11.3%
Priority 2 Issues	$91,500	13.3%
Priority 1+2 Combined Facility Condition Issues	**$169,500**	**24.6%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Code Issues	The age of the building precludes it from meeting many current egress and ADA codes. If significantly renovated, will need modifications to meet current codes.	3					
			ADA accessibility	Throughout Facility	Door hardware does not meet code. Steps are present at several means of egress.	2	$ 7,500.00
			ADA accessibility	Throughout Facility	Public service counters do not offer ADA transaction counters.	2	$ 20,000.00
			Protective area around fuel tanks	Fuel Storage Tanks	There is minimal protection around the fuel storage tanks.	1	$ 5,000.00
Site and Parking	Site consists of concrete and asphalt areas. The perimeter of the yard is surrounded by a brick site wall. The masonry is in fair condition, with minor tuck pointing required.	3					
			Yard not secure	Entry gates	The yard gate is not automatic and often unlocked, allowing the grounds open to the public.	2	$ 15,000.00
			Brick wall needs minor tuck pointing.	Perimeter of facility	The masonry site wall needs minor tuck pointing.	3	$ 5,000.00
Structure	The office structure is wood frame and masonry residential style structure. The auxiliary garage is a load bearing masonry structure, with wood roof structure.	3					
			No reported issues				
Roof	The roof is an asphalt shingle roof at the office area. The auxiliary garage is a built up roofing system. The building is composed of several additions and the roof framing is complex in several areas.	3					
			No reported issues				
Cladding	The exterior cladding of the office building is brick. The exterior cladding of the auxiliary garage is painted masonry block. Several locations of the façade show previous infills, additions, and renovations over the years. Brick is in good condition.	3					
			concrete block due for repainting	exterior, esp. north wall	painted concrete block is due for repainting. Paint has failed in some areas due to water infiltration.	2	$ 12,000.00
Glazing	The office has both single pane and double pane residential grade windows. The aux garage has glass block infill windows and factory sash.	3					
			Single pane windows are poor insulators	Entire facility	The metal frame, single pane windows are poor insulating, old and due for replacement. Replacement efforts have started.	1	$ -
Ceilings	The ceiling is acoustic lay-in 2'x4' panels in a suspended grid and painted, paneling in the storage area.	3					
			Ceiling finishes are worn.	Throughout facility	Throughout the building, the acoustic ceiling tiles are beginning to sag, and in the storage room, the ceiling panels are becoming unfastened.	3	$ 6,000.00

Observation Highlights

Building Name:	**Office and Auxiliary Garage - Public Works**
General Notes:	Single Story office, garage, storage and workshop facility. Originally built in 1935, modified as needed.
Current Replacement Value	$690,000

Year Built	1935
Area (SF)	4,600
Replacement Cost/SF	$150
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$78,000	11.3%
Priority 2 Issues	$91,500	13.3%
Priority 1+2 Combined Facility Condition Issues	**$169,500**	**24.6%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Walls and Casework	The interior walls are paneling on 2x4 wood stud and masonry block, painted. Interior casework is wood cabinets with plastic laminate counters. The office area lacks fire separation from the garage area.	2					
			Lack of fire wall separation	office / garage walls	The office building lacks continuous fire separation from the garage area.	1	$ 7,500.00
Doors	The exterior doors are hollow metal doors and frames. The interior doors are wood doors and frames.	3					
			Marked egress doors swing inward, have incorrect hardware	Entire facility	Egress doors swing inward against direction of travel and should be modified to swing in the direction of egress. Hardware includes locks which require additional effort to exit.	3	$ 5,000.00
Floors	The flooring in the office is vinyl composite tile on concrete floor. Garage floors are concrete.	3					
			Floor finishes are worn	Throughout facility	The floor finishes in the office facility are worn and dated and are nearing time for replacement.	4	$ 10,000.00
HVAC	No central HVAC system serves all areas. The office area is a combination of window AC units and hot water baseboard heat. Some parts of the auxiliary garage area are served by gas-fired unit heaters.	1					
			No means of adequate ventilation	Throughout	There are no means of consistently introducing ventilation air in to the occupied spaces of this building	2	$ 15,000.00
			Boiler location	Garage	The boiler, which serves heating needs for the office, is not located in a dedicated room and has the potential for storage items to be placed near it. Also, the boiler is located right below the building's IT rack. The boiler should be protected or relocated.	1	$ 25,000.00
			Boiler chimney	Garage	The users indicate that the boiler's chimney is leaking water, which also suggests that it could be deteriorated to the point that it also leaks products of combustion.	1	$ 15,000.00
			Gas smell	Front storage room	The front storage room (door is from the main entry area) has an old gas-fired unit heater that may be leaking natural gas. Gas smell was noticed in this room.	1	$ 5,000.00
Plumbing	The facility's plumbing fixtures are old, worn, and not water efficient. The facility's water heater is minimally efficient. Fire protection was not observed in this facility.	1					
			Worn plumbing fixtures	Throughout	Plumbing fixtures throughout the facility are old, worn, and not water efficient. They should be replaced.	1	$ 8,000.00
			Fire suppression	Throughout	No fire-suppression was found throughout the facility, except in the main repair garage area. This use type should have complete fire protection.	1	$ 12,000.00

Observation Highlights

Building Name:	**Office and Auxiliary Garage - Public Works**
General Notes:	Single Story office, garage, storage and workshop facility. Originally built in 1935, modified as needed.
Current Replacement Value	$690,000

Year Built	1935
Area (SF)	4,600
Replacement Cost/SF	$150
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$78,000	11.3%
Priority 2 Issues	$91,500	13.3%
Priority 1+2 Combined Facility Condition Issues	**$169,500**	**24.6%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Electrical	Office electrical service is 120/240 v single phase fed from a DTE pole mounted transformer	2					
			electrical panels are old and have code clearance issues	Storage	Upgrade electrical panels and mount at correct height.	2	$6,000.00
			Main disconnect is old and has code clearance issues	Storage	Upgrade main disconnect switch and relocate to a clear area per NEC	2	$3,000.00
			Old garage panel should be replaced	Aux. garage		2	$2,500.00
Lighting	General lighting is fluorescent,	3					
			General 2'x4' recessed lighting old, inefficient	Throughout	General 2'x4' recessed lighting should be upgraded to new energy efficient fixtures. Add occupancy sensors per ASHRAE 90.1	3	$3,000.00
			Garage industrial fluorescent fixtures old, inefficient too few.	Aux. garage	add additional fixtures and occupancy sensors per ASHRAE 90.1	2	$3,000.00
			Emergency/exit lighting	Throughout	Integral battery back-up units, all units should be tested and replaced if necessary. Means of egress lighting levels should be recalculated, and if required, new fixtures and exit signs should be added to comply with NFPA standards.	2	$2,500.00
Voice and Data		2					
			data backboard poorly located	garage , near boiler	The data backboard and equipment should be relocated away from the building boiler.	2	$ 5,000.00
			data equipment poorly located	office kitchen	router hanging from ceiling by wiring, should be relocated.	1	$ 500.00
Other Reported Issues	Other observed items and user comments						

PUBLIC WORKS COMPLEX

Due to the significantly different construction types and support systems in each of the three major buildings on this site, the complex was assessed as three distinct facilities.

SALT DOME

Description

The salt dome structure is a prefabricated wood panel geodesic roof system on a concrete retaining wall, built in the 1990s. Access is through a barn-style wood door. The condition of this building is typical for one that is exposed to large equipment and salt. The limited electrical service shows signs of deterioration from salt exposure and should be replaced.

Additional detail can be found on the following pages and in the included spreadsheet.

Year Built	1995
Additions/Major Renovations	N/A
Approximate Area	1,800 SF
Number of Floors	1 (no bsmt)
Current Replacement Value	$144,000
Project Totals - Priority 1 Issues	$19,000
FCI - Priority 1 Issues	13.2%
Projects Totals - Cumulative Priority 1-2 Issues	$36,000
FCI - Cumulative Priority 1-2 Issues	25.0%

System Observations

Immediate Priority Issues

- Concrete slab surrounding the salt dome has failed and is due for replacement.
- Asphalt shingles have failed and the roof is due for replacement. Plywood structure is discolored due to water damage.
- Door panel is failing and is not weather-tight.
- Electrical devices are corroded and failing. Should be replaced with GFCI receptacles in weatherproof housing.

Code Compliance

ADA
No code issues observed for this facility

Immediately Adjacent Site

The salt dome is surrounded by concrete slab, contained in the Public works site. The concrete surrounding the structure has failed due to age and exposure.

Structural System

The salt dome construction consists of concrete wall base with a wood framed geodesic dome. The concrete structure is in expected condition for its age and use.

Architectural Systems

Roof
The roof is asphalt shingles on wood plywood substructure and is in poor condition. Water damage is evident. The panels were reported as prefabricated, so re-shingling will be difficult.

Exterior Walls
No cladding on this facility

Glazing/Windows
No glazing for this facility

Interior Partitions
No walls or casework for this facility

Doors
The entrance door for this facility is a wood barn-door style, and is in poor condition.

Ceilings
No ceilings for this facility

Floors
No floor for this facility

HVAC Systems

A small exhaust fan provides some ventilation to this structure. The exhaust fan is assumed to function according to its original intent. Maintenance access to this fan (major components are located inside) would be difficult when salt is stored.

Plumbing Systems

Domestic Water, Piping, Fixtures
There are no plumbing fixtures serving this structure.

Fire Protection
There is no fire protection system.

Electrical Systems

Electrical Power
120v service (most likely from DPW main garage). Power systems are in poor condition.

Lighting
High Pressure Sodium on exterior of dome are in adequate condition.

Energy Efficiency

Refer to the Public Works Main Garage for more information. The utilities for the Public Works Main Garage, Office and Auxiliary Garage, and Salt Dome are recorded by common meters and were therefore analyzed together.

Example Images of Existing Conditions

Shingles on roof are original and failing.

Water damage to the underside of the roof structure.

Damage at salt dome door.

Typical deterioration of steel angle at entry.

Observation Highlights

Building Name:	**Salt Dome - Public Works**
General Notes:	Geodesic wood salt storage structure built in mid-1990's.
Current Replacement Value	$144,000

Year Built	1995+/-
Area (SF)	1,800
Replacement Cost/SF	$80
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$19,000	13.2%
Priority 2 Issues	$17,000	11.8%
Priority 1+2 Combined Facility Condition Issues	**$36,000**	**25.0%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Code Issues	No code issues observed for this facility						
Site and Parking	The salt dome is surrounded by concrete slab, contained in the Public works site. The concrete surrounding the structure has failed.	1					
			concrete slab cracked	perimeter of salt dome	The concrete slab surrounding the salt dome has failed and is due for replacement	2	$ 6,000.00
Structure	The salt dome construction consists of concrete wall base with a wood framed geo-desic dome.	3					
			corrosion discoloration	perimeter concrete	The exterior face of the concrete walls are discolored due to rain water run off from the roof, down the face of the walls. Roof should be flashed to provide better means to shed water.	3	$ 5,000.00
Roof	The roof is asphalt shingles on wood plywood substructure.	1					
			Asphalt shingles are failing.	Entire roof	The asphalt shingles are failing and due for replacement. A section of plywood roof structure is discolored and damaged from water infiltration.	1	$ 18,000.00
Cladding	No cladding on this facility						
Glazing	No glazing for this facility						
Ceilings	No glazing for this facility						
Walls and Casework	No walls or casework for this facility						
Doors	The entrance door for this facility is plywood on wood framing.	2					
			Door panel is failing	door panel / frame	The door to the salt dome is broken at the corners and does not seal. The door does not provide protection from the weather and is due for replacement	2	$ 10,000.00
			Perimeter framing corroding	door jamb	The metal jamb angles have corroded and should be cleaned and protected.	2	$ 1,000.00
Floors	No floor for this facility						
HVAC	A small exhaust fan provides some ventilation to this structure. The exhaust fan is assumed to function according to its original intent. Maintenance access to this fan (major components are located inside) would be difficult when salt is stored.	3					
Plumbing	There are no plumbing fixtures serving this structure.						
Electrical	120v service (probably from DPW main garage)	1					
			Corroded outlet	Salt Dome entrance	Replace outlet with new GFCI type in" weatherproof while in use" PVC box. Provide new wiring in PVC conduit	1	$500.00
			Corroded light switch	Salt Dome entrance	Replace switch and box with protected enclosure	1	$500.00

Observation Highlights

Building Name:	**Salt Dome - Public Works**
General Notes:	Geodesic wood salt storage structure built in mid-1990's.
Current Replacement Value	$144,000

Year Built	1995+/-
Area (SF)	1,800
Replacement Cost/SF	$80
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$19,000	13.2%
Priority 2 Issues	$17,000	11.8%
Priority 1+2 Combined Facility Condition Issues	**$36,000**	**25.0%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Lighting	HPS exterior grade	3					
			New sealed LED figures would offer longer life and "instant on" if controlled by a weatherproof motion sensor at the door	Salt dome	New fixtures, control device, wiring and PVC conduit	3	$2,000.00
Other Reported Issues	Other observed items and user comments						

COMMUNITY CENTER

Description

The Community Center houses meeting rooms, activity rooms, a small gym and staff offices. An addition in the 1980s approximately doubled the floor space. It is attached to the Ice Arena.

The building is a concrete block/steel joist structure on a concrete slab. The roof shows signs of leaking at transitions between walls of different heights, and the envelope is showing signs of age and structural problems. Settlement has caused the north wall to crack, with daylight showing through the block. Repairs to this issue will require repair of the underlying problem to prevent further deterioration.

The original HVAC is inefficient and inadequate to meet the demands of larger groups, and is past the end of its useful life.

Additional detail can be found on the following pages and in the included spreadsheet.

Year Built	1970
Additions/Major Renovations	1980s
Approximate Area	8,100 SF
Number of Floors	1 (no bsmt)
CRV	$1,620,000
Project Totals - Priority 1 Issues	$41,500
FCI - Priority 1 Issues	2.6%
Projects Totals - Cumulative Priority 1-2 Issues	$143,000
FCI - Cumulative Priority 1-2 Issues	8.8%

System Observations

Immediate Priority Issues

- The east masonry wall is settling and separating from the building. Cracks have been patched but underlying problem appears to persist.
- Multiple roof leaks have occurred and been repaired in the past. Roof may need to be inspected and should be routinely maintained.
- HVAC system cannot maintain comfortable temperature when gathering areas are fully occupied.
- Ventilation in the facility seems to be inadequate.
- Parking lot has significant cracking and pitching.
- Mechanical and Electrical equipment rooms have excessive storage in them. Proper clearance for safety and equipment service should be maintained.

Code Compliance

ADA
The building met code when constructed, but will require modifications to meet ADA if renovated.

Immediately Adjacent Site

The parking lot is an asphalt parking lot with a significant amount of cracking. The site is bordered by a treated wood fence at neighbor perimeter. Grass areas have worn to dirt areas on the east side of the building, presumed from roof rainwater runoff. The site elements are in poor condition.

Structural System

The exterior walls are load-bearing, masonry walls with steel joist structure. There is significant settling and cracking in the East masonry wall. It is separating from the building. As a result, the structure is considered to be in poor condition and requires immediate attention.

Architectural Systems

Roof
Sloped roof portions are painted standing seam metal. Flat portions of the roof are rubber membrane. The roof is in adequate condition for its age.

Exterior Walls
Exterior cladding is painted masonry block with limited areas of metal fascia panels and siding. Siding and metal fascia appear to be in good condition. Paint on block is in fair to poor condition. Refer to structural notes for additional detail.

Glazing/Windows
Exterior glazing is double pane glazing in aluminum storefront systems. Interior glazing is wood frame glazing. Windows are in good condition with no reported or observed issues.

Interior Partitions
Interior walls are masonry, painted, with limited areas of drywall and wood paneling. Case work is plastic laminate on OSB, 36" in height at wall cabinets. Interior walls and casework are in good condition with no reported or observed issues.

Doors

The main entry is insulated glazing in an aluminum automatic sliding door system. The interior doors are painted hollow metal doors and frames, and painted wood doors and wood frames. Doors are in good condition with no reported or observed issues.

Ceilings
Ceilings are 2'x2' acoustic lay-in ceilings in office and conference room; exposed metal deck in entry area and exposed Tectum deck in gymnasium area. Ceilings are in adequate condition for their age with evidence of minor water damage.

Floors
Floors are concrete slab on grade with the following finishes: vinyl composite tile (VCT), rubber flooring, and sheet carpeting. Floor finishes are in adequate condition for their age with some evidence of wear.

HVAC Systems

A combination of packaged rooftop units with gas heat and DX cooling, and residential gas furnaces with split system DX air conditioning serve the community center and recreation offices. Most zones are controlled by simple programmable thermostats. System is in adequate condition for its age but past the end of its useful service life.

Plumbing Systems

Domestic Water, Piping, Fixtures
Plumbing system equipment is original to the building and in adequate condition for its age.

Fire Protection
Fire suppression not noted in the office and multipurpose areas. This would be required by current codes and is recommended for this use type.

Electrical Systems

Electrical Power
Building electrical service is 208/120v wye fed from 150KVA DTE dry type transformer, with 6 main disconnects. System is in adequate condition for its age.

Lighting
General lighting is fluorescent, with some metal halide indirect and some incandescent track, in entrance lobby. System is in adequate condition for its age.

Emergency Lighting
Integral battery back-up units should be tested and replaced as required. Means of egress lighting levels should be recalculated to comply with NFPA requirements.

Fire Alarm Systems
An addressable fire alarm system was not observed at this facility.

Data/Telecom System
System is in good condition with no reported or observed issues.

Energy Efficiency

Refer to Page 4 for definitions of the energy efficiency terms in the following section

The Community Center building's EUI for June 2012 through May 2013 is 113 kBTU/ft^2/year. This exceeds the CBECS peer group EUI of 70 kBTU/ft^2/year by 61%. The main factors at the Community Center building that are contributing to this excessive energy use are:

- The building envelope is minimally insulated, and the windows and entrances are also aged and of standard efficiency. Building settling has also allowed for increased levels of outside air infiltration, which negatively affects the building's EUI.
- Building controls do not allow for setback of temperatures when spaces are unoccupied. As such, large meeting areas or multipurpose rooms are being conditioned during times of no occupancy.
- Some lighting upgrades have been done throughout, but additional levels of lighting controls could help improve the facility's EUI.
- The Recreation Center's offices are served by single zone, constant volume roof top air conditioning units. These are of standard efficiency. Upgrading these units when their useful life expectancy has been exceeded will improve the facility's EUI.

Example Images of Existing Conditions

North parking lot and adjacent stockade fence deteriorated.

Block wall showing signs of water damage from roof runoff.

Settlement causing exterior block wall to rotate and separate.

Settlement causing exterior block wall to rotate and separate.

Observation Highlights

Building Name:	**Community Center**
General Notes:	Houses community center offices and activity rooms. Originally built around 1970, with an addition in the northeast corner in the 1980s.
Current Replacement Value	$1,620,000

Year Built	1970+/-
Area (SF)	8,100
Replacement Cost/SF	$200
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$41,500	2.6%
Priority 2 Issues	$101,500	6.3%
Priority 1+2 Combined Facility Condition Issues	**$143,000**	**8.8%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Code Issues	The building met code when constructed, but will require modifications to meet ADA if renovated.	3					
			ADA accessibility	throughout	Casework height is 36". Door hardware is knob style, not levers. Stairway to mezzanine does not have protection to keep people from walking underneath.	2	$ 12,000.00
Site and Parking	The parking lot is an asphalt parking lot with significant amount of cracking. The site is bordered by a treated wood fence at neighbor perimeter. Grass areas have worn to dirt areas on the east side of the building, presumed from roof rainwater run off.	2					
			Significant cracking and pitching of asphalt areas. Asphalt significant wear and failure	Parking		2	$ 23,000.00
			Fence showing signs of deterioration	along parking lot and east of building	Treated wood fence deteriorating due to age, sections replaced as needed.	3	$ 20,000.00
			Soil erosion	East side of building	The soil is beginning to erode on the East side of the building due to lack of grass and water runoff in this area. The area should be graded properly and re-seeded.	2	$ 1,000.00
Structure	The exterior walls are load-bearing, masonry walls with steel joist structure.	2					
			Significant cracking and separation in the masonry joints	Southeast corner	The east masonry wall is settling, separating from the building. Cracks have been patched, but underlying problem appears to persist. Block wall has separated near the door, with daylight showing through. Foundation and wall need repair.	1	$ 15,000.00
Roof	Sloped roof portions are painted standing seam metal. Flat portions of the roof are rubber membrane.	3					
			signs of past roof leaks at transitions	Perimeter of roof.	Previous roof leaks have been reported around the perimeter of the building. The roof should be routinely inspected and maintained.	2	$ 5,000.00
Cladding	Exterior cladding is painted masonry block with limited areas of metal fascia panels and siding. Siding and metal fascia appear to be in good condition. Paint on block is in fair to poor condition. Refer to structural notes for additional detail.	3					
			paint peeling on concrete block	Overall building.	The painted masonry block walls are beginning to peel, especially at base of wall, and should be repainted.	2	$ 20,000.00
Glazing	Exterior glazing is double pane glazing in aluminum storefront systems. Interior glazing is wood frame glazing.	4					

Observation Highlights

Building Name:	**Community Center**
General Notes:	Houses community center offices and activity rooms. Originally built around 1970, with an addition in the northeast corner in the 1980s.
Current Replacement Value	$1,620,000

Year Built	1970+/-
Area (SF)	8,100
Replacement Cost/SF	$200
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$41,500	2.6%
Priority 2 Issues	$101,500	6.3%
Priority 1+2 Combined Facility Condition Issues	**$143,000**	**8.8%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			No reported issues				
Ceilings	Ceilings are 2'x2' acoustic lay-in ceilings in office and conference room; exposed metal deck in entry area and exposed Tectum deck in gymnasium area.	3					
			Minor water damage on acoustic lay-in ceiling	A few locations, overall building	There are few locations throughout the buildings were discoloration on ceiling tiles was noticed, possibly from past roof leaks.	3	$ 2,000.00
Walls and Casework	Interior walls are masonry, painted, with limited areas of drywall and wood paneling. Case work is plastic laminate on OSB, 36" in height at wall cabinets.	4					
			No reported issues				
Doors	The main entry is insulated glazing in an aluminum automatic sliding door system. The interior doors are painted hollow metal doors and frames, and painted wood doors and wood frames.	4					
			No reported issues.				
Floors	Floors are concrete slab on grade with the following finishes: vinyl composite tile (VCT), rubber flooring, sheet good carpeting.	3					
			rubber composite tile worn and dirty	northeast addition	Floor tiles are worn and should be thoroughly cleaned or replaced	3	$ 12,000.00
HVAC	A combination of packaged rooftop units with gas heat and DX cooling, and residential gas furnaces with split system DX air conditioning serve the community center and recreation offices. Most zones are controlled by simple programmable thermostats. System is likely past end of useful life.	3					
			Occupant comfort issues when fully occupied.	Throughout	Units are likely underperforming, improperly sized, or incorrectly zoned.	2	$ 25,000.00
			Facility has cigarette and other odors	Throughout	Insufficient levels of ventilation. Residential units are not bringing in any ventilation air to occupied spaces. Rooftop units are likely bringing in minimal outside air, but is not sufficient to dilute odors throughout the facility.	1	$ 25,000.00
			Furnace system clearance	Multipurpose room storage	Storage room off of the multipurpose room is full of storage items and contains a residential upright furnace and air conditioning system. Clear access needs to be provided for this unit.	1	$ 500.00
Plumbing	The majority of the plumbing is original to the building.	3					
			Office and multipurpose areas fire suppression	Office and multipurpose areas	Fire suppression not noted in the office and multipurpose areas. This would be required by current codes and is recommended for this use type.	3	$ 25,000.00
			Plumbing Fixtures	Throughout	The majority of the plumbing fixtures are original to the building. Valves are nearing end of useful life and not considered water efficient	2	$ 8,000.00

Observation Highlights

Building Name:	**Community Center**
General Notes:	Houses community center offices and activity rooms. Originally built around 1970, with an addition in the northeast corner in the 1980s.
Current Replacement Value	$1,620,000

Year Built	1970+/-
Area (SF)	8,100
Replacement Cost/SF	$200
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog		FCI
Priority 1 Issues	$41,500	🟢	2.6%
Priority 2 Issues	$101,500	🟡	6.3%
Priority 1+2 Combined Facility Condition Issues	**$143,000**	🟡	**8.8%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Water heater clearance	Multipurpose room storage	The gas water heater has a number of storage items around it. Maintain 36" clearance in front of this piece of equipment.	1	$ 500.00
			Gas water heater	Multipurpose room storage	The gas water heater is minimally efficient, but still has some life remaining.	2	$ 2,500.00
Electrical	Building electrical service is 208/120v wye fed from 150KVA DTE dry type transformer, with 6 main disconnects	3					
			Future expansion not possible	electrical /telecom rm	No room for future expansion of electrical system, due to 6 main switch rule. New main distribution panel with main breaker should be considered if future expansion is required.	4	$ 25,000.00
			Clearance in front of electrical equipment	electrical /telecom rm	Electrical/mech. Rm should not be used for misc. storage. NEC requires 3'0" clear in front of electrical panels and disconnect switches for safety.	1	$ 500.00
Lighting	General lighting is fluorescent, with some metal halide indirect and some incandescent track, in entrance lobby.	3					
			2'x4' Recessed 4 lamp T8	Throughout	local switch control only, occupancy sensors should be provided per ASHRAE 90.1. Lighting fixtures should be upgraded to 2 or 3 lamp T8 or T5 with electronic program start ballasts	3	$ 30,000.00
			Exit/Emergency lighting	Throughout	Integral battery back-up units. All units should be tested and replaced as required. Means of egress lighting levels should be recalculated to comply with NFPA requirements.	2	$ 5,000.00
Voice and Data	System mounted on existing plywood backboard, in good condition.	4					
			No issues reported				
Other Reported Issues	Other observed items and user comments						

ICE ARENA

Description

The main ice area of the Ice Arena was originally constructed in 1974, with an addition (studio ice, office, etc.) in 1994. The Studio Ice rink is now used for other functions as the color has cracked, causing the ice system to not work.

The buildings are pre-engineered metal structures with concrete slabs typical of ice arena construction. The exterior cladding is predominantly painted metal panel, with painted block along the long front elevation. Where the metal cladding extend to the ground, the building shows typical damage from equipment and the piling of rink waste ice.

Interior finishes are in poor condition, typical for the high abuse ice arenas receive. Plywood wall construction under the bleachers is not recommended for egress corridors.

The HVAC system is past the end of its expected lifespan and should be replaced. The original ice making equipment is functioning, but obsolete and difficult to maintain, especially given the difficulty in finding parts. The coolant is also no longer manufactured. The freon leak system and equipment room ventilation system is insufficient and should be updated to meet current safety standards.

Based on this and previous assessments, this building should be considered for significant renovations, system replacements and improvements.

Additional detail can be found on the following pages and in the included spreadsheet.

Year Built	1974
Additions/Major Renovations	1994
Approximate Area	36,400 SF
Number of Floors	1 (no bsmt)
CRV	$5,824,000
Project Totals - Priority 1 Issues	$205,000
FCI - Priority 1 Issues	3.5%
Projects Totals - Cumulative Priority 1-2 Issues	$951,500
FCI - Cumulative Priority 1-2 Issues	16.3%

System Observations

Immediate Priority Issues

- Facility has several accessibility and egress issues – construction of bleachers, mechanical platform unprotected, ADA toilet rooms.
- Fire department connections are poorly marked.
- Site issues include significantly cracked and pitched parking lot as well as poor site water drainage.
- Vinyl composite tile in kitchen is coming loose.
- The HVAC unit under the bleachers is difficult to access and surrounded by combustible materials and debris.
- Ice plant equipment is past its useful life and should be scheduled for replacement.
- In general, the facility's mechanical systems are past their useful life, not providing sufficient ventilation and should be scheduled for replacement.

Code Compliance

Life Safety
The fire department connections for the sprinkler system under the bleachers is poorly marked. The use of plywood wall and ceiling construction (found under the bleachers) is not recommended for egress corridors. Egress path lighting levels are poor.

The lack of an automatic ventilation system to vent a large freon leak was noted in the ice equipment room.

ADA
The building met code when constructed, but will require modifications to meet ADA if renovated.

Immediately Adjacent Site

Site consists of asphalt parking lot, grass areas with horseshoe pits and concrete areas around building. Site elements are in poor condition.

Structural System

Structure is a steel truss frame. Structure is in adequate condition for its age.

Architectural Systems

Roof
Roof on building is reported to leak in several locations, including at edge and penetrations. Leaks are evident throughout building. Roof is in poor condition.

Exterior Walls
Concrete block, painted, up to approximately 9'-0", east and west walls. Metal siding, painted, upper walls and south wall. Interior face is fiberglass batt insulation with protective sheeting. Metal wall panels are generally in poor condition.

Glazing/Windows
Main entry is insulated glass in aluminum automated sliding doors. Interior glazing is single pane in hollow metal frames. Windows are in good condition with no reported or observed issues.

Interior Partitions

Interior wall are masonry block, painted. Casework, present in the kitchen, is plastic laminate on OSB. Walls and casework are in relatively good condition for their age and the abuse that's typical in an ice arena.

Doors
Man doors are hollow metal frames and leaves, painted. There is 1 exterior steel sectional door and 2 interior overhead coiling doors. Doors are in adequate condition.

Ceilings
Ceilings, where present are 2'x4' acoustical lay-in ceilings. Exposed ceilings are to the backing material of the insulation. Ceilings are in poor to fair condition.

Floors
Floors are concrete subfloor with rubber athletic floor or vinyl composite tile. The public toilet rooms have ceramic tile. Floor finishes are in adequate condition.

HVAC Systems

The ice rink is served by a number of individual systems. Residential gas-fired furnaces with air conditioning serve office / small enclosed areas and the locker rooms. Larger, non-ice areas are served by a packaged gas-fired rooftop unit with DX cooling. The ice area is served by a failing dehumidification unit. Spectator areas are served by gas-fired infrared heating units. HVAC systems are well past their useful life and in poor condition.

Plumbing Systems

Domestic Water, Piping, Fixtures
The plumbing systems appear original to the construction of the building, with the exception of the domestic water heating boiler which is not original to the building. Original plumbing system equipment is in poor condition.

Fire Protection
The fire protection sprinkler system is located in low-ceiling areas, including offices, kitchen, lockers and under bleachers. The system appears to be functional and in adequate condition.

Electrical Systems

Electrical Power
Building electrical service is Primary 480/277v, 3 phase, 4 wire fed from the owner's pad mounted transformer. Electrical system equipment is past its useful life and in poor condition.

Lighting
General lighting is Fluorescent. Rink lighting is Metal Halide. Lighting appears to be in adequate condition, however there are opportunities to improve energy efficiency.

Emergency Lighting
Existing integral battery back-up units. All units should be tested and replaced as required. Egress lighting levels appear to be below required standards. Means of egress lighting levels should be recalculated to comply with NFPA requirements.

Fire Alarm Systems
An addressable fire alarm system was not observed at this facility.

Data/Telecom System
Data and Telecom equipment is located in mechanical and electrical rooms and appears to be in poor condition.

Energy Efficiency

Refer to Page 4 for definitions of the energy efficiency terms in the following section

The Ice Arena building's EUI for June 2012 through May 2013 is 187 kBTU/ft^2/year. This exceeds the CBECS peer group EUI of 83 kBTU/ft^2/year by 125%. It is noted that the CBECS peer group used for this comparison basis was not discretely for ice arenas, but for arenas and large recreation facilities in general. Regardless of the comparison to peer groups, there are still many opportunities for energy savings at this facility:

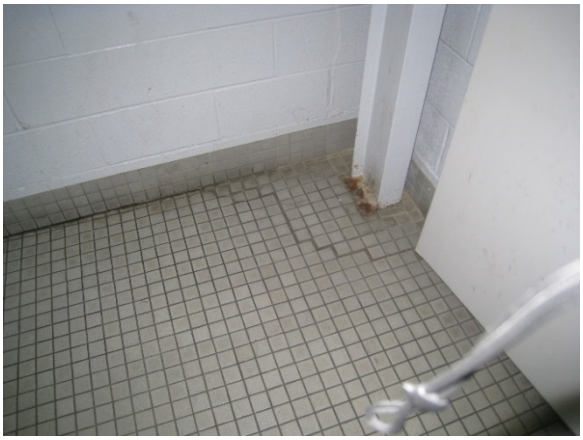
- All of the existing HVAC systems serving zones within the ice arena are either original to the building, or significantly aged and beyond their useful life. The locker rooms, press box offices, storage areas, and hallways are served by residential style gas-fired warm-air furnaces which are minimally efficient.
- The studio ice space, and other support rooms adjacent to it, are served by a packaged rooftop air conditioning unit located above the studio ice space. This unit is newer, but is assumed to be minimally efficient as well.
- The ice plant, cooling tower, and associated dehumidification system is beyond its useful life. A dramatic drop in energy consumption is noticed during a few months when the ice plant is turned off, indicating that this system is a significant portion of the facility's EUI.
- From an energy efficiency and reliability standpoint, the ice plant should be replaced with a modern system.
- The dehumidification system does not operate properly and runs continually without providing much benefit to the facility.
- Exterior wall louvers / sidewall exhaust fans are not provided with tight fitting dampers. These openings to the outside allow air infiltration, increasing energy consumption.
- The ice plant chiller for the studio ice has been decommissioned, however, materials used to block off the outside air intake louvers for this machine are not tightly fitting and are allowing air infiltration to the building.
- The infrared gas-fired radiant heaters for the main ice's spectator area are aged and near the end of their useful life. Upgrading to newer, modern models can improve the efficiency of this system.
- The main ice has high bay metal halide light fixtures. These can be upgraded to more efficient LED or high output fluorescent fixtures for reduced energy consumption.
- Ice arenas generally have high domestic hot water consumption due to the presence of shower facilities and the use of the ice resurfacing machine. The domestic hot water boiler system is equipped with a preheater fed off of the ice plant, but the main water heating boiler is still minimally efficient. A condensing, modulating, low mass domestic water heating system can improve the energy footprint of this system.

Example Images of Existing Conditions

Exterior cladding damaged from ice and equipment.

Block and soffit showing signs of water infiltration.

Block wall showing signs of structural movement.



Bathroom floor showing signs of settlement.

Corridor under bleachers poorly lit and narrow.

Studio rink floor cracked, disabling chiller system.

Steel structure obstructs walking path in upper bleachers.

Mechanical equipment room louvers not properly sealed.

Outdated plumbing fixtures in toilet room.

Observation Highlights

Building Name:	**Ice Arena**
General Notes:	Originally constructed in 1974, with an addition (studio ice, office, etc.) in 1994. Studio Ice rink is now used for other functions (ice non-functional).
Current Replacement Value	$5,824,000

Year Built	1974
Area (SF)	36,400
Replacement Cost/SF	$160
Floors	1
Basement (y/n)	N
Year Assessed	2014

Observed Issues	Backlog		FCI
Priority 1 Issues	$205,000	🟢	3.5%
Priority 2 Issues	$746,500	🔴	12.8%
Priority 1+2 Combined Facility Condition Issues	**$951,500**	🔴	**16.3%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Code Issues	The building met code when constructed, but will require modifications to meet ADA if renovated.	2					
			Potentially combustible materials in egress corridor and locker rooms.	under bleachers, locker rooms	Ceilings and one corridor wall under the bleachers are painted plywood construction. This is not recommended construction and not currently allowed. Fire sprinklers are provided under bleacher area.	2	$ 35,000.00
			ADA accessibility	Entire facility	Barrier free toilet facilities are not integrated with public toilets. The Door hardware is not compliant: the interior door hardware is typically knob-type and not accessible by those with limited grip. Barrier free shower facility not present.	3	$ 25,000.00
			Bleacher seating does not meet current codes, will need modification if building is renovated.	Bleachers	Existing bleacher seats are wood plank, painted. Stair portions exceed acceptable allowances for stair rise. Steel building structure creates a head clearance safety issue. Handrails not compliant with building codes.	3	$ 50,000.00
Site and Parking	Asphalt parking lot. Grass areas with horseshoe pits. Concrete areas around building.	2					
			Protection around exterior mechanical system	South side	The mechanical platform south of the building is raised and provides no protection from the public walking around the unit. A fence around this area is recommended.	1	$ 2,000.00
			Exterior side yard is unsecured.	East wall	The east side wall of the ice rink is an unsecured alley way.	1	$ 1,000.00
			Concrete slab is cracked	South side	Several concrete slabs at the south side of the building are cracked and deteriorating. The slope of this area also may be insufficient to drain water away from building.	2	$ 3,000.00
Structure	Steel truss frame building.	3					
			Structure impacts means of egress	Bleachers	The roof structure extends into the clear area required for egress pathways on the bleachers. The steel is unprotected and limits safe egress. One solution would be to prevent access to top row of bleachers.	2	$ 5,000.00
			Structural movement in floor	various areas	Floor settlement and heaving noted in multiple locations, including studio rink and toilet rooms. Studio rink is not used due to the floor movement.	2	$ 30,000.00
Roof	Roof on building is reported to leak in several locations, including at edge and penetrations. Leaks are evident throughout building.	2					
			Roof leak damage	Ceiling	Discoloration was noticed in various areas throughout the facility which suggest leaks over the years. Roof is due for repair or replacement. This style of roof typically leaks at the edge, especially when gutters become overloaded. Covering the roof in membrane will cost approximately $250,000, repairs less. Inspection to determine extent of problem and repair is recommended.	2	$ 25,000.00

Observation Highlights

Building Name:	**Ice Arena**
General Notes:	Originally constructed in 1974, with an addition (studio ice, office, etc.) in 1994. Studio Ice rink is now used for other functions (ice non-functional).
Current Replacement Value	$5,824,000

Year Built	1974
Area (SF)	36,400
Replacement Cost/SF	$160
Floors	1
Basement (y/n)	N
Year Assessed	2014

Observed Issues	Backlog	FCI
Priority 1 Issues	$205,000	3.5%
Priority 2 Issues	$746,500	12.8%
Priority 1+2 Combined Facility Condition Issues	**$951,500**	**16.3%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Cladding	Concrete block, painted, up to approximately 9'-0", east and west walls. Metal siding, painted, upper walls and south wall. Interior face is fiberglass batt insulation with protective sheeting. Metal wall panels are generally in poor condition.	2					
			Significant denting in metal siding	South wall	The south wall of the main ice area is severely dented from snow piling against the building. The metal paneling is no longer weather tight.	2	$ 8,000.00
			Metal siding due for repaint	entire building	The metal siding is chalked and due for repainting	3	$ 50,000.00
			Failure of soffit	Main entrance	Soffit is becoming unattached and falling.	2	$ 1,000.00
			Penetrations in metal panel are not sealed	Mechanical Room	Pipe penetrations in the exterior wall system are not sealed from the weather.	2	$ 1,000.00
			Exterior louvers providing air for mechanical rooms allow cold into building.	Mechanical Room	The exterior louvers servicing the mechanical units allow for infiltration of air year round. Rigid insulation panels attempt to damper the infiltration, but fail.	2	$ 500.00
Glazing	Main entry is insulated glass in aluminum automated sliding doors. Interior glazing is single pane in hollow metal frames	4					
			No reported issues				
Ceilings	Ceilings, where present are 2'x4' acoustical lay-in ceilings. Exposed ceilings are to the backing material of the insulation.	3					
			damaged and discolored lay-in ceilings	Ceiling	2x4 ceilings in limited areas show signs of past roof leaks	2	$ 500.00
			Insulation becoming unfastened, condition above rink unknown.	Ceiling	The fasteners for the under-roof insulation are beginning to fail, causing insulation to fall in some areas.	2	$ 5,000.00
			Discoloration, deterioration of insulation facing	Bleacher area	The interior face of the insulation is discolored due to proximity to overhead heating source. Insulation covering should be inspected for physical deterioration from heat.	2	$ 5,000.00
Walls and Casework	Interior wall are masonry block, painted. Casework, present in the kitchen, is plastic laminate on OSB.	4					
			Walls show typical damage common in ice arenas	locker rooms, ice rink, under bleachers	walls show typical damage, including torn insulation, damaged paint, etc. Repair and repaint as necessary	2	$ 10,000.00
Doors	Man doors are hollow metal frames and leaves, painted. There is 1 exterior steel sectional door and 2 interior overhead coiling doors.	3					
			Interior man door damage	throughout	Interior doors are hollow metal and show typical damage and denting. Repair and replace as needed.	3	$ 5,000.00
			Corrosion at exterior doors	South wall, east wall	The exterior doors are painted hollow metal and have surface corrosion, faded paint and graffiti. Due for cleaning and repaint	2	$ 1,000.00
			interior overhead door damage	mechanical room	The door is denting and rusting, and due for cleaning and repaint.	3	$ 1,000.00
Floors	Floors are concrete subfloor with rubber athletic floor or vinyl composite tile. The public toilet rooms have ceramic tile.	3					
			Walk off matt shows wear			3	$ 5,000.00

Observation Highlights

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SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Rubber athletic floor shows wear	Throughout	rubber mat flooring is worn and due for replacement	2	$ 80,000.00
			Vinyl composite tiles are becoming loose	Kitchen	The adhesive on the vinyl composite tile is failing, tiles are loose.	1	$ 2,000.00
			Ceramic floor cracking	Men's toilet room - northwest corner	The concrete floor has heaved, resulting in cracks in the toilet room floors. Tile should be replaced after floor is repaired.	2	$ 3,000.00
HVAC	The ice rink is served by a number of individual systems. Residential gas-fired furnaces with air conditioning serve office / small enclosed areas and the locker rooms. Larger, non-ice areas are served by a packaged gas-fired rooftop unit with DX cooling. The ice area is served by a failing dehumidification unit. Spectator areas are served by gas-fired infrared heating units.	1					
			Furnace serving locker rooms	Spectator area	The gas-fired furnace serving the locker rooms is very old, dirty, and is surrounded with combustible refuse. It is located behind the bleachers, and is open to spectator area where occupants have thrown trash around this unit. The unit has a wooden cover fitted over top of it to try to prevent debris from collecting around the flue. The unit was observed repeatedly attempting to fire up. This unit is of an age where it may have a standing pilot light instead of electronic ignition. There is no clear access to this unit. Given these conditions, this unit should be decommissioned immediately and an alternate resolution developed.	1	$ 10,000.00
			Locker room ventilation	Locker rooms	There is inadequate ventilation in the locker and shower rooms. These rooms were very moist and odorous. Use of plywood ceilings may be creating a mildew issue	2	$ 8,000.00
			Overall ventilation	Throughout	The facility has a number of odors throughout. The ventilation system is not providing sufficient exhaust and make-up air quantities to dilute the pollutants that are being generated.	2	$ 50,000.00
			Storage room exhaust	Storage areas	A number of areas are being used for storage and have little or no ventilation. This is not recommended and a potential code violation.	1	$ 10,000.00
			Ice area sidewall louvers	Ice arena	The main ice arena has a number of sidewall exhaust fans with louvers that are not insulated and do not close tightly, resulting in air infiltration and increased energy use.	2	$ 18,000.00
			Spectator area gas heaters	Ice arena	The gas heaters serving the spectator areas are very aged, but functioning. Soot and heat have damaged roof insulation covering.	3	$ 25,000.00

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SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Stud wall ghosting	Ice arena	The dehumidification unit has a single supply and single return grille. This appears to function for handling dehumidification loads for the ice area, but the areas surrounding the ice are showing the signs of high moisture due to improper air distribution. Stud walls are showing "ghosting" where the studs can be seen through the gypsum board and paint. This condition is caused by condensation on the studs or the gypsum.	1	$ 80,000.00
			Moisture issues in storage room	Storage area	The storage area between the main hallway and the studio ice has ceiling tiles that are sagging quite a bit. This is due to excessive humidity levels in this space. This space has little ventilation or air circulation.	2	included in above number
			Studio Ice HVAC	Studio ice	The studio ice has no real HVAC system. It has an exhaust fan that was added, and a sidewall louver that can open to draw air through. Otherwise, there is no true means for conditioning this space.	1	$ 40,000.00
			Studio Ice Plant	Studio ice	An air-cooled brine chiller is located indoors in a mezzanine above the studio ice. The users state that this unit was functional at the time the studio rink was decommissioned. The refrigerant type for this piece of equipment is being phased-out and will be difficult to obtain in the future. The air intake louvers for this unit have been loosely blocked off with rigid insulation. Louver blocking should be repaired to effectively insulate this part of the building.	1	$ 8,000.00
			Main Ice Plant	Refrigeration room	The main ice plant is from the 1970's, has a failed compressor, and currently operates solely on a single replacement compressor. Repair parts have to be custom made or are difficult to find or very expensive. It has a hot-gas cooler that preheats domestic hot water which is still functioning. The system operates solely on refrigerant piped through the ice slab, and contains 7000lb of R-22 refrigerant. This refrigerant is being phased out and will become difficult to obtain in the future. The ice plant is served by a closed-loop cooling tower located outdoors. The cooling tower appears to have worn similarly to the ice plant and should be replaced when the ice plant is replaced. The ice plant operates on reciprocating compressors which are not very energy efficient. The system is old, worn, and unreliable. The users have stated that sometimes it is hard to start after a shutdown.	2	$ 300,000.00

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SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Main Ice Plant alarm system	Refrigeration room	There is a reported 7000lb of R-22 refrigerant in the main ice system. The room this system is contained within has closed doors, no ventilation system to purge the space in the event of a leak, and only a local audible alarm located in the room. Since refrigerant R-22 is an oxygen displacing compound, and is heavier than air, users could unknowingly enter this room after a major refrigerant leak and not be able to breathe. This is a potential safety hazard which should be remedied as soon as possible. An audio/visual refrigerant leak alarm system, connected to an automated exhaust system and combustion shut-down system is the preferred solution. A self-contained breathing apparatus should be located outside the room to permit entry in the event of a significant leak.	1	$ 8,000.00
			Ice plant exhaust	Refrigeration room	There is no means of exhaust in the refrigeration room. Continuously operating exhaust and make-up air equipment, controlled by the detection system allows for a higher amount of "purge" exhaust to clear refrigerant from the space in the event of a leak.	1	$ 30,000.00
			Dehumidification unit	Outdoors	The desiccant dehumidification unit serving the main ice is failing. The unit is old and past the end of its expected life. The dehumidification wheel is failed, does not rotate consistently, and is very dirty. There is likely little dehumidification capacity remaining in this unit. The unit is not protected from theft or vandalism, and is very noisy.	2	$ 80,000.00
Plumbing	The plumbing systems appear original to the construction of the building, with the exception of the domestic water heating boiler which is not original to the building. The fire protection sprinkler system is located in low-ceiling areas, including offices, kitchen, lockers and under bleachers.	1					
			Fire department connection poorly indicated	FDC connection	The fire department connection is poorly indicated as well as poorly protected from wear and tear at the building entries.	1	$ 2,000.00
			Plumbing fixtures worn, not efficient	Locker and toilet rooms	The plumbing fixtures are worn, damaged due to vandalism, and becoming difficult to repair. They are not water efficient and a number are not functioning properly.	1	$ 12,000.00
			Domestic hot water system	Refrigeration room	Hot-gas domestic water preheaters are being used as a form of energy recovery off of the refrigeration system serving the main ice. A sealed- burner domestic water boiler is used for final heating and heated water is stored in minimally insulated storage tanks. The preheating system is likely near the end of its life, though the boiler appears to have some life remaining. The system is minimally efficient.	2	$ 15,000.00

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SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Electrical	Building electrical service is Primary 480/277v, 3phase,4w fed from the owner's pad mounted transformer	2					
			Main switchboard. (800amp,480/277v) switch and fuse type	Mech/Elect equipment rm.	The main switchgear is near end of life and should be scheduled for replacement	2	$20,000.00
			Distribution. Panel (480/277v) switch and fuse type	Mech/Elect equipment rm.	The distribution panel is near end of life and should be scheduled for replacement	2	$15,000.00
			Original lighting and receptacle panels	Mech/Elect equipment rm. and Mezz	The lighting panel is near end of life and should be scheduled for replacement	2	$12,500.00
Lighting	General lighting is Fluorescent, Rink lighting is Metal Halide	3					
			2'x4' recessed, 4 lamp T8	Throughout	local switch control, occupancy sensors should be provided per ASHRAE 90.1. Lighting power densities should be recalculated to comply with ASHRAE standards. Lighting fixtures should be updated to 2 or 3 lamp (T8 or T5) with program start electronic ballasts.	3	$20,000.00
			Fluorescent lighting in Locker rm./shower/ corridor and restroom areas	Locker & restrooms	local switch control, occupancy sensors should be provided per ASHRAE 90.1. Lighting power densities should be recalculated to comply with ASHRAE standards. Lighting fixtures should be updated to 2 or 3 lamp (T8 or T5) with program start electronic ballasts.	3	$11,500.00
			High bay metal halide	Rink areas & bleachers	Should be switched to high bay industrial fluorescent or high bay LED. (instant "on", energy savings, lamp life, color rendition)	3	$48,500.00
			Exit/Emergency lighting	Throughout	Existing integral battery back-up units. All units should be tested and replaced as required. Egress lighting levels appear to be below required standards. Means of egress lighting levels should be recalculated to comply with NFPA requirements.	2	$10,000.00
Voice and Data	Voice and data equipment is located in mechanical and electrical rooms and is in poor condition.	2					
			Poor condition	Mech/Elect. equipment rm.	Replace equipment and reconfigure cabling.	2	$5,000.00
Fire Alarm	Fire alarm system appears to be new and is in good condition.	4					
			No reported issues			4	$20,000.00
Other Reported Issues	Other observed items and user comments						

CITY HALL COMPLEX

Due to the significantly different construction types and support systems in each of the three connected buildings that comprise City Hall, the complex was assessed as three distinct facilities.

CITY HALL

Description

The City Hall building, constructed around 1960, is a slab-on-grade single story building with a steel structure housing administrative departments for the City. The courtroom, connecting this building to the District Court Building, is used for both hearings and council meetings.

The envelope of the building is in good condition for its age, especially the brick, although insulation is insufficient. There are limited areas with issues, including the west entry, which has wood cladding showing significant deterioration similar to the court building, and the roof which has signs of past leaks. There are site issues related to water drainage to the north of the building. Although the parking and storm sewer system were upgraded to reduce water flowing toward the building, minor water infiltration still occurs along the northeast corner. The brick walkway north of the building is significantly deteriorated, likely caused by water issues.

Interior finishes including carpet and walls have been updated as required and are in good condition. A few ceilings show some minor damage in a few locations but have generally been well maintained.

Mechanical systems are older, and while functional, are inefficient and do not provide a consistently comfortable environment. Electrical systems function well.

There are also a number of observed issues not typically part of deferred maintenance, all related to the courtroom: Egress paths are not sufficiently marked; not all doors are fitted with egress hardware; the ability of the judge to exit the courtroom when his personal safety is threatened is limited; and the adjacency to and visibility from the parking lot creates safety problems for occupants.

Additional detail can be found on the following pages and in the included spreadsheet.

Year Built	1960
Additions/Major Renovations	1990s
Approximate Area	7,500 SF
Number of Floors	1 (no bsmt)
Current Replacement Value	$1,688,000
Project Totals - Priority 1 Issues	$30,500
FCI - Priority 1 Issues	1.8%
Projects Totals - Cumulative Priority 1-2 Issues	$149,500
FCI - Cumulative Priority 1-2 Issues	8.9%

System Observations

Immediate Priority Issues

- Surface water flows toward building, causing flooding in offices.
- Brick pavers are deteriorated on the portion of walk immediately north of the building and is a tripping hazard.
- The building's exterior cladding is deteriorating and has failed. There are multiple locations where the building is no longer weather tight.
- Interior door hardware is failing and due for replacement.
- There are signs of water damage on ceiling tiles in multiple locations. The roof should be inspected and surveyed for leaks.
- HVAC and Lighting systems are functional, but nearing the end of their useful life and not energy efficient.
- The office areas are not protected by a wet-pipe fire protection system.
- Double doors exiting from council chambers into the City Hall are not wide enough for egress or ADA compliance and do not have appropriate hardware.
- Exterior electrical service junction box is unsecured.

Code Compliance

Life Safety
Placement of exit signs and emergency lighting should be reviewed. The courtroom has no exit signage, and the doors between the courtroom and City Hall do not have panic hardware.

ADA
The building is generally ADA compliant, with updated toilet rooms. Older casework and hardware is not accessible.

Immediately Adjacent Site

The parking lot is a concrete slab with a newer underground water detention system. The building has landscaping around the perimeter. The site is not sufficiently pitched away from building to prevent standing water from entering building during rain events. Site elements are generally in good condition.

Structural System

Concrete slab on grade, steel column structure, with steel roof joists and metal roof deck. The structure is generally in good condition with some minor observed issues.

Architectural Systems

Roof
The roof is a newer, mechanically fastened, Black EPDM roof (install date not known). The roof appears to be in adequate condition with some suspected leaks.

Exterior Walls
Exterior walls are predominantly aluminum storefront system with insulated metal panels and insulated glazing. The main storefront framework is original, but the windows and insulated panels are newer. A portion of the exterior is brick and in good condition. The original entry vestibule on the west elevation was renovated as part of the 1974 addition to have plywood panel on wood framing. This portion of the exterior is in poor condition.

Glazing/Windows
Exterior Glazing: Glass panels in storefront system are non-operable insulated double pane units and in good condition, with no fogging noted.

Interior glazing: Glass block, limited to a few openings between rooms, in good condition.

Interior Partitions
Interior walls are mix of painted block, painted vinyl-wrapped drywall, and wood paneling. Casework present in storage closets and conference rooms is wood construction. Case work at the Kitchenette is wood veneer. Most surfaces have been recently repainted and are in good condition.

Doors
The exterior doors are aluminum storefront systems, and older. The interior doors are painted wood or hollow metal doors in hollow metal frames. All are generally in good condition.

Ceilings
Predominantly 2x4 lay-in acoustic ceiling throughout, with original 12"x12" acoustic tile ceiling in main conference room. Ceilings generally in good condition. Painted plaster ceilings in toilet rooms and closets.

Floors
Floors are concrete slab on grade with the following finishes: carpet tiles, carpet sheet good and vinyl composite tile. Floor finishes are in good condition and well maintained.

HVAC Systems

Office area: Constant volume, gas-fired, DX cooled, packaged rooftop. A vendor-specific zoning system, including "thermofusers" to control airflow. This system is outdated and inefficient. During the walk-through a large quantity of portable space heaters was observed. HVAC equipment is in adequate condition for its age but the system does not provide reliable temperature control.

Plumbing Systems

Domestic Water, Piping, Fixtures
The majority of the plumbing piping that was able to be observed appeared to be original. No specific issues were identified by the occupants regarding plumbing. Toilet room fixtures had been updated within the last 10-15 years, but not all were water efficient.

Fire Protection
No fire protection was observed in the office area.

Electrical Systems

Power System

Building electrical service is 208/120v wye fed from a 600A-3P fused switch in Public Safety building Main Distribution Panel. Electrical distribution equipment is in adequate condition for its age.

Lighting
General lighting is fluorescent. Lighting is not efficient and should be upgraded as part of any renovation.

Fire Alarm System
An addressable fire alarm system was not observed at this facility.

Data/Telecom System
Data and telecom systems are mounted on plywood backboard. Systems are recent and observed to be in good condition.

Energy Efficiency

Refer to Page 4 for definitions of the energy efficiency terms in the following section

From an energy analysis standpoint, Public Safety, City Hall, District Court and the Historic Fire Hall are required to be analyzed together since there are not discrete utility meters for each building. Two natural gas meters serve this building group, and one single electric meter serves this building group. The CBECS peer group utilized as the basis of comparison for this building group closely matches the four building functions. This building group's EUI for June 2012 through May 2013 is 305 kBTU/ft^2/year. This is incredibly excessive when compared to the peer group's EUI of 85 kBTU/ft^2/year. This building group exceeds its peer's EUI by 260%. The 24-hour nature of the Public Safety building is factored in to this comparison.

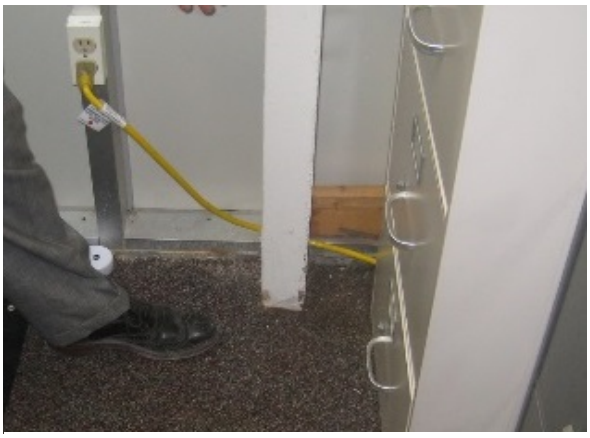
The extremely high EUI measured for these buildings suggests that verification of the accuracy / meter factors for the building's utility meters would be a logical first step. Even if a discrepancy was found, it is still likely that this building group's EUI would exceed the CBECS peer group EUI.

A number of factors at the City Hall, District Court and Historic Fire Hall were observed that contribute to this high EUI:

- The envelope for these three buildings is aged, worn, allows high amounts of air infiltration, and in some cases, does not have insulation present in the walls. Minimal roof insulation is found. The exterior windows are aged and very inefficient. In some cases, daylight could be seen through the window frame assemblies.
- The presence of a number of portable electric space heaters also gives evidence to a poorly performing envelope and improperly operating HVAC equipment.
- The HVAC equipment serving these spaces is minimally efficient, both on the heating and the cooling side.
- Some lighting controls have been put in place in private offices and other spaces in this building group, and the building has already been retrofit with T8 lighting. Few opportunities remain for improved lighting efficiency.

Example Images of Existing Conditions

Deteriorating plywood sheathing at west entry.



Steel column corroded at base from water infiltration.

Council chamber/courtroom highly visible from parking lot.

Brick pavers at north side of building deteriorated.

Council Chamber doors swing inward, not out, door is narrow, knob hardware is inappropriate

Grade is pitched toward building, allowing water infiltration.

Observation Highlights

Building Name:	**City Hall Building**
General Notes:	One Story steel structure, with brick exterior and curtainwall glazing, originally built in approximately 1960, with a courtroom/council chamber addition in the 1990s. Currently houses City administrative offices and council chambers (shared with court).
Current Replacement Value	$1,687,500

Year Built	1960+/-
Area (SF)	7,500
Replacement Cost/SF	$225
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$30,500	1.8%
Priority 2 Issues	$119,000	7.1%
Priority 1+2 Combined Facility Condition Issues	**$149,500**	**8.9%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Code Issues	The building is generally ADA compliant, with updated toilet rooms. Older casework and hardware is not accessible.	3					
			ADA accessibility	throughout building	Door hardware is not ADA compliant	3	$ 8,500.00
			ADA accessibility	first floor kitchenette & second floor kitchenette in conference room	Casework in kitchenette is 36" high, exceeding the ADA accessible heights requirements	3	$ 5,000.00
			Egress	Council Chamber	Double doors exiting from council chambers into the City Hall are not wide enough for egress or ADA compliance and do not have appropriate hardware.	1	$ 2,000.00
Site and Parking	The parking lot is a concrete slab with a newer underground water detention system. The building has landscaping around the perimeter. The site is not sufficiently pitched away from building to prevent standing water from entering building during rain events.	4					
			Surface water flows toward building, causing flooding in offices.	Northeast corner of building	Water migrates toward building during heavy rains, has caused localized flooding in northeast corner of building, washout of soil and has infiltrated into offices in the finance department and the server room. Despite improvements in the past, the issue persists. Additional drainage rework necessary.	2	$ 25,000.00
			brick walkway deterioration	north side of building	Brick pavers are deteriorated on the portion of walk immediately north of the building and is a tripping hazard. The walk should be replaced - approximately 100 ft.	1	$ 10,000.00
Structure	Concrete slab on grade, steel column structure, with steel roof joists and metal roof deck.	4					
			Corrosion at base of structural columns.	interior column in server room	minor surface rust caused by exposure to water. Steel should be cleaned and repainted.	4	$500
			Corrosion of structure at west exterior canopy	Exterior columns on west side	minor surface rust caused by exposure to water. Steel should be cleaned and repainted.	4	$500
Roof	Mechanically fastened Black EPDM roof, newer (install date not known)	3					
			Potential roof leaks	roof	While no active leaks were observed, ceiling shows signs of recent small roof leaks. The roof should be inspected by a roofing consultant or contractor. Continued leaking will cause collateral damage.	2	$5,000
Cladding	Exterior walls are predominantly aluminum storefront system with insulated metal panels and insulated glazing. The main storefront framework is original, but the windows and insulated panels are newer. A portion of the exterior is brick and in good condition. The original entry vestibule on the west elevation was renovated as part of the 1974 addition to have plywood panel on wood framing. This portion of the exterior is in poor condition.	4					

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SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Failed exterior cladding	west entry	Plywood panels and wood trim at west vestibule are deteriorated, failing and due for replacement. The building does not appear to be weather-tight at this location.	1	$ 5,000.00
Glazing	Exterior Glazing: Glass panels in storefront system are non-operable insulated double pane units and in good condition, with no fogging noted. Interior glazing: Glass block, limited to a few openings between rooms, in good condition.	4					
			no reported issues				
Ceilings	Predominantly 2x4 lay-in acoustic ceiling throughout, with original 12"x12" acoustic tile ceiling in main conference room. Ceilings generally in good condition. Painted plaster ceilings in toilet rooms and closets.	4					
			Minor water damage on ceilings - plaster and acoustic lay-in	A few locations throughout building	Past roof leaks caused ceiling damage. Repair as required.	2	$2,000
Walls and Casework	Interior walls are mix of painted block, painted vinyl-wrapped drywall, and wood paneling. Casework present in storage closets and conference rooms is wood construction. Case work at the Kitchenette is wood veneer. Most surfaces have been recently repainted and are in good condition.	4					
			No reported issues.				
Doors	The exterior doors are aluminum storefront systems, and older. The interior doors are painted wood or hollow metal doors in hollow metal frames. All generally In good condition.	4					
			Aluminum frame entry doors	East Entry	Hardware is older, likely original. Doors functioning, but near end of useful life.	1	$2,000
			Aluminum frame interior doors	Finance department entry	Hardware is older, likely original. Doors functioning, but near end of useful life.	1	$2,000
			Wood sliding doors not operating properly	conference room	Some sliding doors have failed; hardware is not functional and due for replacement.	1	$4,000
Floors	Floors are concrete slab on grade with the following finishes: carpet tiles, carpet sheet good and vinyl composite tile. Floor finishes are in good condition and well maintained.	4					
			No reported issues.				
HVAC	Office area: Constant volume, gas-fired, DX cooled, packaged rooftop. A vendor-specific zoning system was noticed, as well as "thermofusers". During the walk-through, a large quantity of portable space heaters were observed.	3					

Observation Highlights

Building Name:	**City Hall Building**
General Notes:	One Story steel structure, with brick exterior and curtainwall glazing, originally built in approximately 1960, with a courtroom/council chamber addition in the 1990s. Currently houses City administrative offices and council chambers (shared with court).
Current Replacement Value	$1,687,500

Year Built	1960+/-
Area (SF)	7,500
Replacement Cost/SF	$225
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$30,500	1.8%
Priority 2 Issues	$119,000	7.1%
Priority 1+2 Combined Facility Condition Issues	**$149,500**	**8.9%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Poor air distribution	Office area / Throughout	Thermofusers were noted throughout, which regulate airflow relative to a temperature setpoint, but do not provide adequate ventilation when temperature is satisfied. Linear diffusers were not placed properly relative to the exterior walls and were drafty / poorly performing.	2	$ 10,000.00
			Improper / poorly functioning zoning	Office area	HVAC zoning may not be appropriate to actual usages, contributing to the occupant discomfort. Temperature readings may also be incorrect - a number of zones appeared to read much warmer than was observed.	2	$ 8,000.00
			Humidity control	Office area	Sagging ceiling tiles noticed in office area, suggesting that humidity is not well controlled. This is likely due to the high outside air infiltration rates and the use of thermofusers. The zoning system may also be a "shut-off" type zoning system that limits airflow and is contributing to poor summertime moisture mitigation.	2	$ 15,000.00
			Storage room unheated	Records storage room	A storage room was observed to be approx. 30°F cooler than the surrounding zones (winter)	1	$ 5,000.00
			Data closet cooling unit	Data closet	A Liebert computer-room cooling system is in place. The system is aged but appears to be functioning.	3	$ 18,000.00
Plumbing	The majority of the plumbing piping that was able to be observed appeared to be original. No specific issues were identified by the occupants regarding plumbing. Toilet room fixtures had been updated within the last 10-15 years, but not all were water efficient. No fire protection was observed in the office area.	3					
			Galvanized supply piping observed	Throughout	Some galvanized water supply piping was observed and is likely still in use. Plumbing fixtures did not show signs of staining, however, this piping may near the end of its service life of approx. 50 years.	3	$ 50,000.00
			Outdated plumbing fixtures	Throughout	Plumbing fixtures are functioning, but are worn and are not water efficient	3	$ 8,000.00
			No fire protection in office	Office Area	This portion of building did not appear to be covered by a wet-pipe fire suppression system.	2	$ 35,000.00
			Standard efficiency domestic water heating	Storage room and basement	Multiple standard efficiency, tank-type gas-fired water heaters were observed. One of the units was likely beyond its tank's warranty period and should be considered for replacement.	2	$ 3,500.00
			Domestic hot water recirculation system not present	Throughout	Domestic hot water recirculation system not present. Wait times for hot water at the furthest fixture may exceed code limit of 30 seconds.	2	$ 3,500.00
Electrical	Building electrical service is 208/120v wye fed from a 600A-3P fused switch in Public Safety building Main Distribution Panel	4					
			Branch circuit panels (existing 120/240v)	Electrical panels	These panels are likely original, are past their expected life and should be exercised, tested and replaced if needed.	2	$12,000.00

Observation Highlights

Building Name:	**City Hall Building**
General Notes:	One Story steel structure, with brick exterior and curtainwall glazing, originally built in approximately 1960, with a courtroom/council chamber addition in the 1990s. Currently houses City administrative offices and council chambers (shared with court).
Current Replacement Value	$1,687,500

Year Built	1960+/-
Area (SF)	7,500
Replacement Cost/SF	$225
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$30,500	1.8%
Priority 2 Issues	$119,000	7.1%
Priority 1+2 Combined Facility Condition Issues	**$149,500**	**8.9%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Code Clearance	Electrical panels	Remove items stored in front electrical equipment. NEC requires 3'-0" clearance	1	$500.00
Lighting	General lighting is fluorescent. Lighting is not efficient and should be upgraded as part of any renovation.	3					
			2'x4' recessed , 4 lamp T8	throughout	local switch control, occupancy sensors should be provided per ASHRAE 90.1. Lighting power densities should be recalculated to comply with ASHRAE standards. Lighting fixtures should be updated to 2 or 3 lamp (T8 or T5) with program start electronic ballasts.	3	$60,000.00
			Emergency/Exit lighting	throughout	Integral battery back-up units. All units should be tested and replaced as required. Means of egress lighting levels should be recalculated to comply with NFPA requirements	3	$8,000.00
Voice and Data	Data and telecom systems mounted on plywood backboard. Systems are recent and observed to be in good condition.	4					
			No reported issues.				
Other Reported Issues	Other observed items and user comments						
			Occupant comfort	Building perimeter	The perimeter area of the building was noted to be cold during cold months. Insulation is insufficient in the storefront system panels areas and likely does not existing in brick wall areas.		
			Council Chambers Security	Council room	The location of the council chamber on exterior wall with windows presents safety and security issues when used as a court room.		

DISTRICT 45A COURT BUILDING

Description

The Court Building was constructed in 1973 by infilling an existing carport in a wood sheathed, wood frame structure to provide enclosed space for housing the police department as the need for space exceeded that available in the original Fire Hall. The steel structure supporting the roof and the roof itself are remnants of the original carport.

The building was converted it into its current function when the Public Safety Building was constructed. The building, never intended to be a long-term solution, is in poor condition, especially its exterior walls, which have deteriorated significantly. Finishes, equipment and infrastructure have all outlasted their expected lifespan.

Mechanical, plumbing and electrical systems are generally original and past the end of their expected life span. Toilet rooms are not ADA compliant.

The courtroom, which connects this building and the City Hall, is considered part of the City Hall Building and is used for both hearings and council meetings.

The significant Facility Condition Index of 27% indicates that the needed amount of work may exceed the benefit of keeping the building. When priority 3 issue are added in, the cumulative issues may exceed $250,000.

Additional detail can be found on the following pages and in the included spreadsheet.

Year Built	1974
Additions/Major Renovations	1987
Approximate Area	2,900 SF
Number of Floors	1 (no bsmt)
CRV	$725,000
Project Totals - Priority 1 Issues	$186,000
FCI - Priority 1 Issues	25.7%
Projects Totals - Cumulative Priority 1-2 Issues	$197,000
FCI - Cumulative Priority 1-2 Issues	27.2%

System Observations

Immediate Priority Issues

- The facility has several accessibility issues – door hardware and door clearances, handrails at ramp, and clearance at transaction counters.
- The facility is lacking many of the security measures that are considered best practice in a modern court facility.
- The facility is lacking adequate space for required use.
- The facility is lacking adequate parking space as well as secure parking for transporting defendants or inmates.
- The building's exterior cladding is deteriorating and has failed. There are multiple locations where the building is no longer weather tight.
- Windows and hardware are past their useful life and are failing.
- HVAC systems are undersized and inefficient. Poor thermal comfort and indoor environmental quality.
- Domestic water heater is exposed and accessible by the public in toilet room.

Code Compliance

ADA
This building met accessibility codes when renovated, but many spaces will require modification if the building is renovated, including toilet rooms, corridors and doors.

Immediately Adjacent Site

The small paved area east of the building is concrete and in fair condition. Lawn and concrete walks are in good condition.

Structural System

The structure is steel columns on concrete slab with steel roof joists and metal roof deck. The structure was originally designed as a carport.

Architectural Systems

Roof
Roof is a newer, mechanically fastened, Black EPDM roof with no reported issues.

Exterior Walls
The building's exterior is made up of various systems. The south wall is primarily composed of clad plywood panels with wood trim. The main entry is aluminum storefront and clad plywood paneling with wood trim. The infilled courtyard walls are T-111 wood panels. These systems are generally in poor condition.

Glazing/Windows
The exterior glazing is aluminum framed windows with operable units at grade. The entry vestibule has wire mesh glazing. Windows are past their useful life and in poor condition.

Interior Partitions
Interior walls are paneling on stud framing or partition system walls. Casework at the front desk is plastic laminate. Casework at the Kitchenette is plastic laminate.

Doors
Exterior entry doors are aluminum frame type, egress doors are painted hollow metal. Interior doors are mostly solid core wood and in good condition.

Ceilings
The ceilings are 2'x2' acoustical lay-in ceilings from 1987 renovation, and in good condition.

Floors
Floors are concrete slab on grade with the following finishes: carpet tiles, carpet sheet good, ceramic tile and vinyl composite tile. Floor finishes are in adequate condition for their age.

HVAC Systems

Heating and cooling provided by 16 ton cooling capacity rooftop AHU (1987), distributed through constant velocity system. Electric strip heating provides heat at perimeter, though it may not be functioning correctly. Thermostats have been updated. **HVAC system and equipment is in poor condition overall.**

Plumbing Systems

Domestic Water, Piping, Fixtures
The majority of the plumbing piping that was able to be observed appeared to be original to the construction of the building. No specific issues were identified by the occupants regarding plumbing. Toilet room fixtures are aged, and are not water efficient.

Fire Protection
A fire protection system was observed only in limited areas of this facility.

Electrical Systems

Electrical Power
Building electrical service is 208/120v wye fed from a 600A-3P fused switch in Public Safety building Main Distribution Panel (shared with City Hall).

Lighting
General lighting is fluorescent and in adequate condition for its age. Lighting is not efficient and should be upgraded as part of any renovation.

Emergency Lighting
Integral battery back-up units should be tested and replaced as required. Means of egress lighting levels should be recalculated to comply with NFPA requirements.

Fire Alarm Systems
An addressable fire alarm system was not observed at this facility.

Data/Telecom System
Data and telecom systems mounted on plywood backboard in City Hall Building. Systems are recent and observed to be in good condition.

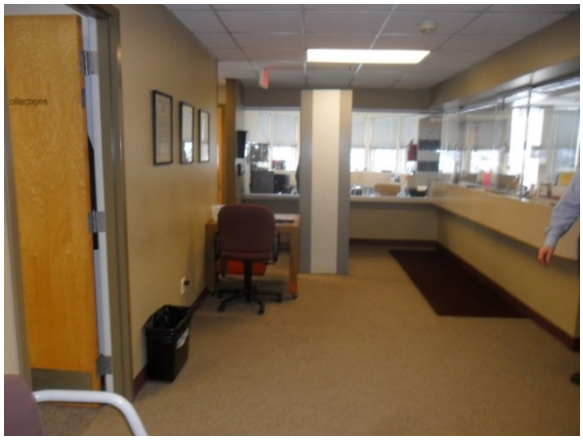
Energy Efficiency

Refer to Public Safety and City Hall for more information. The utilities for Public Safety, City Hall, District Court and the Historic Fire Hall are recorded by common meters and were therefore analyzed together.

Example Images of Existing Conditions

Windows, exterior cladding and trim have failed. The building is not able to keep out the elements or vermin.

Close up of typical conditions at the base of the exterior wall.



The limited size and layout of the lobby makes security a challenge, especially when victims and the accused move through the space at the same time.

The water heater is exposed in the restroom, a potential injury hazard.

The court office space is insufficient.

Observation Highlights

Building Name:	**Court Building**
General Notes:	One Story steel structure with wood framed interior and exterior walls. Originally built in 1974 by enclosing a carport for police department use. Renovated in 1987 to house to 45A District Court.
Current Replacement Value	$725,000

Year Built	1974
Area (SF)	2,900
Replacement Cost/SF	$250
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$186,000	25.7%
Priority 2 Issues	$11,000	1.5%
Priority 1+2 Combined Facility Condition Issues	**$197,000**	**27.2%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Code Issues	This building met accessibility codes when renovated, but many spaces will require modification if the building is renovated, including toilet rooms, corridors and doors.	1					
			ADA accessibility		Door hardware and door clearances are not ADA compliant. Handrails at ramp are not ADA compliant. Lack of clearance required at transaction counters to be ADA compliant.	1	$10,000
Site and Parking	The small paved area east of the building is concrete and in fair condition. Lawn and concrete walks are in good condition.	4					
			Limited parking capacity	Parking lot	The parking capacity for the courthouse is shared with City Hall and Public Safety. There is a municipal parking lot to the south, which is open for city use. There is no secure parking to move inmates into the courtroom facility. Additional parking spaces are recommended (assumed approximately 30).	1	$ 75,000.00
Structure	The structure is steel columns on concrete slab with steel roof joists and metal roof deck. The structure was originally designed as a carport.	4					
			No reported issues				
Roof	Mechanically fastened Black EPDM roof, newer (install date not known), with no reported issues.	4					
			No reported issues				
Cladding	The buildings exterior is made up of various systems. The south wall is primarily composed of clad plywood panels with wood trim. The main entry is aluminum storefront and clad plywood paneling with wood trim. The infilled courtyard walls are T-111 wood panels.	1					
			Failed exterior plywood cladding	exterior walls	Approximately 2000 SF of 1974 era plywood panels and wood trim at the building perimeter are deteriorated, failing and due for replacement. The building does not appear to be weather-tight.	1	$ 40,000.00
Glazing	The exterior glazing is aluminum framed windows with operable units at grade. The entry vestibule has wire mesh glazing.	1					
			Original windows past end of life	south elevation	All original windows are past end of life and due for replacement. Hardware has failed, units allow excessive air infiltration, are not secure and have allowed vermin into building.	1	$ 10,000.00

Observation Highlights

Building Name:	**Court Building**
General Notes:	One Story steel structure with wood framed interior and exterior walls. Originally built in 1974 by enclosing a carport for police department use. Renovated in 1987 to house to 45A District Court.
Current Replacement Value	$725,000

Year Built	1974
Area (SF)	2,900
Replacement Cost/SF	$250
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$186,000	25.7%
Priority 2 Issues	$11,000	1.5%
Priority 1+2 Combined Facility Condition Issues	**$197,000**	**27.2%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Ceilings	The ceilings are 2'x2' acoustical lay-in ceilings from 1987 renovation, and in good condition.	4					
			No reported issues				
Walls and Casework	Interior walls are paneling on stud framing or partition system walls. Casework at the front desk is plastic laminate. Casework at the Kitchenette is plastic laminate.	4					
			Transaction counters are worn	Entry	The transaction counters are showing wear and damage, and due for repair/replacement.	2	$ 5,000.00
Doors	Exterior entry doors are aluminum frame type, egress doors are painted hollow metal. Interior doors are mostly solid core wood and in good condition.	3					
			Aluminum frame entry doors	east entry	Aluminum frame/glass door (1987) is near end of life. Hinges have been replaced, but hardware is worn and the door does not close flush.	2	$ 2,000.00
			Painted hollow metal egress door.	south elevation	Hollow metal door (1987) shows signs of damage, surface rust and is due for repaint.	2	$ 2,000.00
Floors	Floors are concrete slab on grade with the following finishes: carpet tiles, carpet sheet good, ceramic tile and vinyl composite tile.	3					
			Carpet is showing wear	overall building	Carpet dates from 1987 and newer, with heavy wear in high traffic public areas and where original.	3	$15,000
HVAC	Heating and cooling provided by 16 ton cooling capacity rooftop AHU (1987), distributed through constant velocity system. Electric strip heating provides heat at perimeter, though it may not be functioning correctly. Thermostats have been updated.	2					
			Aged system, poor occupant comfort, poor ventilation	Throughout	HVAC past end of expected life and may be undersized - a number of portable space heaters were noticed throughout the facility. The exterior envelope allows air infiltration (daylight observed in some places) and the HVAC and its distribution may not be able to keep up. The office spaces may not be ventilated properly - air within the spaces was relatively stale and stuffy.	1	$ 50,000.00
Plumbing	The majority of the plumbing piping that was able to be observed appeared to be original to the construction of the building. No specific issues were identified by the occupants regarding plumbing. Toilet room fixtures were aged, and are not water efficient.	3					
			Galvanized supply piping observed	Throughout	Some galvanized water supply piping was observed and is likely still in use. Plumbing fixtures did not show signs of staining, however, this piping may near the end of its service life of approx. 50 years.	3	$ 20,000.00
			Original 1974 plumbing fixtures	original toilet rooms	Plumbing fixtures are mix of commercial and residential grade, and while functioning, are worn and are inefficient. Residential grade fixtures should be replaced.	2	$ 2,000.00

Observation Highlights

Building Name:	**Court Building**
General Notes:	One Story steel structure with wood framed interior and exterior walls. Originally built in 1974 by enclosing a carport for police department use. Renovated in 1987 to house to 45A District Court.
Current Replacement Value	$725,000

Year Built	1974
Area (SF)	2,900
Replacement Cost/SF	$250
Floors	1
Basement (y/n)	N
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$186,000	25.7%
Priority 2 Issues	$11,000	1.5%
Priority 1+2 Combined Facility Condition Issues	**$197,000**	**27.2%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Water heater exposed in toilet room	original men's room	small water heater mounted on shelf in toilet stall. Potential injury hazard as controls are exposed and at head height. Water heater should be relocated.	1	$ 1,000.00
Electrical	Refer to City Hall. Electrical service is shared	4					
			Included with City Hall				
Lighting	General lighting is fluorescent. Lighting is not efficient and should be upgraded as part of any renovation.	3					
			2'x4' recessed , 4 lamp T8	throughout	local switch control, occupancy sensors should be provided per ASHRAE 90.1. Lighting power densities should be recalculated to comply with ASHRAE standards. Lighting fixtures should be updated to 2 or 3 lamp (T8 or T5) with program start electronic ballasts.	3	$15,000.00
			Emergency/Exit lighting	throughout	Integral battery back-up units. All units should be tested and replaced as required. Means of egress lighting levels should be recalculated to comply with NFPA requirements	3	$4,000.00
Voice and Data	Data and telecom systems mounted on plywood backboard in City Hall Building. Systems are recent and observed to be in good condition.	4					
			Included with City Hall				
Other Reported Issues	Other observed items and user comments						
			Lack of secure, separate entrances	Main Entry	The current building lacks separate, secure entrances for courtroom parties including holding areas for inmates, waiting / consultation areas for Plaintiff's and Defendants, etc. Security gate position lacks protection of facility.		
			Interior walls lack acoustical separation.	overall building	The interior walls do not extend from floor to roof structure, offering poor acoustical separation of spaces.		
			Lack of workroom casework	overall building	The building lacks workspaces required for faculty work.		
			Safety and security	court area	no dedicated space for victims to wait		
			Safety and security	court area	no dedicated space for separating prisoners from public		
			Safety and security	Judge's Chambers	The Judge's Chambers are on a exterior wall, with only plywood and gypsum board as a separation of the judge from the public outside.		
			Insufficient space	clerk area	insufficient space for staff in office area, compromises function of department.		

Historic Fire Hall

Description

The Fire Hall was built in 1928 to house the city offices, police department and fire department. The current City Hall building was constructed as an addition to this building and allowed the relocation of administrative offices. Currently, the first floor houses some court support spaces, the city cable TV studio, two offices and the Berkley Historic Museum. The second level is only used for storage for the historic museum and city records, including permit drawings. The timber-framed attic is used for storage of invoices and records dating from the 1960s back to the 1920s. The lack of a fire protection sprinkler system makes the use of this building for storage problematic.

The building appears structurally solid, with a steel columns and load-bearing masonry providing support for the wood floors. Access to the second floor, which is locked off from the public, is via stairway only. The basement is in poor condition, shows signs of water and animal infiltration and is not considered usable space.

The exterior walls are in fair to good condition for their age, although the original wood trim is due for replacement, repair or repainting in many locations. Exterior windows and doors are a mix of ages, with some upper level replacement windows not operating properly.

Interior finishes are in good condition where renovated in the offices, main corridor and museum, but are worn and damaged elsewhere, especially on the second level.

Electrical and mechanical systems, while upgraded since the 1920s, are obsolete and due for replacement. The remaining toilet room on the second level is non-functional. Occupants rely on access to toilet rooms in the attached City Hall building.

Any significant renovations will require the building to be brought up to current egress and ADA codes.

Additional detail can be found on the following pages and in the included spreadsheet.

Year Built	1928
Additions/Major Renovations	N/A
Approximate Area	7,650 SF
Number of Floors	2 + Bsmt
CRV	$1,913,000
Project Totals - Priority 1 Issues	$76,000
FCI - Priority 1 Issues	4.0%
Projects Totals - Cumulative Priority 1-3 Issues	$274,000
FCI - Cumulative Priority 1-2 Issues	14.3%

System Observations

Immediate Priority Issues

- Building has accessibility issues – corridor width, door hardware, stairs and handrails.
- There is a significant amount of storage in the attic space. It is not known if the structure was built to handle the current weight/load.
- Discoloration of foundation block walls indicates that water has infiltrated the basement repeatedly.
- Some windows on the second level do not close properly.
- Older plumbing fixtures have been abandoned and should be capped.
- The facility lacks fire protection.
- The facility lacks Emergency and Exit lighting.

Code Compliance

Life Safety
The stairs to the second floor are steep and cannot be reused for typical pedestrian traffic.

ADA
The building is generally not accessible and cannot meet current egress requirements without modification.

Immediately Adjacent Site

On-site parking is limited to a small slab on the south elevation and an access drive into the cable TV studio. The area north of the building is predominantly grass with some brick pavers and a gazebo.

Structural System

The building has a wood joist second floor and roof, bearing on steel columns internally and on load bearing masonry on the exterior. The former garage is a concrete slab on grade, with the area over the basement cast-in-place concrete. The structure appears to be generally in good condition.

Architectural Systems

Roof
Asphalt shingles on wood deck. Shingles appear to be near their expected service life. No leaks have been reported, but ceiling shows past damage.

Exterior Walls
The exterior cladding is brick with limestone accents at the window sills. The cladding is generally in good condition, with some minor tuck pointing is required. Would trim ranges from good condition to poor condition and is due for repaint and repair.

Glazing/Windows
Windows are replacement wood double hung units, with transoms (first floor only). The windows are newer and in fair condition. Some appear to not be closing.

Interior Partitions
Interior walls are painted masonry, plaster walls, gypsum board on stud framing, and paneling on stud framing. Case work at the Kitchenette is wood veneer. Casework on the second floor is dated and worn.

Doors

The building has two exterior man doors and one metal overhead door. The interior doors are solid core wood doors on the first floor and original wood doors on the second floor.

Ceilings
The ceilings are 2'x2' and 2'x4' acoustical lay-in ceilings on level one, in good condition. Old 12"x12" adhered ceiling tiles are in the basement level and upper level, in poor condition.

Floors
The floor structure of the first floor is concrete slab with sheet good carpet. The carpet is relatively new and in good condition. The second level floor is hardwood and is quite worn. There appears to be sufficient material left for refinishing.

HVAC Systems

The lower level of the fire hall (studio room and history museum) is served by an indoor horizontal air handling unit with atmospheric draft gas-fired heating and DX cooling (1987). The condensing unit is located on the adjacent roof of the city hall building. The upper portion of the fire hall is served by electric unit heaters with no provisions for consistent ventilation. **Equipment is in adequate condition for its age.**

Plumbing Systems

Domestic Water, Piping, Fixtures
Minimal plumbing is existing in the fire hall. The majority of fixtures have been abandoned in place, and rooms with plumbing fixtures have been converted in to storage or utility areas. Plumbing system equipment is in poor condition.

Fire Protection
There was no fire suppression system observed in this facility.

Electrical Systems

Electrical Power
Building electrical service is 208/120v wye fed from a 400A-3P fused switch in the City Hall Main Distribution Panel. Old electric panels are abandoned in place and assumed to be disconnected. Electrical system equipment is in poor condition.

Lighting
General lighting is fluorescent, with some incandescent in the attic and basement. Lighting on level 1 is typically 2x4 lay-in fixtures. Level two lighting is 1950's era pendant style. Lighting is generally in poor condition.

Emergency Lighting
Facility is lacking emergency and exit lighting.

Fire Alarm Systems
An addressable fire alarm system was not observed in the facility.

Data/Telecom System
Service from City Hall. Plywood backboard in Fire House has plenty of room for expansion

Energy Efficiency

Refer to Public Safety and City Hall for more information. The utilities for Public Safety, City Hall, District Court and the Historic Fire Hall are recorded by common meters and were therefore analyzed together.

Example Images of Existing Conditions

Exterior wood trim is due for repair and repaint.

Electrical equipment in basement is outdated and has insufficient clearances.

The ceiling on the second level has failed.

The corridors are not wide enough for ADA access/

The attic contains excessive storage.

Electrical equipment in basement is outdated and abandoned.

Basement walls show signs of excessive water infiltration.

The entire second level is used for storage. There is insufficient climate control and no fire suppression system.

Plumbing fixtures have been abandoned and should be capped.

Observation Highlights

Building Name:	**Historic Firehouse**
General Notes:	Two Story historic building with wood framing and load bearing masonry/steel structure originally built in 1928 to house all City offices, Fire Department, Police Department and Council Chambers. Renovated in 1987 to houses a Historic Museum, Cable TV studio, offices and storage.
Current Replacement Value	$1,912,500

Year Built	1928
Area (SF)	7,650
Replacement Cost/SF	$250
Floors	2
Basement (y/n)	Y
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$76,000	4.0%
Priority 2 Issues	$198,000	10.4%
Priority 1+2 Combined Facility Condition Issues	**$274,000**	**14.3%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Code Issues	This building has been renovated from is original use to contain courtroom auxiliary spaces, a cable TV studio and a historic museum on the first floor. The second floor has been repurposed as storage areas. The building is generally not accessible and cannot meet current egress requirements without modification.	2					
			Accessibility - Corridor width	first floor corridor	The main first floor corridor lacks clearance required to provide ADA access. The upper level is not accessible.	2	$ 20,000.00
			Accessibility - door hardware	Entire Facility	interior door hardware is typically knob-type and not accessible by those with limited grip.	2	$ 5,000.00
			Stair and handrail compliance	Stairs to second floor	The rise / run of the stairs are steeper than allowed and handrails do not meet code compliance. The door installed on the stair landing does not have sufficient clearance.	2	$ 10,000.00
Site and Parking	Parking is limited to a small slab on the south elevation and an access drive into the cable TV studio. The area north of the building is predominantly grass with some brick pavers and a gazebo.	3					
			Cracked concrete slabs	south of building	the concrete slabs adjacent to the south entry and areaway are a mix of original and new. Original concrete is deteriorated and cracked, and due for replacement.	2	$ 2,000.00
Structure	The building has a wood joist second floor and roof, bearing on steel columns internally and on load bearing masonry on the exterior. The former garage is a concrete slab on grade, with the area over the basement cast-in-place concrete. The structure is generally in good condition.	4					
			Excessive storage	Attic	The attic area has been utilized as a storage space. It is unclear if the wood framing was designed to handle the load. Stored items should be removed.	1	$ 500.00
			Water infiltration	basement walls	Discoloration of foundation block walls shows signs of water infiltration over the years. Basement walls should be waterproofed and drainage provided to prevent further deterioration.	1	$ 15,000.00
Roof	Asphalt shingles on wood deck. Shingles appear to be near their expected service life. No leaks have been reported, but ceiling shows past damage.	2					
			Asphalt shingles appear to be near end of life	entire roof	Approximately 4,000 SF asphalt shingle roof appears worn and aged. The roof should be watched for leaks and the system should be budgeted for replacement.	2	$ 20,000.00
Cladding	The exterior cladding is brick with limestone accents at the window sills. The cladding is generally in good condition, with some minor tuck pointing is required. Would trim ranges from good condition to poor condition and is due for repaint and repair.	3					

Observation Highlights

Building Name:	**Historic Firehouse**
General Notes:	Two Story historic building with wood framing and load bearing masonry/steel structure originally built in 1928 to house all City offices, Fire Department, Police Department and Council Chambers. Renovated in 1987 to houses a Historic Museum, Cable TV studio, offices and storage.
Current Replacement Value	$1,912,500

Year Built	1928
Area (SF)	7,650
Replacement Cost/SF	$250
Floors	2
Basement (y/n)	Y
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$76,000	4.0%
Priority 2 Issues	$198,000	10.4%
Priority 1+2 Combined Facility Condition Issues	**$274,000**	**14.3%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			deteriorating mortar	near grade	Exposure to salt and water causing mortar to deteriorate at grade along walks. Brick is in good condition, but due for tuck-pointing.	3	$ 10,000.00
			cracking in limestone	near grade at Coolidge entry	Water and salt exposure of the limestone at the base of the wall has caused some deterioration.	3	$ 2,000.00
			Wood trim deterioration and peeling paint	window sills, fascia, etc.	Wood trim is showing aging - significant peeling paint throughout, with some rotting of wood, especially at window sills where in contact with moisture.	2	$ 7,000.00
Glazing	Windows are replacement wood double hung units, with transoms (first floor only). The windows are newer and in fair condition. Some appear to not be closing.	4					
			some windows do not close fully	second floor	all windows should be checked for operation, closed and locked. Some hardware might require replacement.	1	$ 500.00
Ceilings	The ceilings are 2'x2' and 2'x4' acoustical lay-in ceilings on level one, in good condition. Old 12"x12" adhered ceiling tiles are in the basement level and upper level, in poor condition.	2					
			Discoloration / failure of ceilings	A few locations, throughout building	In a few location of the second level, the plaster ceilings have discolored and portions have failed due to water leakage. All ceilings on level 2 are old and due for replacement.	2	$ 30,000.00
Walls and Casework	Interior walls are painted masonry, plaster walls, gypsum board on stud framing, and paneling on stud framing. Case work at the Kitchenette is wood veneer. Casework on the second floor is dated and worn.	3					
			Casework is worn	Entire facility	The casework in the building is worn and due for replacement. The kitchen on level 2 is not used.	3	$ 10,000.00
			Cracking of paint / plaster walls	entire second floor	Walls are past the end of life and wall surfaces are due for replacement with drywall.	2	$ 35,000.00
Doors	The building has two exterior man doors and one metal overhead door. The interior doors are solid core wood doors on the first floor and original wood doors on the second floor.	3					
			Exterior door is worn	Coolidge elevation	The Coolidge door is damaged and showing signs of shrinkage in the wood. Door should be repaired or replaced.	3	$ 2,000.00
			Interior doors due for replacement	second floor	The overhead doors have been blocked by a tarp, blocking the ability to use the door.	2	$ 12,000.00
Floors	The floor structure of the first floor is concrete slab with sheet good carpet. The carpet is relatively new and in good condition. The second level floor is hardwood, that is worn. There appears to be sufficient material left for refinishing.	3					

Observation Highlights

Building Name:	**Historic Firehouse**
General Notes:	Two Story historic building with wood framing and load bearing masonry/steel structure originally built in 1928 to house all City offices, Fire Department, Police Department and Council Chambers. Renovated in 1987 to houses a Historic Museum, Cable TV studio, offices and storage.
Current Replacement Value	$1,912,500

Year Built	1928
Area (SF)	7,650
Replacement Cost/SF	$250
Floors	2
Basement (y/n)	Y
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$76,000	4.0%
Priority 2 Issues	$198,000	10.4%
Priority 1+2 Combined Facility Condition Issues	**$274,000**	**14.3%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
			Hardwood floors are worn.	Throughout Second Floor	The original hardwood floors are worn and have not been maintained. The floors appear to be able to be refinished.	3	$ 25,000.00
HVAC	The lower level of the fire hall (studio room and history museum) is served by an indoor horizontal air handling unit with atmospheric draft gas-fired heating and DX cooling (1987). The condensing unit is located on the adjacent roof of the city hall building. The upper portion of the fire hall is served by electric unit heaters with no provisions for consistent ventilation.	3					
			No specific HVAC issues reported by occupants	Lower level	The HVAC system serving the lower level is aged, but functioning. The air handling unit (AHU) is aged, is not efficient, but is functioning.	3	$ 25,000.00
			No ventilation or central heating system in storage areas	Upper level	There is no ventilation system or central heating system in the second story, which is heated by ceiling-hung electric heaters. If the second floor is to be occupied, this will need to be resolved. Existing electric unit heaters are past the end of life.	2	$ 25,000.00
Plumbing	Minimal plumbing is existing in the fire hall. The majority of fixtures have been abandoned in place, and rooms with plumbing fixtures have been converted in to storage or utility areas.	1					
			No fire suppression	Entire Facility	No fire suppression system is found within the fire hall building. This building has significant amounts of paper storage throughout the entire second level and the attic, and a wood-framed roof construction.	1	$ 40,000.00
			Abandoned plumbing fixtures	Entire Facility	Plumbing fixtures have been abandoned in place. Water supply is likely turned off, but sanitary connections should be checked to ensure they are plugged to avoid the potential of sewer gases escaping in to the building through the unused fixtures.	1	$ 5,000.00
Electrical	Building electrical service is 208/120v wye fed from a 400A-3P fused switch in the City Hall Main Distribution Panel. Old electric panels are abandoned in place and assumed to be disconnected.	2					
			Electrical distribution equipment	basement	Electrical distribution equipment needs to be located in a cleaner, dryer location. The sump pit adjacent to the panels is a fall hazard - the floor should be level for at least 3 feet in front of the panels. The overhead piping and uncovered sump pit violate current National Electrical Code (NEC) requirements.	2	$20,000.00
Lighting	General lighting is fluorescent, with some incandescent in the attic and basement. Lighting on level 1 is typically 2x4 lay-in fixtures. Level two lighting is 1950's era pendant style.	2					
			Lighting	Entire Facility	Lighting on the first floor dates from the 1987 renovation, is inefficient and is nearing end of life. Lighting on level two is obsolete and due for replacement.	2	$12,000.00
			Emergency/Exit lighting	Entire Facility	Provide exit/emergency lighting per NFPA	1	$15,000.00

Observation Highlights

Building Name:	**Historic Firehouse**
General Notes:	Two Story historic building with wood framing and load bearing masonry/steel structure originally built in 1928 to house all City offices, Fire Department, Police Department and Council Chambers. Renovated in 1987 to houses a Historic Museum, Cable TV studio, offices and storage.
Current Replacement Value	$1,912,500

Year Built	1928
Area (SF)	7,650
Replacement Cost/SF	$250
Floors	2
Basement (y/n)	Y
Year Assessed	2014

	Backlog	FCI
Priority 1 Issues	$76,000	4.0%
Priority 2 Issues	$198,000	10.4%
Priority 1+2 Combined Facility Condition Issues	**$274,000**	**14.3%**

SYSTEM	System Description	Condition (0-5)	Observed Issues - Item	Location	Description	Priority (1-5)	Resolution Budget
Voice and Data	Service from City Hall. Plywood backboard in Fire House has plenty of room for expansion	4					
			No reported issues				
Other Reported Issues	Other observed items and user comments						

APPENDIX

Facility Assessment Summary Presentation

Presented to City Council, December 19, 2014

2014 Municipal Facility Condition Assessment

City of Berkley, Michigan

19 December 2014

Stantec

The goal

- Record
- Understand
- Communicate
- Resolve

Stantec

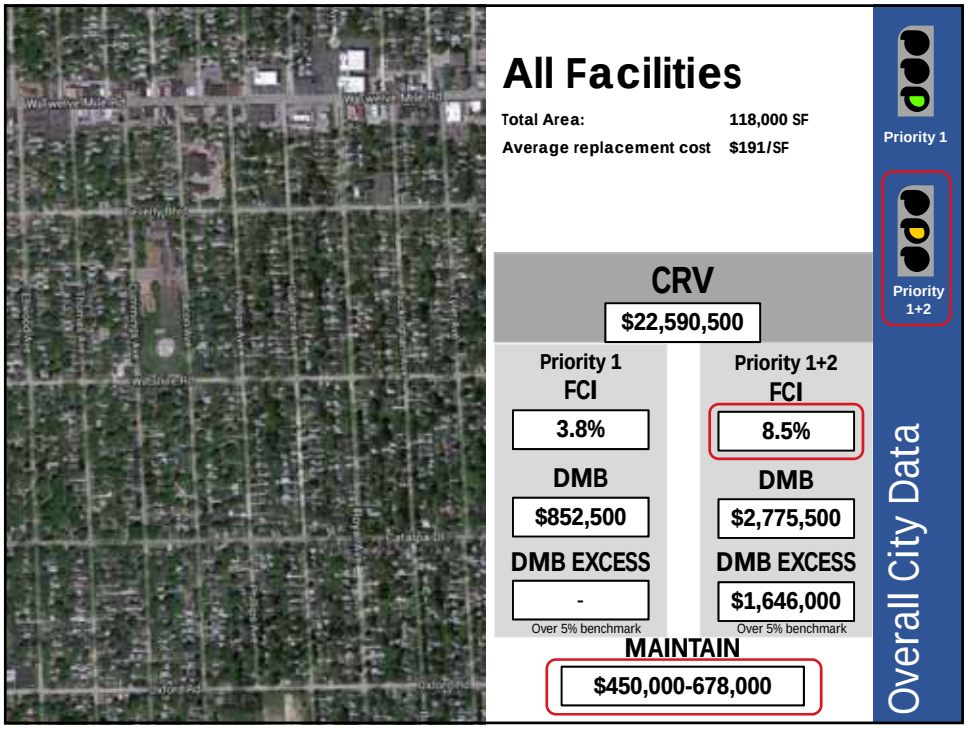
The process

- Review available documents
- Walk every building
- Interview key staff
- Analyze issues
- Develop recommendations

Stantec

A few key terms

- Current Replacement Value
- Priority 1 Issues
- Priority 1+2 Issues
- Facility Condition Index
- Annual Maintenance Target



Library

Built: 1970
Area: 16,200 SF
Replacement Value: $4,050,000

Building in overall excellent condition
Driveway layout and signage is confusing

CRV
$4,050,000

Priority 1	Priority 1+2
FCI	FCI
0.1%	0.7%
DMB	DMB
$5,500	$29,000
DMB EXCESS	DMB EXCESS
-	-
Over APPA 5% benchmark	Over APPA 5% benchmark

MAINTAIN
$81,000-121,000

Priority 1
Priority 1+2
Library
Facility Highlights

Library

Envelope
- **Roof: New, excellent condition**
- **Brick: Good condition**
- **Windows: Good condition. Only minor leaks**
- **Doors: Good condition**

Library

Interiors

- **Ceiling: Good condition**
- **Walls: Good condition**
- **Floors: Good condition some wear in high traffic areas**

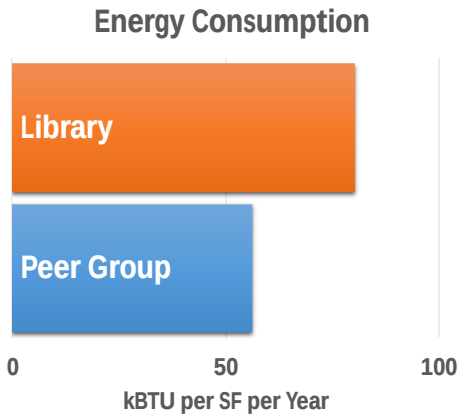
Library

Building Systems

- **HVAC: 15 years old, functioning. Begin budgeting for replacement.**
- **Electrical and Lighting: No reported issues.**
- **Plumbing: Good condition.**

Library

Energy consumption exceeds peer group consumption by 43%.



Public Safety

Built: 1989
Area: 20,200 SF
Replacement Value: $4,040,000

A few significant issues to address immediately.

Issues related to building and systems age expected to become significant in a few years.

CRV
$4,040,000

Priority 1	Priority 1+2
FCI: 3.6%	FCI: 14.1%
DMB: $146,000	DMB: $571,000
DMB EXCESS: -	DMB EXCESS: $369,000
Over APPA 5% benchmark	Over APPA 5% benchmark

MAINTAIN
$81,000-121,000

Priority 1
Priority 1+2

Public Safety Building
Facility Highlights

Public Safety

Envelope

- **Roof: Signs of leaking at transitions**
- **Foundation: Water entering basement at small garage and electrical conduit.**
- **Brick: Some salt damage of mortar**
- **Windows: Original, some air and water infiltration, due for repair**
- **Doors: Fair condition, with some salt damage**

Site

- **Insufficient drainage away from building**

Public Safety

Interiors

- **Ceiling: Signs of water damage, panels damaged in dispatch area.**
- **Walls: Fair condition**
- **Floors: Carpet and VCT worn throughout building**
- **Doors: Good condition**

Public Safety

Building Systems

- **HVAC: Original, at end of life. Controls malfunctioning, system in dispatch minimally functional and noisy. Shooting range exhaust insufficient. No vehicle exhaust system.**
- **Electrical and Lighting: Water in main electrical conduits. Corridor light levels are low.**
- **Plumbing: Original, hardware is worn.**

Public Safety

Priority Issues

- Water drainage away from building poor
- Water infiltration into basement
- Water infiltration into main electrical conduits
- Cooling unit in dispatch area unreliable
- Ventilation in garage and shooting range appears insufficient

City Hall

Built: 1960
Area: 7,500 SF
Replacement Value: $1,687,000

Good to fair condition
Building is solid
Systems are aging and inefficient
Building layout is not optimum
Staff security is limited

CRV
$1,687,500

Priority 1	Priority 1+2
FCI	FCI
1.8%	8.9%
DMB	DMB
$30,500	$149,500
DMB EXCESS	DMB EXCESS
-	$65,100
Over APPA 5% benchmark	Over APPA 5% benchmark

MAINTAIN DMB
$34,000-51,000

Priority 1

Priority 1+2

City Hall Building
Facility Highlights

City Hall

Envelope

- **Roof: Newer, some minor leaks**
- **Cladding: In good condition, except deteriorating wood clad west entry**
- **Windows: Newer units, in good condition**
- **Doors: Older aluminum doors, fair condition, hardware at end of life.**

Site

- **Insufficient drainage away from building, water enters during heavy rains. Brick pavers deteriorating from water.**

City Hall

Interiors

- **Ceiling: Good condition**
- **Walls: Mix of types, good condition**
- **Floors: Mix of types, good condition**
- **Doors: Some hardware near end of life. Doors in council chamber undersized for egress.**

City Hall

Building Systems

- **HVAC: System functional, but outdated and inefficient, poorly controlled.**
- **Electrical and Lighting: Electrical system in good condition. Lighting inefficient, but in good condition.**
- **Plumbing: Fixtures in good condition. No fire protection.**

City Hall

Priority Issues

- **Water infiltration along north wall during heavy rains.**
- **Deteriorated plywood cladding on west entry.**
- **Deteriorated brick pavers north of building.**

District Court

Built: 1974
Area: 2,900 SF
Replacement Value: $725,000

Originally a carport
Building in poor condition
All systems past end of life
Exterior walls open to elements
Building is undersized
Staff security is limited

CRV
$725,000

Priority 1	Priority 1+2
FCI	FCI
25.7%	27.2%
DMB	DMB
$186,000	$197,000
DMB EXCESS	DMB EXCESS
$149,800	$160,800
Over APPA 5% benchmark	Over APPA 5% benchmark

MAINTAIN
$14,500-22,000

Priority 1
Priority 1+2
District Court Building
Facility Highlights

District Court

Structure
- **Wood frame, constructed under old carport structure. Framing exposed to elements at sill.**

Envelope
- **Roof: no reported problems**
- **Cladding: Plywood skin and trim failed, building not water-tight.**
- **Windows: Poor condition, past end of life.**
- **Doors: Fair condition, at end of life.**

District Court

Interiors

- **Ceiling: Good condition**
- **Walls: Fair to good condition.**
- **Floors: Fair to good condition.**
- **Doors: Typically good condition.**
- **Casework: Countertops at end of life.**

District Court

Building Systems

- **HVAC: 25+ years old**
  Temperature control difficult
  Ventilation appears poor.
- **Plumbing: Original, some residential, some near end of life.**
  Water heater exposed in restroom.

Code

- **Many spaces have accessibility issues**
  Toilet rooms not updatable.

District Court

Priority Issues

- **Exterior envelope failed.**
- **Windows past end of life.**
- **Lobby and office areas undersized**
- **Insufficient separation for defendants and witnesses.**
- **Courtroom exposed to parking lot.**

Historic Fire House

Built: 1928
Area: 7,650 SF
Replacement Value: $1,912,500

Building is solid and has potential for reuse

A complete renovation is the best course for continued stability

CRV
$1,912,500

Priority 1	Priority 1+2
FCI	**FCI**
4.0%	14.3%
DMB	**DMB**
$76,000	$274,000
DMB EXCESS	**DMB EXCESS**
-	$178,400
Over APPA 5% benchmark	Over APPA 5% benchmark

MAINTAIN
$38,000-57,000

Priority 1

Priority 1+2

Historic Fire Hall
Facility Highlights

Historic Fire House

Structure

- **Steel frame, timber and masonry. Structure appears in good condition.**

Envelope

- **Roof: Asphalt shingles, near end of life.**
- **Brick: Good condition, some stone work needed.**
- **Wood trim: Due for repair/repaint.**
- **Windows: Replacement units, fair condition.**
- **Doors: Newer, in fair condition.**

Historic Fire House

Interiors

- **Museum recently renovated.**
- **Ceiling: Level 1 - new lay-in ceiling. Level 2 - ceiling failed.**
- **Walls: Drywall, and plaster on studs and clay units. Level 1 in good condition, level 2 damaged.**
- **Floors: Level 1 - carpet, good condition. Level 2 - wood floor, worn, areas damaged.**
- **Doors: Level 1 - wood doors, good condition. Level 2 - doors past end of life.**

Historic Fire House

Building Systems

- **HVAC: Level 1 system 25+ years old, fair condition. Level 2 has no HVAC system.**
- **Electrical: Power fed from City Hall, distribution in fair-poor condition. Live and abandoned system in basement. Insufficient clearance on active electrical panels.**
- **Lighting: Level 2 lighting past end of life.**

Code

- **Building is not accessible, corridors narrow, no elevator.**
- **No fire protection system.**

Historic Fire House

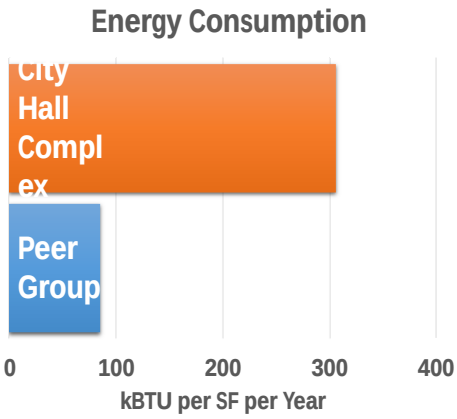
Priority Issues

- **Attic used for storage. Removal of all materials recommended.**
- **Water infiltration in basement.**
- **Level 2 not occupiable without renovation.**
- **Building not ideal for records storage**

City Hall Complex

Energy consumption exceeds peer group consumption by 260%.

3 buildings on single meter
24 hour operation factored in



Community Center

Built: 1970
Area: 8100 SF
Replacement Value: $1,620,000

Structural issues
Poor ventilation
Undersized compared to peers

CRV
$1,620,000

Priority 1	Priority 1+2
FCI	**FCI**
2.6%	8.8%
DMB	**DMB**
$41,500	$143,000
DMB EXCESS	**DMB EXCESS**
-	$62,000
Over APPA 5% benchmark	Over APPA 5% benchmark

MAINTAIN DMB
$48,600

Priority 1+2

Community Center
Facility Highlights

Community Center

Structure
- **Wall movement and cracking at northeast corner.**

Envelope
- **Roof: Signs of leaks at wall transitions.**
- **Painted Block: Paint failed from roof drainage, block joints showing signs of freeze damage.**

Community Center

Interiors

- **Finishes are generally in fair to good condition for their age, but nearing expected end of life.**

Community Center

Building Systems

- **HVAC: System not providing occupant comfort, residential units likely undersized. Inadequate ventilation to remove odors.**
- **Electrical: System at capacity – 6 switch limit.**
- **Lighting: Mix of types. Inefficient, but no reported problems.**
- **Plumbing: Most fixtures original, near end of life.**

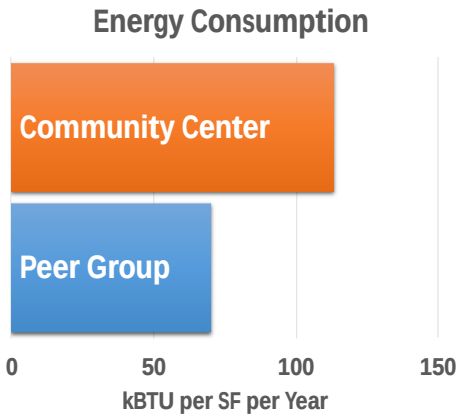
Community Center

Priority Issues

- **Settlement and wall movement at northeast corner of building. Issues should be investigated and repaired.**
- **Roof drainage should be addressed to eliminate water and ice damage on wall.**

Community Center

Energy consumption exceeds peer group consumption by 61%.



Ice Arena

Built: 1974
Area: 36,400 SF
Replacement Value: $5,824,000

Largest city-owned building
Highest energy use
Studio rink not operational
All building systems are past end of life, some are not functioning.

CRV
$5,824,000

Priority 1	Priority 1+2
FCI	**FCI**
3.5%	16.3%
DMB	**DMB**
$205,000	$951,500
DMB EXCESS	**DMB EXCESS**
-	$660,300
Over APPA 5% benchmark	Over APPA 5% benchmark

MAINTAIN DMB
$116,000-175,000

Priority 1

Priority 1+2

Ice Rink
Facility Highlights

Ice Arena

Envelope

- **Roof: Membrane on metal roof. Multiple leaks reported.**
- **Cladding: Painted block and painted metal panels. Metal panels are dented and due for repaint, especially at south end.**
- **Doors: Steel doors damaged, rusting. Overhead door damaged.**

Ice Arena

Interiors

- **Ceiling: mix of types, insulation in rink dirty, sagging and torn. Painted plywood ceilings in locker area and under bleachers.**
- **Walls: Painted plywood and painted block, typical damage for ice arena.**
- **Floors: No reported problems.**
- **Doors: Typical damage for ice arena.**

Ice Arena

Building Systems – HVAC:

- **Locker room furnace very old, has poor access, exposed to debris from spectators and too close to wood surround.**
- **Inadequate ventilation throughout.**
- **Sidewall louvers do not close fully.**
- **Gas heaters old, soot damaging roof insulation.**
- **Dehumidification system failing.**
- **Studio ice area has no HVAC system.**

Ice Arena

Building Systems - Other

- **Electrical: Main switchgear and panels are near end of life and due for replacement.**
- **Lighting: Mix of fluorescent and metal halide. Inefficient, but no reported problems. Egress corridor lighting levels low.**
- **Plumbing: Majority of fixtures original, damaged, near end of life.**

Ice Arena

Main Ice Plant

- **Main Ice Plant: Entire system original, inefficient, past end of life.**
- **R22 refrigerant being phased out.**
- **One compressor failed, parts difficult to obtain.**
- **System difficult to restart.**
- **Cooling tower past end of expected life.**

Studio Ice Plant:

- **Decommissioned.**
- **Intake louvers closed with insulation, but air still enters.**

Ice Arena

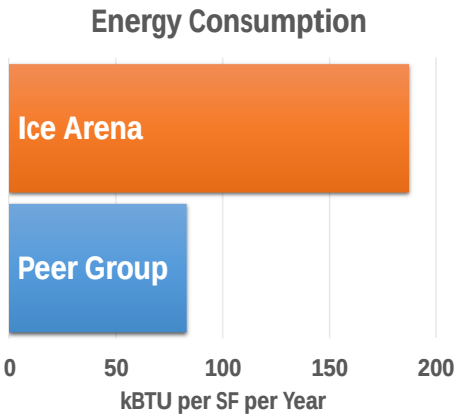
Priority Issues

- **Fire department connection poorly marked.**
- **HVAC unit under bleachers should be removed and relocated.**
- **Under-bleacher walls and ceilings are painted plywood.**
- **The ice plant systems are past useful life.**
- **R-22 leak alarm is audio only. No external visual alarm or exhaust system.**

Ice Arena

Energy consumption exceeds peer group consumption by 125%

Compared to arenas and large recreation facilities



DPW – Main Garage

Built: 1935
Area: 12,650 SF
Replacement Value: $1,897,500

Building condition is typical for this use type.
Many immediate issues are relatively low cost.

CRV
$1,897,500

Priority 1	Priority 1+2
FCI	FCI
3.4%	13.4%
DMB	DMB
$65,000	$255,000
DMB EXCESS	DMB EXCESS
-	$160,100
Over APPA 5% benchmark	Over APPA 5% benchmark

MAINTAIN
$38,000-57,000

Priority 1
Priority 1+2

DPW – Main Garage
Facility Highlights

DPW – Main Garage

Envelope

- **Roof: Good condition**
- **Brick in good condition for age Block due for repaint**
- **Windows: Glass block in good condition. Metal frame units due for replacement.**
- **Doors: Metal doors and overhead doors in fair condition.**

DPW – Main Garage

Interiors

- **Ceiling: Mostly open to deck. Ceiling in staff area in poor condition**
- **Walls: Good condition**
- **Floors: Worn VCT, fair concrete.**
- **Doors: Good condition. Exit hardware and signage is incorrect and potentially confusing.**

DPW – Main Garage

Building Systems

- **HVAC: Low levels of ventilation provided in garage and staff space. Heating system poorly controlled, at end of expected life**
- **Electrical and Lighting: Electrical gear past end of life, complex and due for replacement. Lighting fair condition for use.**
- **Plumbing: Fixtures worn. No containment for oil or chemical spills. Fire protection in garage only.**

DPW – Main Garage

Priority Issues

- **Egress door issues should be corrected.**
- **Storage mezzanine railing very low and open.**
- **Fuel and chemical storage and containment should be corrected.**
- **Many building systems are past end of service life and due for replacement.**

DPW – Office & Auxiliary Garage

Built: 1935
Area: 4,600 SF
Replacement Value: $690,000

Building condition is typical for this use type.
Many immediate issues are relatively low cost.

CRV
$690,000

Priority 1	Priority 1+2
FCI	FCI
11.3%	24.6%
DMB	DMB
$78,000	$169,500
DMB EXCESS	DMB EXCESS
$43,500	$135,000
Over APPA 5% benchmark	Over APPA 5% benchmark

MAINTAIN
$13,800-21,000

Priority 1
Priority 1+2
DPW – Office & Aux
Facility Highlights

DPW – Office & Auxiliary Garage

Envelope
- Roof: Mix of types, fair condition
- Cladding: Brick in good condition, block patched and due for repaint
- Windows: Residential grade units and glass block - in fair condition, but inefficient
- Doors: Metal doors and overhead doors in fair condition

Site
- Paving worn, site wall due for tuckpointing

DPW – Office & Auxiliary Garage

Interiors

- **Ceiling: Mostly open to deck. Much of deck is wood. Lay-in ceiling in staff area in fair condition**
- **Walls: Good condition. Fire separation between garage and office not continuous.**
- **Floors: Worn VCT, fair concrete in garage.**
- **Doors: Fair/poor condition. Exit hardware and signage is incorrect and potentially confusing.**

DPW – Office & Auxiliary Garage

Building Systems

- **HVAC: Low levels of ventilation provided in garage and staff space.**
  Boiler poorly located, chimney leaking water.
  Gas-fired heaters at end of expected life
- **Electrical and Lighting: Gear past end of life, insufficient clearance, due for replacement.**
  Lighting in fair condition for use.
- **Plumbing: Fixtures worn.**
  No containment for oil or chemical spills. Fire protection in garage only.

DPW – Office & Auxiliary Garage

Priority Issues

- Signed egress door issues should be corrected.
- Interruptions in fire separation between spaces should be corrected.
- Deteriorated boiler flue should be repaired.

DPW – Salt Dome

Built: 1995
Area: 1,800 SF
Replacement Value: $144,000

Geodesic dome design make complicate repairs.

CRV
$144,000

Priority 1	Priority 1+2
FCI	FCI
13.2%	25.0%
DMB	DMB
$19,000	$36,000
DMB EXCESS	DMB EXCESS
$11,800	$28,800
Over APPA 5% benchmark	Over APPA 5% benchmark

MAINTAIN
$2,900-4,300

Priority 1

Priority 1+2

DPW – Salt Dome
Facility Highlights

DPW – Salt Dome

Envelope/Priority Issues

- **Roof: Shingles past end of life and failing, wood deck water-damaged. Repair/replacement may be difficult.**
- **Concrete: Wall in good condition, steel frame rusted.**
- **Doors: Sliding wood doors damaged, failing.**

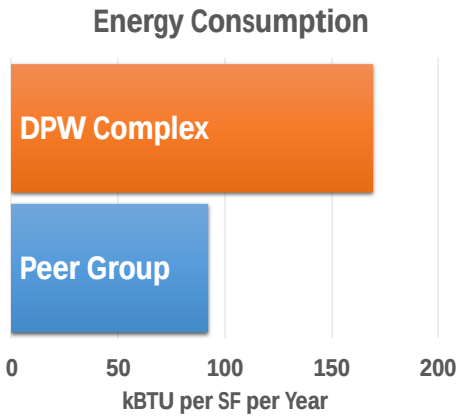
Site

- **Surrounding paving deteriorated and due for replacement**

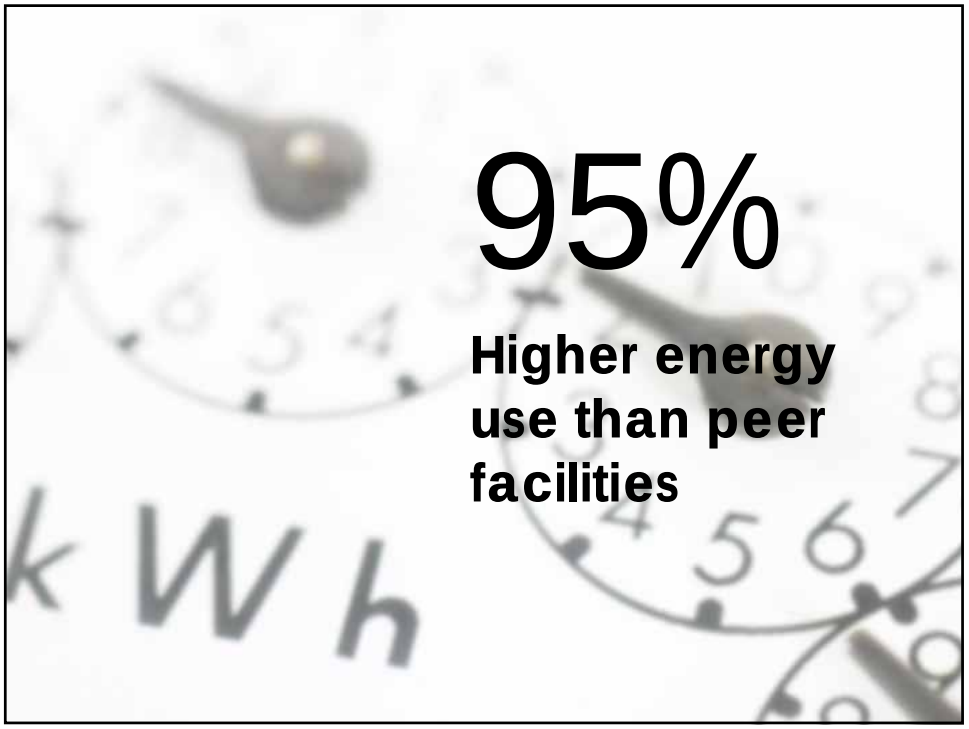
DPW Complex

Energy consumption exceeds peer group consumption by 84%.

DPW buildings on single meter

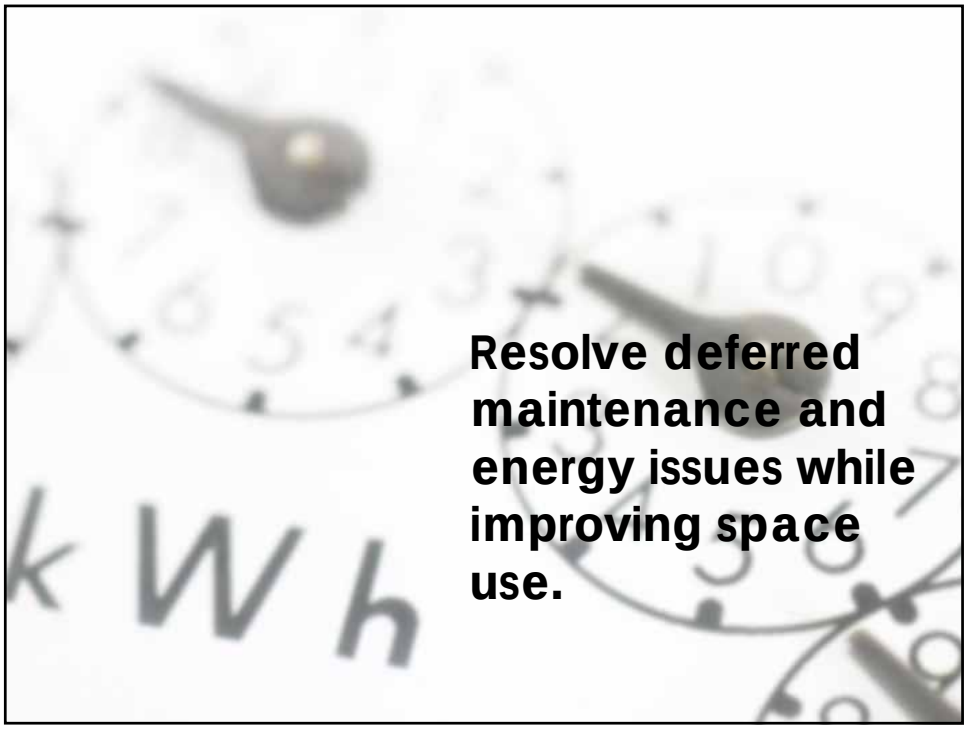


conclusion



Many building systems are on borrowed time.

Buildings do have potential.


kWh
Resolve deferred maintenance and energy issues while improving space use.


kWh
Prioritize projects

Building	FCI	Ongoing investment	Significant repair investment	Replacement	Observation
Library	1	✓			Good fit for continued use
Public Safety	14	✓	✓		Good fit for continued use, with system improvements
City Hall	9	✓			Good fit for continued use, with reconfiguration
Historic Fire House	14	✓	✓		Historically significant, well suited for other uses
DPW Main Garage	13		✓		Lower priority, focus on low-cost code improvements
DPW Office/Aux. Garage	11	✓	✓		Lower priority, focus on low-cost code improvements
DPW Salt Dome	25		✓		Lower priority, high repair costs for low value building
Community Center	9		✓		Undersized for purpose, viability tied to ice arena
Ice Arena	16		✓	✓	Significant renovation or replacement recommended
District Court	27		✓	✓	Poor condition and fit for current use, repairs not recommended

recommendations

- **Develop a prioritized action plan for municipal buildings**
- **Begin budgeting for system replacement**
- **Resolve issues of code compliance, life safety and collateral damage as soon as practical**

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recommendations

- **Library – keep up the good work!**
- **DPW facilities are likely a lower priority, but many short-term issues can be resolved for a reasonable cost.**

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recommendations

- **Recreation buildings**
  - **Ice Arena is worn out.**
  - **Community Center is undersized for a community of this size.**
  - **Investigate alternate facilities that would be more heavily used and cost effective.**

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recommendations

- **City Hall Complex**
  - **Demolish court building**
  - **Renovate fire house for court and council use**
  - **Renovate City Hall for city offices**
  - **Construct new lobby for entry, service counters, restrooms and elevator access**
  - **Relocate records storage**

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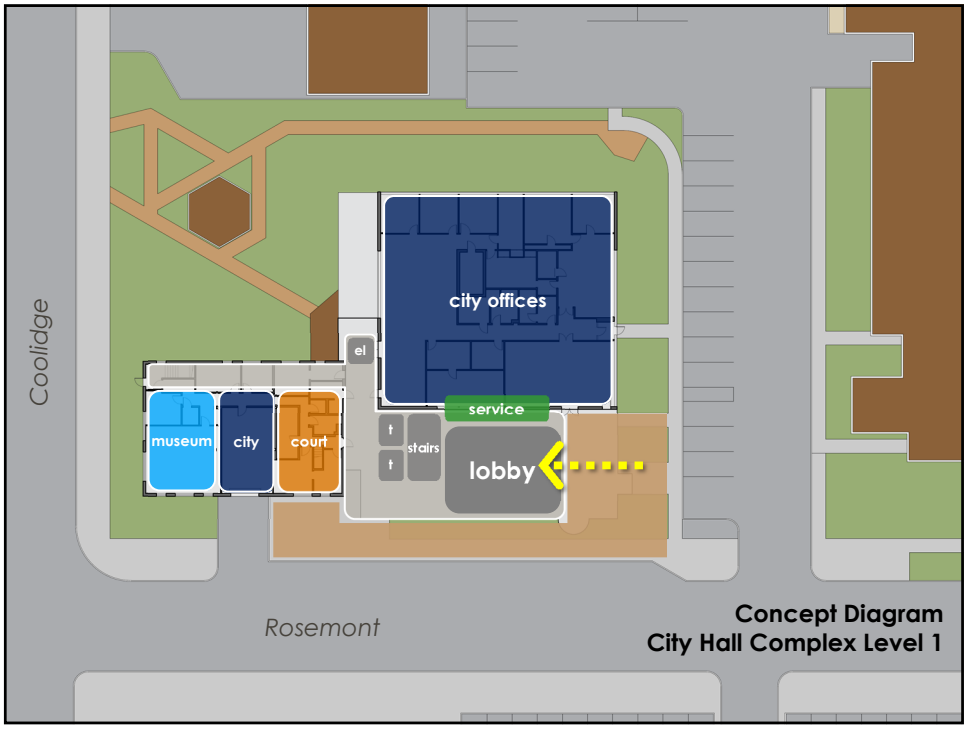
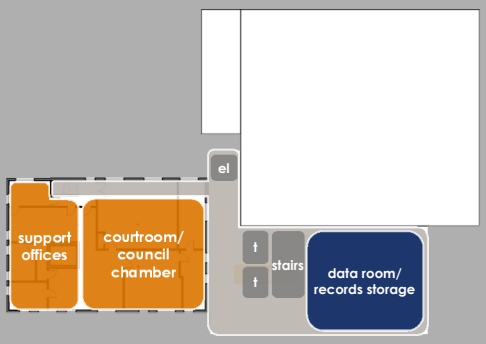


Concept Diagram
City Hall Complex Level 1



Concept Diagram
City Hall Complex Level 2

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Thank you!

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