



CITY OF TROY
TROY, MICHIGAN

FACILITY CONDITION ASSESSMENT

IDS PROJECT NO. 17235-1000

MAY 2018



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Overview

Integrated Design Solutions, LLC (IDS) was commissioned by the City of Troy to conduct a Facility Condition Assessment of fifty-six (56) structures in Troy, Michigan for the purpose of creating a source for the development of a comprehensive repair, alteration and improvement program. The survey was conducted between January 2018 and April 2018. Each facility was thoroughly surveyed with the assistance of Troy building engineers and supervisory personnel, and historical data.

The following report compiles a list of all deficient building, mechanical, electrical and life safety items that, in our professional opinion, would require replacement, enhancement and/or repair to meet the goals of preserving the assets of each facility. Itemized deficiencies were not meant to change the facilities specific layouts or functions. Items excluded from the report include site amenities and furnishings. The IDS survey team consisted of senior level individuals with extensive knowledge in each of the facility categories surveyed.

The IDS survey team evaluated each deficiency discovered during the survey and assigned an overall score based on two factors, the Deficiency Priority and the Deficiency Category. The Deficiency Priority ranks each item in terms of its critical nature. This ranges from the most critical items that are considered to be a hazard to life, health or safety to the least critical, such as a condition that is not code compliant, but is “grandfathered” in. The Deficiency Category categorizes each item from scheduled maintenance, those requiring routine maintenance to those that are a security risk. The resulting sum of these two factors results in the overall score, where the lowest numerical number relates to the highest priority.

Scope of Report

This report consists of the following information:

- An executive summary of all buildings, with respective deficiency costs, current replacement value and facility condition index outlined.
- General information related to the report parameters and methodology.
- Minimum code and barrier free requirements.

For each building, the following information is provided:

- A brief description of the present use and vital statistics of each building.
- A summary of the major findings related to the building deficiencies for the following elements and systems, where applicable:
 - Roof
 - Exterior
 - Interior
 - HVAC
 - Plumbing
 - Fire Protection
 - Temperature Controls
 - Lighting and Controls
 - Power Systems
 - Site
- A spreadsheet listing each deficiency with cost estimates to correct each of the identified deficiencies extrapolated out for the next twenty (20) years.
- Photographs that document existing systems and areas of deficiencies.
- Evaluation sheets.

The deficiencies outlined in this report were the result of visual inspections by IDS staff and/or information obtained from the City of Troy facility and maintenance personnel directly responsible for the respective buildings. The inspections were not intended to be invasive and generally do not include items beyond the surface of floors, walls, ceilings or building systems.

Estimated costs are itemized by architectural, mechanical and electrical trades, and are totaled under Project Costs and include the following additional mark-ups:

- Design Contingency5%
- Construction Contingency10%
- General Conditions.....10%
- Construction Manager Mark-up3%
- Architectural and Engineering Fees7%

Total35%

Estimated costs have been extrapolated through the year 2038 at an inflation rate of 2.5 percent per year. In some cases, due to the nature of the work, quantities were estimated and assumptions made in order to establish the course of action. Further development and investigation during future implementation phases will be necessary to determine a more accurate scope of work and more precise budget estimate.

Maintenance Costs

Mechanical

In order to preserve the life and efficiency of all mechanical equipment, routine annual maintenance must be performed. For our analysis, we included the annual maintenance cost for the following equipment: pumps, boilers, rooftop units, air handling units, fans, cooling towers, chillers, furnaces, condensing units, and cabinet unit heaters. Assumptions were made for both labor and material costs. We assumed \$60 per hour labor and \$50 per filter or belt for material.

Pump annual maintenance totaled \$300, including greasing the bearings quarterly. Boiler annual maintenance totaled \$450, including cleaning twice a year and chemical treatment. Roof top unit annual maintenance totaled \$1,900, including changing filters three times, cleaning the condenser twice, and replacing belts once. Air handling unit annual maintenance totaled \$2,300, including changing pre-filters three times, final filters once, and replacing belts once. Fan annual maintenance totaled \$150, including replacing the belt once. Cooling Tower annual maintenance totaled \$400, including cleaning the fill four times and basin twice. Chiller annual maintenance totaled \$500, including cleaning twice a year and chemical treatment. Furnace annual maintenance totaled \$350, including replacing the filters three times. Condensing unit annual maintenance totaled \$200, including cleaning the coil three times. Cabinet unit heater annual maintenance totaled \$200, including replacing the filter and belt.

Mechanical Item	Per Year	Annual				Notes
		Labor Hours	Labor Cost	Material Cost	Rounded Total	
Pump	4	4	240	60	\$300	Grease bearings
Boiler	2	3	180	250	\$450	Clean 2x, chemical treatment
RTU	3	6	360	1,500	\$1,900	Pre-filters 3x, condenser 2x, belts 1x
AHU	3	5	300	2,000	\$2,300	Pre-filters 3x, final-filter 1x, belts 1x
Fan	1	1	60	50	\$150	Replace belt
Cooling Tower	4	6	360	0	\$400	Clean fill
Chiller	2	4	240	250	\$500	Clean 2x, chemical treatment
Furnace	3	3	180	150	\$350	Replace filters
Condensing Unit	3	3	180	0	\$200	Clean coil
CUH	1	1	60	100	\$200	Filter and belt

Electrical

Electrical equipment which requires maintenance includes high voltage switchgear, emergency systems and lamp replacement.

High voltage switchgear maintenance is performed by technicians with special training. The equipment must be de-energized, which requires shutting down the building or site. Moving parts are exercised and lubricated, contacts are inspected and replaced if necessary and dust or dirt is removed. The visual inspection can determine problems which require attention prior to them causing failures.

Emergency generators are exercised monthly by time clocks. Annual maintenance includes oil changes, air and oil filter changes and battery and coolant tests. The automatic transfer switch should be inspected and operated to verify sensor and switching operation to and from the emergency source. Outdoor generators should have their battery and engine heating systems tested every fall. The diesel fuel in the tank must be kept "fresh".

Lamp replacement can be a scheduled task or on an "as needed" basis. It should be scheduled and "group re-lamped" for those areas where lamp replacement requires a lift or other special methods to access the fixture. (such as the swimming pool). Where access to lamps is by a ladder, the "as needed" method is assumed. The maintenance costs listed attempt to quantify lamp life as well as material cost. Due to the short lifespan, half of incandescent lamps will require replacement per year. The longer life of fluorescent lamps will require 10% replacement per year. LED lamps and fixtures are projected to have 50,000 hour life and none are expected to need replacement for 20 years based on normal operating hours.

Elevator

The State of Michigan, Bureau of Construction Codes, Michigan Elevator Rules – 2007 requires inspections and maintenance performed on each elevator by a licensed elevator inspector every three months. The annual cost for such inspections, assuming no maintenance required, is \$1000. For each hydraulic elevator, a load test is required every three years at \$1800 per elevator. Below is a summary of elevator inspections costs assuming each hydraulic elevator requires a load test.

Building	Number of Elevators	Hydraulic	2018 Cost
City Hall/Hall of Justice	3	Yes	\$8,400.00
City Hall/Police Department	1	Yes	\$2,800.00
Community Center	1	Yes	\$2,800.00
Historic Village - General Store	1	Yes	\$2,800.00
Troy Public Library	1	Yes	\$2,800.00
Sylvan Glen Pro Shop/Restaurant	1	Yes	\$2,800.00
Transit Center	2	No	\$2,000.00
Total	10		\$24,400.00

Project Costs Summary - Table 1

The following is a summary of each building's cost by year (excluding site costs).

Building	2018 Project Costs	2021 Project Costs	2023 Project Costs	2028 Project Costs	2038 Project Costs
Aquatic Center	\$ 61,769	\$ 150,803	\$ 343,253	\$ 1,044,092	\$ 1,383,423
Caughlin Farms Large House	\$ 116,447	\$ 125,401	\$ 350,663	\$ 397,866	\$ 509,302
Caughlin Farms Small House	\$ 48,366	\$ 52,085	\$ 82,634	\$ 107,318	\$ 137,376
Caughlin Farms Large Barn	\$ 357,210	\$ 384,676	\$ 404,150	\$ 457,259	\$ 585,330
Caughlin Farms Small Barn	\$ 93,647	\$ 100,847	\$ 105,953	\$ 119,876	\$ 153,451
Caughlin Farms Storage Garage	\$ 56,098	\$ 60,411	\$ 75,001	\$ 84,857	\$ 108,624
Caughlin Farms Portable Classrooms	\$ 52,841	\$ 56,904	\$ 89,378	\$ 101,123	\$ 129,446
Caughlin Farms Toilet Facility	\$ 42,779	\$ 46,068	\$ 109,228	\$ 133,777	\$ 171,246
City Hall/Hall of Justice	\$ 1,660,049	\$ 1,997,039	\$ 2,844,579	\$ 6,944,077	\$ 10,625,530
City Hall/Police Addition	\$ 513,115	\$ 734,294	\$ 1,608,483	\$ 3,965,817	\$ 6,258,226
Sanctuary Lake Cart Building	\$ 48,146	\$ 51,848	\$ 57,833	\$ 99,995	\$ 128,002
Sanctuary Lake Maintenance Building	\$ 29,186	\$ 31,430	\$ 44,934	\$ 145,582	\$ 186,357
Sanctuary Lake Pro Shop and Club House	\$ 74,470	\$ 80,196	\$ 194,839	\$ 594,445	\$ 781,843
Community Center	\$ 1,283,408	\$ 1,759,148	\$ 5,452,816	\$ 12,091,229	\$ 16,639,164
Troy Racquet Club	\$ 319,424	\$ 616,281	\$ 850,586	\$ 3,744,727	\$ 4,873,204
District Court 52-4	\$ 1,631,572	\$ 1,757,025	\$ 1,863,295	\$ 2,359,691	\$ 3,158,331
DPW Main Facility	\$ 1,579,767	\$ 1,919,307	\$ 2,196,528	\$ 3,506,047	\$ 5,386,164
DPW Parks Garage	\$ 239,092	\$ 257,476	\$ 296,510	\$ 459,855	\$ 588,654
DPW Facilities Storage Building	\$ 80,532	\$ 86,724	\$ 91,114	\$ 113,455	\$ 145,233
DPW Street Storage Building	\$ 272,755	\$ 293,728	\$ 308,598	\$ 349,150	\$ 446,941
DPW Water and Fleet Storage Building	\$ 213,277	\$ 229,676	\$ 241,303	\$ 278,197	\$ 356,115
DPW Storage Building	\$ 20,396	\$ 21,964	\$ 23,076	\$ 26,108	\$ 33,421
DPW Parks and Fire Department Storage Building	\$ 53,487	\$ 57,600	\$ 60,516	\$ 84,021	\$ 107,554
DPW Salt Storage Dome	\$ 16,389	\$ 17,649	\$ 18,543	\$ 20,979	\$ 175,510
Fire Station One	\$ 163,053	\$ 197,397	\$ 248,325	\$ 482,800	\$ 917,428
Fire Station Two	\$ 158,096	\$ 210,377	\$ 380,489	\$ 654,223	\$ 954,439
Fire Station Three	\$ 255,152	\$ 340,192	\$ 376,262	\$ 684,750	\$ 1,059,703
Fire Station Four	\$ 7,584	\$ 89,580	\$ 94,115	\$ 113,829	\$ 1,040,231
Fire Station Five	\$ 160,578	\$ 350,986	\$ 379,447	\$ 839,725	\$ 1,134,204
Fire Station Six	\$ 80,177	\$ 137,224	\$ 166,814	\$ 395,157	\$ 588,899
Police/Fire Training	\$ 121,253	\$ 166,126	\$ 396,521	\$ 757,042	\$ 969,078
Historic Village Barnard House	\$ 407,106	\$ 583,789	\$ 613,343	\$ 700,508	\$ 909,097
Historic Village Caswell House	\$ 53,393	\$ 57,498	\$ 60,409	\$ 93,059	\$ 129,963
Historic Village Church	\$ 56,909	\$ 64,193	\$ 105,054	\$ 155,840	\$ 211,765
Historic Village Gazebo	\$ 2,437	\$ 2,625	\$ 2,758	\$ 3,120	\$ 3,994
Historic Village General Store	\$ 167,689	\$ 180,583	\$ 189,725	\$ 247,144	\$ 639,724
Historic Village Log Cabin	\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
Historic Village Museum	\$ 148,606	\$ 160,032	\$ 191,083	\$ 330,070	\$ 533,125
Historic Village Parsonage	\$ 55,901	\$ 60,199	\$ 77,031	\$ 117,914	\$ 150,940
Historic Village Poppleton School	\$ 16,844	\$ 18,139	\$ 24,861	\$ 28,128	\$ 36,006
Historic Village Print Shop	\$ 5,796	\$ 6,241	\$ 6,557	\$ 10,875	\$ 26,664
Historic Village Troy Hall	\$ 32,833	\$ 35,358	\$ 54,408	\$ 62,422	\$ 84,052
Historic Village Wagon Shop	\$ 291,059	\$ 313,438	\$ 329,306	\$ 372,580	\$ 476,933
Troy Public Library	\$ 1,390,581	\$ 1,497,504	\$ 1,941,358	\$ 4,157,576	\$ 5,609,626
Lange House	\$ 29,338	\$ 31,594	\$ 81,688	\$ 115,795	\$ 148,228
OEC/Nature Center/Sugar Shack	\$ 60,226	\$ 68,928	\$ 168,336	\$ 659,025	\$ 967,452
Boulan Park	\$ 58,296	\$ 65,904	\$ 208,387	\$ 315,609	\$ 470,229
Brinston Park	\$ 4,955	\$ 5,335	\$ 77,698	\$ 91,779	\$ 119,254
Don Flynn Park/Concession	\$ 89,741	\$ 98,095	\$ 153,484	\$ 235,347	\$ 301,972
Firefighters Park/Concession	\$ 24,921	\$ 28,291	\$ 177,957	\$ 226,364	\$ 293,084
Jaycee Park	\$ 112,493	\$ 124,777	\$ 141,175	\$ 174,070	\$ 222,824
Milverton Park	\$ 4,469	\$ 8,301	\$ 70,428	\$ 79,683	\$ 102,000
Raintree Park	\$ 70,922	\$ 76,376	\$ 95,516	\$ 125,653	\$ 163,501
3500 John R Park	\$ 299,193	\$ 322,198	\$ 338,509	\$ 382,992	\$ 490,262
Stone House Park	\$ 273,375	\$ 294,395	\$ 309,299	\$ 349,943	\$ 447,957
Sylvan Glen Pro Shop/Restaurant	\$ 339,001	\$ 375,825	\$ 580,349	\$ 773,660	\$ 1,342,079
Sylvan Glen Main Building	\$ 306,519	\$ 330,087	\$ 368,945	\$ 464,442	\$ 594,525
Sylvan Glen Storage Barn	\$ 50,795	\$ 54,701	\$ 57,470	\$ 83,168	\$ 106,461
Transit Center	\$ 19,710	\$ 21,226	\$ 23,064	\$ 198,269	\$ 486,572
Totals	\$ 14,183,896	\$ 17,266,823	\$ 26,204,747	\$ 51,712,970	\$ 74,801,826

Facility Condition Index - Table 2

The facility condition index (FCI) number indicates the level of deficiency for each building. This number is arrived by taking the deficiency cost and dividing it by the current replacement value. The FCI method was developed by Applied Management Engineering of Virginia Beach, VA and was published in 1991 by the National Association of College and University Business Officers (NCUBO) in *Managing the Facilities Portfolio*.

School / Building	Square Feet	Cost per SF	Replacement Cost	2018 Project Cost	FCI
Aquatic Center	5,874	\$ 300.00	\$ 1,762,200	\$ 61,769	4%
Caughlin Farms Large House	1,784	\$ 124.65	\$ 222,376	\$ 116,447	52%
Caughlin Farms Small House	750	\$ 168.70	\$ 126,525	\$ 48,366	38%
Caughlin Farms Large Barn	1,800	\$ 150.00	\$ 270,000	\$ 357,210	132%
Caughlin Farms Small Barn	1,200	\$ 185.00	\$ 222,000	\$ 93,647	42%
Caughlin Farms Storage Garage	660	\$ 250.00	\$ 165,000	\$ 56,098	34%
Caughlin Farms Portable Classrooms	540	\$ 150.00	\$ 81,000	\$ 52,841	65%
Caughlin Farms Toilet Facility	210	\$ 175.00	\$ 36,750	\$ 42,779	116%
City Hall/Hall of Justice	71,931	\$ 160.00	\$ 11,508,960	\$ 1,660,049	14%
City Hall/Police Addition	49,750	\$ 200.00	\$ 9,950,000	\$ 513,115	5%
Sanctuary Lake Cart Building	5,160	\$ 61.40	\$ 316,824	\$ 48,146	15%
Sanctuary Lake Maintenance Building	5,160	\$ 61.40	\$ 316,824	\$ 29,186	9%
Sanctuary Lake Pro Shop and Club House	3,750	\$ 218.55	\$ 819,563	\$ 74,470	9%
Community Center	127,120	\$ 200.00	\$ 25,424,000	\$ 1,283,408	5%
Troy Racquet Club	4,919	\$ 250.00	\$ 1,229,750	\$ 319,424	26%
District Court 52-4	32,400	\$ 209.75	\$ 6,795,900	\$ 1,631,572	24%
DPW Main Facility	53,341	\$ 130.00	\$ 6,934,330	\$ 1,579,767	23%
DPW Parks Garage	8,250	\$ 130.00	\$ 1,072,500	\$ 239,092	22%
DPW Facilities Storage Building	2,000	\$ 61.40	\$ 122,800	\$ 80,532	66%
DPW Street Storage Building	3,950	\$ 61.40	\$ 242,530	\$ 272,755	112%
DPW Water and Fleet Storage Building	3,988	\$ 61.40	\$ 244,863	\$ 213,277	87%
DPW Storage Building	9,600	\$ 61.40	\$ 589,440	\$ 20,396	3%
DPW Parks and Fire Department Storage Building	13,100	\$ 61.40	\$ 804,340	\$ 53,487	7%
DPW Salt Storage Dome	6,950	\$ 80.00	\$ 556,000	\$ 16,389	3%
Fire Station One	6,616	\$ 178.75	\$ 1,182,610	\$ 163,053	14%
Fire Station Two	5,520	\$ 184.40	\$ 1,017,888	\$ 158,096	16%
Fire Station Three	8,700	\$ 174.15	\$ 1,515,105	\$ 255,152	17%
Fire Station Four	11,002	\$ 174.15	\$ 1,915,998	\$ 7,584	0%
Fire Station Five	6,000	\$ 180.90	\$ 1,085,400	\$ 160,578	15%
Fire Station Six	6,600	\$ 178.75	\$ 1,179,750	\$ 80,177	7%
Police/Fire Training	21,136	\$ 200.00	\$ 4,227,200	\$ 121,253	3%
Historic Village Barnard House	2,000	\$ 156.50	\$ 313,000	\$ 407,106	130%
Historic Village Caswell House	1,350	\$ 156.50	\$ 211,275	\$ 53,393	25%
Historic Village Church	1,610	\$ 200.00	\$ 322,000	\$ 56,909	18%
Historic Village Gazebo	270	\$ 300.00	\$ 81,000	\$ 2,437	3%
Historic Village General Store	2,200	\$ 174.00	\$ 382,800	\$ 167,689	44%
Historic Village Log Cabin	700	\$ 200.00	\$ 140,000	\$ 675	0%
Historic Village Museum	3,676	\$ 200.00	\$ 735,200	\$ 148,606	20%
Historic Village Parsonage	1,500	\$ 156.50	\$ 234,750	\$ 55,901	24%
Historic Village Poppleton School	1,500	\$ 168.00	\$ 252,000	\$ 16,844	7%
Historic Village Print Shop	320	\$ 350.00	\$ 112,000	\$ 5,796	5%
Historic Village Troy Hall	500	\$ 350.00	\$ 175,000	\$ 32,833	19%
Historic Village Wagon Shop	600	\$ 350.00	\$ 210,000	\$ 291,059	139%
Troy Public Library	44,630	\$ 167.50	\$ 7,475,525	\$ 1,390,581	19%
Lange House	2,814	\$ 102.10	\$ 287,309	\$ 29,338	10%
OEC/Nature Center/Sugar Shack	9,624	\$ 160.00	\$ 1,539,840	\$ 60,226	4%
Boulan Park	4,632	\$ 150.00	\$ 694,800	\$ 58,296	8%
Brinston Park	1,400	\$ 150.00	\$ 210,000	\$ 4,955	2%
Don Flynn Park/Concession	1,200	\$ 150.00	\$ 180,000	\$ 89,741	50%
Firefighters Park/Concession	1,860	\$ 150.00	\$ 279,000	\$ 24,921	9%
Jaycee Park	2,241	\$ 150.00	\$ 336,150	\$ 112,493	33%
Milverton Park	860	\$ 150.00	\$ 129,000	\$ 4,469	3%
Raintree Park	1,980	\$ 150.00	\$ 297,000	\$ 70,922	24%
3500 John R Park	1,680	\$ 178.00	\$ 299,040	\$ 299,193	100%
Stone House Park	900	\$ 213.45	\$ 192,105	\$ 273,375	142%
Sylvan Glen Pro Shop/Restaurant	4,800	\$ 218.55	\$ 1,049,040	\$ 339,001	32%
Sylvan Glen Main Building	2,500	\$ 250.00	\$ 625,000	\$ 306,519	49%
Sylvan Glen Storage Barn	7,200	\$ 61.40	\$ 442,080	\$ 50,795	11%
Transit Center	5,725	\$ 200.00	\$ 1,145,000	\$ 19,710	2%



This report recommends system upgrades that are long-term goals City-wide. The FCI values should not be construed as meaning an entire building is deficient, rather, over time, the systems upgrades have not kept pace with comparable facilities of the latest design and engineering.

Site Costs Summary - Table 3

Building	2018 Site Costs	2021 Site Costs	2023 Site Costs	2028 Site Costs	2038 Site Costs
Aquatic Center	\$ 41,855	\$ 59,030	\$ 62,019	\$ 70,168	\$ 1,063,161
Caughlin Farms Large House	\$ -	\$ -	\$ -	\$ -	\$ -
Caughlin Farms Small House	\$ -	\$ -	\$ -	\$ -	\$ -
Caughlin Farms Large Barn	\$ 16,902	\$ 18,202	\$ 19,123	\$ 21,636	\$ 27,696
Caughlin Farms Small Barn	\$ -	\$ -	\$ -	\$ -	\$ -
Caughlin Farms Storage Garage	\$ -	\$ -	\$ -	\$ -	\$ -
Caughlin Farms Portable Classrooms	\$ 4,928	\$ 5,306	\$ 5,575	\$ 6,308	\$ 8,074
Caughlin Farms Toilet Facility	\$ -	\$ -	\$ -	\$ -	\$ -
City Hall/Hall of Justice	\$ 49,826	\$ 60,635	\$ 498,984	\$ 564,555	\$ 749,223
City Hall/Police Addition	\$ 77,328	\$ 83,274	\$ 744,950	\$ 842,842	\$ 1,105,454
Sanctuary Lake Cart Building	\$ -	\$ -	\$ -	\$ -	\$ -
Sanctuary Lake Maintenance Building	\$ -	\$ -	\$ -	\$ -	\$ -
Sanctuary Lake Pro Shop and Club House	\$ 45,765	\$ 49,284	\$ 55,445	\$ 78,490	\$ 1,468,527
Community Center	\$ 1,642,496	\$ 1,768,789	\$ 1,858,334	\$ 2,145,393	\$ 2,865,740
Troy Racquet Club	\$ 5,184	\$ 5,583	\$ 5,865	\$ 6,636	\$ 294,568
District Court 52-4	\$ 1,086,480	\$ 1,170,020	\$ 1,229,252	\$ 1,390,786	\$ 1,780,324
DPW Main Facility	\$ 160,240	\$ 172,561	\$ 1,335,075	\$ 2,823,640	\$ 3,614,497
DPW Parks Garage	\$ -	\$ -	\$ -	\$ -	\$ -
DPW Facilities Storage Building	\$ -	\$ -	\$ -	\$ -	\$ -
DPW Street Storage Building	\$ -	\$ -	\$ -	\$ -	\$ -
DPW Water and Fleet Storage Building	\$ -	\$ -	\$ -	\$ -	\$ -
DPW Storage Building	\$ -	\$ -	\$ -	\$ -	\$ -
DPW Parks and Fire Department Storage Building	\$ -	\$ -	\$ -	\$ -	\$ -
DPW Salt Storage Dome	\$ -	\$ -	\$ -	\$ -	\$ -
Fire Station One	\$ 87,122	\$ 93,821	\$ 98,571	\$ 111,524	\$ 150,723
Fire Station Two	\$ 25,468	\$ 27,426	\$ 183,388	\$ 220,275	\$ 289,933
Fire Station Three	\$ 78,354	\$ 84,379	\$ 88,650	\$ 397,535	\$ 530,116
Fire Station Four	\$ -	\$ -	\$ -	\$ -	\$ 122,109
Fire Station Five	\$ 21,186	\$ 22,815	\$ 121,113	\$ 137,028	\$ 178,063
Fire Station Six	\$ 18,431	\$ 19,848	\$ 27,268	\$ 214,203	\$ 292,779
Police/Fire Training	\$ 244,320	\$ 263,106	\$ 276,426	\$ 312,751	\$ 416,274
Historic Village Barnard House	\$ -	\$ -	\$ -	\$ -	\$ -
Historic Village Caswell House	\$ -	\$ -	\$ -	\$ -	\$ -
Historic Village Church	\$ -	\$ -	\$ -	\$ -	\$ -
Historic Village Gazebo	\$ 1,823	\$ 1,963	\$ 2,062	\$ 2,333	\$ 2,986
Historic Village General Store	\$ -	\$ -	\$ -	\$ -	\$ -
Historic Village Log Cabin	\$ -	\$ -	\$ -	\$ -	\$ -
Historic Village Museum	\$ 1,306,627	\$ 1,407,095	\$ 1,599,226	\$ 1,847,797	\$ 2,365,336
Historic Village Parsonage	\$ -	\$ -	\$ -	\$ -	\$ -
Historic Village Poppleton School	\$ -	\$ -	\$ -	\$ -	\$ -
Historic Village Print Shop	\$ -	\$ -	\$ -	\$ -	\$ -
Historic Village Troy Hall	\$ -	\$ -	\$ -	\$ -	\$ -
Historic Village Wagon Shop	\$ -	\$ -	\$ -	\$ -	\$ -
Troy Public Library	\$ 254,926	\$ 274,527	\$ 288,425	\$ 326,327	\$ 420,381
Lange House	\$ 9,612	\$ 10,351	\$ 10,875	\$ 12,304	\$ 15,750
OEC/Nature Center/Sugar Shack	\$ 18,187	\$ 21,766	\$ 22,868	\$ 292,002	\$ 409,146
Boulan Park	\$ 154,260	\$ 194,034	\$ 262,081	\$ 1,437,008	\$ 4,298,155
Brinston Park	\$ 331,641	\$ 357,141	\$ 466,875	\$ 545,335	\$ 753,378
Don Flynn Park/Concession	\$ 504,630	\$ 543,431	\$ 570,943	\$ 645,969	\$ 915,381
Firefighters Park/Concession	\$ 58,320	\$ 70,655	\$ 74,232	\$ 129,608	\$ 2,046,018
Jaycee Park	\$ 2,430	\$ 33,147	\$ 50,863	\$ 74,413	\$ 1,360,613
Milvorton Park	\$ 144,018	\$ 155,092	\$ 162,943	\$ 314,310	\$ 510,738
Raintree Park	\$ 34,560	\$ 37,217	\$ 39,101	\$ 61,349	\$ 801,227
3500 John R Park	\$ 21,600	\$ 23,261	\$ 24,438	\$ 27,650	\$ 35,394
Stone House Park	\$ 2,025	\$ 2,181	\$ 2,291	\$ 2,592	\$ 3,318
Sylvan Glen Pro Shop/Restaurant	\$ 320,660	\$ 357,528	\$ 1,298,178	\$ 1,550,942	\$ 1,985,336
Sylvan Glen Main Building	\$ -	\$ -	\$ -	\$ 13,652	\$ 17,475
Sylvan Glen Storage Barn	\$ -	\$ -	\$ -	\$ -	\$ -
Transit Center	\$ 5,670	\$ 6,106	\$ 6,415	\$ 304,494	\$ 434,906
Totals	\$ 6,776,874	\$ 7,399,573	\$ 11,491,855	\$ 16,931,853	\$ 31,332,799



Conclusions

As a reference, the total of all deficient items was estimated to be \$14,183,896 in 2018 dollars, including all mark-ups listed in the report.

Management of the facilities carries with it the stewardship responsibility to preserve the assets and maintain them in a condition that will allow the City of Troy to effectively carry out its mission. To achieve this, the City of Troy has developed a strategic plan for the preservation of City buildings. The major barrier to full implementation is funding. Failure to fund, however, does not save money or reduce costs, for only by strategically investing in asset preservation can dollars be saved and costs controlled.



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Third Party Information

Historic Preservation ArchitectsHopkins Burns Design Studio
Elevator ManufacturerKone Elevators and Escalators

Deficiency Priorities

Priority 1 - Currently Critical: Conditions in this category require immediate action to:

- Correct a cited safety hazard
- Stop accelerated deterioration
- Return a facility to operation

Priority 2 - Potentially Critical: Conditions in this category, if not corrected expeditiously, will become critical within a year. Situations within this category include:

- Intermittent operations
- Rapid deterioration
- Potential life safety hazards

Priority 3 - Necessary, Not Yet Critical: Conditions in this category require appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further.

Priority 4 - Recommended: Conditions in this category include items that represent a sensible improvement to existing conditions. These are not required for the most basic function of the facility.

Priority 5 - Appearance: Conditions in this category include finishes that have deteriorated and are required to maintain the required aesthetic standards.

Priority 6 - Does Not Meet Current Codes/Standards - "Grandfathered": Conditions in this category include items that do not conform to existing codes, but are "grandfathered" in their condition. No action is required at this time, but should substantial work be undertaken in contiguous areas, certain existing conditions may require correction to comply with current code standards.

2018 Deficiency Priority - Table 4							
	1	2	3	4	5	6	7
Aquatic Center	\$0	\$0	\$17,246	\$40,338	\$0	\$4,185	\$0
Caughlin Farms Large House	\$8,640	\$45,714	\$24,840	\$10,024	\$26,744	\$486	\$0
Caughlin Farms Small House	\$8,640	\$25,815	\$0	\$304	\$13,068	\$540	\$0
Caughlin Farms Large Barn	\$320,760	\$36,450	\$0	\$0	\$0	\$0	\$0
Caughlin Farms Small Barn	\$90,623	\$0	\$0	\$3,024	\$0	\$0	\$0
Caughlin Farms Storage Garage	\$30,434	\$11,610	\$2,430	\$2,160	\$9,464	\$0	\$0
Caughlin Farms Portable Classrooms	\$9,504	\$15,984	\$1,418	\$25,126	\$0	\$810	\$0
Caughlin Farms Toilet Facility	\$19,829	\$0	\$8,100	\$11,880	\$0	\$2,970	\$0
City Hall/Hall of Justice	\$0	\$213,573	\$247,315	\$1,155,759	\$8,640	\$34,763	\$0
City Hall/Police Addition	\$0	\$8,100	\$44,746	\$422,686	\$30,024	\$7,560	\$0
Sanctuary Lake Cart Building	\$0	\$0	\$0	\$48,146	\$0	\$0	\$0
Sanctuary Lake Maintenance Building	\$0	\$0	\$0	\$28,106	\$0	\$1,080	\$0
Sanctuary Lake Pro Shop and Club House	\$0	\$5,400	\$3,672	\$51,450	\$9,898	\$4,050	\$0
Community Center	\$0	\$12,150	\$118,361	\$1,105,647	\$0	\$10,800	\$36,450
Troy Racquet Club	\$0	\$43,740	\$28,755	\$240,260	\$0	\$6,669	\$0
District Court 52-4	\$6,122	\$0	\$59,873	\$1,410,299	\$148,798	\$6,480	\$0
DPW Main Facility	\$0	\$810,675	\$154,710	\$497,435	\$15,293	\$61,155	\$40,500
DPW Parks Garage	\$0	\$47,520	\$47,655	\$121,709	\$0	\$16,133	\$6,075
DPW Facilities Storage Building	\$0	\$16,578	\$10,325	\$25,009	\$0	\$27,000	\$1,620
DPW Street Storage Building	\$0	\$22,613	\$68,480	\$140,171	\$0	\$41,492	\$0
DPW Water and Fleet Storage Building	\$0	\$35,262	\$46,790	\$84,083	\$0	\$47,142	\$0
DPW Storage Building	\$0	\$0	\$0	\$20,396	\$0	\$0	\$0
DPW Parks and Fire Department Storage Building	\$0	\$0	\$2,700	\$47,898	\$0	\$0	\$2,889
DPW Salt Storage Dome	\$4,185	\$0	\$0	\$12,204	\$0	\$0	\$0
Fire Station One	\$0	\$50,760	\$621	\$97,193	\$0	\$14,479	\$0
Fire Station Two	\$0	\$69,390	\$14,310	\$60,997	\$0	\$13,399	\$0
Fire Station Three	\$0	\$39,150	\$0	\$88,731	\$118,665	\$8,606	\$0
Fire Station Four	\$0	\$0	\$135	\$7,449	\$0	\$0	\$0
Fire Station Five	\$945	\$19,980	\$0	\$60,173	\$9,415	\$70,065	\$0
Fire Station Six	\$0	\$10,530	\$0	\$52,637	\$15,863	\$1,148	\$0
Police/Fire Training	\$4,050	\$0	\$9,180	\$99,417	\$0	\$8,606	\$0
Historic Village Barnard House	\$407,106	\$0	\$0	\$0	\$0	\$0	\$0
Historic Village Caswell House	\$0	\$14,681	\$27,068	\$10,969	\$675	\$0	\$0
Historic Village Church	\$810	\$14,580	\$32,400	\$8,039	\$0	\$1,080	\$0
Historic Village Gazebo	\$0	\$0	\$2,381	\$56	\$0	\$0	\$0
Historic Village General Store	\$270	\$38,610	\$43,909	\$83,078	\$0	\$1,823	\$0
Historic Village Log Cabin	\$0	\$0	\$675	\$0	\$0	\$0	\$0
Historic Village Museum	\$1,593	\$9,450	\$53,879	\$76,664	\$3,983	\$3,038	\$0
Historic Village Parsonage	\$405	\$9,990	\$30,038	\$13,578	\$1,350	\$540	\$0
Historic Village Poppleton School	\$270	\$2,025	\$3,578	\$4,491	\$6,480	\$0	\$0
Historic Village Print Shop	\$0	\$0	\$4,320	\$180	\$1,296	\$0	\$0
Historic Village Troy Hall	\$743	\$3,827	\$25,718	\$1,196	\$0	\$1,350	\$0
Historic Village Wagon Shop	\$540	\$878	\$289,305	\$336	\$0	\$0	\$0
Troy Public Library	\$11,475	\$20,250	\$225,180	\$827,280	\$202,230	\$104,166	\$0
Lange House	\$0	\$540	\$0	\$28,798	\$0	\$0	\$0
OEC/Nature Center/Sugar Shack	\$0	\$1,620	\$5,767	\$45,279	\$0	\$7,560	\$0
Boulan Park	\$0	\$28,215	\$0	\$24,546	\$0	\$5,535	\$0
Brinston Park	\$0	\$1,080	\$0	\$3,875	\$0	\$0	\$0
Don Flynn Park/Concession	\$52,245	\$20,520	\$1,620	\$13,466	\$0	\$1,890	\$0
Firefighters Park/Concession	\$0	\$16,470	\$1,337	\$4,145	\$0	\$2,970	\$0
Jaycee Park	\$83,633	\$17,550	\$0	\$6,855	\$0	\$2,295	\$2,160
Milverton Park	\$0	\$0	\$0	\$3,848	\$0	\$0	\$621
Raintree Park	\$58,320	\$3,240	\$4,590	\$3,962	\$0	\$810	\$0
3500 John R Park	\$0	\$0	\$0	\$299,193	\$0	\$0	\$0
Stone House Park	\$0	\$0	\$0	\$273,375	\$0	\$0	\$0
Sylvan Glen Pro Shop/Restaurant	\$33,919	\$36,484	\$42,390	\$189,101	\$10,647	\$6,210	\$20,250
Sylvan Glen Main Building	\$48,465	\$19,321	\$103,937	\$98,049	\$36,747	\$0	\$0
Sylvan Glen Storage Barn	\$0	\$0	\$0	\$50,795	\$0	\$0	\$0
Transit Center	\$0	\$16,200	\$2,430	\$0	\$1,080	\$0	\$0
	\$1,203,525	\$1,816,524	\$1,812,179	\$8,041,862	\$670,359	\$528,883	\$110,565



Deficiency Categories

Each deficiency identified in the field assessment shall be classified in the following manner:

Category 1 - Scheduled Maintenance:	Maintenance that is planned and performed on a routine basis to maintain and preserve the condition.
Category 2 - Deferred Maintenance:	Maintenance that was not performed when it was scheduled or is past its useful life resulting in immediate repair or replacement.
Category 3 - Capital Renewal:	Planned replacement of building systems that have reached the end of their useful life.
Category 4 - Energy and Sustainability:	When the repair or replacement of equipment or systems is recommended to improve energy and sustainability performance.
Category 5 - Security:	When a system requires replacement due to a security risk or requirement.

2018 Deficiency Category - Table 9						
	1	2	3	4	5	6
Aquatic Center	\$0	\$6,784	\$10,463	\$40,338	\$0	\$4,185
Caughlin Farms Large House	\$16,943	\$81,556	\$15,539	\$304	\$0	\$2,106
Caughlin Farms Small House	\$14,081	\$33,442	\$0	\$304	\$0	\$540
Caughlin Farms Large Barn	\$0	\$357,210	\$0	\$0	\$0	\$0
Caughlin Farms Small Barn	\$0	\$90,623	\$0	\$0	\$0	\$3,024
Caughlin Farms Storage Garage	\$6,480	\$44,474	\$2,984	\$0	\$0	\$2,160
Caughlin Farms Portable Classrooms	\$7,560	\$25,488	\$15,667	\$4,126	\$0	\$0
Caughlin Farms Toilet Facility	\$0	\$39,809	\$0	\$0	\$0	\$2,970
City Hall/Hall of Justice	\$30,915	\$22,005	\$399,300	\$878,649	\$194,214	\$134,966
City Hall/Police Addition	\$1,890	\$0	\$9,842	\$402,975	\$675	\$97,734
Sanctuary Lake Cart Building	\$0	\$0	\$0	\$32,581	\$0	\$15,566
Sanctuary Lake Maintenance Building	\$0	\$0	\$0	\$14,606	\$0	\$14,580
Sanctuary Lake Pro Shop and Club House	\$0	\$12,042	\$0	\$29,310	\$0	\$33,118
Community Center	\$0	\$7,290	\$108,510	\$1,029,672	\$675	\$137,261
Troy Racquet Club	\$0	\$43,740	\$34,479	\$224,060	\$0	\$17,145
District Court 52-4	\$21,102	\$92,131	\$1,296,231	\$210,634	\$675	\$10,800
DPW Main Facility	\$0	\$203,175	\$908,280	\$409,172	\$675	\$58,466
DPW Parks Garage	\$17,280	\$49,005	\$51,435	\$110,977	\$0	\$10,395
DPW Facilities Storage Building	\$0	\$40,302	\$0	\$27,000	\$0	\$13,230
DPW Street Storage Building	\$0	\$70,573	\$21,141	\$93,022	\$0	\$88,020
DPW Water and Fleet Storage Building	\$18,495	\$61,397	\$0	\$72,365	\$0	\$61,020
DPW Storage Building	\$0	\$0	\$0	\$20,396	\$0	\$0
DPW Parks and Fire Department Storage Building	\$2,160	\$0	\$2,700	\$45,738	\$2,889	\$0
DPW Salt Storage Dome	\$4,185	\$2,160	\$0	\$10,044	\$0	\$0
Fire Station One	\$0	\$42,660	\$56,909	\$52,535	\$0	\$10,949
Fire Station Two	\$0	\$33,278	\$62,829	\$43,562	\$0	\$18,428
Fire Station Three	\$3,240	\$151,065	\$20,252	\$58,725	\$0	\$21,870
Fire Station Four	\$0	\$0	\$6,977	\$473	\$0	\$135
Fire Station Five	\$945	\$18,360	\$83,851	\$48,377	\$0	\$9,045
Fire Station Six	\$1,080	\$7,290	\$18,347	\$44,550	\$0	\$8,910
Police/Fire Training	\$0	\$10,530	\$7,526	\$85,593	\$0	\$17,604
Historic Village Barnard House	\$0	\$0	\$405,000	\$0	\$0	\$2,106
Historic Village Caswell House	\$270	\$32,704	\$20,250	\$169	\$0	\$0
Historic Village Church	\$14,580	\$38,266	\$0	\$2,984	\$0	\$1,080
Historic Village Gazebo	\$0	\$2,381	\$0	\$56	\$0	\$0
Historic Village General Store	\$34,965	\$68,391	\$50,794	\$3,617	\$0	\$9,923
Historic Village Log Cabin	\$0	\$675	\$0	\$0	\$0	\$0
Historic Village Museum	\$2,700	\$92,043	\$29,309	\$18,641	\$0	\$5,913
Historic Village Parsonage	\$0	\$29,093	\$6,885	\$4,938	\$0	\$14,985
Historic Village Poppleton School	\$8,505	\$3,848	\$3,206	\$1,285	\$0	\$0
Historic Village Print Shop	\$1,296	\$2,700	\$1,620	\$180	\$0	\$0
Historic Village Troy Hall	\$24,300	\$5,987	\$0	\$1,196	\$0	\$1,350
Historic Village Wagon Shop	\$0	\$290,723	\$0	\$336	\$0	\$0
Troy Public Library	\$101,790	\$27,844	\$642,377	\$589,275	\$675	\$28,620
Lange House	\$0	\$9,990	\$14,961	\$4,388	\$0	\$0
OEC/Nature Center/Sugar Shack	\$14,040	\$8,640	\$4,860	\$24,219	\$0	\$8,467
Boulan Park	\$0	\$29,878	\$0	\$22,883	\$0	\$5,535
Brinston Park	\$2,160	\$1,080	\$0	\$1,715	\$0	\$0
Don Flynn Park/Concession	\$52,245	\$21,762	\$10,105	\$2,120	\$0	\$3,510
Firefighters Park/Concession	\$0	\$18,090	\$0	\$2,525	\$0	\$4,307
Jaycee Park	\$83,633	\$19,991	\$3,240	\$3,335	\$0	\$2,295
Milverton Park	\$0	\$0	\$3,375	\$473	\$0	\$621
Raintree Park	\$48,195	\$14,715	\$3,240	\$3,962	\$0	\$810
3500 John R Park	\$0	\$0	\$299,193	\$0	\$0	\$0
Stone House Park	\$0	\$0	\$273,375	\$0	\$0	\$0
Sylvan Glen Pro Shop/Restaurant	\$71,051	\$66,454	\$7,391	\$112,185	\$0	\$81,921
Sylvan Glen Main Building	\$48,465	\$133,029	\$21,954	\$88,054	\$0	\$15,017
Sylvan Glen Storage Barn	\$0	\$6,750	\$0	\$9,148	\$0	\$34,898
Transit Center	\$1,080	\$2,430	\$0	\$0	\$0	\$16,200
	\$655,629	\$2,473,849	\$4,934,394	\$4,887,764	\$200,478	\$1,031,783

Code and Barrier Free Requirements

Building and barrier free codes have changed extensively since many of the City owned buildings were constructed. Attempting to apply today's codes to buildings of this era is not always practical, but nonetheless, provides a benchmark to evaluate existing conditions. While there is no code mandated requirement to bring an existing building up to current code requirements, any new or renovation work would be required to meet most current codes. Contributing factors that make current code compliance problematic include limitations imposed by existing infrastructure that may prevent or make code compliance extremely difficult, both physically and monetarily. As a result, it may be necessary to consider equivalent code measures or combinations of code systems to achieve a desired life safety improvement or code compliance objective.

In addition to the Michigan Building Code, which generally comes into play when there is renovation or new work, there are continuing obligations under the Americans with Disabilities Act (ADA) to remove barriers. The ADA is a civil rights act, not a code or standard and therefore, no agency verifies compliance. The Act expects compliance with the intent of the Act, which is to eliminate discrimination of the disabled. Portions of the buildings that are accessible to the public and students fall under the "public accommodations" classification. These areas are governed by Title III of the ADA that requires the facilities owner to make "readily achievable" changes that are in compliance with the ADA. The barrier free noncompliance issues in this report are generally based on full compliance to all requirements, although for reasons stated above, removal of all barriers may not be required at this time.

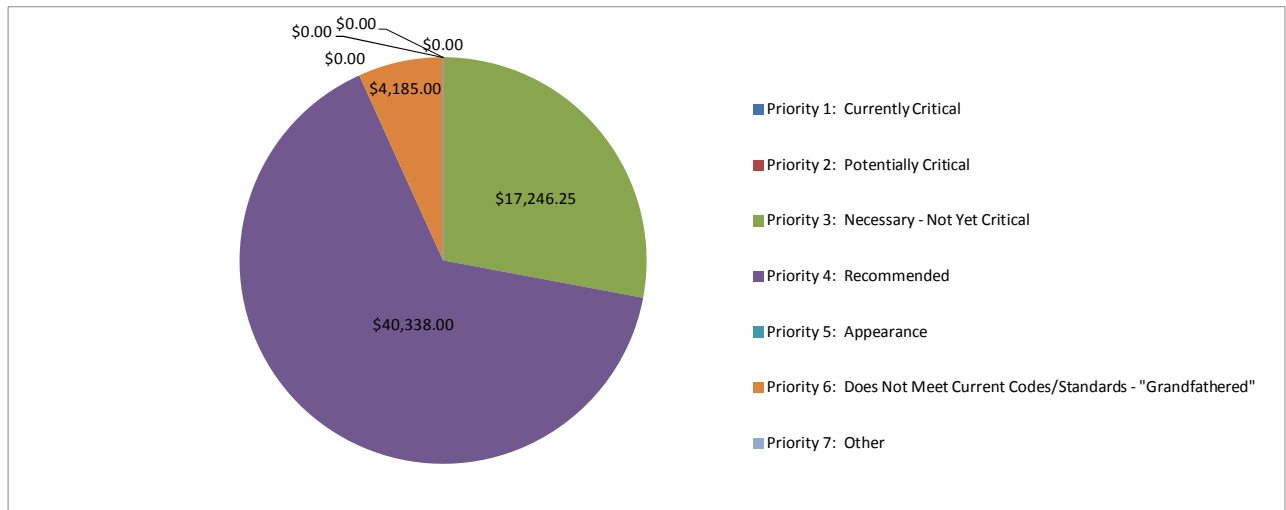
Applicable Construction Codes and Standards

Building:	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 2015 Michigan Building Code, Incorporating the 2015 Edition of the International Building Code
	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 2015 Michigan Rehabilitation Code for Existing Buildings, Incorporating the 2015 Edition of the International Existing Building Code
Barrier Free:	Michigan Department of Licensing and Regulatory Affairs, 2015 Michigan Building Code, Incorporating the 2015 Edition of the International Building Code
	Americans With Disabilities Act (ADA), 2010, Standards for Accessible Design
Elevator:	Michigan Department of Licensing and Regulatory Affairs, Elevator Safety Division, 2010 Michigan Elevator Rules, Incorporating ASME A17.1-2010, ASME A18.1-2011 and ASME A90.1-2009
Structural:	Michigan Department of Licensing and Regulatory Affairs, Bureau of Construction Codes, 2015 Michigan Building Code, Incorporating the 2015 Edition of the International Building Code
Mechanical:	Michigan Department of Licensing and Regulatory Affairs, 2015 Michigan Mechanical Code, Incorporating the 2015 Edition of the International Mechanical Code
Plumbing:	Michigan Department of Licensing and Regulatory Affairs, 2015 Michigan Plumbing Code, Incorporating the 2015 Edition of the International Plumbing Code
Electrical:	Michigan Department of Licensing and Regulatory Affairs, 2014 Michigan Electrical Code, Incorporating the 2014 Edition of the National Electrical Code

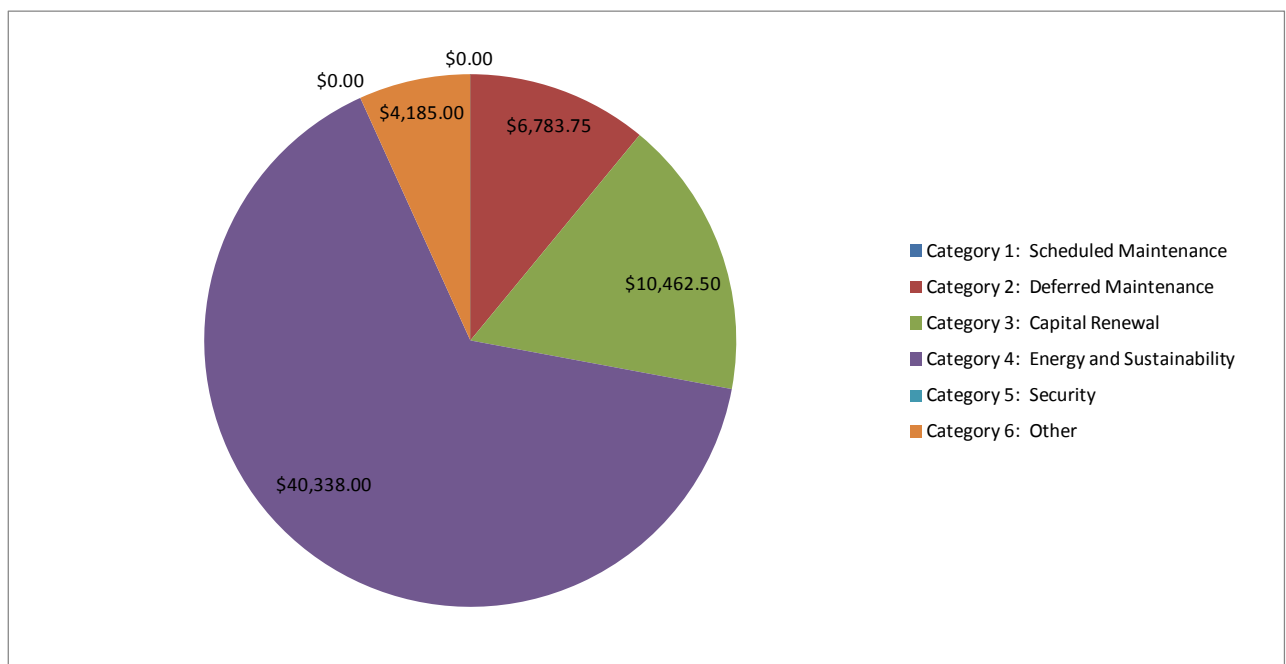


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Aquatic Center

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 3425 Civic Center Drive				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area (Concessions): 530 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
Building Area (Lockers): 3,630 SF				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Building Area (Mechanical): 1,225 SF				Priority 4: Recommended				Category 4: Energy and Sustainability														
No. of Floors: 1				Priority 5: Appearance				Category 5: Security														
Year Built: 1991				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
Evaluation Date: March 2018				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only														
*Lower score equals higher priority																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Asphalt Shingles	Locker Building Roof			4	3	The asphalt shingles are in good condition.	Plan on replacing asphalt shingles, underlayment and flashings in 2028.	7,000	SF	\$ 4.00	\$ 28,000									\$ 48,387	\$ 61,939
1.2	Asphalt Shingles	Concessions Building Roof			4	3	The asphalt shingles are in good condition.	Plan on replacing asphalt shingles, underlayment and flashings in 2028.	2,800	SF	\$ 4.00	\$ 11,200									\$ 19,355	\$ 24,776
2.0	Building Interior																					
2.1	Non-Insulated Lavatory Piping	Women's Restroom, Men's Restroom, Women's Locker and Restroom, Men's Locker and Restroom			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	10	EA	\$ 150.00	\$ 1,500						\$ 2,025	\$ 2,181	\$ 2,291	\$ 2,592	\$ 3,318
2.2	Third Grab Bar	Women's Restroom, Men's Restroom, Women's Locker and Restroom, Men's Locker and Restroom	AC-056		6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	4	EA	\$ 400.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
2.3	Electric Hand Dryers	Women's Restroom, Men's Restroom, Women's Locker and Restroom, Men's Locker and Restroom			4	3	The electric hand dryers are functional.	Plan on replacing electric hand dryers in 2028.	4	EA	\$ 800.00	\$ 3,200									\$ 5,530	\$ 7,079
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Entire Locker Building			6	3	Additional fixtures with emergency back-up are required.	Install emergency battery fixtures in Lockers	4	EA					\$ 350.00	\$ 1,400	\$ 1,000				\$ 2,419	\$ 3,096
3.2	Emergency Exit Lighting	Entire Locker Building			6	3	Existing exit signs appear damaged.	Install exit signs.	4	EA					\$ 525.00	\$ 2,100	\$ 1,000				\$ 3,630	\$ 4,646
3.4	Service Entrance Switchboard (1991)	Locker Building Electrical Room		AC-E-1	3	3	The switchboard is 38 years old, does not have required working space, and near the end of its life cycle	Relocate the water heater and replace the switchboard.	1	EA					\$ 5,800.00	\$ 5,800					\$ 10,023	\$ 12,830
3.5	Secondary Distribution (1991)	Locker Building Electrical Room		AC-E-2 thru AC-E-7	3	3	Much of the equipment is 38 years old, does not have the required working space, and near the end of its life cycle	Reposition the panels and replace them.	2	EA					\$ 3,875.00	\$ 7,750					\$ 13,392	\$ 17,144
3.6	Secondary Distribution	Concessions Building Electrical/Storage		AC-E-8 thru AC-E-10	3	3	Much of the equipment is 38 years old, does not have the required working space, and near the end of its life cycle	Reposition the panel and replace it.	1	EA					\$ 3,875.00	\$ 3,875		\$ 5,231	\$ 5,633	\$ 5,919	\$ 6,696	\$ 8,572
3.6	Secondary Distribution	Mechanical Building Electrical		AC-E-11 thru AC-E-16	3	3	Much of the equipment is 38 years old, does not have the required working space, and near the end of its life cycle	Reposition the panel and replace it.	1	EA					\$ 3,875.00	\$ 3,875		\$ 5,231	\$ 5,633	\$ 5,919	\$ 6,696	\$ 8,572
3.6	Lighting Control System	All Buildings			4	4	Lights are manually controlled.	Install occupancy sensors in rooms, daylight sensors in lockers and timers for pool.	10	EA					\$ 1.00	\$ 10		\$ 14	\$ 15	\$ 15	\$ 17	\$ 22
3.7	Interior Building Lighting	All Buildings			4	4	Fluorescent lighting with T-8 lamps and downlights with CFL lamps.	Replace fixtures with LED fixtures or retrofit with LED lamps.	5,874	SF					\$ 5.00	\$ 29,370	\$ 117	\$ 39,650	\$ 42,698	\$ 44,860	\$ 50,755	\$ 64,970
3.8	Fire Alarm Control Panel	Locker Building Ticket Office			4	4	Smoke detectors and strobes in lockers.	Install system software updates and replace the batteries.	1	LS					\$ 500.00	\$ 500		\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
4.0	Mechanical System																					
4.1	Split Systems	Concessions Building (Outdoor/Indoor)		AC-M-1 AC-M-2	4	3	The 3 ton DX split system heat pumps consisting of wall mounted air conditioning unit and outdoor air cooled condenser are in good condition.	Replace the split systems with like kind in the next 20 years.	2	EA			\$ 8,500.00	\$ 17,000			\$ 400					\$ 37,606
4.2	Unit Heater	Concessions Building		AC-M-3	2	2	The 50 MBH gas fired ducted unit heater is in poor condition.	Replace the unit heater with like kind in the next 5 years.	1	EA			\$ 3,000.00	\$ 3,000				\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636	
4.3	Pool Pumps	Pump Building			3	2	The eight (8) vertical turbine pool pumps are in fair condition. Pumps range in size from 5 to 30 HP.	Replace the pumps with like kind in the next 10 years.	1	LS			\$ 100,000.00	\$ 100,000			\$ 2,400				\$ 172,811	\$ 221,213
4.4	Pool Boilers	Pump Building		AC-M-4 AC-M-5	3	2	The 1467 MBH gas fired pool water boilers are in fair condition.	Replace the boilers with high efficient condensing models in the next 10 years.	2	EA			\$ 50,000.00	\$ 100,000			\$ 900				\$ 172,811	\$ 221,213
4.5	Pool Filtration	Pump Building		AC-M-6 AC-M-7	3	3	The 102" diameter, 148" tall triple cell sand pool filters are in fair condition.	Replace the filter system with like kind in the next 10 years.	2	EA			\$ 60,000.00	\$ 120,000							\$ 207,374	\$ 265,456
4.6	Unit Heater	Pump Building		AC-M-8	4	3	The 175 MBH gas fired suspended unit heater is in good condition.	Replace the unit heater with like kind in the next 20 years.	1	EA			\$ 4,200.00	\$ 4,200								\$ 9,291
4.7	Unit Heaters	Locker Room Building		AC-M-9 AC-M-10	2	2	The 100 MBH gas fired ducted unit heaters are in poor condition.	Replace the unit heaters with like kind in the next 5 years.	2	EA			\$ 3,000.00	\$ 6,000				\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273	

City of Troy
Facility Condition Assessment
April 2018

Aquatic Center

Building Information		Deficiency Priorities		Deficiency Categories	
Address: 3425 Civic Center Drive		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area (Concessions): 530 SF		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
Building Area (Lockers): 3,630 SF		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
Building Area (Mechanical): 1,225 SF		Priority 4: Recommended		Category 4: Energy and Sustainability	
No. of Floors: 1		Priority 5: Appearance		Category 5: Security	
Year Built: 1991		Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"		Category 6: Other	
Evaluation Date: March 2018		Priority 7: Other			
				*Lower score equals higher priority	
				Note: Project Cost includes 35% mark-ups and fees	
				Annual Maintenance includes labor and material only	

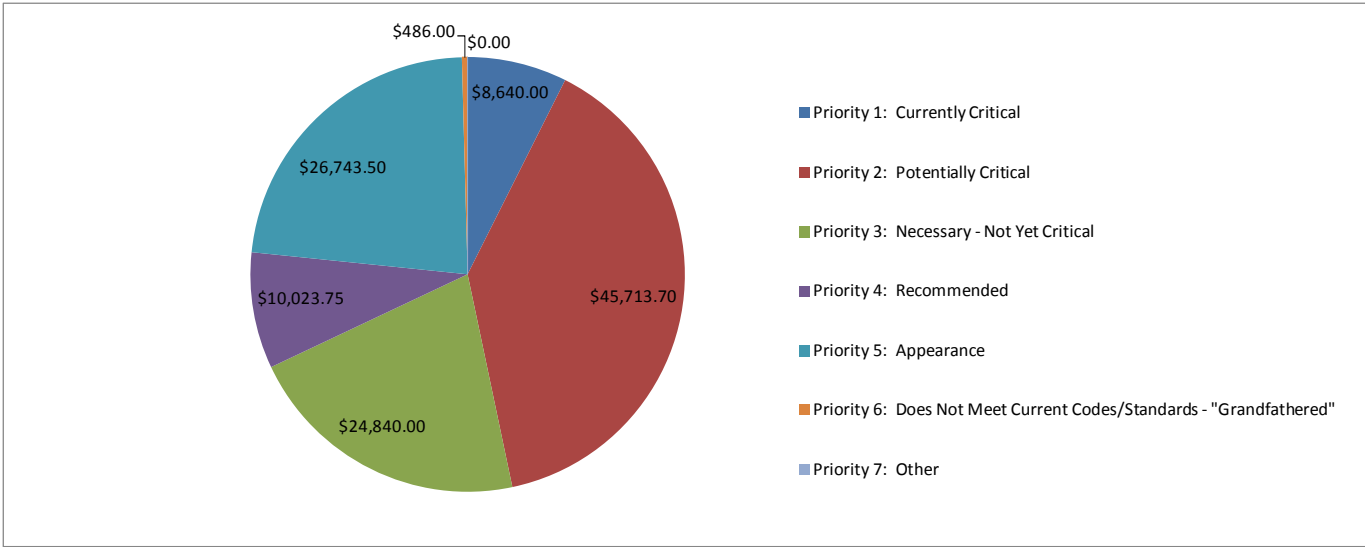
*Lower score equals higher priority

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
5.0	Plumbing System																					
5.1	Water Heater	Concessions Building		AC-P-1	3	2	The 40 MBH 50 gallon gas fired water heater is in good condition.	Replace the water heater with like kind in the next 5 years.	1	EA			\$ 5,025.00	\$ 5,025				\$ 6,784	\$ 5,815	\$ 6,110	\$ 6,912	\$ 8,849
5.2	Water Heater	Locker Room Building		AC-P-2	2	2	The 670 MBH gas fired water heater and associated storage tank are in poor condition.	Replace the domestic water heater system high efficient condensing model in the next 5 years.	1	LS			\$ 50,000.00	\$ 50,000				\$ 72,690	\$ 76,370	\$ 86,406	\$ 110,607	
5.3	Plumbing Fixtures	Throughout			4	3	Plumbing fixtures (water closets, urinals, lavatories, showers, sinks and drinking fountains) are in fair condition.	Replace the fixtures in the next 5 to 10 years.	1	LS			\$ 105,000.00	\$ 105,000					\$ 160,377	\$ 181,452	\$ 232,274	
5.4	Fire Protection	Locker Room Building			3	3	The fire protection service and sprinkler piping is in fair condition.	Replace the system in the next 5 to 10 years.	4,000	SF			\$ 4.00	\$ 16,000					\$ 24,439	\$ 27,650	\$ 35,394	
												\$ 45,500		\$ 526,225		\$ 54,680	\$ 5,817	\$ 61,769	\$ 150,803	\$ 343,253	\$ 1,044,092	\$ 1,383,423

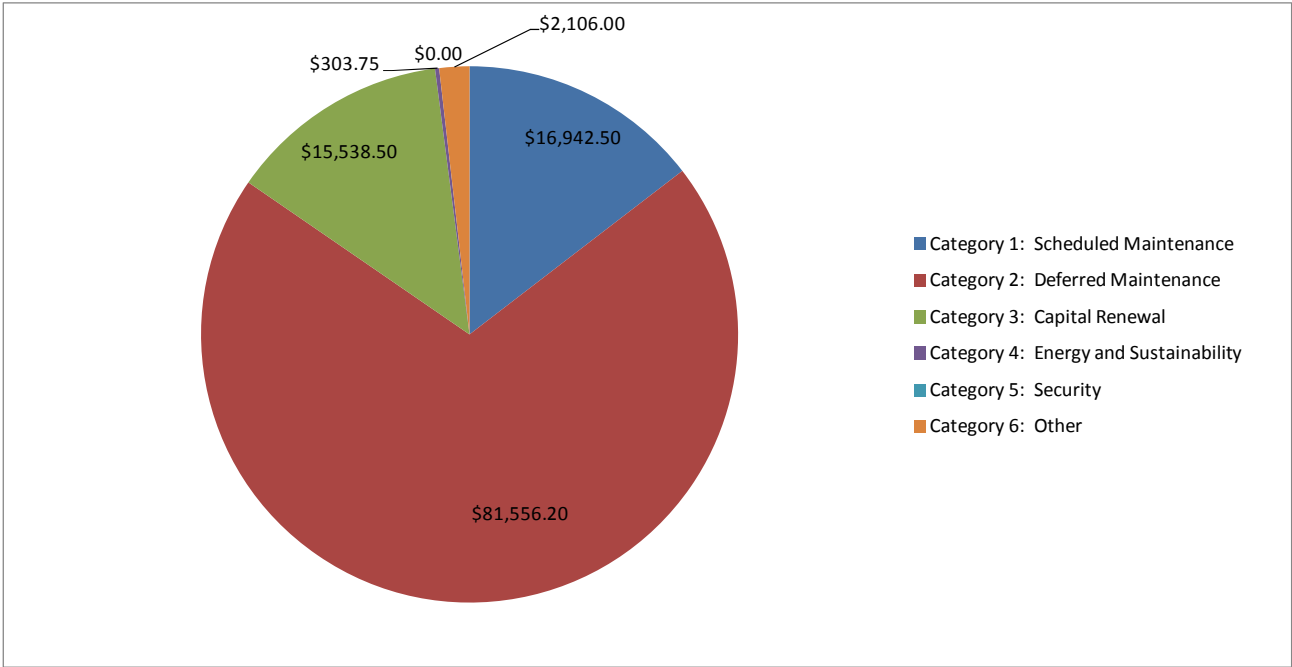
6.0	Site																						
6.1	Asphalt Pavement	Parking Lot	AC-182		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does flow to the drains and is in good condition overall.	Plan on removing both layers of asphalt, recompactng the drainage course, adding a 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	100,000	SF	\$ 4.00	\$ 400,000										\$ 884,853	
6.2	Control Joints	Concrete Pavement	AC-062 AC-181		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	6,400	LF	\$ 2.00	\$ 12,800					\$ 17,280	\$ 18,609	\$ 19,551	\$ 22,120	\$ 28,315		
6.3	Pavement Sealant	Concession Building Perimeter	AC-156		4	6	The sealant joints between the building and concrete pavement are urethane based and are degrading in the sunlight. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Replace sealant with an exterior grade silicone based sealant.	118	LF	\$ 3.00	\$ 354					\$ 478	\$ 515	\$ 541	\$ 612	\$ 783		
6.4	Play Structure	Playground			7	3	The play structure in in good condition.	Plan on replacing structure in 2038.	1	EA	\$ 40,000.00	\$ 40,000									\$ 88,486		
6.5	Screen Wall	Refuse Container	AC-169 AC-177		4	2	The mortar joints have deteriorated between the limestone cap sections, allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the limestone cap sections. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Add new limestone cap sections where removed sections are damaged. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant. Rack out damaged mortar at bricks and tuckpoint with new mortar.	1	LS	\$ 2,600.00	\$ 2,600					\$ 3,510	\$ 3,780	\$ 3,971	\$ 4,493	\$ 5,752		
6.6	Privacy Gates	Refuse Container	AC-167		4	3	The wood gates, though functional, have weathered, been damaged and the locking hardware is corroded.	Plan on replacing the wood gates with prefinished aluminum gates and new locking hardware in 2021.	1	LS	\$ 4,800.00	\$ 4,800					\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618			
6.7	Privacy Gates	Outdoor Storage	AC-113		4	3	The wood gates, though functional, have weathered, been damaged and the locking hardware is corroded.	Plan on replacing the wood gates with prefinished aluminum gates and new locking hardware in 2021.	1	LS	\$ 4,800.00	\$ 4,800					\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618			
6.8	Site Lighting	Pool and Play Areas		AC-E-17	4	4	HID flood lighting.	Replace HID fixtures with LED fixtures.	10	EA					\$ 1,525.00	\$ 15,250		\$ 20,588	\$ 22,170	\$ 23,293	\$ 26,354	\$ 33,735	
												\$ 465,354		\$ -		\$ 15,250	\$ -	\$ 41,855	\$ 59,030	\$ 62,019	\$ 70,168	\$ 1,063,161	

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Caughlin Farms Large House

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 3305 West South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 1,784 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 1917				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
								Note: Project Cost includes 35% mark-ups and fees														
								Annual Maintenance includes labor and material only														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Foundation Wall	Basement	CFLH-061 CFLH-062		2	2	There are cracks through the mortar joints of the stone foundation wall in two locations at the south side of the house.	Salvage affected stones and remove damaged mortar. Shore corners of the house during removal. Rebuild stone foundation wall with Type M mortar. Monitor foundation wall annually for signs of differential settlement.	1	LS	\$ 8,200.00	\$ 8,200						\$ 11,070	\$ 11,921	\$ 12,525	\$ 14,171	\$ 18,139
1.2	Stair	West Entrance	CFLH-055		1	2	The brick stair risers and concrete stair treads have deteriorated and broken into unsafe sections.	Replace the entire stair with new brick and precast concrete stair treads. Set on a new 42 inch deep concrete foundation wall.	1	LS	\$ 6,400.00	\$ 6,400						\$ 8,640	\$ 9,304	\$ 9,775	\$ 11,060	\$ 14,158
1.3	Guardrail	Front Porch			6	6	There is no guardrail at the front porch (code violation).	Install 42 inch tall steel guardrail panels. Paint white.	18	LF	\$ 20.00	\$ 360						\$ 486	\$ 523	\$ 550	\$ 622	\$ 796
1.4	Handrail and Columns	Front Porch	CFLH-049		5	1	The painted steel handrails and columns are corroding.	Remove all paint and corrosion with power tools and apply an exterior ferrous-metal primer. Apply two finish coats of exterior low-luster acrylic paint over primer.	1	LS	\$ 3,200.00	\$ 3,200						\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079
1.5	Wood Trim, Doors, Ceiling, Soffits, Fascias	All Elevations	CFLH-047 CFLH-063		5	1	The paint has delaminated from the wood.	Remove all loose paint, sand to bare wood and prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	1	LS	\$ 8,600.00	\$ 8,600						\$ 11,610	\$ 12,503	\$ 13,136	\$ 14,862	\$ 19,024
1.6	Windows	Basement			2	2	The paint on the wood windows has delaminated from the wood; permitting the weather to rot the wood.	Remove all windows and reconstruct with preservative-treated wood; matching historic dimensions. Replace glass with 1/4 inch thick laminated glass. Allow wood to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	2	EA	\$ 1,800.00	\$ 3,600						\$ 4,860	\$ 5,234	\$ 5,499	\$ 6,221	\$ 7,964
1.7	Window Shutters	North and West Elevations	CFLH-045 CFLH-056		5	2	The paint has delaminated from the wood; permitting the weather to rot the wood.	Replace with vinyl shutters.	10	EA	\$ 250.00	\$ 2,500						\$ 3,375	\$ 3,635	\$ 3,819	\$ 4,320	\$ 5,530
1.8	Chimney	Living Room	CFLH-066 CFLH-069		2	2	The brick and mortar are exhibiting signs of thermal shock from excessive heat due to damaged or missing flue liner. The fireplace also lacks a fresh air intake.	Remove and rebuild the chimney from the foundation to 2 feet above the nearest roof line using code-compliant fireplace dimensions and material for clay and concrete masonry. Extend furnace and water heater flues the entire chimney height. Cap with a limestone and a cement-only mortar wash. Embed metal flashing into the brick masonry joints at the roof line. Rebuild foundation with steel reinforced concrete to a minimum depth of 42 inches below grade.	1	EA	\$ 14,000.00	\$ 14,000						\$ 18,900	\$ 20,353	\$ 21,384	\$ 24,194	\$ 30,970
1.9	Asphalt Shingles	Roof	CFLH-057		2	2	The asphalt shingles are in poor condition.	Replace with asphalt shingles, underlayment and flashings.	1,828	SF	\$ 4.00	\$ 7,312						\$ 9,871	\$ 10,630	\$ 11,168	\$ 12,636	\$ 16,175
2.0	Building Interior																					
2.1	Carpet	Living Room Foyer Bedroom 1, et.al.	CFLH-003		5	3	There is no carpeting in the house. The wood plank flooring system is unsuitable as a finished floor.	Add cut pile carpet (nylon) on padding.	702	SF	\$ 5.00	\$ 3,510						\$ 4,739	\$ 5,103	\$ 5,361	\$ 6,066	\$ 7,765
2.2	Wood Windows	Living Room Bedroom 1 Bedroom 2, et.al.	CFLH-045		3	2	The paint on the wood window frames has delaminated from the wood.	Remove all loose paint, sand to bare wood and prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	23	EA	\$ 800.00	\$ 18,400						\$ 24,840	\$ 26,750	\$ 28,104	\$ 31,797	\$ 40,703
2.3	Screen Door	Living Room Kitchen	CFLH-050 CFLH-051		4	6	The living room screen door is missing and the kitchen screen door has sagged and is no longer plumb.	Replace/add vinyl screen doors and hardware.	2	EA	\$ 600.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655

City of Troy
Facility Condition Assessment
April 2018

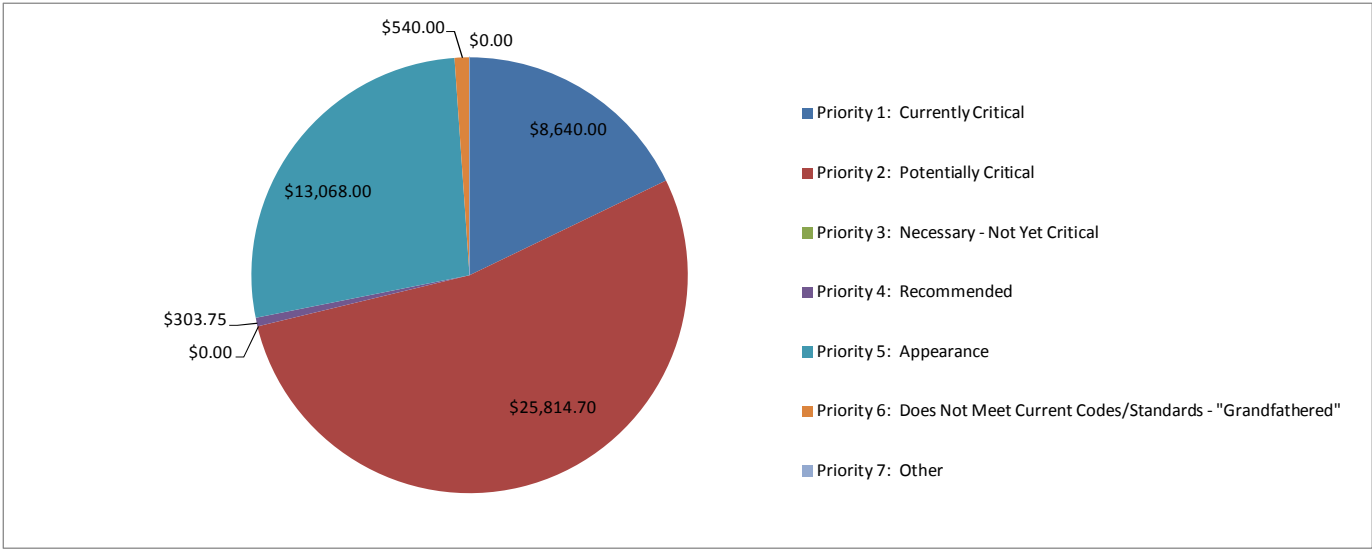
Caughlin Farms Large House

Building Information			Deficiency Priorities					Deficiency Categories															
Address: 3305 West South Boulevard			Priority 1: Currently Critical					Category 1: Scheduled Maintenance															
Building Area: 1,784 SF			Priority 2: Potentially Critical					Category 2: Deferred Maintenance															
No. of Floors: 2			Priority 3: Necessary - Not Yet Critical					Category 3: Capital Renewal															
Year Built: 1917			Priority 4: Recommended					Category 4: Energy and Sustainability															
Evaluation Date: April 2018			Priority 5: Appearance					Category 5: Security															
			Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"					Category 6: Other															
			Priority 7: Other																				
								Note: Project Cost includes 35% mark-ups and fees															
								Annual Maintenance includes labor and material only															
*Lower score equals higher priority																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
2.4	Foundation Wall	Basement	CFLH-031 CFLH-038		5	3	The foundation wall mortar joints have spalled due to cracks.	After repairing the foundation wall, tuckpoint all mortar joints with a Type M mortar. Coat with a stain blocking, adhesion promoting primer.	1	LS	\$ 2,000.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424	
3.0	Electrical System																						
3.1	Service Cable	South Exterior Wall	CFLH-060 CFLH-062		2	1	Service conductors are weathered, braided jacket is frayed.	Replace conductors and install in conduit.	1	EA					\$ 750.00	\$ 750		\$ 1,013	\$ 1,090	\$ 1,146	\$ 1,296	\$ 1,659	
3.2	Panelboard. Possibly wired with 2-wire system.	Basement	CFLH-041 CFLH-042	CFLH-E-1	4	3	Main panel is in fair condition. House may have 2-wire (ungrounded) system.	Replace main panel and wiring with 3-wire (grounded) system.	1	EA					\$ 6,000.00	\$ 6,000		\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273	
3.3	Panelboard. Possible 2-wire system.	Basement	CFLH-041	CFLH-E-2	4	3	Sub panel is in fair condition.	Plan on replacing panel and updating wiring in 2028.	1	EA					\$ 650.00	\$ 650				\$ 1,123	\$ 1,438		
3.4	Interior Building Lighting	Entire Building	CFLH-006 CFLH-009		4	4	Incandescent lamps in porcelain sockets.	Replace lamps with LED.	9	EA					\$ 25.00	\$ 225	\$ 37	\$ 304	\$ 327	\$ 344	\$ 389	\$ 498	
4.0	Mechanical System																						
4.1	Furnace	Basement		CFLH-M-1	2	2	The gas fired furnace with DX cooling coil is in poor condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405	
4.2	Condensing Unit	Outdoors	CFLH-066	CFLH-M-2	2	2	The 4 ton condensing unit is in poor condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273	
5.0	Plumbing System																						
5.1	Water Heater	Basement	CFLH-031	CFLH-P-1	3	3	The 50 gallon electric water heater is in fair condition.	Replace the water heater with like kind in 2023.	1	EA			\$ 5,025.00	\$ 5,025						\$ 7,675	\$ 8,683	\$ 11,115	
5.2	Plumbing Fixtures	Throughout			4	3	The plumbing fixtures are in poor condition.	Replace the fixtures in 2023.	1	LS			\$ 12,850.00	\$ 12,850						\$ 196,270	\$ 222,062	\$ 284,258	
												\$ 79,282	\$ 27,675		\$ 7,625	\$ 587	\$ 116,447	\$ 125,401	\$ 350,663	\$ 397,866	\$ 509,302		
6.0	Site																						
	No comments.																						
												\$ -	\$ -		\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

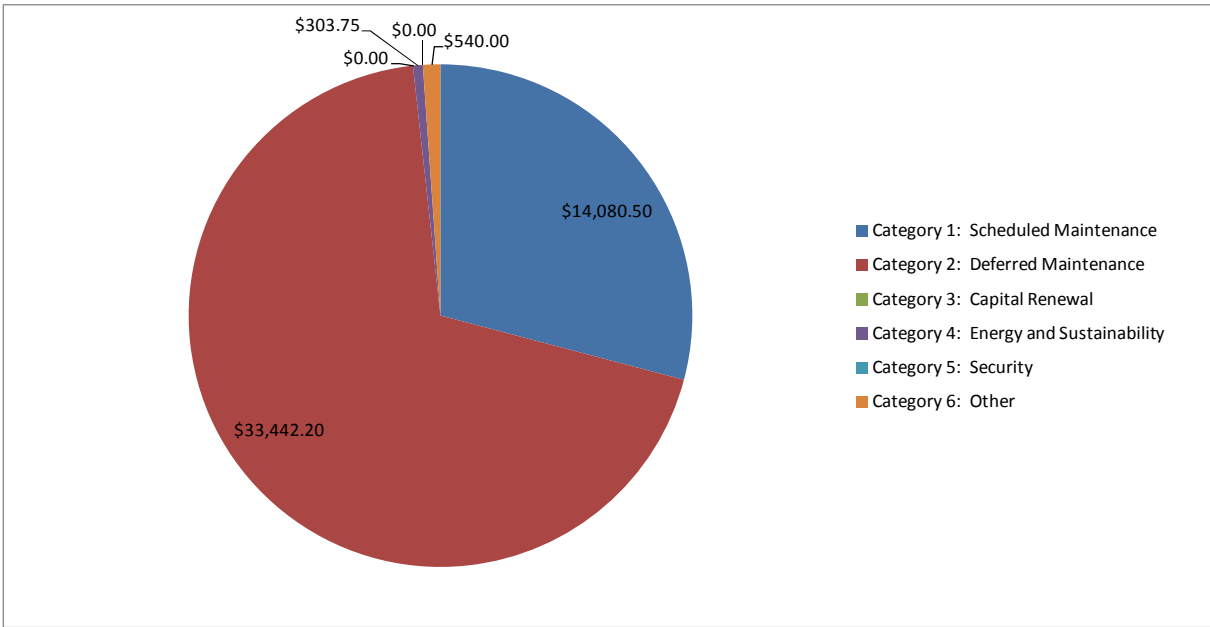


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



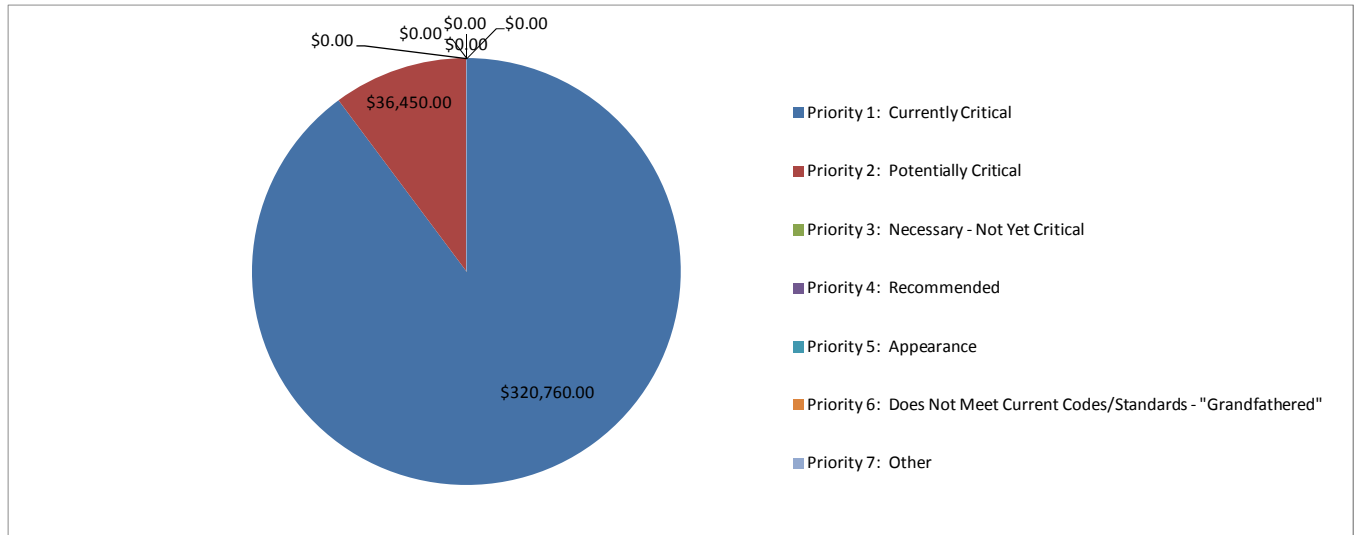
City of Troy
Facility Condition Assessment
April 2018

Caughlin Farms Small House

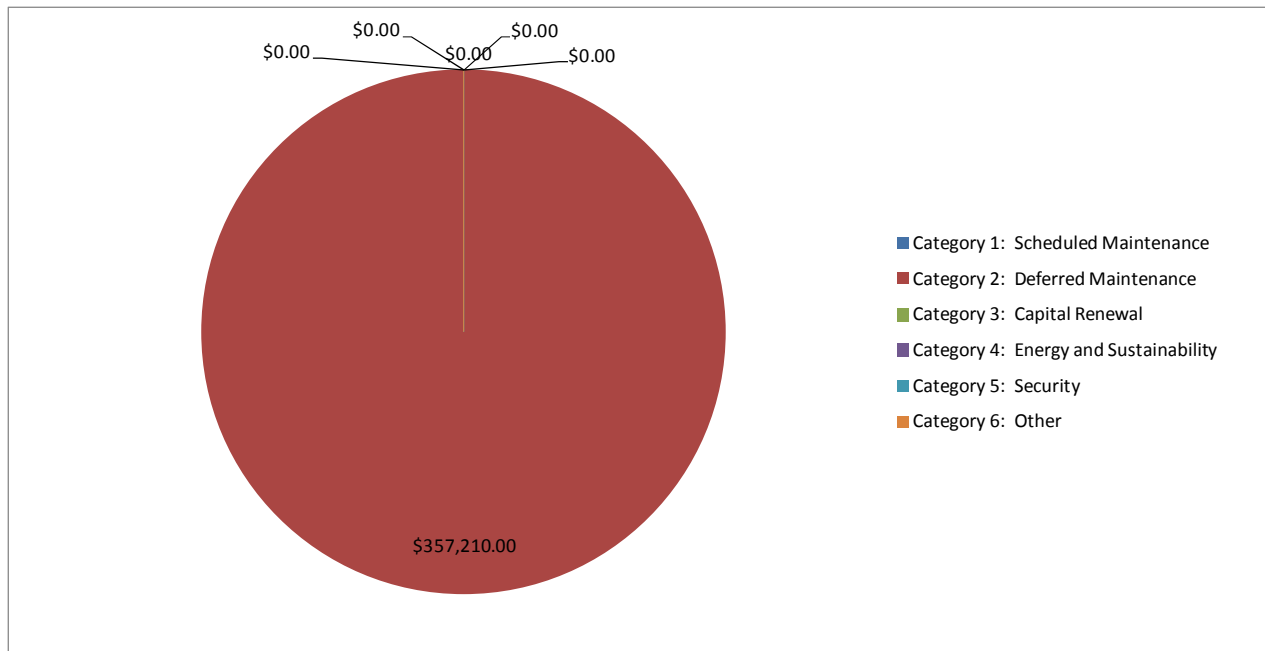
Building Information				Deficiency Priorities				Deficiency Categories															
Address: 3321 West South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 750 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 1937				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only															
				*Lower score equals higher priority																			
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
1.0	Building Exterior																						
1.1	Handrail	Front Porch			6	6	There is no handrail or guardrail at the front porch (code violation).	Install 42 inch tall steel guardrail panels and handrails. Paint black.	20	LF	\$ 20.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885	
1.2	Aluminum Siding, Trim and Ceiling	All Elevations	CFSH-045		5	1	Organic material covers the aluminum.	Pressure wash with a dirt, algae, mold and mildew stain removing solution.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770	
1.3	Windows	All Elevations	CFSH-059		2	2	The paint on the wood windows has delaminated from the wood; permitting the weather to rot the wood.	Remove all windows and reconstruct with preservative-treated wood; matching historic dimensions. Replace glass with 1/4 inch thick laminated glass. Allow wood to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	5	EA	\$ 1,800.00	\$ 9,000						\$ 12,150	\$ 13,084	\$ 13,747	\$ 15,553	\$ 19,909	
1.4	Door Frame	Stair/Entry	CFSH-057		2	2	The paint on the wood door frames has delaminated from the wood; permitting the weather to rot the wood.	Replace the wood door frame with preservative-treated wood. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	1	EA	\$ 1,800.00	\$ 1,800						\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982	
1.5	Window Screen	West and South Windows	CFSH-055		2	2	The window screens are damaged beyond repair.	Replace with fiberglass screen, 18 x 14 mesh, in the existing aluminum frame. Secure with new vinyl gasketing.	4	EA	\$ 200.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770	
1.6	Roof	Stair/Entry	CFSH-020 CFSH-060		1	2	The roof has collapsed over the stair.	Remove roofing system, including asphalt shingles, underlayment and flashing. Remove the wood ceiling system. Install 3/4 inch thick preservative-treated plywood over the existing wood structure. Cover plywood withy underlayment and asphalt shingles. Install metal flashing along edges. Replace wood ceiling with gypsum board. Tape, mud and sand joints. Prime with an interior gypsum board primer. Apply two finish coats of interior low-luster acrylic enamel over primer.	1	LS	\$ 6,400.00	\$ 6,400						\$ 8,640	\$ 9,304	\$ 9,775	\$ 11,060	\$ 14,158	
1.7	Asphalt Shingles	Roof			2	2	The asphalt shingles are in poor condition.	Replace with asphalt shingles, underlayment and flashings.	1,093	SF	\$ 4.00	\$ 4,372						\$ 5,902	\$ 6,356	\$ 6,678	\$ 7,555	\$ 9,671	
2.0	Building Interior																						
2.1	Carpet	Living Room Foyer Bedroom 1, et.al.	CFSH-021		5	1	The carpeting and padding has been damaged by water and stained by debris.	Replace with cut pile carpet (nylon) on padding.	1,576	SF	\$ 5.00	\$ 7,880						\$ 10,638	\$ 11,456	\$ 12,036	\$ 13,618	\$ 17,432	
2.2	Water Damage	Bedroom 2	CFSH-010 CFSH-017		2	2	Water infiltrated from the roof and damaged the ceiling and wall finishes.	Replace damaged areas with gypsum board. Tape, mud and sand joints. Prime with an interior gypsum board primer. Apply two finish coats of interior low-luster acrylic enamel over primer.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309	
2.3	Exterior Doors	Foyer	CFSH-044		5	1	The screen is missing from the outer door and its wood finish and the inner door's wood finish has weathered from delaminated paint.	Replace missing screen. Remove all loose paint and coat the wood with an adhesion promoting primer and two finish coats of exterior low-luster acrylic enamel over the primer.	1	LS	\$ 1,000.00	\$ 1,000						\$ 1,350	\$ 1,454	\$ 1,527	\$ 1,728	\$ 2,212	
3.0	Electrical System																						
3.1	Service Cable	South Exterior Wall	CFSH-054		2	1	Service conductors are very weathered, braided jacket has split, leaving insulation exposed.	Replace conductors and install in conduit.	1	EA						\$ 750.00	\$ 750		\$ 1,013	\$ 1,090	\$ 1,146	\$ 1,296	\$ 1,659
3.2	Panelboard. Possible 2-wire system.	Basement		CFSH-E-1	4	3	Main panel is in fair condition. House may have 2-wire system which should be replaced with 3-wire (grounded) system.	Plan on replacing main panel and updating wiring in 2028.	1	EA						\$ 6,000.00	\$ 6,000				\$ 10,368	\$ 13,272	

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Caughlin Farms Large Barn

Building Information Address: 3325 West South Boulevard Building Area: 1,800 SF No. of Floors: 2 Year Built: 1857 Evaluation Date: April 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only									
								*Lower score equals higher priority													

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architctural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Windows	All Elevations	CFLB-010		2	2	The paint on the wood windows has delaminated from the wood; permitting the weather to rot the wood.	Remove all windows and reconstruct with preservative-treated wood; matching historic dimensions. Replace glass with 1/4 inch thick laminated glass. Allow wood to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	10	EA	\$ 2,400.00	\$ 24,000						\$ 32,400	\$ 34,891	\$ 36,658	\$ 41,475	\$ 53,091
1.2	Wood Siding and Trim	All Elevations	CFLB-009		1	2	The paint on the wood siding, window trim, louver, soffit and fascia has delaminated from the wood; permitting the weather to rot the wood.	Replace all wood siding, window trim, louver, soffit and fascia with preservative-treated wood; matching historic dimensions. Allow wood to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	2,000	SF	\$ 45.00	\$ 90,000						\$ 121,500	\$ 130,842	\$ 137,466	\$ 155,530	\$ 199,092
1.3	Gutters	North and South Elevations	CFLB-005		2	2	Due to the damaged wood fascia boards, sections of the gutters and downspouts have fallen from the building.	Replace all gutters and downspouts and cover gutters with leaf screens.	100	LF	\$ 30.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
1.4	Asphalt Shingles	Roof	CFLB-005 CFLB-021		1	2	The asphalt shingles are in poor condition and a section of the roof has collapsed.	Replace all wood roof planks with preservative-treated wood planks matching historic dimensions. Apply new asphalt shingles over a continuous underlayment and install metal flashing at all edge conditions.	2,232	SF	\$ 50.00	\$ 111,600						\$ 150,660	\$ 162,244	\$ 170,458	\$ 192,858	\$ 246,874
2.0	Building Interior																					
2.1	Sliding Wood Door	Basement Barn Storage 3	CFLB-006		1	2	The paint on the sliding wood doors has delaminated from the wood; permitting the weather to rot the wood. The door hardware is difficult to operate.	Replace the wood doors with preservative-treated wood door frames. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer. Hang the doors on nylon rollers in stainless steel tracks. Install exterior grade locksets.	800	SF	\$ 45.00	\$ 36,000						\$ 48,600	\$ 52,337	\$ 54,986	\$ 62,212	\$ 79,637
3.0	Electrical System																					
	Not applicable.																					
4.0	Mechanical System																					
	Not applicable.																					
5.0	Plumbing System																					
	Not applicable.																					
												\$ 264,600		\$ -		\$ -	\$ -	\$ 357,210	\$ 384,676	\$ 404,150	\$ 457,259	\$ 585,330

6.0	Site																					
6.1	Bench	Walking Path	CFLB-038		2	3	The bench is made of wood and is weathering without protection (i.e. paint) and is covered in organic material. The condition of the bench is good and in character with the farm.	Pressure wash with a dirt, algae, mold and mildew stain removing solution and coat with an oil-modified polyurethane.	9	EA	\$ 400.00	\$ 3,600						\$ 4,860	\$ 5,234	\$ 5,499	\$ 6,221	\$ 7,964
6.2	Wood Siding and Trim	Storage Shed Elevations	CFLB-042		3	1	The shed is made of wood and is weathering without protection (i.e. paint) and is covered in organic material. The condition of the shed is good and in character with the farm.	Pressure wash with a dirt, algae, mold and mildew stain removing solution and coat with an oil-modified polyurethane.	1	LS	\$ 2,200.00	\$ 2,200						\$ 2,970	\$ 3,198	\$ 3,360	\$ 3,802	\$ 4,867

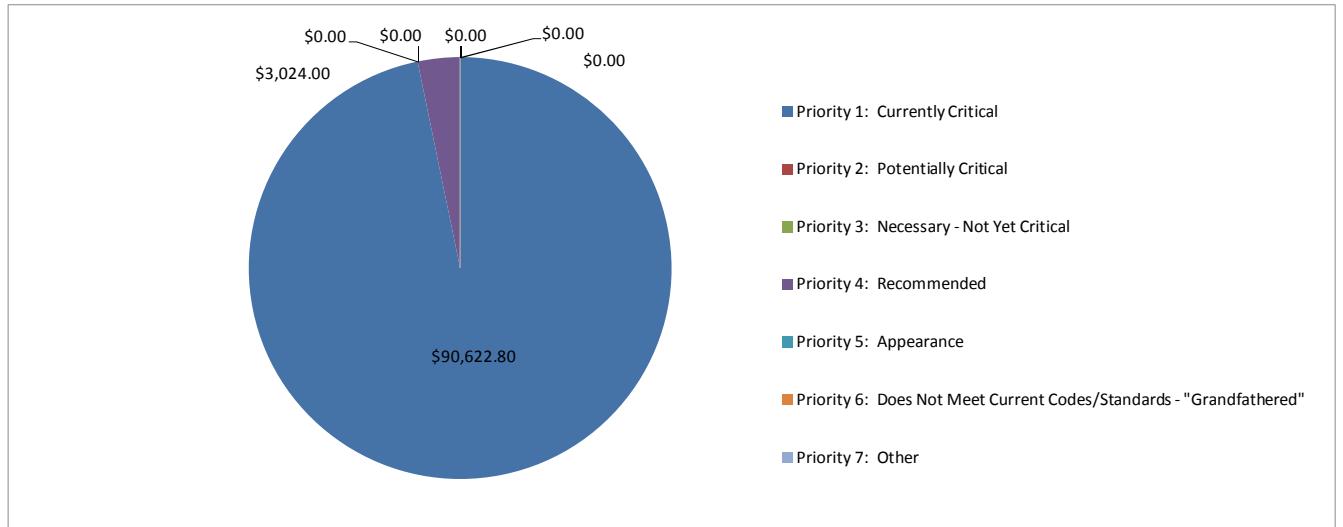
City of Troy
Facility Condition Assessment
April 2018

Caughlin Farms Large Barn

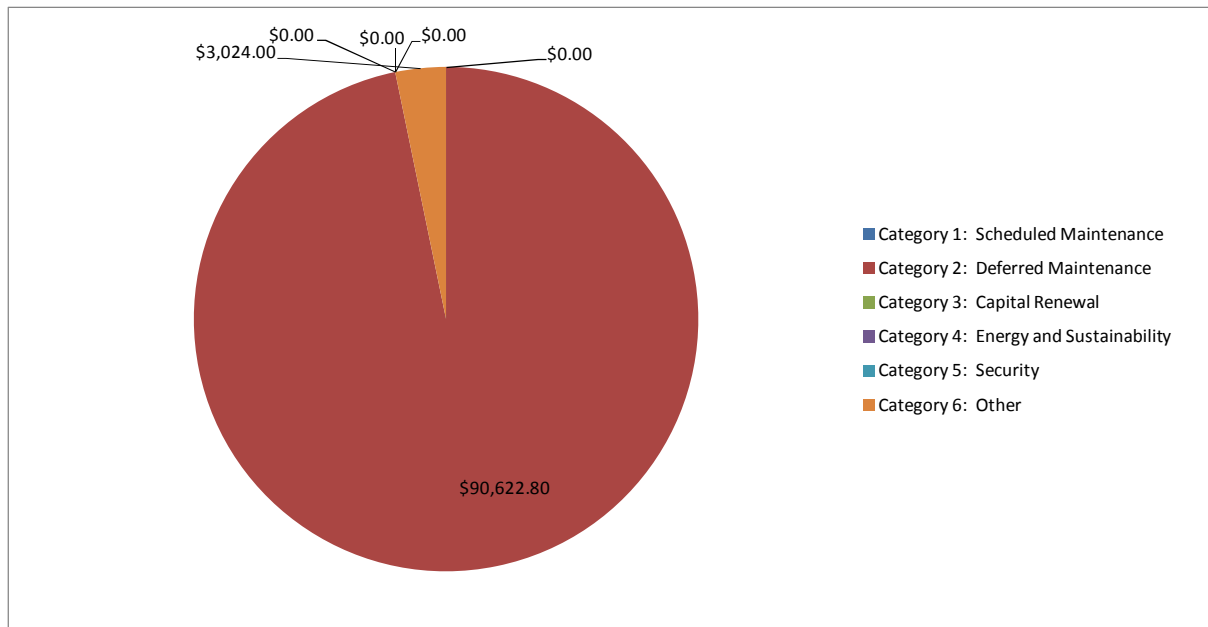
Building Information				Deficiency Priorities				Deficiency Categories															
Address: 3325 West South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 1,800 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 1857				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other																			
*Lower score equals higher priority																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
6.3	Wood Siding and Trim	Water Piping Storage Shed	CFLB-046		3	1	The shed is made of wood and is weathering without protection (i.e. paint) and is covered in organic material. The condition of the shed is good and in character with the farm.	Pressure wash with a dirt, algae, mold and mildew stain removing solution and coat with an oil-modified polyurethane.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770	
6.4	Wood Fencing	Site Perimeter	CFLB-049 CFLB-051		3	1	The fencing is made of wood and is weathering without protection (i.e. paint) and is covered in organic material. The wood fence supports have rotted at their bottoms due to their adjacency to the soil and damaged from lawn equipment. The condition of the fencing is fair and in character with the farm.	Pressure wash with a dirt, algae, mold and mildew stain removing solution and coat with an oil-modified polyurethane and cover the bottoms of the wood fence supports with vinyl covers.	740	LF	\$ 8.00	\$ 5,920						\$ 7,992	\$ 8,607	\$ 9,042	\$ 10,230	\$ 13,096	
												\$ 12,520		\$ -		\$ -	\$ -	\$ -	\$ 16,902	\$ 18,202	\$ 19,123	\$ 21,636	\$ 27,696

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



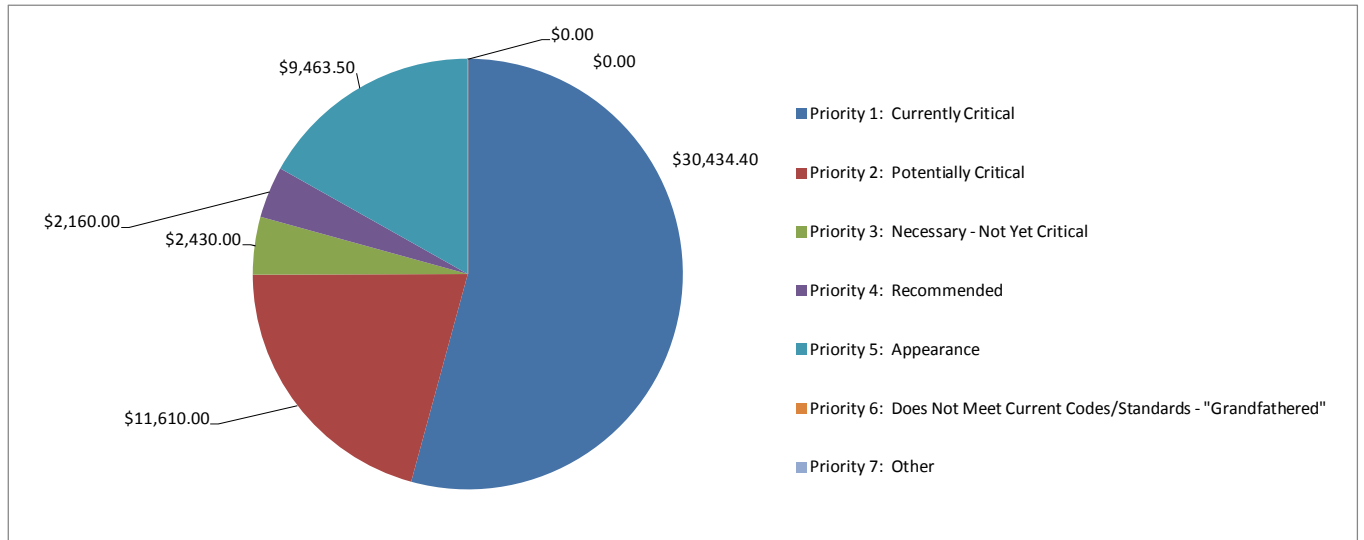
Building Information	Deficiency Priorities	Deficiency Categories
Address: 3325 West South Boulevard	Priority 1: Currently Critical	Category 1: Scheduled Maintenance
Building Area: 1,200 SF	Priority 2: Potentially Critical	Category 2: Deferred Maintenance
No. of Floors: 1	Priority 3: Necessary - Not Yet Critical	Category 3: Capital Renewal
Year Built: 1857	Priority 4: Recommended	Category 4: Energy and Sustainability
Evaluation Date: April 2018	Priority 5: Appearance	Category 5: Security
	Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"	Category 6: Other
	Priority 7: Other	
		*Lower score equals higher priority
		Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
1.0	Building Exterior																						
1.1	Wood Siding and Trim	All Elevations	CFSB-007 CFSB-009		1	2	The paint on the wood siding, window trim, louver, soffit and fascia has delaminated from the wood; permitting the weather to rot the wood. Several damaged sections have been replaced with mismatched boards.	Replace all wood siding, soffit and fascia with preservative-treated wood; matching historic dimensions. Allow wood to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer	1,360	SF	\$ 45.00	\$ 61,200						\$ 82,620	\$ 88,973	\$ 93,477	\$ 105,761	\$ 135,382	
1.2	Gutters	East and West Elevations	CFSB-008 CFSB-009		4	6	The barn does not have gutters and downspouts. Water has splashed up from grade and deteriorated the bottoms of the wood siding.	Add gutters and downspouts and cover gutters with leaf screens.	80	LF	\$ 28.00	\$ 2,240						\$ 3,024	\$ 3,257	\$ 3,421	\$ 3,871	\$ 4,955	
1.3	Asphalt Shingles	Roof	CFSB-004		1	2	The asphalt shingles are in poor condition.	Replace with asphalt shingles, underlayment and flashings.	357	SF	\$ 4.00	\$ 1,428						\$ 1,928	\$ 2,076	\$ 2,181	\$ 2,468	\$ 3,159	
2.0	Building Interior																						
2.1	Sliding Wood Door	Barn	CFSB-001		1	2	The paint on the sliding wood door has delaminated from the wood; permitting the weather to rot the wood. The door hardware is difficult to operate.	Replace the wood door with preservative-treated wood. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer. Hang the door on nylon rollers in stainless steel tracks. Install exterior grade locksets.	100	SF	\$ 45.00	\$ 4,500						\$ 6,075	\$ 6,542	\$ 6,873	\$ 7,777	\$ 9,955	
3.0	Electrical System																						
	Not applicable.																						
4.0	Mechanical System																						
	Not applicable.																						
5.0	Plumbing System																						
	Not applicable.																						
												\$ 69,368		\$ -		\$ -		\$ -	\$ 93,647	\$ 100,847	\$ 105,953	\$ 119,876	\$ 153,451
6.0	Site																						
	No comments.																						
												\$ -		\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

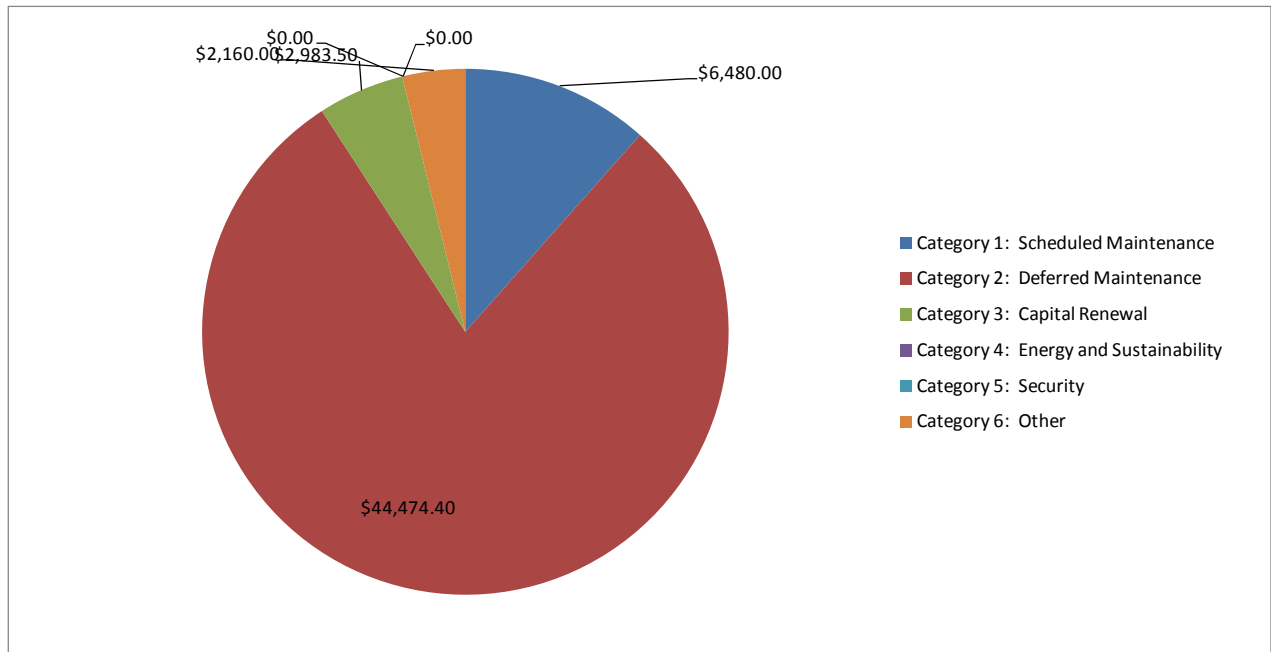


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Caughlin Farms Storage Garage

Building Information				Deficiency Priorities				Deficiency Categories																
Address: 3325 West South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																
Building Area: 660 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																
Year Built: 1982				Priority 4: Recommended				Category 4: Energy and Sustainability																
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security																
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																
				Priority 7: Other																				
*Lower score equals higher priority																				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only				
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost		
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal								
1.0	Building Exterior																							
1.1	Wood Siding, Trim, Doors, Soffits, Fascias	All Elevations	CFSG-002 CFSG-003		5	1	The paint has delaminated from the wood.	Remove all loose paint, sand to bare wood and prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	1	LS	\$ 4,800.00	\$ 4,800						\$ 6,480	\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618		
1.2	Attic Louver	North and South Elevations	CFSG-015		4	6	The attic vents at each gable side provide inadequate roofing ventilation.	Remove attic vents and infill with wood construction and finish boards matching adjacent construction.	2	EA	\$ 800.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539		
1.3	Gutters	East and West Elevations	CFSG-017		2	2	Due to the damaged wood fascia boards, sections of the gutters and downspouts have fallen to the ground.	Replace all gutters and downspouts and cover gutters with leaf screens.	60	LF	\$ 30.00	\$ 1,800						\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982		
1.4	Asphalt Shingles	Roof	CFSG-011		1	2	The asphalt shingles are in poor condition; resulting in water infiltration and damage to the interior finishes.	Replace with asphalt shingles, underlayment and flashings.	686	SF	\$ 4.00	\$ 2,744						\$ 3,704	\$ 3,989	\$ 4,191	\$ 4,742	\$ 6,070		
2.0	Building Interior																							
2.1	Carpet	Living Room Kitchen			5	3	There is no carpeting in the building.	Add cut pile carpet (nylon) on padding.	362	SF	\$ 5.00	\$ 1,810						\$ 2,444	\$ 2,631	\$ 2,765	\$ 3,128	\$ 4,004		
2.2	Floor Tile	Bathroom			5	3	There is no floor tile or base in the bathroom.	Add 2 x 2 floor tile and base over thinset on the concrete floor slab.	1	LS	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885		
2.3	Exterior Door	Living Room	CFSG-005		3	2	The door has weathered beyond reuse and the hardware is missing.	Replace with an unfinished pre-hung wood door with 6 glass lites and exterior grade cylinder hardware.	1	EA	\$ 1,800.00	\$ 1,800						\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982		
2.4	Interior Door	Living Room Bathroom			1	2	The interior wood doors are water damaged.	Replace with unfinished pre-hung wood doors and cylinder hardware.	3	EA	\$ 600.00	\$ 1,800						\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982		
2.5	Windows	All Elevations	CFSG-013 CFSG-014		2	2	The condition of the windows is poor.	Replace with vinyl double hung windows with 1 inch insulating glass, decorative colonial grilles and framed fiberglass screens (18 x 14 mesh). Rebuild wood jambs, sill and head with preservative-treated lumber, as required, for securing windows.	6	EA	\$ 800.00	\$ 4,800						\$ 6,480	\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618		
2.6	Garage Door	Garage			2	2	The wood garage door is heavy and requires new hardware (torsion spring, torsion tube, cable drums, cables, etc.) to operate the door safely.	Replace garage door with a vinyl faced, insulated garage door (no windows) with bottom and side seals. Replace all garage door hardware. Install a chain drive electric garage door opener with battery backup and safety sensors.	1	LS	\$ 2,000.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424		
2.7	Interior Finishes	Garage Living Room Kitchen Bathroom	CFSG-022		1	2	All the interior finishes on the walls and ceilings are damaged from water infiltration and have fallen to the floor.	Replace all wall and ceiling finishes with gypsum board. Tape, mud and sand joints. Prime with an interior gypsum board primer. Apply two finish coats of interior low-luster acrylic enamel over primer. Insulate all walls with 3-1/2 inch thick batt insulation. Insulate the attic with 16 inch thick blanket insulation.	1	LS	\$ 18,000.00	\$ 18,000						\$ 24,300	\$ 26,168	\$ 27,493	\$ 31,106	\$ 39,818		
3.0	Electrical System																							
	No comments.																							
4.0	Mechanical System																							
4.1	Unit Heater	Garage		CFSG-M-1 CFSG-M-2 CFSG-M-3	2	2	The recessed wall mounted electric unit heaters are in poor condition.	Replace the unit heaters with like kind in 2023.	3	EA			\$ 1,000.00	\$ 3,000						\$ 4,582	\$ 5,184	\$ 6,636		
5.0	Plumbing System																							
5.1	Plumbing Fixtures	Throughout	CFSG-025		2	2	The plumbing fixtures are in poor condition.	Replace the fixtures in 2023.	1	LS			\$ 4,550.00	\$ 4,550						\$ 6,950	\$ 7,863	\$ 10,066		
												\$ 41,554	\$ 7,550		\$ -		\$ -	\$ 56,098	\$ 60,411	\$ 75,001	\$ 84,857	\$ 108,624		

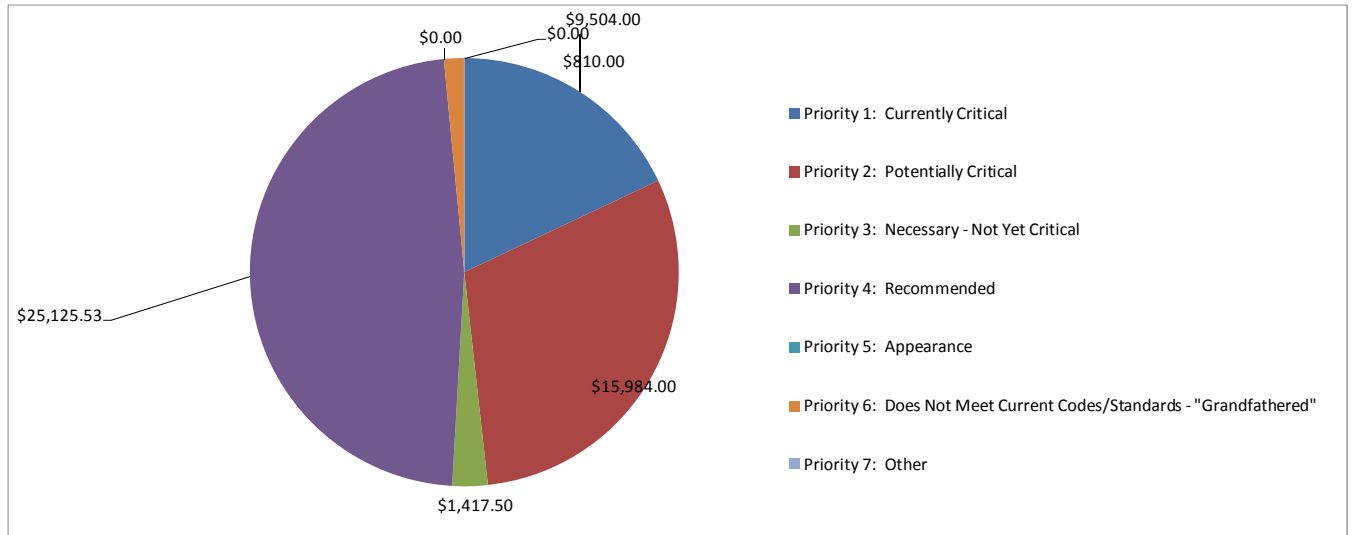
City of Troy
Facility Condition Assessment
April 2018

Caughlin Farms Storage Garage

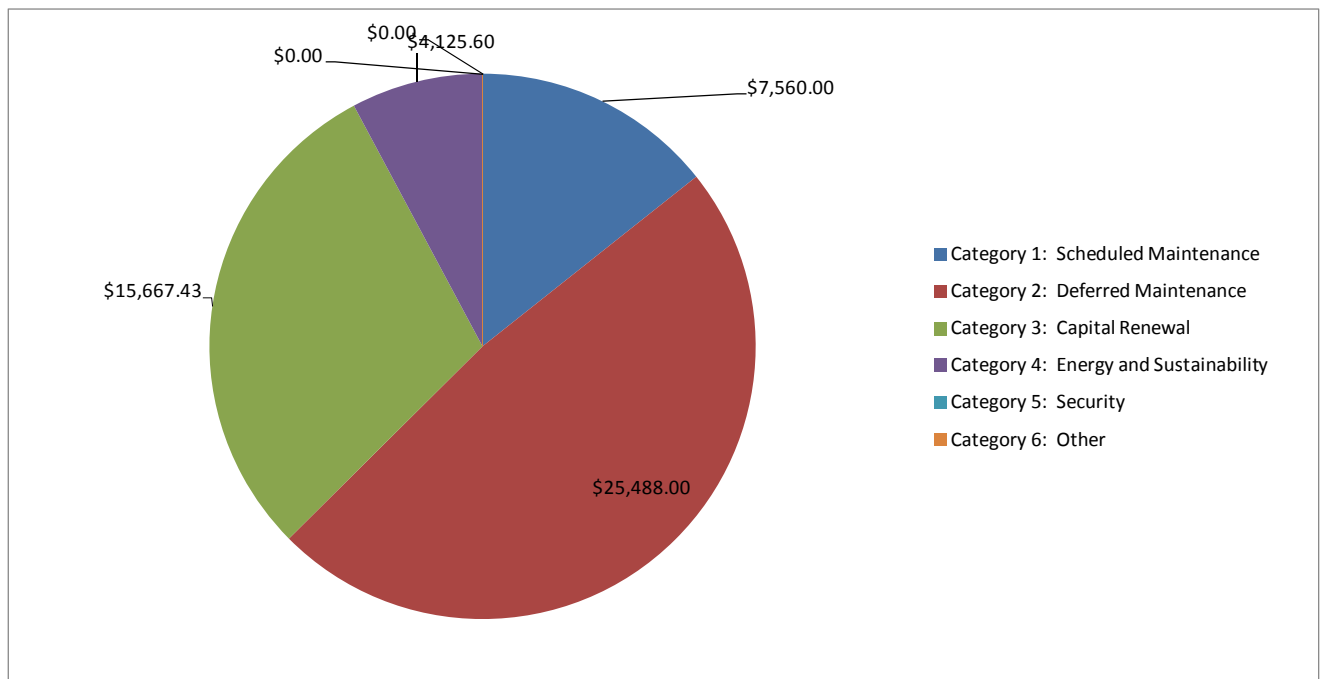
Building Information Address: 3325 West South Boulevard Building Area: 660 SF No. of Floors: 1 Year Built: 1982 Evaluation Date: April 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other *Lower score equals higher priority														Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only					
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost					
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal											
6.0	Site																										
	No comments.																										
												\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-		

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Caughlin Farms Portable Classrooms

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 3325 West South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 540 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 1982				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				*Lower score equals higher priority														
				Note: Project Cost includes 35% mark-ups and fees																		
				Annual Maintenance includes labor and material only																		
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Skirt Boards	Building Perimeter	CFPC-002		1	2	The wood skirt boards have rotted due to their adjacency to the soil and damaged due to lawn equipment.	Replace wood skirt boards with the following system: vinyl soffit (position vertically), building wrap (i.e. Tyvek), 3/4 inch preservative-treated plywood, 2 x 4 preservative-treated wood studs, stainless steel fasteners. Install vented vinyl soffit sections at south elevation. Trench under building perimeter and pour a 12 inch deep by 12 inch wide "rat wall".	128	SF	\$ 35.00	\$ 4,480						\$ 6,048	\$ 6,513	\$ 6,843	\$ 7,742	\$ 9,910
1.2	Wood Siding	All Elevations	CFPC-002		4	1	The paint on the wood siding has delaminated from the wood.	Remove all loose paint and coat the wood siding with an adhesion promoting primer and two finish coats of exterior low-luster acrylic enamel over the primer.	1	LS	\$ 5,600.00	\$ 5,600						\$ 7,560	\$ 8,141	\$ 8,553	\$ 9,677	\$ 12,388
1.3	Door Frame	Exterior Doors	CFPC-012		2	2	The paint on the wood door frames has delaminated from the wood; permitting the weather to rot the frames.	Replace the wood door frames with preservative-treated wood door frames. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	2	EA	\$ 1,800.00	\$ 3,600						\$ 4,860	\$ 5,234	\$ 5,499	\$ 6,221	\$ 7,964
1.4	Wood Fascia	All Elevations	CFPC-011		1	2	The wood fascia paint has faded and sections of the wood fascia have been weather damaged.	Replace damaged wood fascia boards. Prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	128	LF	\$ 20.00	\$ 2,560						\$ 3,456	\$ 3,722	\$ 3,910	\$ 4,424	\$ 5,663
1.5	Gutters	East and West Elevations	CFPC-009 CFPC-014		2	2	Due to the damaged wood fascia boards, sections of the gutters and downspouts have fallen to the ground.	Replace all gutters and downspouts and cover gutters with leaf screens.	128	LF	\$ 30.00	\$ 3,840						\$ 5,184	\$ 5,583	\$ 5,865	\$ 6,636	\$ 8,495
1.6	Asphalt Shingles	Roof	CFPC-014		4	3	The asphalt shingles are in fair condition.	Plan on replacing the asphalt shingles, underlayment and flashings in 2023.	800	SF	\$ 4.00	\$ 3,200								\$ 4,888	\$ 5,530	\$ 7,079
2.0	Building Interior																					
2.1	Carpet	Classroom Water Heater Closet/Furnace	CFPC-025		4	3	The carpet is in poor condition with tears along the seams.	Replace with carpet tiles.	901	SF	\$ 5.50	\$ 4,956						\$ 6,690	\$ 7,204	\$ 7,569	\$ 8,564	\$ 10,962
2.2	Exterior Door	Classroom	CFPC-012 CFPC-019		2	2	The door hardware is not barrier-free compliant. Organic material and water infiltration have damaged the door's core material.	Replace the doors with fiberglass reinforced polyester (FRP) doors.	2	EA	\$ 2,200.00	\$ 4,400						\$ 5,940	\$ 6,397	\$ 6,721	\$ 7,604	\$ 9,733
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Entire Building	CFPC-023		6	3	Additional fixtures with emergency back-up are required to comply with code.	Add emergency battery packs to select existing fixtures.	2	EA					\$ 300.00	\$ 600	\$ 500	\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327
3.2	Exit Signs	Entire Building	CFPC-018		3	3	Exit signs with battery backup are required.	Install exit signs with battery backup at exit doors.	2	EA					\$ 525.00	\$ 1,050	\$ 500	\$ 1,418	\$ 1,526	\$ 1,604	\$ 1,815	\$ 2,323
3.3	Panelboard (1972?). Possibly wired with 2-wire system.	Closet		CFPC-E-1	4	3	Panel is obsolete 'pushmatic'. Classroom may have 2-wire system which should be replaced with 3-wire (grounded) system.	Plan on replacing main panel and updating wiring.	1	EA					\$ 5,000.00	\$ 5,000		\$ 6,750	\$ 7,269	\$ 7,637	\$ 8,641	\$ 11,061
3.4	Interior Building Lighting	Entire Building			4	4	Recessed 2x4 with fluorescent lamps	Replace lamps with LED	10	EA					\$ 250.00	\$ 2,500	\$ 33	\$ 3,375	\$ 3,635	\$ 3,819	\$ 4,320	\$ 5,530
3.5	Exterior Building Lighting	Entry doors	CFPC-003		4	4	Original incandescent wall packs have yellowed.	Replace with LED fixtures	2	EA					\$ 278.00	\$ 556		\$ 751	\$ 808	\$ 849	\$ 961	\$ 1,230
4.0	Mechanical System																					
4.1	Furnace	Closet		CFPC-M-1	2	2	The 60 MBH gas fired furnace with DX cooling coil is in poor condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405
4.2	Condensing Unit	Outdoors		CFPC-M-2	2	2	The 2 ton condensing unit is in poor condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273

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Caughlin Farms Portable Classrooms

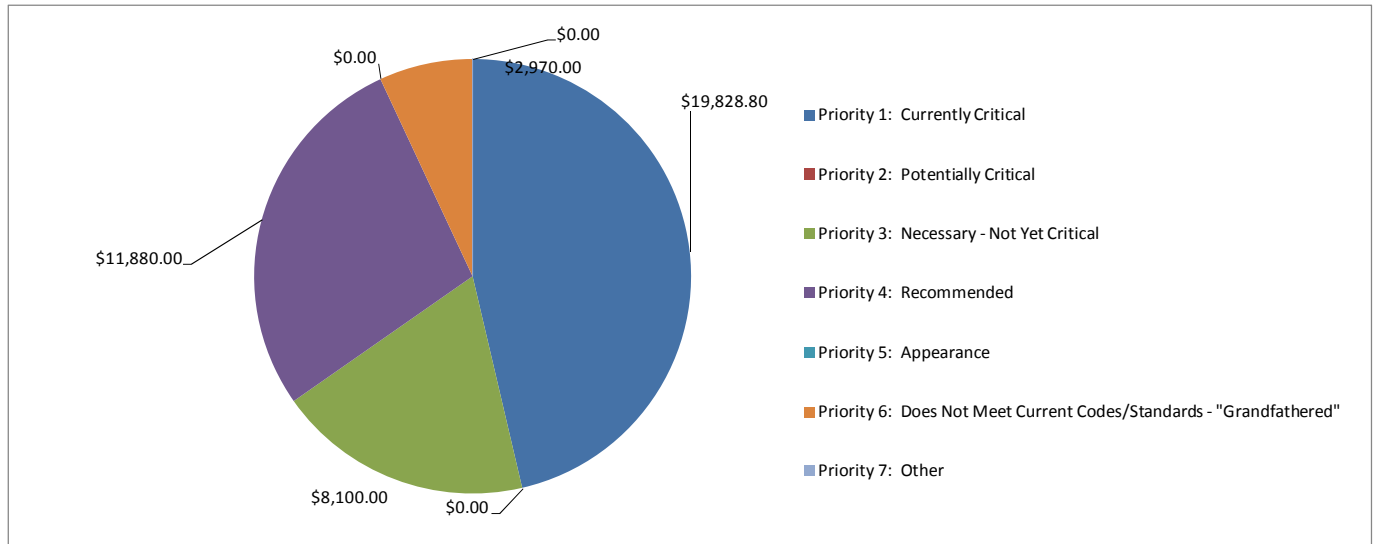
Building Information		Deficiency Priorities		Deficiency Categories	
Address: 3325 West South Boulevard		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area: 540 SF		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
No. of Floors: 1		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
Year Built: 1982		Priority 4: Recommended		Category 4: Energy and Sustainability	
Evaluation Date: April 2018		Priority 5: Appearance		Category 5: Security	
		Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"		Category 6: Other	
		Priority 7: Other			
				*Lower score equals higher priority	
				Note: Project Cost includes 35% mark-ups and fees	
				Annual Maintenance includes labor and material only	

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
5.0	Plumbing System																					
5.1	Water Heater	Closet		CFPC-P-1	2	2	The 30 gallon electric water heater is in poor condition.	Replace the water heater with like kind in 2023.	1	EA			\$ 5,025.00	\$ 5,025						\$ 7,675	\$ 8,683	\$ 11,115
5.2	Sink	Classroom			2	2	The sink is in poor condition.	Replace the sink in 2023.	1	EA			\$ 1,350.00	\$ 1,350						\$ 2,062	\$ 2,333	\$ 2,987
												\$ 32,636	\$ 16,175	\$ 9,706	\$ 1,583	\$ 52,841	\$ 56,904	\$ 89,378	\$ 101,123	\$ 129,446		

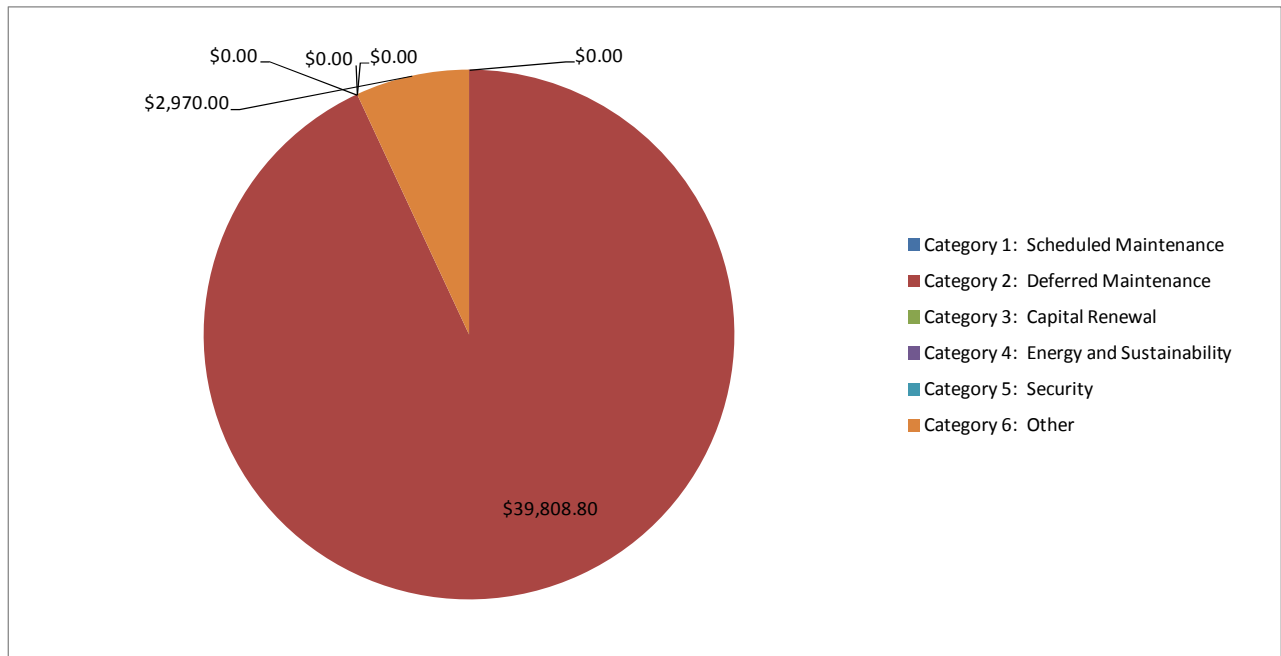
6.0	Site																					
6.1	Control Joints	Concrete Ramp	CFPC-013		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Remove soil and seal joints with an exterior grade silicone sealant.	25	LF	\$ 2.00	\$ 50						\$ 68	\$ 73	\$ 76	\$ 86	\$ 111
6.2	Handrail	Concrete Ramp	CFPC-012		3	2	The paint has delaminated from the steel handrails and corrosion has formed on the handrails.	Remove all paint and corrosion with power tools and apply an exterior ferrous-metal primer. Apply two finish coats of exterior low-luster acrylic paint over primer.	1	LS	\$ 1,600.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
6.3	Wood Stair	West Exterior Door	CFPC-001		1	2	The wood step at the wood platform outside the west exterior door is not level and does not have a code compliant riser height.	Replace wood step with two stone steps set on 6 inches of compacted gravel fill.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
6.4	Wood Platform	West Exterior Door	CFPC-003		2	1	The wood platform is weathering without protection (i.e. paint) and is covered in organic material.	Pressure wash with a dirt, algae, mold and mildew stain removing solution and coat with an oil-modified polyurethane.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
												\$ 3,650	\$ -	\$ -	\$ -	\$ -	\$ 4,928	\$ 5,306	\$ 5,575	\$ 6,308	\$ 8,074	

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

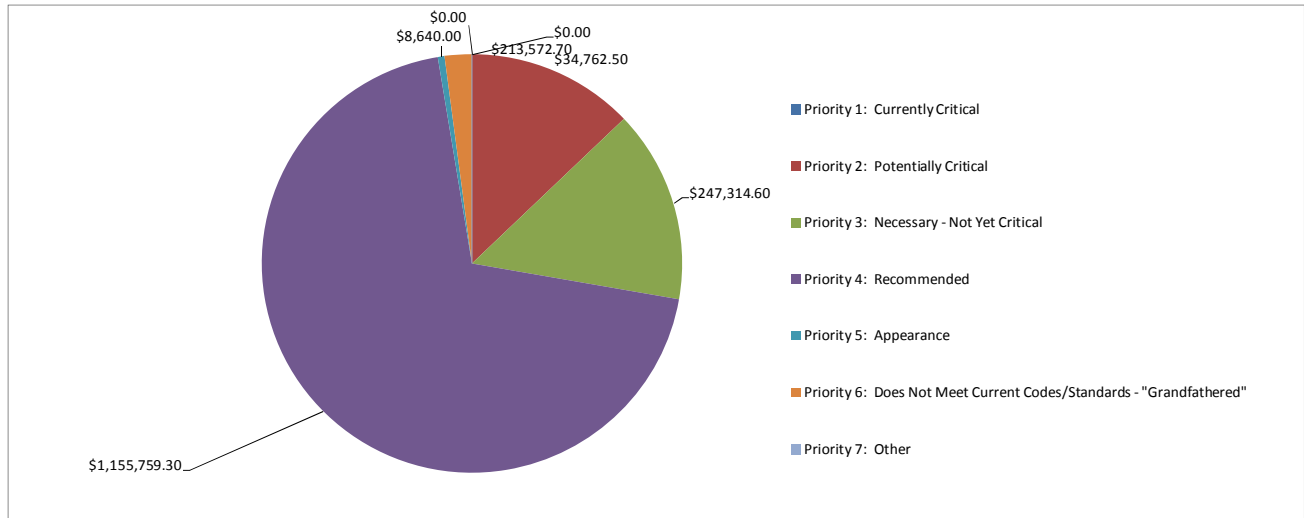
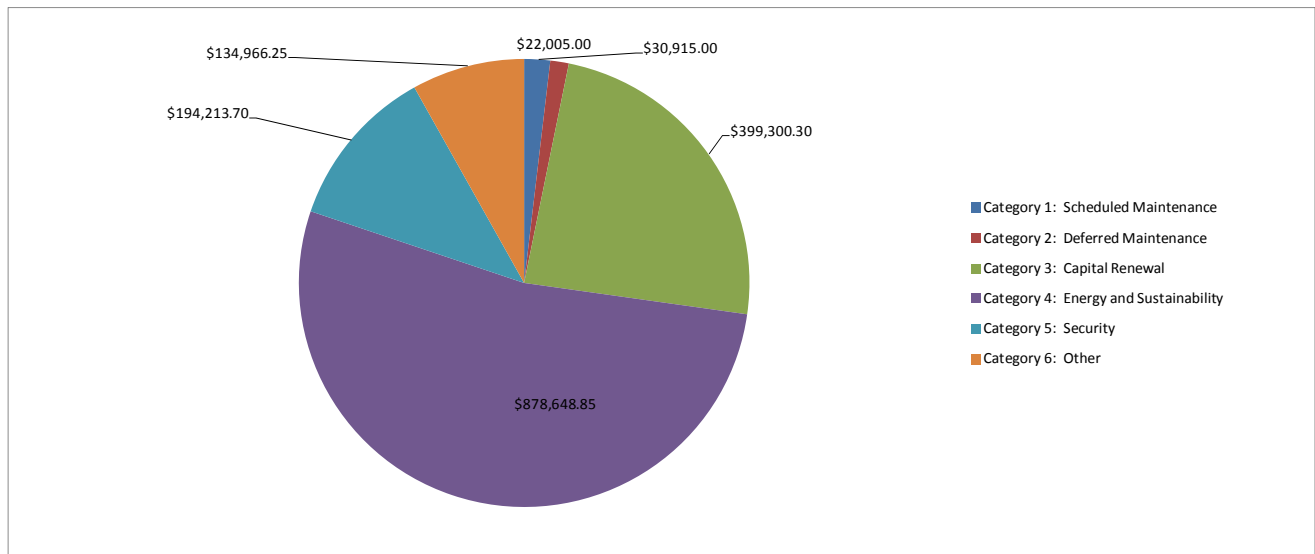
Caughlin Farms Toilet Facility

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 3325 West South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 210 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2002				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				*Lower score equals higher priority														
Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Concrete Pavement	Ramp	CFTF-011		3	2	The ramp's concrete pavement has cracked in several sections.	Route the cracks open and fill with patching mortar.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
1.2	Handrail Paint	Concrete Ramp	CFTF-013		3	2	The paint has delaminated from the wood handrails.	Remove all paint with power tools and apply an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
1.3	Wood Siding, Trim and Ceiling	All Elevations	CFTF-007 CFTF-018		4	2	The paint on the wood siding, trim and ceiling has delaminated from the wood. The paint on the wood fascias has delaminated from the wood; permitting the weather to rot the wood.	Remove all loose paint and coat the wood with an adhesion promoting primer and two finish coats of exterior low-luster acrylic enamel over the primer. Replace all damaged wood fascias with preservative-treated wood fascias. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	1	LS	\$ 8,800.00	\$ 8,800						\$ 11,880	\$ 12,793	\$ 13,441	\$ 15,207	\$ 19,467
1.4	Asphalt Shingles	Roof	CFTF-003		1	2	The asphalt shingles are in poor condition.	Replace with asphalt shingles, underlayment and flashings.	672	SF	\$ 4.00	\$ 2,688						\$ 3,629	\$ 3,908	\$ 4,106	\$ 4,645	\$ 5,946
2.0	Building Interior																					
2.1	Non-Insulated Lavatory Piping	Men's, Women's			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	4	EA	\$ 150.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327
2.2	Grab Bar	Men's, Women's			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	2	EA	\$ 800.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
2.3	Electric Hand Dryers	Men's, Women's			4	3	The electric hand dryers are functional.	Plan on replacing electric hand dryers in 2023.	2	EA	\$ 800.00	\$ 1,600								\$ 2,444	\$ 2,765	\$ 3,539
2.4	Interior Finishes	Men's	CFTF-030 CFTF-031		1	2	All the interior finishes on the walls and ceilings have been damaged from water infiltration.	Replace all wall and ceiling finishes with gypsum board. Tape, mud and sand joints. Prime with an interior gypsum board primer. Apply two finish coats of interior low-luster acrylic enamel over primer. Insulate all walls with 3-1/2 inch thick batt insulation. Insulate the attic with 16 inch thick blanket insulation.	1	LS	\$ 12,000.00	\$ 12,000						\$ 16,200	\$ 17,446	\$ 18,329	\$ 20,737	\$ 26,546
2.5	Interior Ceiling Finish	Women's	CFTF-042		3	2	The interior finishes on the ceiling have been damaged from water infiltration.	Replace the ceiling with gypsum board. Tape, mud and sand joints. Prime with an interior gypsum board primer. Apply two finish coats of interior low-luster acrylic enamel over primer. Insulate the attic with 16 inch thick blanket insulation.	1	LS	\$ 4,000.00	\$ 4,000						\$ 5,400	\$ 5,815	\$ 6,110	\$ 6,912	\$ 8,849
3.0	Electrical System																					
3.1	Panelboard	Chase		CFTF-E-1	4	3	Main panel is in fair condition.	Plan on replacing panel in 2028.	1	EA					\$ 4,900.00	\$ 4,900				\$ 8,467	\$ 10,839	
4.0	Mechanical System																					
4.1	Furnace	Plumbing Chase		CFTF-M-1	2	2	The suspended electric furnace is in poor condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405
5.0	Plumbing System																					
5.1	Water Heater	Plumbing Chase		CFTF-P-1	2	2	The 20 gallon electric water heater is in poor condition.	Replace the water heater with like kind in 2023.	1	EA			\$ 5,025.00	\$ 5,025						\$ 7,675	\$ 8,683	\$ 11,115
5.2	Pressure Tank	Plumbing Chase		CFTF-P-2	4	4	The 30 gallon domestic water pressure tank is in fair condition.	Replace the pressure tank with like kind in 2028.	1	EA			\$ 1,000.00	\$ 1,000						\$ 1,728	\$ 2,212	
5.3	Plumbing Fixtures	Throughout			4	3	The plumbing fixtures are in poor condition.	Replace the fixtures in 2023.	1	LS			\$ 29,400.00	\$ 29,400						\$ 44,906	\$ 50,807	\$ 65,037
												\$ 33,288	\$ 39,225		\$ 4,900		\$ 350	\$ 42,779	\$ 46,068	\$ 109,228	\$ 133,777	\$ 171,246

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Caughlin Farms Toilet Facility

Building Information				Deficiency Priorities				Deficiency Categories																	
Address: 3325 West South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																	
Building Area: 210 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																	
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																	
Year Built: 2002				Priority 4: Recommended				Category 4: Energy and Sustainability																	
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security																	
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																	
				Priority 7: Other																					
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								Note: Project Cost includes 35% mark-ups and fees																	
								Annual Maintenance includes labor and material only																	
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost			
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal									
6.0	Site																								
	No comments.																								
												\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-

DEFICIENCY COSTS**2018 Deficiency Priority****2018 Deficiency Category**

City of Troy
Facility Condition Assessment
April 2018

City Hall/Hall of Justice

Building Information				Deficiency Priorities				Deficiency Categories																
Address: 500 West Big Beaver Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																
Building Area: 71,931 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																
No. of Floors: 3				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																
Year Built: 1965, 1978				Priority 4: Recommended				Category 4: Energy and Sustainability																
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security																
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																
				Priority 7: Other																				
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																				Annual Maintenance includes labor and material only				
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost		
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal								
1.0	Building Exterior																							
1.1	Brick	Second Floor West Elevation	CHHJ-769		3	2	Water has penetrated through the top of the brick wall and damaged brick and mortar joints through freeze and thaw cycles.	Replace damaged brick. Remove damaged mortar and tuck point with new mortar. Seal the top of the wall with an exterior grade silicone sealant.	1	LS	\$ 6,400.00	\$ 6,400						\$ 8,640	\$ 9,304	\$ 9,775	\$ 11,060	\$ 14,158		
1.2	Sealant Joints	Building Perimeter			4	3	The urethane based sealant at the brick walls has failed.	Replace with an exterior grade silicone sealant.	74	LF	\$ 15.00	\$ 1,110						\$ 1,499	\$ 1,614	\$ 1,695	\$ 1,918	\$ 2,455		
1.3	Roofing System	Roof			4	3	The roofing system is a 3-ply modified asphalt built-up roof with gravel surfacing.	Warranty expires July 7, 2019. Replace with same in 2028.	37,056	SF	\$ 25.00	\$ 926,400								\$ 1,600,925	\$ 2,049,319			
1.4	Roofing System	Roof			4	3	The roofing system is a PVC single-ply membrane.	Warranty expires 2021. Replace with same in 2028.	1,931	SF	\$ 14.00	\$ 27,034									\$ 46,718	\$ 59,803		
1.5	Roof Coping	Roof	CHHJ-582		3	6	At both roofing systems, the metal roof coping splice joints are loose and have corroded fasteners. The corner sections are not fully welded and have been sealed with a urethane based sealant (degrades in sunlight).	Replace with a cleat based coping system and concealed splice plates sealed with butyl sealant.	2,078	LF	\$ 35.00	\$ 72,730						\$ 98,186	\$ 105,735	\$ 111,088	\$ 125,686	\$ 160,888		
1.6	Ladders	Roof			4	6	Access to the south roof is via a roof hatch and ladder. Access to remainder of the roofs requires portable ladders. This discourages regular roofing inspections and maintenance.	Add wall-mounted, galvanized steel ladders to the differing roofing elevations.	30	VF	\$ 150.00	\$ 4,500						\$ 6,075	\$ 6,542	\$ 6,873	\$ 7,777	\$ 9,955		
1.7	Elevator Load Testing	Elevator 1 Elevator 2 Elevator 3			4	1	Recommended safety testing from the elevator service contractor.	To verify the integrity of the in-ground hydraulic elevator piston seals, a full load needs to be applied to the car for a pre-determined amount of time. A certified elevator technician will inspect the seals around the piston for any leaks.	1	LS	\$ 1,400.00	\$ 1,400						\$ 1,890	\$ 2,035	\$ 2,138	\$ 2,419	\$ 3,097		
1.8	Soft Starter	Elevator 1 Elevator 2 Elevator 3	CHHJ-995		4	3	The existing motor starter controls the electrical voltage and current from your building power source to the elevator. The existing motor starter is obsolete and parts to repair may not be available, which can lead to extended downtime and unplanned costs to return the elevator to service.	A soft starter will add phase, over-voltage and under-voltage protection to major elevator components. This protection helps prevent the motor from burnout during phase loss and enhances motor life. It will also provide potential energy savings by changing the amount of energy used by the motor according to the load on the motor, while keeping the motor speed the same.	1	LS	\$ 3,600.00	\$ 3,600						\$ 4,860	\$ 5,234	\$ 5,499	\$ 6,221	\$ 7,964		
1.9	Elevator Power Unit and Pump	Elevator 2 Elevator 3			4	1	The existing elevator power unit and pump have exceeded their expected serviceable life.	Replace elevator power unit and pump.	1	LS	\$ 21,500.00	\$ 21,500						\$ 29,025	\$ 31,257	\$ 32,839	\$ 37,154	\$ 47,561		
1.10	Elevator Modernization	Elevator 1 Elevator 2 Elevator 3			4	3	The existing elevator car finishes, power unit, pump, motor, controls and safety features should be replaced in 2038.	Replace all hydraulic elevator serviceable components and car finishes	1	LS	\$ 130,000.00	\$ 130,000										\$ 287,577		
2.0	Building Interior																							
2.1	9 Inch by 9 Inch Vinyl Floor Tile	Building Maintenance			4	6	Original vinyl floor tiles.	Replace with 12 inch by 12 inch vinyl composition tile (VCT).	398	SF	\$ 2.50	\$ 995						\$ 1,343	\$ 1,447	\$ 1,520	\$ 1,719	\$ 2,201		
2.2	Carpet	Purchasing, Building Operations, et al	CHHJ-022		5	3	The carpet and carpet tiles are in acceptable condition, but are showing signs of wear.	Plan on replacing with carpet tiles in 2028.	30,368	SF	\$ 5.50	\$ 167,024								\$ 288,637	\$ 369,480			
2.3	Terrazzo	North Corridor - First Floor, East Corridor - First Floor, et al	CHHJ-495		5	2	The terrazzo flooring has numerous cracks.	Grind floor at crack, grout crack, polish to a natural finish and seal with impregnator sealer.	16	EA	\$ 400.00	\$ 6,400						\$ 8,640	\$ 9,304	\$ 9,775	\$ 11,060	\$ 14,158		
2.4	Non-Insulated Lavatory Piping	Unisex 1, Unisex 2, et al			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	9	EA	\$ 150.00	\$ 1,350						\$ 1,823	\$ 1,963	\$ 2,062	\$ 2,333	\$ 2,986		

City of Troy
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Building Information				Deficiency Priorities				Deficiency Categories															
Address: 500 West Big Beaver Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 71,931 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 3				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 1965, 1978				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
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Note: Project Cost includes 35% mark-ups and fees																							
Annual Maintenance includes labor and material only																							
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
2.5	Third Grab Bar	Unisex 1, Unisex 2, et al			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	6	A	\$ 400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309	
2.6	Shooting Range Equipment	Shooting Range			4	3	The Shooting Range equipment for operating targets and separating shooters has exceeded its useful life.	The equipment will be replaced in the City's Fiscal 2017-2018 operating budget.	1	EA	\$ -	\$ -						\$ -	\$ -	\$ -	\$ -	\$ -	
2.7	Shooting Range Infrastructure	Shooting Range	CHHJ-252 CHHJ-255		4	3	The Shooting Range infrastructure does not provide adequate sound deadening.	The infrastructure will be upgraded in the City's Fiscal 2018-2019 operating budget.	1	EA	\$ -	\$ -						\$ -	\$ -	\$ -	\$ -	\$ -	
2.8	Windows	Office 5, Office 6, Office 7, et al			4	4	The original aluminum window frames are non-thermally broken and have non-insulating glass.	Replace with windows having thermally broken, aluminum frames and one inch insulating glass units. Seal the window frame with exterior grade silicone sealant.	3,337	SF	\$ 65.00	\$ 216,905						\$ 292,822	\$ 315,337	\$ 331,301	\$ 374,837	\$ 479,823	
2.9	Walk-Off Mat	East Entry, West Entry			4	3	The walk-off mat is in acceptable condition, but will be expensive to replace when worn.	Plan to replace walk-off mat with walk-off carpet tiles in 2028.	300	SF	\$ 5.50	\$ 1,650								\$ 2,851	\$ 3,650		
2.10	Exterior Door and Frame	East Entry	CHHJ-780		2	2	The bottom of the aluminum frame and door are swollen from excessive water and salt. The aluminum threshold and steel hinges are corroded from excessive water and salt. The door is difficult to operate because of the restricted door frame clear opening.	Replace the door frame with a thickened wall aluminum frame. Replace the door with a fiberglass reinforced polyester door. Replace the threshold with a stainless steel threshold.	1	EA	\$ 3,500.00	\$ 3,500						\$ 4,725	\$ 5,088	\$ 5,346	\$ 6,048	\$ 7,742	
2.11	Elevator Pit	Elevator 2, Elevator 3	CHHJ-993		2	6	There is water in the elevator pit (code violation).	Prior to correction, the elevator pit and its equipment must be inspected, under the code required service agreement, by a licensed elevator inspector. They must be provided pit access and be present during the entire correction process. Remove all standing water and oil from the pit's concrete surfaces. Route all cracks and defective construction joints and fill with a cementitious packing mortar compatible with a crystalline waterproofing system. Apply an 1/8 inch thick slurry coat of a crystalline waterproofing system over all concrete surfaces.	3	EA	\$ 6,000.00	\$ 18,000						\$ 24,300	\$ 26,168	\$ 27,493	\$ 31,106	\$ 39,818	
3.0	Electrical System																						
3.1	Emergency Egress Lighting	Entire Building			6	3	Additional fixtures with emergency back-up are required to comply with the current code.	Extend life safety circuits to select fixtures.	1	LS						\$ 22,000.00	\$ 22,000		\$ 29,700	\$ 31,984	\$ 33,603	\$ 38,019	\$ 48,667
3.2	Emergency Power	Boiler Room		CHHJ-E-3 thru CHHJ-E-7 CHHJ-E-22 CHHJ-E-23 CHHJ-E-24	4	3	An outdoor generator serves the building. An indoor generator serves IT. Life safety and equipment loads are not separated as required by Code.	Relocate the indoor generator outdoors to provide ventilation. Add an second ATS and panel and separate equipment loads from life safety loads.	1	LS						\$ 28,300.00	\$ 28,300	\$ 800	\$ 38,205	\$ 41,143	\$ 43,225	\$ 48,906	\$ 62,603
3.3	Service Entrance Switchboard (1978)	Mechanical	CHHJ-622 CHHJ-954 CHHJ-955	CHHJ-E-1 CHHJ-E-2	3	3	There is rust at one end from a recurring leak. The switchboard is 40 years old, manufactured by Park Metal, and near the end of its life cycle.	Replacement parts are becoming hard to find. Replace the switchboard.	1	EA						\$ 17,750.00	\$ 17,750		\$ 23,963	\$ 25,805	\$ 27,111	\$ 30,674	\$ 39,265
3.4	Secondary Distribution (1978)	Mechanical		CHHJ-E-8 thru CHHJ-E-15	3	3	Much of the equipment is 40 years old, manufactured by Westinghouse, and near the end of its life cycle.	Frank Adam is no longer in business and replacement parts are hard to find. Replace the distribution equipment.	28,772	SF						\$ 3.00	\$ 86,316		\$ 116,527	\$ 125,486	\$ 131,839	\$ 149,164	\$ 190,942
3.5	Switchboard (1965)	Electrical		CHHJ-E-16	2	3	The switchboard is 53 years old, manufactured by Frank Adam Electric, and is obsolete.	Replace switchboard with 1200 amp distribution panel.	1	LOT						\$ 7,225.00	\$ 7,225		\$ 9,754	\$ 10,504	\$ 11,035	\$ 12,486	\$ 15,983
3.6	Secondary Distribution (1965)	Electrical		CHHJ-E-17 thru CHHJ-E-21	2	3	Much of the equipment is 53 years old, manufactured by Frank Adam Electric, and is obsolete.	ITE is no longer in business and replacement parts are hard to find. Replace the distribution equipment.	43,159	SF						\$ 3.00	\$ 129,477		\$ 174,794	\$ 188,234	\$ 197,763	\$ 223,751	\$ 286,420

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Address: 500 West Big Beaver Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance													
Building Area: 71,931 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance													
No. of Floors: 3				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal													
Year Built: 1965, 1978				Priority 4: Recommended				Category 4: Energy and Sustainability													
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											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.19	Air Handling Unit	Mechanical		CHHJ-M-17	2	2	The built up air handling unit in the mechanical room is in poor condition and should be updated.	Replace the air handling unit and associated piping and motors with like kinds in the next 5 years.	1	LS			\$ 150,000.00	\$ 150,000			\$ 2,300			\$ 229,110	\$ 259,217	\$ 331,819
4.20	Exhaust Fan	Mechanical		CHHJ-M-18	2	3	The ducted exhaust fan in the mechanical room is quite old and in fair condition.	Replace the exhaust fan and motor with like kinds in the next 5 years.	1	LS			\$ 70,000.00	\$ 70,000			\$ 2,300			\$ 106,918	\$ 120,968	\$ 154,849
4.21	Exhaust Fans	Roof			3	3	The roof top exhaust fans are in fair condition and should be maintained.	Replace the exhaust fans with like kinds and size in the next 5 to 10 years.	5	EA			\$ 3,000.00	\$ 15,000			\$ 750			\$ 22,911	\$ 25,922	\$ 33,182
4.22	Fan Coil Unit/Furnace			CHHJ-M-19	3	3	The fan coil unit has 5 tons of DX cooling and is in good condition.	Replace the fan coil unit with a like kind in the next 10-15 years.	1	LS			\$ 2,575.00	\$ 2,575			\$ 350				\$ 4,450	\$ 5,696
4.23	Air Conditioning Unit	Data Room		CHHJ-M-20	3	3	The large air conditioning unit is in fair condition.	Replace the conditioning unit with a like kind in the next 10 years	1	LS			\$ 5,000.00	\$ 5,000			\$ 200			\$ 7,637	\$ 8,641	\$ 11,061
4.24	Air-Cooled Condenser	Outdoors		CHHJ-M-21	3	3	The five ton cooling condenser is in fair condition using R-22.	Replace the outdoor condensing unit with a like kind and tonnage in the next 10 years.	1	LS			\$ 4,550.00	\$ 4,550			\$ 200				\$ 7,863	\$ 10,066
4.25	Air-Cooled Condenser	Outdoors		CHHJ-M-22	3	3	The air cooled condensing unit using R-407C is in fair condition.	Replace the condensing unit with a like kind in the next 10 years.	1	LS			\$ 5,000.00	\$ 5,000			\$ 200				\$ 8,641	\$ 11,061
4.26	Air-Cooled Condenser	Roof		CHHJ-M-23	3	3	The air cooled condensing unit on the roof is in fair condition.	Replace the condensing unit with a like kind in the next 10 years.	1	LS			\$ 4,550.00	\$ 4,550			\$ 200				\$ 7,863	\$ 10,066
4.27	Unit Heater	Mechanical		CHHJ-M-24	4	4	The hot water heating unit heater is in fair condition.	Replace the unit heater and associated piping with a like kind in the next 10 years.	1	LS			\$ 5,700.00	\$ 5,700							\$ 9,850	\$ 12,609
4.28	Heat Exchanger	Mechanical		CHHJ-M-25	2	2	The heat exchanger is in poor condition and should be maintained.	Replace the heat exchanger in the next 5 years with a like kind or better.	1	LS			\$ 35,000.00	\$ 35,000						\$ 53,459	\$ 60,484	\$ 77,425
4.29	Heat Exchanger	Mechanical		CHHJ-M-26	2	2	The heat exchanger is in poor condition and should be maintained.	Replace the heat exchanger in the next 5 years with a like kind or newer.	1	LS			\$ 35,000.00	\$ 35,000						\$ 53,459	\$ 60,484	\$ 77,425
4.30	Air Compressor	Mechanical		CHHJ-M-27	3	3	The large air compressor is in fair condition.	Replace the air compressor in the next 10 years with a like kind.	1	LS			\$ 5,000.00	\$ 5,000							\$ 8,641	\$ 11,061
4.31	Air Compressor	Mechanical		CHHJ-M-28	3	3	The large air compressor is in fair condition.	Replace the air compressor in the next 10 years with a like kind.	1	LS			\$ 5,000.00	\$ 5,000							\$ 8,641	\$ 11,061
4.32	Finned Tube Radiation	Throughout			3	3	The finned tube radiators were in fair condition.	Replace the finned tube and piping in the next 20 years with a like kind.	1,000	LF			\$ 75.00	\$ 75,000								\$ 165,910
4.33	Controls	Throughout			3	3	The controls system is in fair condition.	Replace the system in the next 10 years.	72,000	SF			\$ 2.00	\$ 144,000					\$ 209,348	\$ 219,946	\$ 248,848	\$ 318,547
5.0	Plumbing System																					
5.1	Water Heater	Mechanical		CHHJ-P-1	4	4	The 40 MBH 50 gallon natural gas water heater is in good condition and was recently installed.	Replace the water heater and associated piping with a like kind in the next 10 years.	1	LS			\$ 5,050.00	\$ 5,050							\$ 8,727	\$ 11,171
5.2	Domestic Water Heater	Mechanical		CHHJ-P-2	2	2	The 376 MBH natural gas domestic water heater and piping is in fair condition.	Replace the domestic water heater and associated piping and recirculation pump with a like kind in the next 10 years.	1	LS			\$ 22,700.00	\$ 22,700					\$ 34,672	\$ 39,228	\$ 50,215	
5.3	Storage Tank	Mechanical		CHHJ-P-3	4	4	The large storage tank in the mechanical room is in fair condition.	Replace the storage tank with a like kind in the next 10 years.	1	LS			\$ 2,500.00	\$ 2,500							\$ 4,321	\$ 5,531
5.4	Storage Tank	Mechanical		CHHJ-P-4	4	4	The large storage tank for hot water heating in the mechanical room is in fair condition.	Replace the storage tank with a like kind in the next 10 years.	1	LS			\$ 2,500.00	\$ 2,500							\$ 4,321	\$ 5,531
5.5	Sump Pump SP-1	Mechanical		CHHJ-P-5	3	3	The type of sump pump cannot be determined, and should therefore be field verified for the exact type, but looked to be in fair condition.	Replace the sump pump with a like kind in the next 10 years.	1	LS			\$ 5,000.00	\$ 5,000							\$ 8,641	\$ 11,061
5.6	Sump Pump SP-2	Mechanical		CHHJ-P-6	3	3	The type of sump pump cannot be determined, and should therefore be field verified for the exact type, but looked to be in fair condition.	Replace the sump pump with a like kind in the next 10 years.	1	LS			\$ 5,000.00	\$ 5,000							\$ 8,641	\$ 11,061
5.7	Plumbing Fixtures	Throughout			3	3	The existing plumbing fixtures are in fair condition but could use some maintenance.	Replace the fixtures in the next 10 years for bathrooms with like kinds, and update water coolers/drinking fountains.	1	LS			\$ 185,000.00	\$ 185,000							\$ 319,701	\$ 409,244
5.8	Fire Protection	Throughout			3	3	The fire protection service and sprinkler piping is in fair condition.	Replace the system in the next 10 years with a like kind.	72000	SF			\$ 4.00	\$ 288,000							\$ 497,697	\$ 637,095
												\$ 1,612,898	\$ 2,321,525	\$ 868,876	\$ 27,039	\$ 1,660,049	\$ 1,997,039	\$ 2,844,579	\$ 6,944,077	\$ 10,625,530		

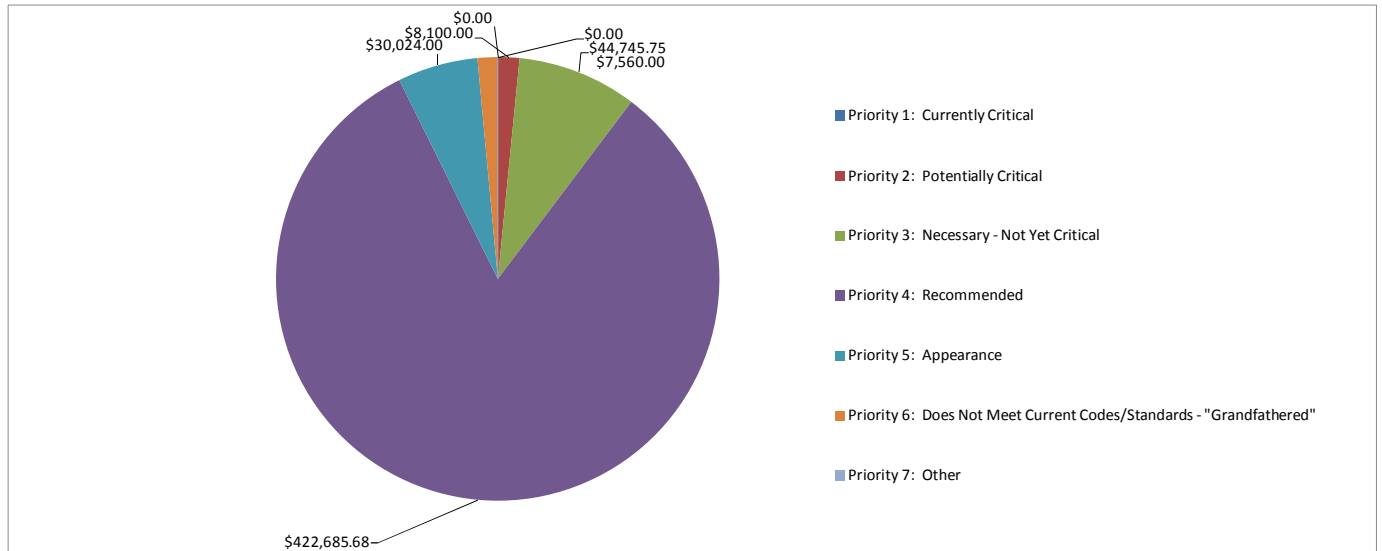
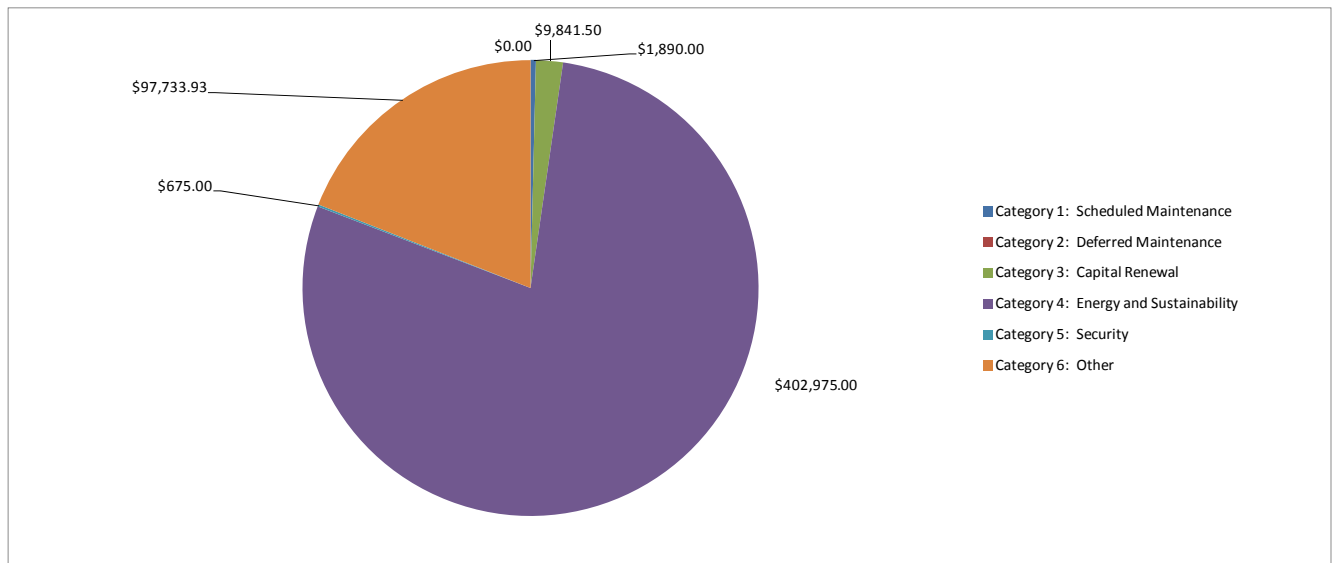
City of Troy
Facility Condition Assessment
April 2018

City Hall/Hall of Justice

Building Information Address: 500 West Big Beaver Road Building Area: 71,931 SF No. of Floors: 3 Year Built: 1965, 1978 Evaluation Date: March 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only									
								*Lower score equals higher priority													

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						

6.0	Site																						
6.1	Asphalt Pavement	Parking Lot	CHHJ-585		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2023. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	69,695	SF	\$ 4.00	\$ 278,780								\$ 425,809	\$ 481,764	\$ 616,698	
6.2	Control Joints	Concrete Pavement	CHHJ-817		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	2,354	LF	\$ 2.00	\$ 4,708						\$ 6,356	\$ 6,845	\$ 7,191	\$ 8,136	\$ 10,415	
6.3	Screen Wall	Mechanical Unit	CHHJ-732		4	2	The mortar joints have deteriorated between the limestone cap sections, allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the limestone cap sections. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Replace damaged limestone caps. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant. Rack out damaged mortar at bricks and tuck point with new mortar.	1	LS	\$ 4,200.00	\$ 4,200						\$ 5,670	\$ 6,106	\$ 6,415	\$ 7,258	\$ 9,291	
6.4	Screen Wall	Refuse Container	CHHJ-755		4	2	The mortar joints have deteriorated between the limestone cap sections, allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the limestone cap sections. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant. Rake out damaged mortar at bricks and tuck point with new mortar.	1	LS	\$ 2,600.00	\$ 2,600						\$ 3,510	\$ 3,780	\$ 3,971	\$ 4,493	\$ 5,752	
6.5	Seat Walls	Main Entrance Planters	CHHJ-806 CHHJ-809		4	2	The mortar joints have deteriorated between the limestone cap sections, allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the limestone cap sections. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant. Rake out damaged mortar at bricks and tuck point with new mortar.	1	LS	\$ 5,400.00	\$ 5,400						\$ 7,290	\$ 7,851	\$ 8,248	\$ 9,332	\$ 11,946	
6.6	Privacy Gates	Refuse Container	CHHJ-751		4	3	The wood gates, though functional, have weathered and the locking hardware has been damaged.	Plan on replacing the wood gates with prefinished aluminum gates and new locking hardware in 2021.	1	LS	\$ 4,800.00	\$ 4,800						\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618		
6.7	Concrete Stair	Parking Lot	CHHJ-761		3	3	The concrete stair to the police parking lot has spalled and cracked around the handrail supports.	Plan on replacing the concrete stairs and resetting the handrail in 2023.	1	LS	\$ 6,200.00	\$ 6,200							\$ 9,470	\$ 10,715	\$ 13,716		
6.8	Site Lighting	Parking Lot and Walkway			4	4	LED heads installed on existing poles.	Plan on replacing in 2038.	10	EA					\$ 1,200.00	\$ 12,000					\$ 26,545		
6.9	Site Lighting	Plaza			4	4	Wall packs and flood lights have out of date lamps.	Replace with LED fixtures.	20	EA					\$ 1,000.00	\$ 20,000	\$ 200	\$ 27,000	\$ 29,076	\$ 30,548	\$ 34,562	\$ 44,243	
											\$ 306,688		\$ -		\$ 32,000		\$ 200	\$ 49,826	\$ 60,635	\$ 498,984	\$ 564,555	\$ 749,223	

DEFICIENCY COSTS**2018 Deficiency Priority****2018 Deficiency Category**

City of Troy
Facility Condition Assessment
April 2018

City Hall/Police Addition

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 500 West Big Beaver Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 49,750 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2003				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				*Lower score equals higher priority														
Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Sealant Joints	Building Perimeter	CHPD-728		4	3	The urethane based sealant at the brick walls has failed.	Replace with an exterior grade silicone sealant.	486	LF	\$ 15.00	\$ 7,290						\$ 9,842	\$ 10,598	\$ 11,135	\$ 12,598	\$ 16,126
1.2	Roofing System	Roof			3	3	The roofing system is a 3-ply modified asphalt built-up roof with gravel surfacing.	Warranty expires August 22, 2023. Replace with same in 2028.	24,000	SF	\$ 25.00	\$ 600,000								\$ 1,036,869	\$ 1,327,280	
1.3	Roof Coping	Roof	CHPD-854 CHPD-863		3	6	Where there is a metal roof coping, the splice joints are loose or have been sealed with a bituminous sealant and have corroded fasteners. The corner sections are not fully welded and have been sealed with a urethane based sealant (degrades in sunlight).	Replace with a cleat based coping system and concealed splice plates sealed with butyl sealant.	947	LF	\$ 35.00	\$ 33,145						\$ 44,746	\$ 48,186	\$ 50,626	\$ 57,278	\$ 73,321
1.4	Elevator Load Testing	Elevator 1			4	1	Recommended safety testing from the elevator service contractor.	To verify the integrity of the in-ground hydraulic elevator piston seals, a full load needs to be applied to the car for a pre-determined amount of time. A certified elevator technician will inspect the seals around the piston for any leaks.	1	LS	\$ 1,400.00	\$ 1,400						\$ 1,890	\$ 2,035	\$ 2,138	\$ 2,419	\$ 3,097
1.5	Elevator Modernization	Elevator 1			4	3	The existing elevator car finishes, power unit, pump, motor, controls and safety features should be replaced in 2038.	Replace all hydraulic elevator serviceable components and car finishes.	1	LS	\$ 130,000.00	\$ 130,000									\$ 287,577	
2.0	Building Interior																					
2.1	Carpet	Office 1, Office 2, et.al.	CHPD-115		5	3	The carpet and carpet tiles are in acceptable condition, but are showing signs of wear.	Plan on replacing with carpet tiles in 2028.	23,654	SF	\$ 5.50	\$ 130,097								\$ 224,822	\$ 287,791	
2.2	Vinyl Composition Tile (VCT)	East Corridor	CHPD-081		4	6	The VCT has delaminated from the concrete floor slab.	Remove VCT and perform a moisture test on the concrete floor slab. If acceptable, install new VCT. If unacceptable, apply a penetrating sealer to the concrete before installing the VCT.	1,063	SF	\$ 1.50	\$ 1,595						\$ 2,153	\$ 2,318	\$ 2,435	\$ 2,755	\$ 3,527
2.3	Vinyl Composition Tile (VCT)	Tactical Support Team, Storage 2	CHPD-457		4	6	The VCT has been severely worn down throughout.	Remove VCT and perform a moisture test on the concrete floor slab. If acceptable, install new VCT. If unacceptable, apply a penetrating sealer to the concrete before installing the VCT.	452	SF	\$ 1.50	\$ 678						\$ 915	\$ 986	\$ 1,036	\$ 1,172	\$ 1,500
2.4	Vinyl Composition Tile (VCT)	Forensic Evidence Lab	CHPD-302		4	6	The VCT has been severely worn down in certain areas of the Lab and the joints are difficult to sanitize.	Replace the VCT with a resilient sheet flooring system with welded seams and an integral base.	523	SF	\$ 6.00	\$ 3,138						\$ 4,236	\$ 4,562	\$ 4,793	\$ 5,423	\$ 6,942
2.5	Casework Doors	Forensic Evidence Lab	CHPD-300		5	6	The plastic laminate face sheet has delaminated from the wood base and upper cabinet doors.	Salvage cabinet door hardware. Replace all cabinet doors with plastic laminate doors. Reinstall salvaged cabinet door hardware.	52	EA	\$ 120.00	\$ 6,240						\$ 8,424	\$ 9,072	\$ 9,531	\$ 10,783	\$ 13,804
2.6	Third Grab Bar	Women's 1, Men's 1, et.al.			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	14	EA	\$ 400.00	\$ 5,600						\$ 7,560	\$ 8,141	\$ 8,553	\$ 9,677	\$ 12,388
2.7	Walk-Off Mat	West Vestibule	CHPD-477		4	3	The walk-off mat is in acceptable condition, but will be expensive to replace when worn.	Plan to replace walk-off mat with walk-off carpet tiles in 2028.	116	SF	\$ 5.50	\$ 638								\$ 1,102	\$ 1,411	
2.8	Rubber Flooring	Fitness - First Floor, Fitness - Second Floor	CHPD-519		4	3	The rubber flooring is in acceptable condition.	Plan to replace rubber flooring with new rubber flooring in 2028.	1031	SF	\$ 2.00	\$ 2,062								\$ 3,564	\$ 4,562	
2.9	Architectural Woodwork	Control Room	CHPD-612 CHPD-613		5	6	The plastic laminate has been damaged on the base cabinet doors and countertop.	Replace base cabinets with wood base cabinets. Replace the countertop with solid surface countertop and backsplash.	80	LF	\$ 200.00	\$ 16,000						\$ 21,600	\$ 23,261	\$ 24,438	\$ 27,650	\$ 35,394

City of Troy
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City Hall/Police Addition

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 500 West Big Beaver Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 49,750 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2003				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
Note: Project Cost includes 35% mark-ups and fees																						
Annual Maintenance includes labor and material only																						
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
2.10	Elevator Pit	Elevator 4	CHPD-933		2	6	There is water in the elevator pit (code violation).	Prior to correction, the elevator pit and its equipment must be inspected, under the code required service agreement, by a licensed elevator inspector. They must be provided pit access and be present during the entire correction process. Remove all standing water and oil from the pit's concrete surfaces. Route all cracks and defective construction joints and fill with a cementitious packing mortar compatible with a crystalline waterproofing system. Apply an 1/8 inch thick slurry coat of a crystalline waterproofing system over all concrete surfaces.	1	EA	\$ 6,000.00	\$ 6,000						\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Entire Building			4	3	2003 construction should comply with code minimum illumination.	Plan on replacing in 2038.	1	SF						\$ -		\$ -	\$ -	\$ -	\$ -	\$ -
3.2	Emergency Power Building (2003)	Electrical Room Outdoor CAT Diesel Generator		CHPD-E-2 CHPD-E-3 CHPD-E-4 CHPD-E-5 CHPD-E-6	4	3	Equipment is 15 years old and in fair condition.	Plan on replacing in 2038.	1	LS					\$ 75,000.00	\$ 75,000	\$ 1,500					\$ 165,910
3.3	Emergency Power Communications Center (2017)	Electrical Room Outdoor Generac Natural Gas Generator		CHPD-E-9 thru CHPD-E-14	4	3	Equipment is new and in excellent condition.	Plan on replacing in 2048.	1	LS					\$ 65,000.00	\$ 65,000	\$ 1,000					
3.4	Outdoor Primary Switch	West Exterior			4	3	Serves Police Addition and Hall of Justice transformers.	Plan on replacing in 2038.	1	EA					\$ 35,700.00	\$ 35,700						\$ 78,974
3.5	Service Entrance Switchboard (2003)	Electrical Room		CHPD-E-1	4	3	Equipment is 15 years old and in very good condition.	Plan on replacing in 2053.	1	LS					\$ 2,175.00	\$ 2,175						
3.6	Secondary Distribution (2003)	Entire Building		CHPD-E-15 thru CHPD-E-40	4	3	Equipment is 15 years old and in very good condition.	Plan on replacing in 2053.	49,750	SF					\$ 5.00	\$ 248,750						
3.7	Lighting Control System	Entire Building			4	4	Lights are manually controlled with occupancy sensors in some areas.	Install occupancy sensors to automatically shut off lighting in unoccupied spaces.	49,750	SF					\$ 1.00	\$ 49,750		\$ 67,163	\$ 72,327	\$ 75,988	\$ 85,974	\$ 110,054
3.8	Interior Building Lighting	Entire Building			4	4	Fluorescent lamps in recessed fixtures.	Fluorescent fixtures should be replaced with LED fixtures.	49,750	SF					\$ 5.00	\$ 248,750	\$ 1,244	\$ 335,813	\$ 361,633	\$ 379,941	\$ 429,868	\$ 550,268
3.9	Fire Alarm Control Panel	Communications Center		CHPD-E-41	4	5	The fire alarm system is original to the building with adequate strobe and speaker coverage.	Install system software updates and replace the batteries in 5-year increments.	1	LS					\$ 500.00	\$ 500		\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
3.10	Exterior Building Lighting	Building Mounted			4	4	Original HID fixtures should be replaced with LED fixtures.	Plan on replacing in 2038.	7	EA					\$ 495.00	\$ 3,465						\$ 7,665
4.0	Mechanical System																					
4.1	Rooftop Unit RTU-1	Roof		CHPD-M-1	2	2	The 60 ton DX multizone VAV rooftop unit is in poor condition.	Replace the rooftop unit with like kind in the next 5 years.	1	EA			\$ 210,000.00	\$ 210,000			\$ 3,800			\$ 320,754	\$ 362,903	\$ 464,547
4.2	Rooftop Unit RTU-2	Roof		CHPD-M-2	2	2	The 60 ton DX multizone VAV rooftop unit is in poor condition.	Replace the rooftop unit with like kind in the next 5 years.	1	EA			\$ 210,000.00	\$ 210,000			\$ 3,800			\$ 320,754	\$ 362,903	\$ 464,547
4.3	Rooftop Unit RTU-3	Roof		CHPD-M-3	2	2	The 15 ton DX single zone rooftop unit is in poor condition.	Replace the rooftop unit with like kind in the next 5 years.	1	EA			\$ 53,000.00	\$ 53,000			\$ 1,900			\$ 80,953	\$ 91,591	\$ 117,244
4.4	Rooftop Unit RTU-4	Roof		CHPD-M-4	2	2	The 10 ton DX multizone VAV rooftop unit is in poor condition.	Replace the rooftop unit with like kind in the next 5 years.	1	EA			\$ 35,000.00	\$ 35,000			\$ 1,900			\$ 53,459	\$ 60,484	\$ 77,425
4.5	Energy Recovery Wheel ERW-1	Roof		CHPD-M-5	2	2	The energy recovery unit associated with RTU-4 is in poor condition.	Replace the energy recovery unit with like kind in the next 5 years.	1	EA			\$ 25,000.00	\$ 25,000			\$ 1,900			\$ 38,185	\$ 43,203	\$ 55,303
4.6	Exhaust Fans	Roof			3	3	The roof mounted exhaust fans are in fair condition. The building consists of both downblast and upblast fans.	Replace the exhaust fans with like kind in the next 5 to 10 years.	5	EA			\$ 3,000.00	\$ 15,000			\$ 750			\$ 22,911	\$ 25,922	\$ 33,182
4.7	Air Conditioning Unit and Condensing Unit	Ceiling of Storage 21		CHPD-M-6	3	3	The 2 ton DX air conditioning unit and its associated condensing unit are in fair condition.	Replace the units with like kind in the next 10 years.	1	LS			\$ 6,000.00	\$ 6,000			\$ 400				\$ 10,368	\$ 13,272

City of Troy
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City Hall/Police Addition

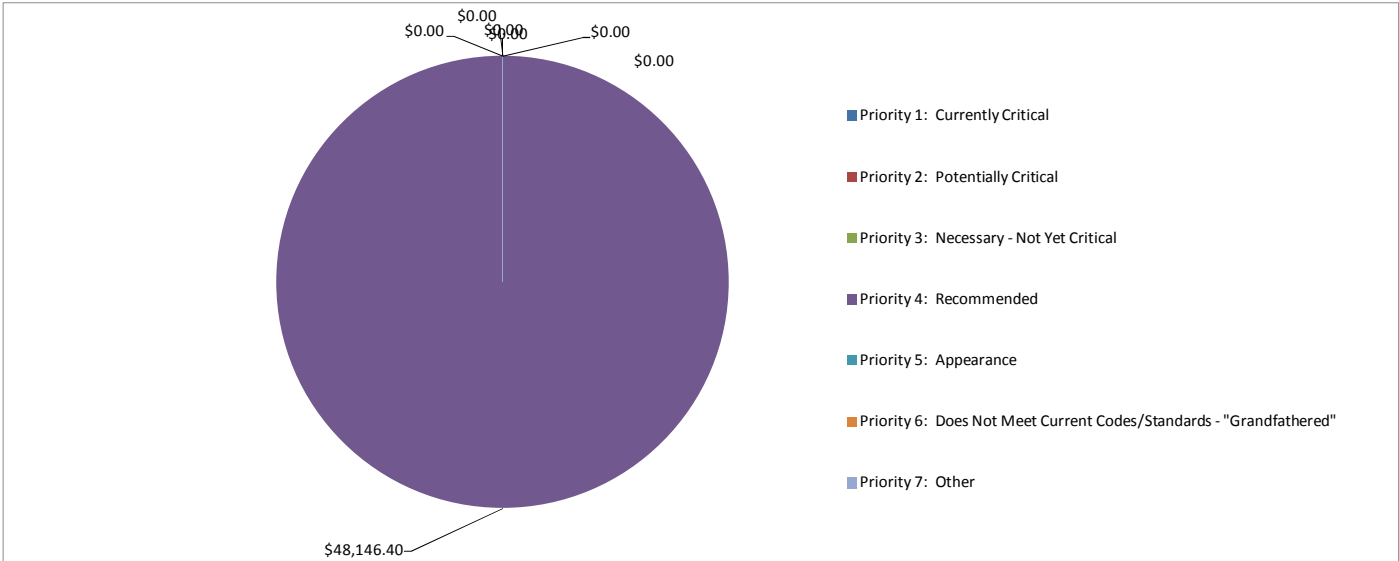
Building Information Address: 500 West Big Beaver Road Building Area: 49,750 SF No. of Floors: 2 Year Built: 2003 Evaluation Date: March 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only											
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.8	Air Conditioning Unit and Condensing Unit	Ceiling of Men's 4 Locker		CHPD-M-7	3	3	The 5 ton DX air conditioning unit and its associated condensing unit are in fair condition.	Replace the units with like kind in the next 10 years.	1	LS			\$ 8,000.00	\$ 8,000			\$ 400				\$ 13,825	\$ 17,697
4.9	Fan Coil Unit	Service Garage		CHPD-M-8	3	3	The suspended hot water heating fan coil unit is in fair condition.	Replace the fan coil unit with like kind in the next 10 years.	1	EA			\$ 8,000.00	\$ 8,000			\$ 350				\$ 13,825	\$ 17,697
4.10	Boiler	Mechanical		CHPD-M-9	3	3	The 650 MBH gas fired boiler is in fair condition.	Replace the boiler system with a high efficient condensing unit in the next 10 years.	1	EA			\$ 42,000.00	\$ 42,000			\$ 450				\$ 72,581	\$ 92,910
4.11	Boiler	Mechanical		CHPD-M-10	3	3	The 650 MBH gas fired boiler is in fair condition.	Replace the boiler system with a high efficient condensing unit in the next 10 years.	1	EA			\$ 42,000.00	\$ 42,000			\$ 450				\$ 72,581	\$ 92,910
4.12	Base Centrifugal Pump	Mechanical		CHPD-M-11	3	3	The 3 HP inline split coupled centrifugal secondary hot water heating pump is in fair condition.	Replace the pump with like kind in the next 10 years.	1	EA			\$ 10,000.00	\$ 10,000			\$ 300				\$ 17,281	\$ 22,121
4.13	Base Centrifugal Pump	Mechanical		CHPD-M-12	3	3	The 3 HP inline split coupled centrifugal secondary hot water heating pump is in fair condition.	Replace the pump with like kind in the next 10 years.	1	EA			\$ 10,000.00	\$ 10,000			\$ 300				\$ 17,281	\$ 22,121
4.14	Terminal Units	Throughout			3	3	The terminal units are in fair condition.	Replace the terminal units with like kind in the next 10 years.	24	EA			\$ 3,000.00	\$ 72,000							\$ 124,424	\$ 159,274
4.15	Fan Powered Boxes	Throughout			3	3	The fan powered terminal units are in poor condition.	Replace the fan powered terminal units with like kind in the next 10 years.	2	EA			\$ 3,000.00	\$ 6,000							\$ 10,368	\$ 13,272
4.16	Finned Tube Radiation	Throughout			3	3	The sloped top hot water finned tube radiators are in fair condition.	Replace the finned tube with like kind in the next 20 years.	1,200	LF			\$ 75.00	\$ 90,000								\$ 199,092
4.17	Controls	Throughout			3	3	Existing Andover system is in good/fair condition.	Update hardware and software on regular intervals of not more than five years.	50,000	SF			\$ 2.50	\$ 125,000					\$ 181,725	\$ 190,925	\$ 216,014	\$ 276,517
5.0	Plumbing System																					
5.1	Domestic Water Heater	Mechanical		CHPD-P-1	3	3	The 300 MBH gas fired water heater is in fair condition.	Replace the water heater with a high efficient condensing model in the next 10 years.	1	EA			\$ 20,000.00	\$ 20,000			\$ 450				\$ 34,562	\$ 44,243
5.2	Storage Tank	Mechanical			3	3	The 432 gallon domestic hot water storage tank is in fair condition.	Replace the storage tank with like kind in the next 10 years.	1	EA			\$ 10,000.00	\$ 10,000							\$ 17,281	\$ 22,121
5.3	Plumbing Fixtures	Throughout			3	3	The plumbing fixtures are in fair condition.	Replace the fixtures in the next 10 years..	1	LS			\$ 275,000.00	\$ 275,000							\$ 475,231	\$ 608,336
5.4	Fire Protection	Throughout			3	3	The fire protection service and sprinkler piping are in fair condition.	Replace the system in the next 20 years.	50,000	SF			\$ 4.00	\$ 200,000								\$ 442,427
												\$ 943,883	\$ 1,472,000		\$ 729,090		\$ 20,894	\$ 513,115	\$ 734,294	\$ 1,608,483	\$ 3,965,817	\$ 6,258,226

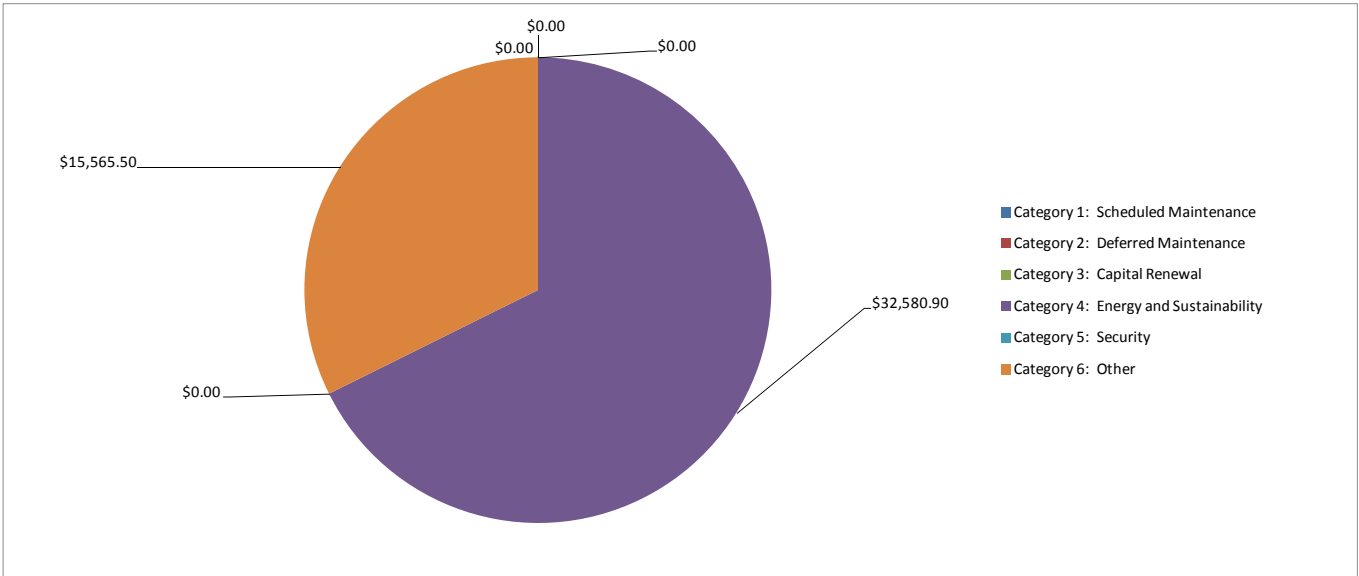
6.0	Site																				
6.1	Asphalt Pavement	Parking Lot	CHPD-759 CHPD-820		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2023. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	107,611	SF	\$ 4.00	\$ 430,444							\$ 657,460	\$ 743,856	\$ 952,198
6.2	Concrete Pavement	Fuel Station	CHPD-808		4	2	The concrete pavement has cracked and been filled in with asphalt.	Replace concrete pavement with 8 inch thick concrete on a 6 inch compacted gravel base.	1,012	SF	\$ 15.00	\$ 15,180					\$ 20,493	\$ 22,069	\$ 23,186	\$ 26,233	\$ 33,580
6.3	Control Joints	Concrete Pavement			3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Replace sealant or seal joints with an exterior grade silicone sealant.	1,800	LF	\$ 2.00	\$ 3,600					\$ 4,860	\$ 5,234	\$ 5,499	\$ 6,221	\$ 7,964

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



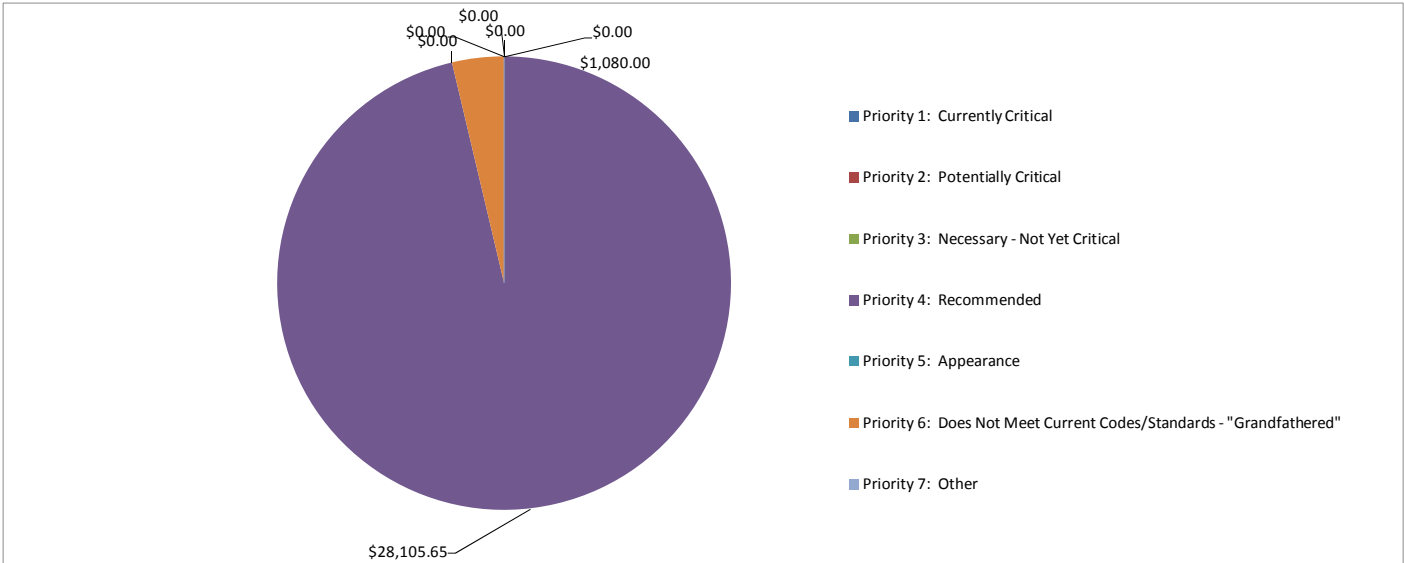
City of Troy
Facility Condition Assessment
April 2018

Sanctuary Lake Cart Building

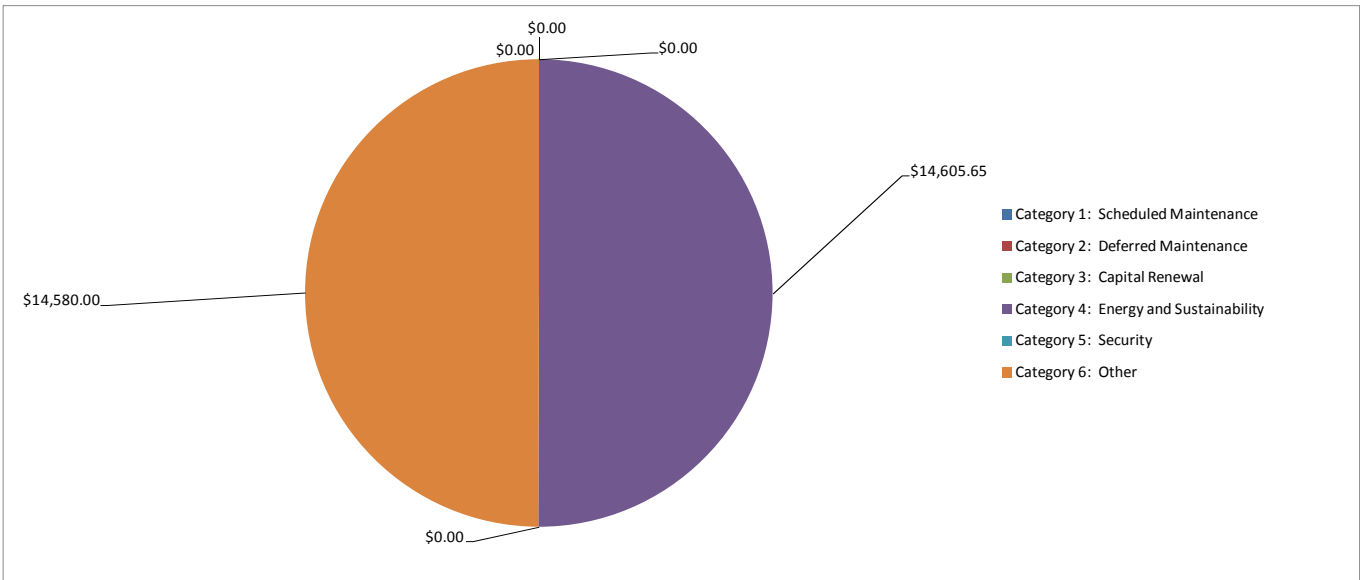
Building Information			Deficiency Priorities				Deficiency Categories																
Address: 1446 East South Boulevard			Priority 1: Currently Critical				Category 1: Scheduled Maintenance																
Building Area: 5,160 SF			Priority 2: Potentially Critical				Category 2: Deferred Maintenance																
No. of Floors: 1			Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																
Year Built: 2003			Priority 4: Recommended				Category 4: Energy and Sustainability																
Evaluation Date: April 2018			Priority 5: Appearance				Category 5: Security																
			Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																
			Priority 7: Other																				
							*Lower score equals higher priority																
							Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only																
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
1.0	Building Exterior																						
1.1	Asphalt Shingles	Roof			4	3	The asphalt shingles were installed in 2003 and are in good condition.	Plan on replacing the asphalt shingles, underlayment and flashings in 2028.	5,000	SF	\$ 4.00	\$ 20,000									\$ 34,562	\$ 44,243	
2.0	Building Interior																						
2.1	Wood Structure	Cart Shed	SLCB-004		4	6	The unfinished surfaces of the wood structure and roof are unprotected from moisture in the unconditioned space. Additionally, a finish will provide better light reflectance in the space.	Paint the wood structure with a waterborne acrylic dry fall paint system.	5,000	SF	\$ 2.00	\$ 10,000						\$ 13,500	\$ 14,538	\$ 15,274	\$ 17,281	\$ 22,121	
2.2	Plywood Partitions and Wood Framing	Cart Shed	SLCB-005		4	6	The wood wall framing and the plywood over it are unprotected from moisture in the unconditioned space. Additionally, a finish will provide better light reflectance in the space.	Prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	680	SF	\$ 2.25	\$ 1,530						\$ 2,066	\$ 2,224	\$ 2,337	\$ 2,644	\$ 3,385	
3.0	Electrical System																						
3.1	Service Entrance Panelboards	Southeast Corner		SLCB-E-1	7	6	Panelboard was installed in 2003.	Replace the panelboards in 34 years.	3	EA													
3.2	Lighting Control System	Panelboard			4	4	Lights are manually controlled.	Install occupancy sensors.	6	EA					\$ 389.00	\$ 2,334		\$ 3,151	\$ 3,393	\$ 3,565	\$ 4,033	\$ 5,163	
3.3	Interior Building Lighting	Entire Building			4	4	Lighting consists of fluorescent strip fixtures.	Replace with LED fixtures.	40	EA					\$ 545.00	\$ 21,800	\$ 88	\$ 29,430	\$ 31,693	\$ 33,297	\$ 37,673	\$ 48,224	
4.0	Mechanical System																						
4.1	Fan	Cart Shed		SLCB-M-1	3	3	The sidewall louvered fan is in fair condition.	Replace the fan with like and kind in 2023.	1	EA			\$ 2,200.00	\$ 2,200						\$ 3,360	\$ 3,801	\$ 4,866	
5.0	Plumbing System																						
	No comments.																\$ 150						
												\$ 31,530		\$ 2,200		\$ 24,134	\$ 238	\$ 48,146	\$ 51,848	\$ 57,833	\$ 99,995	\$ 128,002	
6.0	Site																						
	No comments.																						
												\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



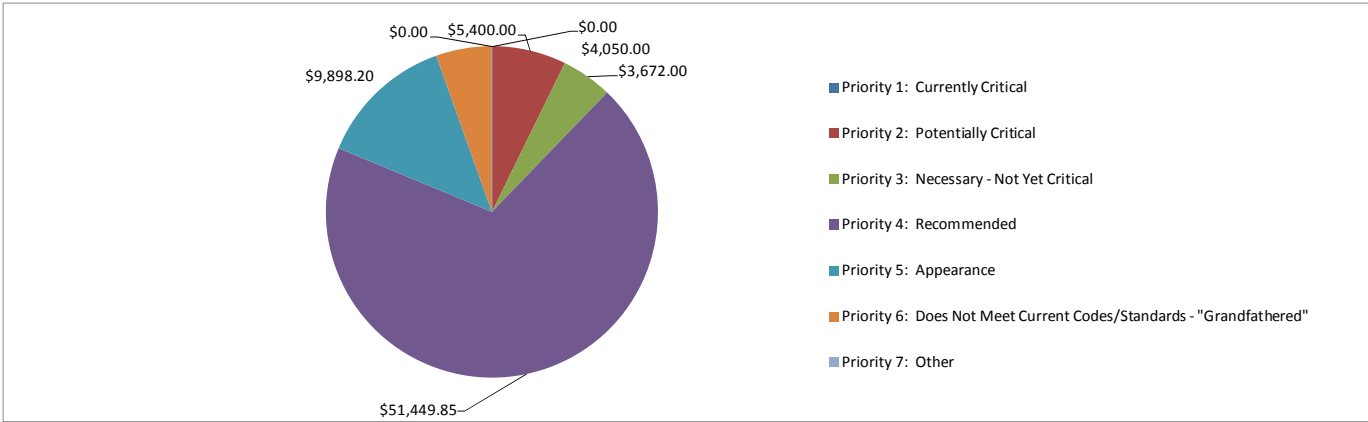
City of Troy
Facility Condition Assessment
April 2018

Sanctuary Lake Maintenance Building

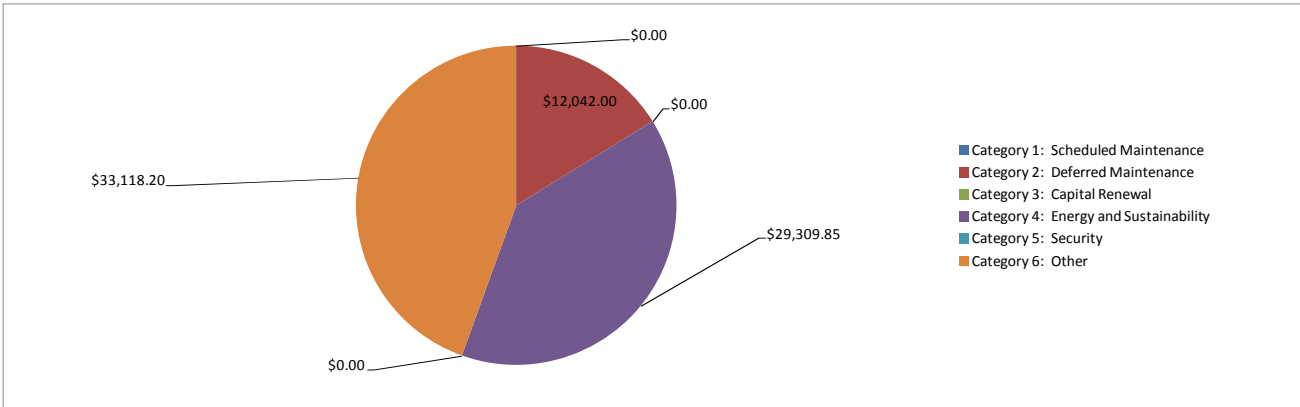
Building Information				Deficiency Priorities				Deficiency Categories																
Address: 1442 East South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																
Building Area: 5,160 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																
Year Built: 2003				Priority 4: Recommended				Category 4: Energy and Sustainability																
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security																
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																
				Priority 7: Other																				
								*Lower score equals higher priority																
																				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only				
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost		
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal								
1.0	Building Exterior																							
1.1	Asphalt Shingles	Roof			4	3	The asphalt shingles were installed in 2003 and are in acceptable condition.	Plan on replacing the asphalt shingles, underlayment and flashings in 2028.	5,000	SF	\$ 4.00	\$ 20,000									\$ 34,562	\$ 44,243		
2.0	Building Interior																							
2.1	Wood Structure	Maintenance Shed	SLMB-021		4	6	The unfinished surfaces of the wood structure and roof are unprotected from moisture in the unconditioned space. Additionally, a finish will provide better light reflectance in the space.	Paint the wood structure with a waterborne acrylic dry fall paint system.	5,000	SF	\$ 2.00	\$ 10,000						\$ 13,500	\$ 14,538	\$ 15,274	\$ 17,281	\$ 22,121		
2.2	Third Grab Bar	Men's Toilet/Locker Women's Toilet/Locker			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	2	EA	\$ 400.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770		
3.0	Electrical System																							
3.1	Service Entrance Panelboard	Break Room		SLMB-E-1	7	6	Panelboard was installed in 2003.	Replace the panelboard in 2023.	1	EA					\$ 5,600.00	\$ 5,600				\$ 8,553	\$ 9,677	\$ 12,387		
3.2	Lighting Control System	Panelboard			4	4	Lights are manually controlled.	Install occupancy sensors.	11	EA					\$ 389.00	\$ 4,279		\$ 5,777	\$ 6,221	\$ 6,536	\$ 7,395	\$ 9,466		
3.3	Interior Building Lighting	Entire Building			4	4	Lighting consists of surface and recess mounted 2 x 4 fluorescent fixtures.	Replace with LED fixtures.	12	EA					\$ 545.00	\$ 6,540	\$ 40	\$ 8,829	\$ 9,508	\$ 9,989	\$ 11,302	\$ 14,467		
4.0	Mechanical System																							
4.1	Furnace	Break Room Plenum		SLMB-M-1	3	3	The 66 MBH horizontally suspended gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2028.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350				\$ 6,567	\$ 8,406		
4.2	Condensing Unit	Outdoors		SLMB-M-2	3	3	The 2 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2028.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200				\$ 10,368	\$ 13,272		
4.3	Exhaust Fan	Maintenance Shed		SLMB-M-3	3	3	The sidewall louvered fan is in fair condition.	Replace the fan with like kind in 2023.	1	EA			\$ 2,200.00	\$ 2,200			\$ 150			\$ 3,360	\$ 3,801	\$ 4,866		
4.4	Infrared Heaters	Repair/Storage			3	3	The gas fired infrared tube heater is in good condition.	Replace the infrared heater with like kind in 2028.	1,000	SF			\$ 3.00	\$ 3,000							\$ 5,184	\$ 6,636		
5.0	Plumbing System																							
5.1	Water Heater	Maintenance Shed		SLMB-P-1	3	3	The 40 gallon electric water heater is in good condition.	Replace the water heater with like kind in 2028.	1	EA			\$ 5,025.00	\$ 5,025							\$ 8,684	\$ 11,116		
5.2	Plumbing Fixtures	Throughout			4	3	The plumbing fixtures are in fair condition.	Replace the fixtures in 2028.	1	LS			\$ 17,000.00	\$ 17,000							\$ 29,378	\$ 37,607		
												\$ 30,800	\$ 37,025			\$ 16,419	\$ 740	\$ 29,186	\$ 31,430	\$ 44,934	\$ 145,582	\$ 186,357		
6.0	Site																							
	No comments.																							
												\$ -	\$ -			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Sanctuary Lake Pro Shop and Club House

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 1450 East South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 3,750 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2003				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
																		Note: Project Cost includes 35% mark-ups and fees				
																		Annual Maintenance includes labor and material only				

City of Troy
Facility Condition Assessment
April 2018

Sanctuary Lake Pro Shop and Club House

Building Information				Deficiency Priorities				Deficiency Categories																	
Address: 1450 East South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																	
Building Area: 3,750 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																	
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																	
Year Built: 2003				Priority 4: Recommended				Category 4: Energy and Sustainability																	
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security																	
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																	
				Priority 7: Other																					
																				Note: Project Cost includes 35% mark-ups and fees					
																				Annual Maintenance includes labor and material only					
																				*Lower score equals higher priority					
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost			
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal									
2.0	Building Interior																								
2.1	Carpet	Club House Pro Shop Office 1 Office 2	SLPS-040		5	3	The carpet is in good condition.	Plan on replacing the carpet with carpet tiles in 2028.	1,761	SF	\$ 5.50	\$ 9,686									\$ 16,738	\$ 21,426			
2.2	Flooring	Kitchen Pantry Corridor	SLPS-065		5	6	The vinyl composition tile (VCT) flooring system has cracked and the seams have opened up due to standing water.	Replace the VCT with a resilient sheet flooring system with welded seams and an integral base.	611	SF	\$ 7.00	\$ 4,277						\$ 5,774	\$ 6,218	\$ 6,533	\$ 7,391	\$ 9,461			
2.3	Ceiling	Kitchen Pantry Corridor	SLPS-070		5	6	The lay-in ceiling panels are stained and damaged.	Replace the panels with washable, vinyl coated acoustical lay-in ceiling panels.	611	SF	\$ 5.00	\$ 3,055						\$ 4,124	\$ 4,441	\$ 4,666	\$ 5,279	\$ 6,758			
2.4	Third Grab Bar	Men's 1 Women's 1 Men's 2 Women's 2 Men's 3 Women's 3			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	6	EA	\$ 400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309			
2.5	Non-Insulated Lavatory Piping	Men's 2 Women's 2 Men's 3 Women's 3			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	4	EA	\$ 150.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327			
2.6	Exterior Door and Frame	Club House	SLPS-110		2	6	There are gaps between the doors and the threshold permitting unconditioned air and insects into the building. Additionally, a draft can be felt through one jamb.	Remove the wood jamb and insert insulation. Reinstall wood jamb. Add an astragal and coordinator to the doors. Add a bottom weather resistant sweep to each door.	1	EA	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309			
2.7	Window Trim	Starters Shed	SLPS-166		3	2	The paint on the wood window trim has delaminated from the wood.	Remove all loose paint, sand to bare wood and prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	5	EA	\$ 400.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424			
2.8	Walls	Starters Shed	SLPS-167		3	2	The paint on the wood panel walls has delaminated from the wood.	Remove all loose paint, sand to bare wood and prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	240	SF	\$ 3.00	\$ 720						\$ 972	\$ 1,047	\$ 1,100	\$ 1,244	\$ 1,593			
2.9	Exterior Door and Frame	Pump Room 1	SLPS-171		4	3	The edges of the hollow metal doors and frames are corroding. The hardware is difficult to operate.	Plan to replace frames with aluminum frames and doors with fiberglass reinforced polyester doors in 2028.	3	EA	\$ 3,000.00	\$ 9,000									\$ 15,553	\$ 19,910			
2.10	Exterior Door and Frame	Pump Room 2	SLPS-189		4	3	The edges of the hollow metal door and frame are corroding. The hardware is difficult to operate.	Plan to replace frame with aluminum frame and door with a fiberglass reinforced polyester doors in 2028.	1	EA	\$ 3,000.00	\$ 3,000									\$ 5,184	\$ 6,636			
2.11	Water Damaged Ceiling	Club House	SLPS-027 SLPS-138		2	2	The asphalt shingle roof over the Club House has been damaged and water has infiltrated through the roof and damaged the acoustical lay-in ceiling panels.	Replace damaged asphalt shingles and underlayment. Replace the wood substrate if water damaged. Replace the damaged ceiling panels and clean the affected mechanical diffuser.	1	LS	\$ 600.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327			
3.0	Electrical System																								
3.1	Service Entrance Equipment	Storage		SLPS-E-1 SLPS-E-2	7	3	Equipment is from 2003.	Plan on replacing equipment in 2053.	1	EA						\$ 10,800.00	\$ 10,800								
3.2	Panelboard	Kitchen		SLPS-E-3	7	3	Panelboard is from 2003.	Plan on replacing panel in 2053.	1	EA						\$ 5,600.00	\$ 5,600								
3.3	Service Entrance Disconnect	Pump House 1		SLPS-E-7	7	3	The equipment appears in very good condition.	Plan on replacing in 2053.	1	EA						\$ 1,500.00	\$ 1,500								
3.4	Pump Starters	Pump House 1		SLPS-E-8	7	3	The starters appear in very good condition.	Plan on replacing in 2038.	2	EA						\$ 2,800.00	\$ 5,600					\$ 12,387			
3.5	Service Entrance Disconnect	Pump House 2		SLPS-E-12	7	3	The equipment appears in good condition.	Plan on replacing panel in 2038.	1	EA						\$ 1,500.00	\$ 1,500					\$ 3,318			
3.6	Pump Starters	Pump House 2		SLPS-E-13	7	3	The starters appear in good condition.	Plan on replacing starters in 2038.	2	EA						\$ 1,175.00	\$ 2,350					\$ 5,198			
3.7	Interior Lighting	Entire Building		SLPS-E-4	4	4	T-8 Fluorescent and Incandescent.	Retrofit fixtures with LED components.	62	EA						\$ 250.00	\$ 15,500	\$ 310	\$ 20,925	\$ 22,534	\$ 23,675	\$ 26,786	\$ 34,288		
3.8	Emergency Lighting	Entire Building			4	1	There are sufficient emergency battery packs.	Replace the units in 2043. Replace the batteries on a 5 year schedule.	8	EA						\$ 535.00	\$ 4,280	\$ 500							

City of Troy
Facility Condition Assessment
April 2018

Sanctuary Lake Pro Shop and Club House

Building Information Address: 1450 East South Boulevard Building Area: 3,750 SF No. of Floors: 1 Year Built: 2003 Evaluation Date: April 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only									
								*Lower score equals higher priority													

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
3.8	Exterior Lighting	Entry and Patio			4	4	Original fixtures with compact fluorescent lamps.	Replace with LED lamps.	30	EA					\$ 25.00	\$ 750	\$ 150	\$ 1,013	\$ 1,090	\$ 1,146	\$ 1,296	\$ 1,659
3.9	Interior Lighting	Pump House 1 and 2			4	4	Fluorescent strip and incandescent socket relamped with fluorescent.	Replace with LED strips.	9	EA					\$ 545.00	\$ 4,905	\$ 66	\$ 6,622	\$ 7,131	\$ 7,492	\$ 8,476	\$ 10,851
3.10	Exterior Lighting	Pump House 1 and 2			4	4	Original incandescent socket relamped with fluorescent.	Replace with LED fixture.	2	EA					\$ 278.00	\$ 556	\$ 25	\$ 751	\$ 808	\$ 849	\$ 961	\$ 1,230
4.0	Mechanical System																					
4.1	Furnace	Mechanical		SLPS-M-1	3	3	The 110 MBH gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405
4.2	Furnace	Mechanical		SLPS-M-2	3	3	The 110 MBH gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405
4.3	Furnace	Mechanical		SLPS-M-3	3	3	The 60 MBH horizontally suspended gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405
4.4	Condensing Unit	Outdoors		SLPS-M-4	3	3	The 5 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
4.5	Condensing Unit	Outdoors		SLPS-M-5	3	3	The 5 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
4.6	Condensing Unit	Outdoors		SLPS-M-6	3	3	The 5 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
4.7	Makeup Air Unit	Roof		SLPS-M-7	3	3	The roof mounted makeup air unit is in fair condition.	Replace the make up air unit with like kind in 2023.	1	EA			\$ 28,500.00	\$ 28,500			\$ 300			\$ 43,531	\$ 49,251	\$ 63,045
4.8	Exhaust Fan	Roof		SLPS-M-8	3	3	The roof mounted upblast exhaust fan is in fair condition.	Replace the exhaust fan with like kind in 2028.	1	EA			\$ 2,200.00	\$ 2,200						\$ 3,802	\$ 4,866	
4.9	Exhaust Fan	Roof		SLPS-M-9	3	3	The roof mounted upblast exhaust fan is in fair condition.	Replace the exhaust fan with like kind in 2028.	1	EA			\$ 2,200.00	\$ 2,200						\$ 3,802	\$ 4,866	
5.0	Plumbing System																					
5.1	Water Heater	Mechanical		SLPS-P-1	3	3	The 250 MBH 80 gallon gas fired water heater is in fair condition.	Replace the water heater with like kind in 2023.	1	EA			\$ 14,500.00	\$ 14,500						\$ 22,147	\$ 25,057	\$ 32,076
5.2	Pump	Pump House 1		SLPS-P-2	3	3	The close coupled foot mounted end suction 75 HP irrigation pump is in fair condition.	Replace the pump with like kind in 2028.	1	EA			\$ 22,000.00	\$ 22,000			\$ 300			\$ 38,019	\$ 48,667	
5.3	Pump	Pump House 1		SLPS-P-3	3	3	The close coupled foot mounted end suction 75 HP irrigation pump is in fair condition.	Replace the pump with like kind in 2028.	1	EA			\$ 22,000.00	\$ 22,000			\$ 300			\$ 38,019	\$ 48,667	
5.4	Pump	Pump House 2		SLPS-P-4	3	3	The close coupled foot mounted end suction 10 HP irrigation pump is in fair condition.	Replace the pump with like kind in 2028.	1	EA			\$ 6,000.00	\$ 6,000			\$ 300			\$ 10,368	\$ 13,272	
5.5	Pump	Pump House 2		SLPS-P-5	3	3	The close coupled foot mounted end suction 10 HP irrigation pump is in fair condition.	Replace the pump with like kind in 2028.	1	EA			\$ 6,000.00	\$ 6,000			\$ 300			\$ 10,368	\$ 13,272	
5.6	Pressure Tank	Pump House 2		SLPS-P-6	3	3	The domestic water tank is in fair condition.	Replace the tank in 2028.	1	EA			\$ 3,000.00	\$ 3,000						\$ 5,184	\$ 6,636	
5.7	Plumbing Fixtures	Throughout			3	3	Plumbing fixtures are in fair condition.	Replace the fixtures in 2028.	1	LS			\$ 86,750.00	\$ 86,750						\$ 149,914	\$ 191,902	
5.8	Fire Protection	Throughout			4	3	The fire protection piping is in good condition.	Replace the system in 2028.	4,000	SF			\$ 4.00	\$ 16,000						\$ 27,649	\$ 35,394	
												\$ 83,726	\$ 238,550	\$ 53,341	\$ 4,201	\$ 74,470	\$ 80,196	\$ 194,839	\$ 594,445	\$ 781,843		

6.0	Site																				
6.1	Asphalt Pavement	Customer Parking Lot	SLPS-006		4	3	The asphalt pavement in the parking lot has cracked in a few locations, but does flow to the drains and is in good condition overall.	Plan on removing both layers of asphalt, recompacting the drainage course, adding a 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	113,000	SF	\$ 4.00	\$ 452,000									\$ 999,884
6.2	Asphalt Pavement	Maintenance/Staff Parking Lot	SLPS-147		4	3	The asphalt pavement in the parking lot has cracked in a few locations, but does flow to the drains and is in good condition overall.	Plan on removing both layers of asphalt, recompacting the drainage course, adding a 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	13,315	SF	\$ 4.00	\$ 53,260									\$ 117,818

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Sanctuary Lake Pro Shop and Club House

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 1450 East South Boulevard Building Area: 3,750 SF No. of Floors: 1 Year Built: 2003 Evaluation Date: April 2018				Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other														
Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
6.3	Asphalt Pavement	Cart Paths	SLPS-213		4	3	The asphalt paved golf cart paths are in good condition. There are only a few sections with dips low enough to pond water.	Plan removing both layers of asphalt, recompact the drainage course, adding a 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	28,293	SF	\$ 4.00	\$ 113,172										\$ 250,351
6.4	Control Joints	Concrete Pavement			3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	1,200	LF	\$ 2.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
6.5	Concrete Pavement	Sidewalk Wheelchair Ramp	SLPS-005		2	3	The top surface of the concrete pavement has cracked and will spall within 10 years.	Plan on replacing the concrete pavement and roll-off curb in 2028 with 4 inch thick concrete on a 6 inch compacted gravel base. Seal joints with an exterior grade silicone sealant.	120	SF	\$ 50.00	\$ 6,000									\$ 10,368	\$ 13,272
6.6	Brick Pavers	Main Entrance			4	1	The brick pavers are in good shape and have not settled unevenly.	Inspect and reset brick pavers annually. Plan on salvaging and cleaning brick pavers, recompact sub-grade, adding filler where needed, replacing edging with concrete and resetting brick pavers in 2028.	312	SF	\$ 10.00	\$ 3,120									\$ 5,391	\$ 6,901
6.7	Ramp	Pro Shop Entrance	SLPS-141		6	6	The entrance to the Prop Shop does not have a barrier-free ramp.	Cut and remove the asphalt pavement 6 feet out from the concrete step. Pre-drill the concrete step along its edge and place 8 inch long, number 4 reinforcement steel each 16 inches on center to a depth of 4 inches and secured with non-shrink/non-metallic grout. Pour a new 1:12 sloped concrete slab up to the concrete step slab on a 6 inch compacted gravel base. Seal joints with an exterior grade silicone sealant. Note, handrails not required for ramp vertical heights of 6 inches or less.	1	LS	\$ 3,400.00	\$ 3,400						\$ 4,590	\$ 4,943	\$ 5,193	\$ 5,876	\$ 7,521
6.8	Sign Wall	Property Entrance	SLPS-002		2	2	The mortar joints have deteriorated between the bricks on the south side of the sign wall.	Tuck point mortar into the joints and tool to match the existing mortar profile.	1	LS	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
6.9	Screen Wall	Refuse Container	SLPS-143		4	2	The mortar joints have deteriorated between the limestone cap sections; allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the limestone cap sections. Cap the top of the block wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Add new limestone cap sections where removed sections are damaged. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant. Rake out damaged mortar at bricks and tuck point with new mortar.	1	LS	\$ 2,600.00	\$ 2,600						\$ 3,510	\$ 3,780	\$ 3,971	\$ 4,493	\$ 5,752
6.10	Privacy Gate	Refuse Container			4	3	The wood gate, though functional, has weathered.	Plan on replacing the wood gate with prefinished aluminum gates and new locking hardware in 2023.	1	LS	\$ 2,400.00	\$ 2,400								\$ 3,666	\$ 4,147	\$ 5,309
6.11	Screen Wall	Yard Material Storage	SLPS-146		4	2	The mortar joints have deteriorated between the limestone cap sections; allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the limestone cap sections. Cap the top of the block wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Add new limestone cap sections where removed sections are damaged. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant. Rake out damaged mortar at bricks and tuck point with new mortar.	1	LS	\$ 3,900.00	\$ 3,900						\$ 5,265	\$ 5,670	\$ 5,957	\$ 6,740	\$ 8,627

City of Troy
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April 2018

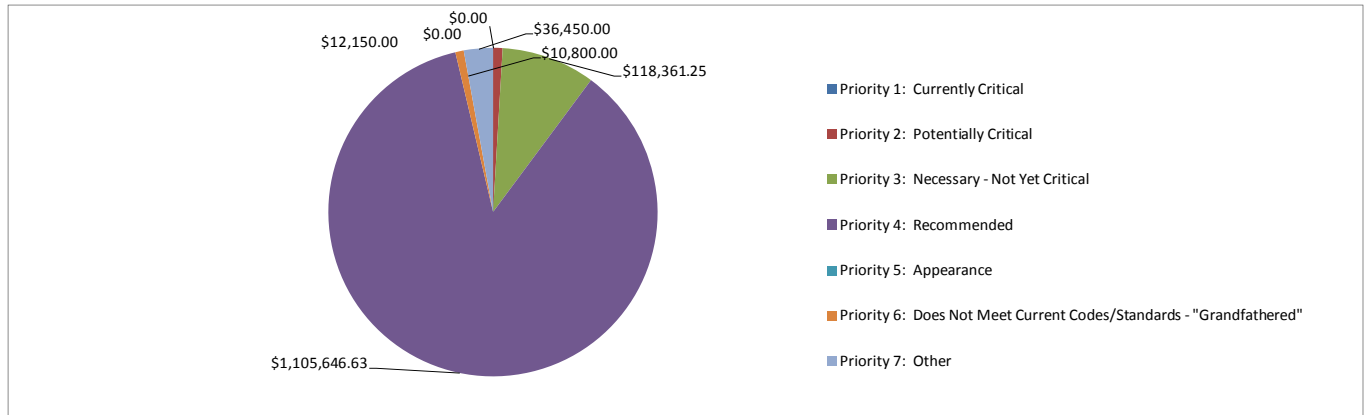
Sanctuary Lake Pro Shop and Club House

Building Information				Deficiency Priorities				Deficiency Categories															
Address: 1450 East South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 3,750 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 2003				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other																			
																		Note: Project Cost includes 35% mark-ups and fees					
																		Annual Maintenance includes labor and material only					
																		*Lower score equals higher priority					
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
6.12	Screen Wall	Emergency Generator	SLPS-149		4	2	The mortar joints have deteriorated between the limestone cap sections; allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the limestone cap sections. Cap the top of the block wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Add new limestone cap sections where removed sections are damaged. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant. Rake out damaged mortar at bricks and tuck point with new mortar.	1	LS	\$ 2,600.00	\$ 2,600						\$ 3,510	\$ 3,780	\$ 3,971	\$ 4,493	\$ 5,752	
6.13	Picnic Table	Maintenance Building Grounds			4	1	The picnic table has wood tops and benches that have weathered.	Refinish all wood surfaces with an oil-modified polyurethane.	1	EA	\$ 600.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327	
6.14	Site Lighting	Parking Lot		SLPS-E-5	4	4	HID "shoebox"	Replace with LED on existing poles.	15	EA					\$ 1,200.00	\$ 18,000	\$ 150	\$ 24,300	\$ 26,168	\$ 27,493	\$ 31,106	\$ 39,818	
												\$ 645,852		\$ -		\$ 18,000		\$ 150	\$ 45,765	\$ 49,284	\$ 55,445	\$ 78,490	\$ 1,468,527

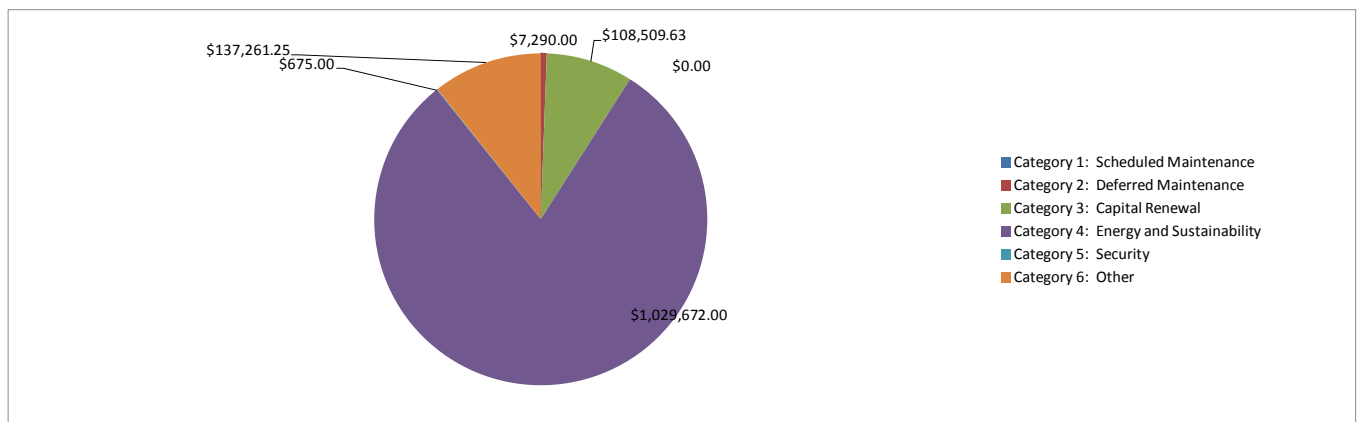


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Community Center

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 3179 Livernois Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 127,120 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2002				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees														
								Annual Maintenance includes labor and material only														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Exterior Wall	Dining Room 402			4	2	The mortar joints have deteriorated between the limestone cap sections; allowing water to infiltrate, freeze and push out the mortar.	Grind out 1/2 inch of the limestone cap mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
1.2	Roof Coping	Roof	CC-444		3	6	The metal roof coping splice joints are loose and have corroded fasteners. The corner sections are not fully welded and have been sealed with a urethane based sealant (degrades in sunlight).	Replace with a cleat based coping system and concealed splice plates sealed with butyl sealant.	2,505	LF	\$ 35.00	\$ 87,675						\$ 118,361	\$ 127,462	\$ 133,915	\$ 151,512	\$ 193,949
1.3	Building Expansion Joint	Roof	CC-510 CC-545		4	2	The roofing expansion joint material has weathered and deteriorated.	Replace in 2021 with 60-mil thick, non-reinforced, EPDM bellows over the existing curbs.	156	LF	\$ 60.00	\$ 9,360							\$ 13,608	\$ 14,296	\$ 16,175	\$ 20,706
1.4	Roofing System	Roof			4	3	The roofing system is a 3-ply modified asphalt built-up roof with gravel surfacing.	Warranty expires in 2022. Replace with same in 2028.	85,144	SF	\$ 25.00	\$ 2,128,600								\$ 3,678,464	\$ 4,708,745	
1.5	Roofing System	Roof			4	3	The roofing system is an EPDM single-ply roofing system.	The warranty expired March 16, 2018. Replace with same in 2023.	27,000	SF	\$ 14.00	\$ 378,000								\$ 525,374	\$ 594,413	\$ 760,899
1.6	Elevator Modernization	Elevator			4	3	The existing elevator car finishes, power unit, pump, motor, controls and safety features should be replaced in 2038.	Replace all hydraulic elevator serviceable components and car finishes.	1	LS	\$ 130,000.00	\$ 130,000										\$ 287,577
2.0	Building Interior																					
2.1	Carpet	Banquet Room 304 Banquet Room 305 Meeting Room 301 Office 1, et.al.	CC-101		5	3	The carpet and carpet tiles are in acceptable condition, but are showing signs of wear.	Plan on replacing with carpet tiles in 2028.	20992	SF	\$ 5.50	\$ 115,456									\$ 199,522	\$ 255,404
2.2	Walk-Off Mat	Vestibule 1, et.al.			4	3	The walk-off mat is in good condition, but will be expensive to replace when worn.	Plan on replacing walk-off mat with walk off carpet tiles in 2028.	760	SF	\$ 5.50	\$ 4,180									\$ 7,224	\$ 9,247
2.3	Wood Flooring	Banquet Room 304 Banquet Room 305			4	3	The wood flooring is in good condition, but is showing signs of wear.	Plan to refinish wood flooring in 2028 with machine sanding, fill and repair of seams and defects and two coats of urethane.	2661	SF	\$ 2.50	\$ 6,653									\$ 11,496	\$ 14,716
2.4	Resilient Flooring	Preschool 201 Preschool 202 Kids Corner			4	3	The resilient flooring is in good condition, but is showing signs of wear.	Plan to replace resilient flooring in 2028.	2458	SF	\$ 3.00	\$ 7,374									\$ 12,743	\$ 16,312
2.5	Rubber Flooring	Fitness Room Activity Room 601 Cardio Room 602			4	3	The rubber flooring is in good condition, but is showing signs of wear.	Plan to replace resilient flooring in 2028.	7,839	SF	\$ 3.00	\$ 23,517									\$ 40,640	\$ 52,023
2.6	Wood Athletic Flooring	Gymnasium Aerobic Studio A Aerobic Studio D			4	3	The wood flooring is in good condition.	Plan to refinish wood flooring in 2038 with machine sanding, fill and repair of seams and defects and two coats of urethane.	21,351	SF	\$ 2.50	\$ 53,378						\$ 72,060	\$ 77,600	\$ 81,529	\$ 92,242	\$ 118,078
2.7	Third Grab Bar	Toilet Men's 3 Women's 3, et.al.			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	20	EA	\$ 400.00	\$ 8,000						\$ 10,800	\$ 11,630	\$ 12,219	\$ 13,825	\$ 17,697
2.8	Exterior Door and Frame	Kitchen Office 2	CC-050		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace frame with an aluminum frame. Replace door with a fiberglass reinforced polyester door.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
2.9	Electric Hand Dryers	Toilet Men's 3 Women's 3, et.al.			4	3	The electric hand dryers are in good condition.	Plan on replacing electric hand dryers in 2028.	20	EA	\$ 800.00	\$ 16,000									\$ 27,649	\$ 35,394

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Community Center

Building Information				Deficiency Priorities				Deficiency Categories																	
Address: 3179 Livernois Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																	
Building Area: 127,120 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																	
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																	
Year Built: 2002				Priority 4: Recommended				Category 4: Energy and Sustainability																	
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security																	
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																	
				Priority 7: Other																					
																				Note: Project Cost includes 35% mark-ups and fees					
																				Annual Maintenance includes labor and material only					
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost			
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal									
2.10	Elevator Pit	Elevator	CC-855		2	6	There is water in the elevator pit (code violation).	Prior to correction, the elevator pit and its equipment must be inspected, under the code required service agreement, by a licensed elevator inspector. They must be provided pit access and be present during the entire correction process. Remove all standing water and oil from the pit's concrete surfaces. Route all cracks and defective construction joints and fill with a cementitious packing mortar compatible with a crystalline waterproofing system. Apply an 1/8 inch thick slurry coat of a crystalline waterproofing system over all concrete surfaces.	1	EA	\$ 6,000.00	\$ 6,000						\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273			
3.0	Electrical System																								
3.1	Emergency Egress Lighting	Entire Building			7	3	Normal lighting fixtures with Central Battery Inverter back-up.	Maintain the fixtures in working condition.	1	LS					\$ 2,000.00	\$ 2,000		\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424			
3.2	Emergency Power	Electrical Room		CC-E-19 CC-E-43	7	3	Central Battery Inverters provide emergency power to select fixtures.	Regularly test the inverters and plan to replace the batteries every 5 to 7 years.	1	LS					\$ 25,000.00	\$ 25,000	\$ 2,500	\$ 33,750	\$ 36,345	\$ 38,185	\$ 43,203	\$ 55,303			
3.3	Service Entrance Substation (2002)	Electrical Room		CC-E-1 CC-E-2 CC-E-3	7	6	The substation is 16 years old and has 34 years of its life cycle left.	Plan on replacing the substation in 2052.	1	EA					\$ 150,000.00	\$ 150,000	\$ 1,000								
3.4	Secondary Distribution (2002)	Entire Building		CC-E-4 thru CC-E-41	7	6	The equipment is 16 years old and has 34 years of its life cycle left.	Plan on replacing the equipment in 2052.	40	EA					\$ 5,000.00	\$ 200,000									
3.5	Lighting Control System	Entire Building			4	4	Lights are manually controlled with occupancy sensors in some areas.	Install occupancy sensors in all spaces and daylight sensors where appropriate.	127,120	SF					\$ 1.00	\$ 127,120		\$ 171,612	\$ 184,807	\$ 194,163	\$ 219,678	\$ 281,206			
3.6	Interior Building Lighting	Entire Building		CC-E-45	4	4	Lighting varies from fluorescent T-8 and T-5 lamps to HID lamps in high ceiling spaces.	Replace fixtures with LED fixtures or retrofit with LED lamps.	127,120	SF					\$ 5.00	\$ 635,600	\$ 3,178	\$ 858,060	\$ 924,037	\$ 970,816	\$ 1,098,389	\$ 1,406,031			
3.7	Fire Alarm Control Panel	Electrical Room			4	5	The Fire Alarm system is from 2002 and the building has adequate strobe and horn coverage.	Install system software updates and replace the batteries in 5-year increments.	1	LS					\$ 500.00	\$ 500		\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106			
4.0	Mechanical System																								
4.1	Cabinet Unit Heaters	Stairwells and Vestibules			3	3	The hot water recessed cabinet unit heaters are in fair condition.	Replace the cabinet unit heaters with like kind in the next 5 to 10 years.	10	EA			\$ 3,000.00	\$ 30,000			\$ 2,000			\$ 45,822	\$ 51,843	\$ 66,364			
4.2	Unit Heaters	Throughout			3	3	The unit heaters are in fair condition. There are both hot water and electric type.	Replace the unit heaters with like kind in the next 5 to 10 years.	7	EA			\$ 3,000.00	\$ 21,000						\$ 32,076	\$ 36,291	\$ 46,455			
4.3	Terminal Units	Throughout			3	3	The terminal units with hot water reheat coils are in fair condition.	Replace the terminal units with like kind in the next 5 to 10 years.	14	EA			\$ 3,000.00	\$ 42,000						\$ 64,151	\$ 72,581	\$ 92,910			
4.4	Fan Powered Boxes	Throughout			3	3	The fan powered terminal units with hot water reheat coils are in fair condition.	Replace the fan powered terminal units with like kind in the next 5 to 10 years.	36	EA			\$ 3,000.00	\$ 108,000						\$ 164,960	\$ 186,637	\$ 238,911			
4.5	Exhaust Fans	Throughout			3	3	The roof mounted exhaust fans are in fair condition. The building consists of both downblast and upblast fans.	Replace the exhaust fans with like kind in the next 5 to 10 years.	16	EA			\$ 3,750.00	\$ 60,000			\$ 2,400			\$ 91,644	\$ 103,687	\$ 132,728			
4.6	Supply Fan	Roof		CC-M-1	3	3	The centrifugal roof supply fan is in fair condition.	Replace the supply fan with like kind in the next 5 to 10 years.	1	EA			\$ 5,000.00	\$ 5,000			\$ 150			\$ 7,637	\$ 8,641	\$ 11,061			
4.7	Air Conditioning Unit	Communication Room		CC-M-2	3	3	The portable 3 ton air conditioning unit is in fair condition.	Replace the AC unit with like kind in the next 5 to 10 years.	1	EA			\$ 5,000.00	\$ 5,000			\$ 150			\$ 7,637	\$ 8,641	\$ 11,061			
4.8	Door Air Curtain	Receiving Dock		CC-M-3	3	3	The loading dock electric door air curtain is in fair condition.	Replace the door air curtain with like kind in the next 5 to 10 years.	1	EA			\$ 4,000.00	\$ 4,000						\$ 6,109	\$ 6,912	\$ 8,848			
4.9	Boiler - Hot Water Heating	Mechanical Room		CC-M-4	3	3	The 2499 MBH gas fired boiler and its associated 3/4 HP primary circulation pump are in fair condition. The system generates building heating hot water.	Replace the boiler system with a high efficient condensing unit in the next 5 to 10 years.	1	LS			\$ 80,000.00	\$ 80,000			\$ 450			\$ 122,192	\$ 138,249	\$ 176,970			
4.10	Boiler - Hot Water Heating	Mechanical Room		CC-M-5	3	3	The 2499 MBH gas fired boiler and its associated 3/4 HP primary circulation pump are in fair condition. The system generates building heating hot water.	Replace the boiler system with a high efficient condensing unit in the next 5 to 10 years.	1	LS			\$ 80,000.00	\$ 80,000			\$ 450			\$ 122,192	\$ 138,249	\$ 176,970			

City of Troy
Facility Condition Assessment
April 2018

Community Center

Building Information				Deficiency Priorities			Deficiency Categories															
Address: 3179 Livernois Road				Priority 1: Currently Critical			Category 1: Scheduled Maintenance															
Building Area: 127,120 SF				Priority 2: Potentially Critical			Category 2: Deferred Maintenance															
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical			Category 3: Capital Renewal															
Year Built: 2002				Priority 4: Recommended			Category 4: Energy and Sustainability															
Evaluation Date: March 2018				Priority 5: Appearance			Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"			Category 6: Other															
				Priority 7: Other																		
Note: Project Cost includes 35% mark-ups and fees																						
Annual Maintenance includes labor and material only																						
*Lower score equals higher priority																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architctural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.11	Hot Water Heating Pump	Mechanical Room		CC-M-6	3	3	The 5 HP base mounted end suction hot water heating secondary pump is in fair condition.	Replace the heating pump with like kind in the next 5 to 10 years.	1	EA			\$ 15,000.00	\$ 15,000			\$ 300			\$ 22,911	\$ 25,922	\$ 33,182
4.12	Hot Water Heating Pump	Mechanical Room		CC-M-7	3	3	The 5 HP base mounted end suction hot water heating secondary pump is in fair condition.	Replace the heating pump with like kind in the next 5 to 10 years.	1	EA			\$ 15,000.00	\$ 15,000			\$ 300			\$ 22,911	\$ 25,922	\$ 33,182
4.13	Boiler - Pool Water	Pool Mechanical Room		CC-M-8	3	3	The 715 MBH gas fired pool water boiler is in fair condition.	Replace the boiler with a high efficiency condensing unit in the next 5 to 10 years.	1	LS			\$ 50,000.00	\$ 50,000			\$ 450			\$ 76,370	\$ 86,406	\$ 110,606
4.14	Boiler - Pool Water	Pool Mechanical Room		CC-M-9	4	3	The gas fired pool water boiler is in good condition.	Replace the boiler with a high efficiency unit in the next 20 years.	1	LS			\$ 50,000.00	\$ 50,000			\$ 450					\$ 110,607
4.15	Pool Pumps	Pool Mechanical Room			3	3	The close coupled inline centrifugal pool water pumps are in fair condition. Pumps range in size from 7.5 to 20 HP.	Replace the pumps in the next 5 to 10 years.	1	LS			\$ 60,000.00	\$ 60,000			\$ 1,200			\$ 91,644	\$ 103,687	\$ 132,728
4.16	Rooftop Unit - RTU-1-1 / ERV-1-1	Roof		CC-M-10	3	2	The 36 ton DX cooling, 600 MBH gas fired heating RTU and its associated energy recovery unit are in fair condition.	Replace the two separate units with a combined rooftop unit in the next 5 to 10 years.	1	LS			\$ 150,000.00	\$ 150,000			\$ 1,900			\$ 229,110	\$ 259,217	\$ 331,819
4.17	Rooftop Unit - RTU-1-2 / ERV-1-2	Roof		CC-M-11	3	2	The 22 ton DX cooling, 400 MBH gas fired heating RTU and its associated energy recovery unit are in fair condition.	Replace the two separate units with a combined rooftop unit in the next 5 to 10 years.	1	LS			\$ 100,000.00	\$ 100,000			\$ 1,900			\$ 152,740	\$ 172,811	\$ 221,213
4.18	Rooftop Unit - RTU-2-1 / ERV-2-1	Roof		CC-M-12	3	2	The 26 ton DX cooling, 600 MBH gas fired heating RTU and its associated energy recovery unit are in fair condition.	Replace the two separate units with a combined rooftop unit in the next 5 to 10 years.	1	LS			\$ 115,000.00	\$ 115,000			\$ 1,900			\$ 175,651	\$ 198,733	\$ 254,395
4.19	Rooftop Unit - RTU-2-2 / ERV-2-2	Roof		CC-M-13	3	2	The 46 ton DX cooling, 1000 MBH gas fired heating RTU and its associated energy recovery unit are in fair condition.	Replace the two separate units with a combined rooftop unit in the next 5 to 10 years.	1	LS			\$ 185,000.00	\$ 185,000			\$ 1,900			\$ 282,569	\$ 319,701	\$ 409,244
4.20	Rooftop Unit - RTU-3-1 / ERV-3-1	Roof		CC-M-14	3	2	The 26 ton DX cooling, 600 MBH gas fired heating RTU and its associated energy recovery unit are in fair condition.	Replace the two separate units with a combined rooftop unit in the next 5 to 10 years.	1	LS			\$ 115,000.00	\$ 115,000			\$ 1,900			\$ 175,651	\$ 198,733	\$ 254,395
4.21	Rooftop Unit - RTU-4-1 / ERV-4-1	Roof		CC-M-15	3	2	The 32 ton DX cooling, 600 MBH gas fired heating RTU and its associated energy recovery unit are in fair condition.	Replace the two separate units with a combined rooftop unit in the next 5 to 10 years.	1	LS			\$ 135,000.00	\$ 135,000			\$ 1,900			\$ 206,199	\$ 233,295	\$ 298,637
4.22	Rooftop Unit - RTU-5-1 / ERV-5-1	Roof		CC-M-16	3	2	The 35 ton DX cooling, 1250 MBH gas fired heating RTU and its associated remote condensing unit and energy recovery unit are in fair condition.	Replace the three separate units with a combined rooftop unit in the next 5 to 10 years.	1	LS			\$ 150,000.00	\$ 150,000			\$ 1,900			\$ 229,110	\$ 259,217	\$ 331,819
4.23	Rooftop Unit - RTU-5-2 / ERV-5-2	Roof		CC-M-17	3	2	The 35 ton DX cooling, 1250 MBH gas fired heating RTU and its associated energy recovery unit are in fair condition.	Replace the two separate units with a combined rooftop unit in the next 5 to 10 years.	1	LS			\$ 150,000.00	\$ 150,000			\$ 1,900			\$ 229,110	\$ 259,217	\$ 331,819
4.24	Rooftop Unit - RTU-6-1 / ERV-6-1	Roof		CC-M-18	3	2	The 45 ton DX cooling, 1250 MBH gas fired heating RTU and its associated remote condensing unit and energy recovery unit are in fair condition.	Replace the three separate units with a combined rooftop unit in the next 5 to 10 years.	1	LS			\$ 185,000.00	\$ 185,000			\$ 1,900			\$ 282,569	\$ 319,701	\$ 409,244
4.25	Dehumidification Unit - DHU-3-1	Roof		CC-M-19	4	3	The 60 ton DX cooling, 1080 MBH gas fired heating rooftop dehumidification unit is in good condition.	Replace the dehumidification unit with like kind in the next 20 years.	1	EA			\$ 300,000.00	\$ 300,000			\$ 1,900					\$ 663,639
4.26	Make-up Air Unit - MAU-4-1	Roof		CC-M-20	3	3	The 13 ton DX cooling, 390 MBH gas fired heating rooftop make-up air unit is in good condition.	Replace the make-up air unit with like kind in the next 20 years.	1	EA			\$ 45,000.00	\$ 45,000			\$ 1,900					\$ 99,546
4.27	Air-Cooled Condensing Unit	Roof		CC-M-21	3	2	The custom module refrigeration system rooftop condensing unit is in fair condition.	Replace the condensing unit with like kind in the next 5 to 10 years.	1	EA			\$ 10,000.00	\$ 10,000			\$ 200			\$ 15,274	\$ 17,281	\$ 22,121
4.28	Controls	Throughout			3	3	Existing Andover system is in good/fair condition.	Update hardware and software on regular intervals of not more than five years.	125,000	SF			\$ 2.00	\$ 250,000					\$ 363,451	\$ 381,850	\$ 432,029	\$ 553,033

City of Troy
Facility Condition Assessment
April 2018

Community Center

Building Information		Deficiency Priorities		Deficiency Categories	
Address: 3179 Livernois Road		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area: 127,120 SF		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
No. of Floors: 2		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
Year Built: 2002		Priority 4: Recommended		Category 4: Energy and Sustainability	
Evaluation Date: March 2018		Priority 5: Appearance		Category 5: Security	
		Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"		Category 6: Other	
		Priority 7: Other			
				*Lower score equals higher priority	
				Note: Project Cost includes 35% mark-ups and fees	
				Annual Maintenance includes labor and material only	

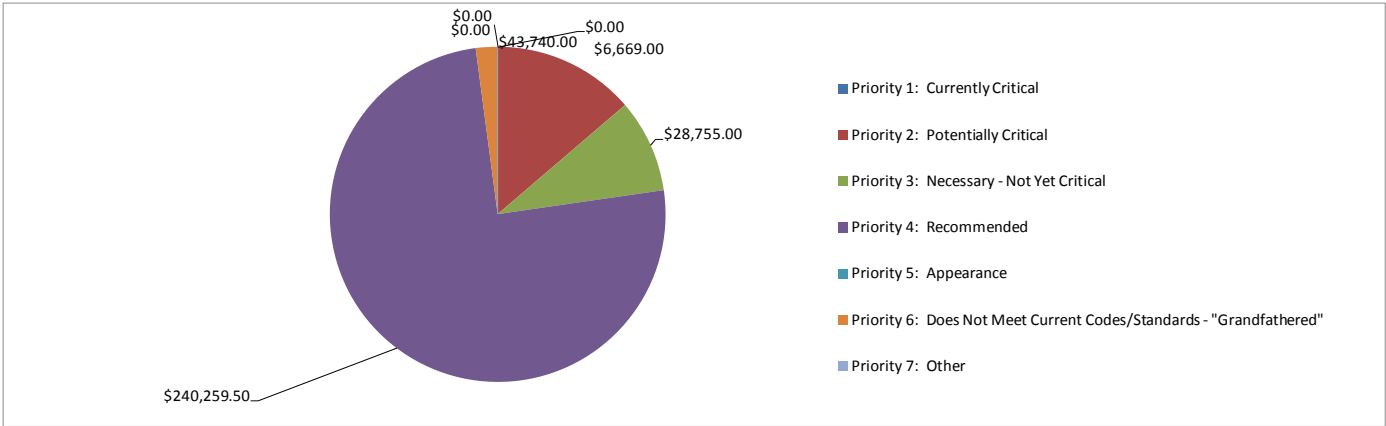
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
5.0	Plumbing System																						
5.1	Fire Pump	Fire Pump Room		CC-P-1	3	3	The 20 HP inline centrifugal fire pump is in fair condition.	Replace the fire pump in the next 5 to 10 years.	1	EA			\$ 40,000.00	\$ 40,000			\$ 300			\$ 61,096	\$ 69,124	\$ 88,485	
5.2	Fire Protection	Throughout			3	3	The fire protection service and sprinkler piping is in fair condition.	Replace the system in the next 10 years.	125000	SF			\$ 4.00	\$ 500,000							\$ 864,058	\$ 1,106,067	
5.3	Plumbing Fixtures	Throughout			3	3	The plumbing fixtures are in fair condition.	Replace the fixtures in the next 10 years.	125000	SF			\$ 5.00	\$ 625,000							\$ 1,080,072	\$ 1,382,583	
5.4	Water Heater	Mechanical Room		CC-P-2	3	3	The 625 MBH gas fired domestic water heater and associated 1/4 HP circulation pump are in fair condition.	Replace the water heater system with high efficient unit in the next 5 to 10 years.	1	LS			\$ 50,000.00	\$ 50,000			\$ 450			\$ 76,370	\$ 86,406	\$ 110,606	
5.5	Water Heater	Mechanical Room		CC-P-3	3	3	The 625 MBH gas fired domestic water heater and associated 1/4 HP circulation pump are in fair condition.	Replace the water heater system with high efficient unit in the next 5 to 10 years.	1	LS			\$ 50,000.00	\$ 50,000			\$ 450			\$ 76,370	\$ 86,406	\$ 110,606	
5.6	Domestic Circulation Pumps	Mechanical Room			3	3	The domestic hot water return inline circulation pumps are in fair condition.	Replace the pumps in the next 5 to 10 years.	3	EA			\$ 2,000.00	\$ 6,000						\$ 9,165	\$ 10,369	\$ 13,273	
												\$ 2,979,592		\$ 3,786,000		\$ 1,140,220		\$ 37,278	\$ 1,283,408	\$ 1,759,148	\$ 5,452,816	\$ 12,091,229	\$ 16,639,164

6.0	Site																						
6.1	Asphalt Pavement	Parking Lot	CC-576		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does flow to the drains and is in good condition overall.	Plan on removing both layers of asphalt, recompactng the drainage course, adding a 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	300,000	SF	\$ 4.00	\$ 1,200,000						\$ 1,620,000	\$ 1,744,563	\$ 1,832,881	\$ 2,073,737	\$ 2,654,559	
6.2	Control Joints	Concrete Pavement	CC-571		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	2,732	LF	\$ 2.00	\$ 5,464						\$ 7,376	\$ 7,944	\$ 8,346	\$ 9,442	\$ 12,087	
6.3	Rubber Flooring	Outdoor Play Area			4	1	The rubber flooring is in good condition, but is showing signs of wear.	Plan to replace resilient flooring in 2028.	3,267	SF	\$ 3.00	\$ 9,801									\$ 16,937	\$ 21,681	
6.4	Brick Pavers	Main Entrance Patio			4	1	The brick pavers are in good shape and have not settled unevenly.	Inspect and reset brick pavers annually. Plan on salvaging and cleaning brick pavers, re-compacting sub-grade, adding filler where needed, replacing edging with concrete and setting brick pavers in 2028.	1,500	SF	\$ 10.00	\$ 15,000									\$ 25,922	\$ 33,182	
6.5	Screen Wall	Outdoor Play Area	CC-177 CC-178		4	2	The mortar joints have deteriorated between the limestone cap sections; allowing water to infiltrate, freeze and push out the mortar. Efflorescence covers multiple areas of the bricks.	Remove and salvage the limestone cap sections. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Add new limestone cap sections where removed sections are damaged. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant. Rake out damaged mortar at bricks and tuck point with new mortar. Clean brick with a non-acidic cleaning agent.	1	LS	\$ 8,000.00	\$ 8,000						\$ 10,800	\$ 11,630	\$ 12,219	\$ 13,825	\$ 17,697	
6.6	Screen Wall	Refuse Container	CC-530		4	2	The mortar joints have deteriorated between the limestone cap sections; allowing water to infiltrate, freeze and push out the mortar. Efflorescence covers multiple areas of the bricks.	Remove and salvage the limestone cap sections. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Add new limestone cap sections where removed sections are damaged. Rake the limestone cap m	1	LS	\$ 3,200.00	\$ 3,200						\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079	
6.7	Site Lighting	Parking lots			4	4	LED heads on painted steel poles. Paint is peeling on at least one pole.	Plan to replace fixtures and some poles in 20 years.	45	EA					\$ 1,200.00	\$ 54,000	\$ 450					\$ 119,455	
												\$ 1,241,465		\$ -		\$ 54,000		\$ 450	\$ 1,642,496	\$ 1,768,789	\$ 1,858,334	\$ 2,145,393	\$ 2,865,740

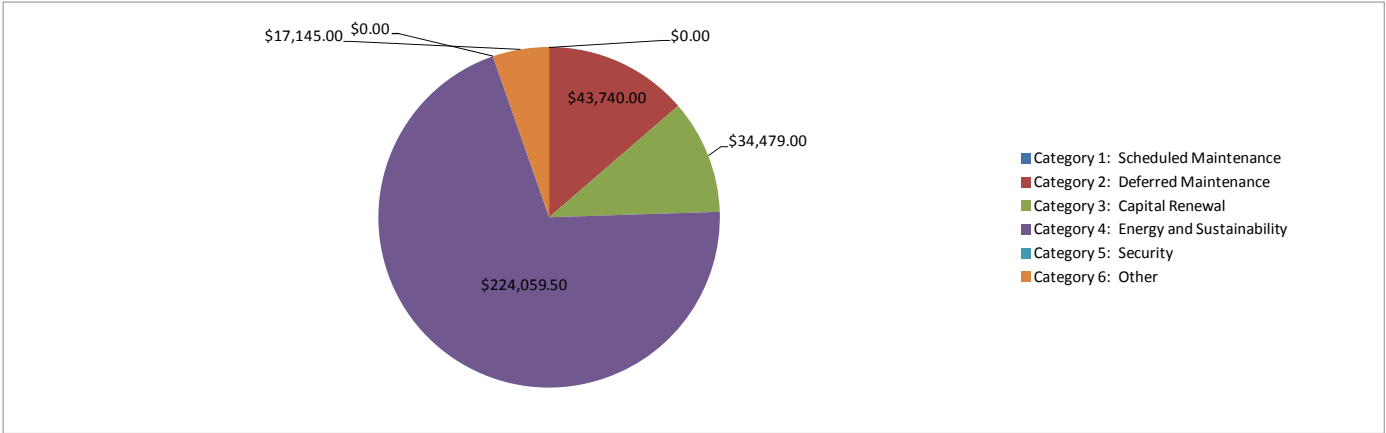


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Troy Racquet Club

Building Information				Deficiency Priorities				Deficiency Categories															
Address: 3400 Civic Center Drive				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area (Main Building): 3,421 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
Building Area (Mechanical Building): 1,498 SF				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
No. of Floors: 1				Priority 4: Recommended				Category 4: Energy and Sustainability															
Year Built (Original Building): 1980				Priority 5: Appearance				Category 5: Security															
Year Built (Addition): 2000				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
Evaluation Date: March 2018				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only															
*Lower score equals higher priority																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
1.0	Building Exterior																						
1.1	Flooring	Courts 1, 2 and 3 Courts 4, 5, 6, 7 and 8			4	3	The flooring system is in good condition.	Plan to refinish flooring in 2028.	51,086	SF	\$ 3.00	\$ 153,258									\$ 2,648,469	\$ 3,390,265	
1.2	Garage Door	Mechanical House	RC-153		2	2	The wood garage door trim has rotted and fallen off. The masonry jambs and sill are damaged or missing.	Replace the wood garage door trim with preservative-treated wood. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer. Replace garage door resilient seals.	1	LS	\$ 1,800.00	\$ 1,800						\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982	
1.3	Wood Fascia	Mechanical House	RC-148		2	2	The wood fascia panels have severely weathered and have rotted beyond repair.	Replace wood fascia panels with painted metal wall panels.	1	LS	\$ 12,000.00	\$ 12,000						\$ 16,200	\$ 17,446	\$ 18,329	\$ 20,737	\$ 26,546	
1.4	Gutters	Mechanical House	RC-149		2	2	Gutter sections and downspouts are missing.	Replace entire gutter/downspout system.	1	LS	\$ 2,200.00	\$ 2,200						\$ 2,970	\$ 3,198	\$ 3,360	\$ 3,802	\$ 4,867	
1.5	Roofing System	Mechanical House Roof			3	3	The roof has a modified bituminous roofing system in fair condition.	Plan to replace in 2023 with flood and gravel modified bituminous roofing system with a 30 year warranty.	1,498	SF	\$ 25.00	\$ 37,450								\$ 57,201	\$ 64,718	\$ 82,845	
1.6	Roofing System	Main Building Roof			3	3	The roof has a modified bituminous roofing system in fair condition.	Plan to replace in 2023 with flood and gravel modified bituminous roofing system with a 30 year warranty.	3,421	SF	\$ 25.00	\$ 85,525								\$ 130,631	\$ 147,796	\$ 189,192	
2.0	Building Interior																						
2.1	Carpet	Main Room Men's Women's, et.al.			5	3	The carpet and carpet tiles are in good condition, but are showing signs of wear.	Plan on replacing with carpet tiles in 2028.	1924	SF	\$ 5.50	\$ 10,582									\$ 18,287	\$ 23,409	
2.2	Third Grab Bar	Restroom			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	1	EA	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885	
2.3	Non-Insulated Lavatory Piping	Men's			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping	2	EA	\$ 150.00	\$ 300						\$ 405	\$ 436	\$ 458	\$ 518	\$ 664	
2.4	Floor	Mechanical House	RC-161		2	2	The concrete floor slab has cracked and sunk inside the building.	Remove damaged concrete sections. Fill depressed sub-grade with course aggregate and compact. Drill and epoxy set #4 reinforcement bars into the existing concrete slab. Pour a new 6 inch thick concrete floor slab.	500	SF	\$ 20.00	\$ 10,000						\$ 13,500	\$ 14,538	\$ 15,274	\$ 17,281	\$ 22,121	
2.5	Exterior Doors and Frames	Mechanical House	RC-155 RC-163		2	2	The bottoms of the hollow metal doors and frames are corroded. There are no thresholds; preventing wildlife from entering the building.	Replace frames with aluminum frames. Replace doors with fiberglass reinforced polyester doors. Add thresholds.	2	EA	\$ 3,200.00	\$ 6,400						\$ 8,640	\$ 9,304	\$ 9,775	\$ 11,060	\$ 14,158	
2.6	Sliding Doors	Mechanical House	RC-164 RC-171		4	6	The wood sliding doors do not close and secure the building from wildlife or vandalism.	Replace the wood sliding doors with an aluminum coiling overhead door. Add louvers to the exterior walls for mechanical equipment fresh air intake.	1	LS	\$ 12,000.00	\$ 12,000						\$ 16,200	\$ 17,446	\$ 18,329	\$ 20,737	\$ 26,546	
3.0	Electrical System																						
3.1	Emergency Egress Lighting	Entire Building			6	3	Additional fixtures with emergency back-up are required.	Install Emergency battery fixtures in Lockers	4	EA						\$ 535.00	\$ 2,140	\$ 500	\$ 2,889	\$ 3,111	\$ 3,269	\$ 3,698	\$ 4,734
3.2	Emergency Exit Lighting	Entire Building			6	3	Replace existing and add new fixtures with emergency battery back-up are required.	Install Exit signs.	4	EA						\$ 525.00	\$ 2,100		\$ 2,835	\$ 3,053	\$ 3,208	\$ 3,629	\$ 4,645
3.3	Emergency Power	Mechanical House		RC-E-7 RC-E-8	3	3	The generator is original.	Plan on replacing generator in 2028.	1	EA						\$ 15,900.00	\$ 15,900				\$ 27,477	\$ 35,173	
3.4	Service Entrance Switchboard (1980)	Electrical Room		RC-E-1	3	3	The switchboard is 38 years old, does not have required working space, and near the end of its life cycle	Relocate the water heater and replace the switchboard.	1	EA						\$ 5,800.00	\$ 5,800		\$ 7,830	\$ 8,432	\$ 8,859	\$ 10,023	\$ 12,830
3.5	Secondary Distribution (1980)	Entire Building		RC-E-2 RC-E-4 RC-E-6	3	3	Much of the equipment is 38 years old, does not have the required working space, and near the end of its life cycle	Reposition the panels and replace them.	4	EA						\$ 3,875.00	\$ 15,500		\$ 20,925	\$ 22,534	\$ 23,675	\$ 26,786	\$ 34,288
3.6	Lighting Control System	Entire Building			4	4	Lights are manually controlled.	Install occupancy sensors in rooms and timers for courts.	10	EA						\$ 389.00	\$ 3,890		\$ 5,252	\$ 5,655	\$ 5,942	\$ 6,722	\$ 8,605

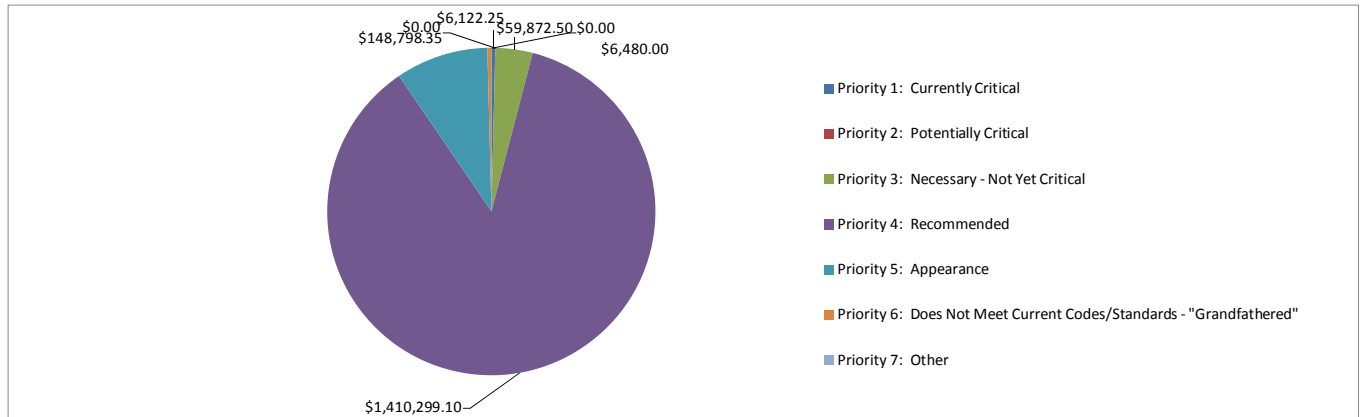
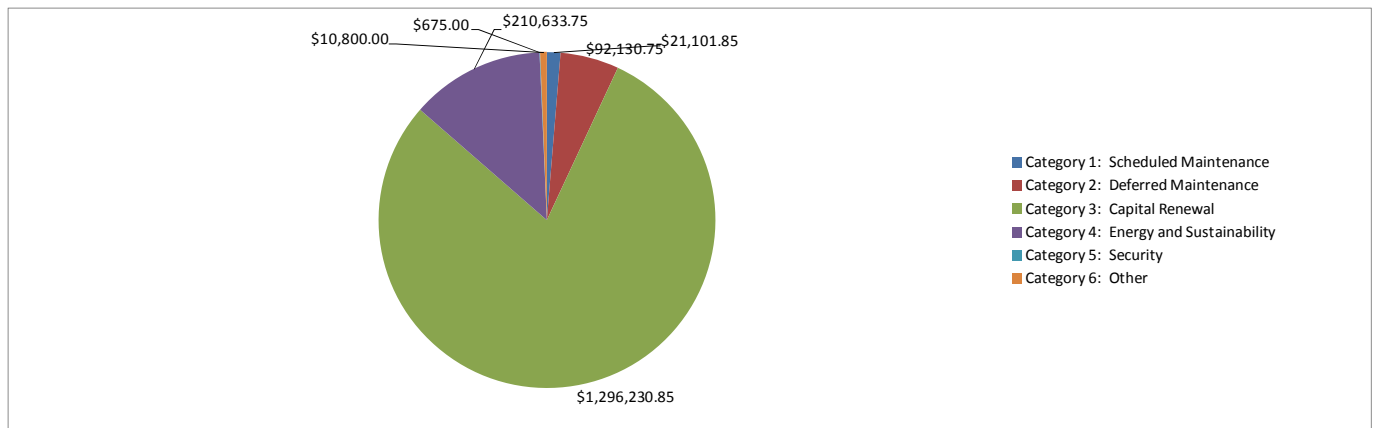
City of Troy
Facility Condition Assessment
April 2018

Troy Racquet Club

Building Information	Deficiency Priorities	Deficiency Categories
Address: 3400 Civic Center Drive	Priority 1: Currently Critical	Category 1: Scheduled Maintenance
Building Area (Main Building): 3,421 SF	Priority 2: Potentially Critical	Category 2: Deferred Maintenance
Building Area (Mechanical Building): 1,498 SF	Priority 3: Necessary - Not Yet Critical	Category 3: Capital Renewal
No. of Floors: 1	Priority 4: Recommended	Category 4: Energy and Sustainability
Year Built (Original Building): 1980	Priority 5: Appearance	Category 5: Security
Year Built (Addition): 2000	Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"	Category 6: Other
Evaluation Date: March 2018	Priority 7: Other	
		Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only
*Lower score equals higher priority		

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
3.7	Interior Building Lighting	Entire Building			4	4	Fluorescent lighting with T-8 lamps and downlights with CFL lamps.	Replace fixtures with LED fixtures or retrofit with LED lamps.	4,919	SF					\$ 5.00	\$ 24,595	\$ 98	\$ 33,203	\$ 35,756	\$ 37,566	\$ 42,503	\$ 54,407
3.8	Interior Court Lighting	8 Courts		RC-E-9	4	4	Indirect HID lighting	Replace HID fixtures with LED fixtures.	68	EA					\$ 2,000.00	\$ 136,000	\$ 27,200	\$ 183,600	\$ 197,717	\$ 207,727	\$ 235,024	\$ 300,850
3.9	Exterior Court Lighting	8 Courts		RC-E-10	4	4	New fixtures with HID lamps	Replace with LED fixtures on existing poles in 2038	30	EA					\$ 1,200.00	\$ 36,000	\$ 7,200					\$ 79,637
3.10	Exterior Building Lighting	Entrance to main building and mechanical building	RC-154	RC-E-10	4	4	Non LED downlight and original wall packs with HID lamps	Relamp entrance downlight and replace wall packs with LED wall packs.	3	EA					\$ 495.00	\$ 1,485	\$ 50	\$ 2,005	\$ 2,159	\$ 2,268	\$ 2,566	\$ 3,285
4.0	Mechanical System																					
4.1	Rooftop Unit	Roof	RC-029	RC-M-1	2	2	The 5 ton DX multizone VAV rooftop unit is in poor condition.	Replace the rooftop unit with like kind in the next 5 years.	1	EA			\$ 17,500.00	\$ 17,500			\$ 1,900		\$ 25,442	\$ 26,730	\$ 30,242	\$ 38,712
4.2	Furnace/Condensing Unit	Closet/Roof		RC-M-2	2	2	The 80 MBH gas fired furnace and associated 2.5 ton condensing unit are in poor condition.	Replace the furnace and associated condensing unit with like kind in the next 5 years.	1	LS			\$ 9,800.00	\$ 9,800			\$ 550		\$ 14,247	\$ 14,969	\$ 16,936	\$ 21,679
4.3	Exhaust Fans	Roof		RC-M-3	4	3	The roof mounted downblast centrifugal exhaust fans are in good condition.	Replace the exhaust fans with like kind in the next 10 to 15 years.	2	EA			\$ 3,000.00	\$ 6,000			\$ 300				\$ 10,368	\$ 13,272
4.4	Air Handling Unit	Mechanical House		RC-M-4	2	2	The 1250 MBH gas fired air handling unit and utility set fans are in poor condition.	Replace the air handling unit and fans with like kind in the next 5 years.	1	LS			\$ 60,000.00	\$ 60,000			\$ 2,300		\$ 87,228	\$ 91,644	\$ 103,687	\$ 132,728
4.5	Air Handling Unit	Mechanical House		RC-M-5	2	2	The 2500 MBH gas fired air handling unit and utility set fans are in poor condition.	Replace the air handling unit and fans with like kind in the next 5 years.	1	LS			\$ 100,000.00	\$ 100,000			\$ 2,300		\$ 145,380	\$ 152,740	\$ 172,811	\$ 221,213
5.0	Plumbing System																					
5.1	Water Heater	Storage 4		RC-P-1	3	3	The 199 MBH 98 gallon gas fired water heater is in fair condition.	Replace the water heater with like kind in the next 5 to 10 years.	1	EA			\$ 10,000.00	\$ 10,000						\$ 15,274	\$ 17,281	\$ 22,121
5.2	Plumbing Fixtures	Throughout			4	3	Plumbing fixtures (water closets, urinal, lavatories, showers, sink and electric water cooler) are in good condition.	Replace the fixtures in the next 10 to 20 years.	1	LS			\$ 45,000.00	\$ 45,000							\$ 77,765	\$ 99,546
												\$ 331,915	\$ 248,300		\$ 243,410	\$ 42,398	\$ 319,424	\$ 616,281	\$ 850,586	\$ 3,744,727	\$ 4,873,204	

6.0	Site																					
6.1	Asphalt Pavement	Parking Lot	RC-174 RC-175		4	3	The asphalt pavement in the parking lot has cracked in a few locations, but does flow to the drains and is in good condition overall.	Plan on removing both layers of asphalt, recompactng the drainage course, adding a 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	32,330	SF	\$ 4.00	\$ 129,320										\$ 286,073
6.2	Control Joints	Concrete Pavement	RC-131		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	300	LF	\$ 2.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327
6.3	Seat Walls	Main Entrance Planters	RC-129		4	2	The mortar joints have deteriorated between the limestone cap sections; allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the limestone cap sections. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant. Rake out damaged mortar at bricks and tuck point with new mortar.	1	LS	\$ 3,200.00	\$ 3,200						\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079
6.4	Control Joints	Mechanical Building Concrete Pavement	RC-150 RC-154		3	2	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	20	LF	\$ 2.00	\$ 40						\$ 54	\$ 58	\$ 61	\$ 69	\$ 88
												\$ 133,160	\$ -		\$ -	\$ -	\$ -	\$ 5,184	\$ 5,583	\$ 5,865	\$ 6,636	\$ 294,568

DEFICIENCY COSTS**2018 Deficiency Priority****2018 Deficiency Category**

<u>Building Information</u>	<u>Deficiency Priorities</u>	<u>Deficiency Categories</u>
Address: 520 West Big Beaver Road	Priority 1: Currently Critical	Category 1: Scheduled Maintenance
Building Area: 32,400 SF	Priority 2: Potentially Critical	Category 2: Deferred Maintenance
No. of Floors: 1	Priority 3: Necessary - Not Yet Critical	Category 3: Capital Renewal
Year Built: 1998	Priority 4: Recommended	Category 4: Energy and Sustainability
Evaluation Date: January 2018	Priority 5: Appearance	Category 5: Security
	Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"	Category 6: Other
	Priority 7: Other	
		*Lower score equals higher priority
		Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only

Note: Project Cost includes 35% mark-ups and fees
Annual Maintenance includes labor and material only

City of Troy
Facility Condition Assessment
April 2018

District Court 52-4

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 520 West Big Beaver Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 32,400 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 1998				Priority 4: Recommended				Category 4: Energy and Sustainability														
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
2.14	Pink Sheet Carpet	Judge 2, Judge 3			5	3	The pink sheet carpet is new.	Replace with carpet tile in 2038.	520	SF	\$ 5.50	\$ 2,860										\$ 6,326
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Administration Offices			1	1	Emergency Battery Unit (EBU) in Cashier not working.	All EBU should be routinely tested and results recorded. Replace battery or entire unit.	1	EA					\$ 535.00	\$ 535	\$ 2,500	\$ 722	\$ 778	\$ 817	\$ 925	\$ 1,183
3.2	Emergency Egress Lighting Power	Storage 1			3	2	Central Inverter System (CIS) not labeled.	CIS should be routinely tested and results recorded.	1	EA					\$ 1,600.00	\$ 1,600		\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
3.3	General Lighting	Courts, Judge's Chambers, Corridors			4	4	Compact fluorescent downlights are inefficient, have short life and require frequent relamping.	There are standard LED retrofit kits for existing fluorescent downlights.	30	EA					\$ 100.00	\$ 3,000		\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
3.4	General Lighting	Courts			4	4	U-lamps in 2x2 fixtures are inefficient.	There are standard LED retrofit kits for existing fluorescent fixtures.	75	EA					\$ 275.00	\$ 20,625	\$ 264	\$ 27,844	\$ 29,985	\$ 31,503	\$ 35,642	\$ 45,625
3.5	Service Entrance Switchboard	Electrical 3	DC-330 DC-331	DC-E-1	3	6	Rack installed in Code required working space in front of section 3	Remove rack to provide 36" minimum clearance.	1	LS					\$ 2,000.00	\$ 2,000		\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
3.6	Lighting Control System	Entire Building			4	4	All lighting is manually switched.	Install occupancy sensors to turn lights of when unoccupied.	32,400	SF					\$ 1.00	\$ 32,400		\$ 43,740	\$ 47,103	\$ 49,488	\$ 55,991	\$ 71,673
3.7	Interior Building Lighting	Entire Building (except courts above)			4	4	2 x 4 recessed fluorescent.	Replace with LED fixtures.	20,000	SF					\$ 5.00	\$ 100,000	\$ 400	\$ 135,000	\$ 145,380	\$ 152,740	\$ 172,811	\$ 221,213
3.8	Fire Alarm Control Panel	Corridor 2		DC-E-15	4	5	Internal calendar has wrong date and time.	Program system to correct date and time so recorded history can be matched to events for analysis. Replace batteries in 5-year increments.	1	LS					\$ 500.00	\$ 500		\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
4.0	Mechanical System																					
4.1	RTU-1	Roof	DC-072	DC-M-1	4	3	Existing Mammoth 11 zone constant volume DX multi-zone rooftop unit is in fair condition, but approaching the end of its useful life. Associated roof mounted ductwork is in fair condition.	Replace with like and kind multi-zone unit. Special care should be taken to line up existing zones precisely with the replacement unit in order to reuse all existing infrastructure. A portion of the associated roof mounted ductwork should be replaced as well.	1	LS			\$ 216,000.00	\$ 216,000	\$ 562.00	\$ 562	\$ 1,900	\$ 292,359	\$ 314,838	\$ 330,777	\$ 374,244	\$ 479,064
4.2	RTU-2	Roof	DC-085	DC-M-2	4	3	Existing Mammoth 10 zone constant volume DX multi-zone rooftop unit is in fair condition, but approaching the end of its useful life. Associated roof mounted ductwork is in fair condition.	Replace with like and kind multi-zone unit. Special care should be taken to line up existing zones precisely with the replacement unit in order to reuse all existing infrastructure. A portion of the associated roof mounted ductwork should be replaced as well.	1	LS			\$ 243,000.00	\$ 243,000	\$ 562.00	\$ 562	\$ 1,900	\$ 328,809	\$ 354,091	\$ 372,017	\$ 420,903	\$ 538,791
4.3	RTU-3	Roof		DC-M-3	4	3	Existing Mammoth constant volume rooftop unit is in fair condition, but approaching the end of its useful life. Associated roof mounted ductwork is in fair condition.	Replace with like and kind CAV unit. Special care should be taken to line up existing ductwork precisely with the replacement unit in order to reuse all existing infrastructure.	1	LS			\$ 270,000.00	\$ 270,000	\$ 562.00	\$ 562	\$ 1,900	\$ 365,259	\$ 393,344	\$ 413,257	\$ 467,562	\$ 598,519
4.4	Domestic Water Heater	Pump Room		DC-M-4	4	3	199 MBH natural gas A. O. Smith unit is in good condition.	Replace with like and kind at the interval to the right.	1	LS			\$ 10,000.00	\$ 10,000				\$ 13,500	\$ 14,538	\$ 15,274	\$ 17,281	\$ 22,121
4.5	HWH Pumps	Pump Room		DC-M-5	4	3	Existing base mounted end suction Bell & Gossett 175 gpm pumps are in fair condition and approaching the end of their useful life.	Replace with like and kind in five to ten years or as increased maintenance dictates.	2	EA			\$ 4,500.00	\$ 9,000	\$ 280.00	\$ 560	\$ 600	\$ 12,906	\$ 13,898	\$ 14,602	\$ 16,521	\$ 21,148
4.6	Boilers	Boiler Room		DC-M-6 DC-M-7	4	3	Existing standard efficiency 1,200 MBH output Bryan Flextube Boilers built in 1998 are in very good condition and should last another ten plus years with regular maintenance and water treatment.	Replace with high efficiency boilers at end of life. Add dedicated combustion intake and condensate neutralization as required.	2	EA			\$ 35,000.00	\$ 70,000	\$ 280.00	\$ 560	\$ 900	\$ -	\$ -	\$ -	\$ 121,935	\$ 156,087
4.7	Roof Exhaust Fans	Roof			4	3	Existing three roof mounted exhaust fans are in fair condition. Approximately 300-750 CFM each.	Replace with like and kind. Connect to the BAS.	3	EA			\$ 3,500.00	\$ 10,500	\$ 280.00	\$ 840	\$ 450	\$ -	\$ -	\$ 17,321	\$ 19,597	\$ 25,085
4.8	Terminal Boxes with hydronic heat	Southwest Portion of Building			4	3	Existing 25 terminal units are in fair condition.	Replace with like and kind after 10 year period. Install with new DDC controls and connect to existing BAS.	25	EA			\$ 3,000.00	\$ 75,000				\$ -	\$ -	\$ -	\$ 129,608	\$ 165,910

City of Troy
Facility Condition Assessment
April 2018

District Court 52-4

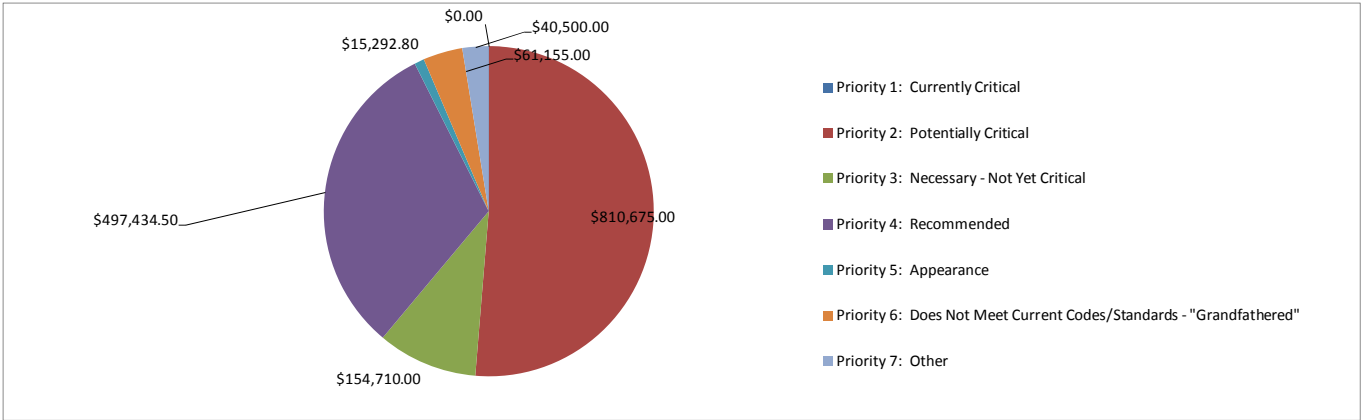
<u>Building Information</u>										<u>Deficiency Priorities</u>										<u>Deficiency Categories</u>									
Address: 520 West Big Beaver Road										Priority 1: Currently Critical										Category 1: Scheduled Maintenance									
Building Area: 32,400 SF										Priority 2: Potentially Critical										Category 2: Deferred Maintenance									
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.9	Building Controls System	Entire Building			4	3	Existing Andover system is in good/fair condition.	Update hardware and software on regular intervals of not more than five years.	34,000	EA			\$ 3.00	\$ 102,000				\$ 137,700	\$ 148,288	\$ 155,795	\$ 176,268	\$ 225,637
5.0 Plumbing System																						
5.1	Toilet Fixtures and Faucet	Entire Building			4	3	Existing fixtures are in good condition.	Replace with automatic touch-free units.	46	EA			\$ 500.00	\$ 23,000				\$ 31,050	\$ 33,437	\$ 35,130	\$ 39,747	\$ 50,879
5.2	Sanitary Piping	Entire Building			4	3	No issues reported relative to the sanitary system in this building.	Existing infrastructure should last the duration of this study period without major repair or comprehensive replacement.										\$ -	\$ -	\$ -	\$ -	\$ -
5.3	Storm Piping	Entire Building			4	3	No issues reported relative to the storm system in this building.	Existing infrastructure should last the duration of this study period without major repair or comprehensive replacement.										\$ -	\$ -	\$ -	\$ -	\$ -
												\$ 234,926	\$ 1,028,500		\$ 164,306		\$ 10,814	\$ 1,631,572	\$ 1,757,025	\$ 1,863,295	\$ 2,359,691	\$ 3,158,331

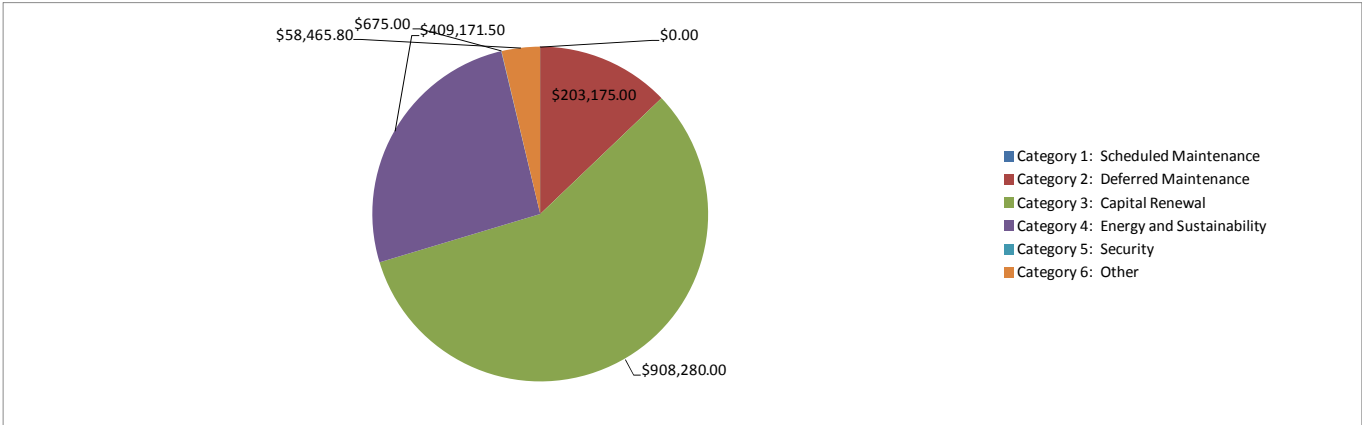
6.0	Site																					
6.1	Control Joints	Sidewalks	DC-155		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	1,000	LF	\$ 2.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
6.2	Asphalt Pavement	Parking Lots	DC-151		3	2	The asphalt pavement in the parking lots has cracked and does not slope to the drains.	Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	200,000	SF	\$ 4.00	\$ 800,000						\$ 1,080,000	\$ 1,163,042	\$ 1,221,921	\$ 1,382,491	\$ 1,769,706
6.3	Concrete Pavement	Top of Ramp	DC-154		1	2	The concrete pavement at the top of the ramp has cracked and sunk.	Replace concrete and recompact drainage course.	1	LS	\$ 1,600.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
6.4	Site Lighting	Parking Lots			4	3	Fixtures have been changed to LED.	One pole has no fixture.	1	EA					\$ 1,200.00	\$ 1,200		\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
												\$ 803,600	\$ -		\$ 1,200		\$ -	\$ 1,086,480	\$ 1,170,020	\$ 1,229,252	\$ 1,390,786	\$ 1,780,324

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

DPW Main Facility

Building Information				Deficiency Priorities				Deficiency Categories													
Address: 4693 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance													
Building Area: 53,341 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance													
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal													
Year Built: 1975				Priority 4: Recommended				Category 4: Energy and Sustainability													
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security													
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other													
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City of Troy
Facility Condition Assessment
April 2018

DPW Main Facility

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Note: Project Cost includes 35% mark-ups and fees																						
Annual Maintenance includes labor and material only																						
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
2.8	Non-Insulated Lavatory Piping	Women, Men			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	2	EA	\$ 150.00	\$ 300						\$ 405	\$ 436	\$ 458	\$ 518	\$ 664
2.9	Lockers	Men's Locker Room	PWMF-449		4	6	The inside bottom metal panel of each locker is corroded.	Remove corrosion and secure an 18 gauge stainless steel plate to the bottom of each locker.	140	EA	\$ 12.00	\$ 1,680						\$ 2,268	\$ 2,442	\$ 2,566	\$ 2,903	\$ 3,716
2.10	Walk-Off Mat	Vestibule 1			4	3	The walk-off mat is in acceptable condition, but will be expensive to replace when worn.	Plan to replace walk-off mat with walk-off carpet tiles in 2028.	25	SF	\$ 5.50	\$ 138								\$ 238	\$ 304	
2.11	Columns	Street Equipment Garage	PWMF-261		2	2	The grout under the base plates at each column has deteriorated and no longer provides a solid bond between the concrete footing and base plate.	Remove damaged grout and install factory-packaged non-shrink, non-metallic, non-straining, non-corrosive, non-gaseous grout.	12	SF	\$ 400.00	\$ 4,800						\$ 6,480	\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Entire Building			6	3	Additional fixtures with emergency back-up are required to comply with the current code.	Extend life safety circuits to select fixtures.	1	LS					\$ 20,000	\$ 20,000		\$ 27,000	\$ 29,076	\$ 30,548	\$ 34,562	\$ 44,243
3.2	Emergency Power	Electrical Room	PWMF-344 PWMF-347 PWMF-348 PWMF-561	PWMF-E-2 thru PWMF-E-8	6	3	Life safety and equipment loads are not separated as required by Code.	Add an second ATS and panel and separate equipment loads from life safety loads.	1	LS					\$ 25,000	\$ 25,000	\$ 800	\$ 33,750	\$ 36,345	\$ 38,185	\$ 43,203	\$ 55,303
3.3	Service Entrance Switchboard (1975)	Electrical Room	PWMF-338 PWMF-341 PWMF-560	PWMF-E-1	3	3	The switchboard is 43 years old, by ITE, and near the end of its life cycle	ITE is no longer in business and replacement parts are hard to find. Replace the switchboard	1	EA					\$ 50,000	\$ 50,000		\$ 67,500	\$ 72,690	\$ 76,370	\$ 86,406	\$ 110,607
3.4	Secondary Distribution (1975)	Entire Building	PWMF-353 PWMF-358 PWMF-360 PWMF-366 PWMF-369	PWMF-E-7 PWMF-E-9 thru PWMF-E-14	3	3	Much of the equipment is 43 years old, by ITE, and near the end of its life cycle	ITE is no longer in business and replacement parts are hard to find. Replace the distribution equipment.	6	EA					\$ 5,000	\$ 30,000		\$ 40,500	\$ 43,614	\$ 45,822	\$ 51,843	\$ 66,364
3.5	Lighting Control System	Entire Building			4	4	Lights are manually controlled with occupancy sensors in some areas	Install occupancy sensors to turn lights off when unoccupied.	50	EA					\$ 389	\$ 19,450		\$ 26,258	\$ 28,276	\$ 29,708	\$ 33,612	\$ 43,026
3.6	Interior Building Lighting	Entire Building		PWMF-E-18	4	4	Fluorescent lighting varies from obsolete T-12 lamps to high output T-5 lamps to low bay HID lamps.	Replace fixtures with LED fixtures.	53,341	SF					\$ 5	\$ 266,705	\$ 1,333	\$ 360,052	\$ 387,736	\$ 407,366	\$ 460,897	\$ 589,987
3.7	Fire Alarm Control Panel	Electrical Room		PWMF-E-17	4	5	The Fire Alarm system is recent and the Building has adequate strobe and horn coverage.	Install system software updates and replace the batteries in 5-year increments.	1	LS					\$ 500	\$ 500		\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
3.8	Exterior Building Lighting	West Side	PWMF-373	PWMF-E-18	4	4	Wall packs with out of date lamps.	Replace fixtures with LED fixtures.	5	EA					\$ 495	\$ 2,475	\$ 50	\$ 3,341	\$ 3,598	\$ 3,780	\$ 4,277	\$ 5,475
4.0	Mechanical System																					
4.1	RTU-1	DPW Roof		PWMF-M-1	3	2	Existing 10-ton gas-fired DX Lennox light commercial rooftop unit is in fair condition, but approaching end of life cycle. R-22 refrigerant is phased out.	Replace with high efficiency unit in 5 years. Re-use existing infrastructure including roof curb, gas and electrical service.	1	EA			\$ 16,000.00	\$ 16,000			\$ 1,900			\$ 24,439	\$ 27,650	\$ 35,394
4.2	RTU-2	DPW Roof		PWMF-M-2	3	2	Existing 10-ton gas-fired DX Lennox light commercial roof top unit is in fair condition approaching end of life cycle. R-22 refrigerant is phased out.	Replace with high efficiency unit in 5 years. Re-use existing infrastructure including roof curb, gas and electrical service.	1	EA			\$ 16,000.00	\$ 16,000			\$ 1,900			\$ 24,439	\$ 27,650	\$ 35,394
4.3	RTU-3	DPW Roof		PWMF-M-3	3	2	Existing 10-ton gas-fired DX Lennox light commercial roof top unit is in fair condition approaching end of life cycle. R-22 refrigerant is phased out.	Replace with high efficiency unit in 5 years. Re-use existing infrastructure including roof curb, gas and electrical service.	1	EA			\$ 16,000.00	\$ 16,000			\$ 1,900			\$ 24,439	\$ 27,650	\$ 35,394
4.4	RTU-4	DPW Roof		PWMF-M-4	3	2	Existing 3.5-ton gas-fired DX Lennox light commercial roof top unit is in fair condition approaching end of life cycle. R-22 refrigerant is phased out.	Replace with high efficiency unit in 5 years. Re-use existing infrastructure including roof curb, gas and electrical service.	1	EA			\$ 5,600.00	\$ 5,600			\$ 1,900			\$ 8,553	\$ 9,677	\$ 12,387
4.5	RTU-5	DPW Roof		PWMF-M-5	3	2	Existing 4-ton gas-fired DX Lennox light commercial roof top unit is in fair condition approaching end of life cycle. R-22 refrigerant is phased out.	Replace with high efficiency unit in 5 years. Re-use existing infrastructure including roof curb, gas and electrical service.	1	EA			\$ 6,400.00	\$ 6,400			\$ 1,900			\$ 9,775	\$ 11,060	\$ 14,157

City of Troy
Facility Condition Assessment
April 2018

DPW Main Facility

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Building Area: 53,341 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
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											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.6	AHU-X - Ceiling Hung	DPW Garage		PWMF-M-11	3	2	This Weather-Rite gas-fired ceiling hung 100% outdoor air make-up unit looks to be 20+ years old and is at the end of its useful life. 6,500 CFM, 740 MBH input.	Replace with high efficiency unit. Re-use existing infrastructure provide new cat walk, gas and electrical service.	1	EA			\$ 19,500.00	\$ 19,500			\$ 2,300			\$ 29,759	\$ 33,670	\$ 43,100
4.7	REF-X	Roof DPW Garage			7	6	Newer REF ducted in north and south within the space.	Replace with like and kind in 10 years, new exhaust fan and associated duct work at that time. Add additional O2 and Nox sensors and controls to the space.	1	LS			\$ 8,500.00	\$ 8,500			\$ 150				\$ 14,689	\$ 18,803
4.8	REF-2	DPW Roof			4	3	Existing roof mounted fan is in fair condition and operational.	Replace fan in five to ten years with like and kind. Re-use roof curb, provide new power feed.	1	EA			\$ 4,000.00	\$ 4,000			\$ 150			\$ 6,109	\$ 6,912	\$ 8,848
4.9	REF-3	DPW Roof			4	3	Existing roof mounted fan is in fair condition and operational.	Replace fan in five to ten years with like and kind. Re-use roof curb, provide new power feed.	1	EA			\$ 4,000.00	\$ 4,000			\$ 150			\$ 6,109	\$ 6,912	\$ 8,848
4.10	REF-4	DPW Roof			4	3	Existing roof mounted fan is in fair condition and operational.	Replace fan in five to ten years with like and kind. Re-use roof curb, provide new power feed.	1	EA			\$ 4,000.00	\$ 4,000			\$ 150			\$ 6,109	\$ 6,912	\$ 8,848
4.11	REF-11	DPW Roof			4	3	Existing roof mounted fan is in fair condition and operational.	Replace fan in five to ten years with like and kind. Re-use roof curb, provide new power feed.	1	EA			\$ 4,000.00	\$ 4,000			\$ 150			\$ 6,109	\$ 6,912	\$ 8,848
4.12	Air Compressors	Compressor Room			7	6	Shop air compressors are new and in excellent operating condition.	Replace with like and kind in 20 years.	2	EA			\$ 10,000.00	\$ 20,000				\$ 27,000	\$ 29,076	\$ 30,548	\$ 34,562	\$ 44,243
4.13	Gas Fired Unit Heaters - Ceiling Hung	Field Operations Office			2	3	Ceiling hung gas fired unit heater is in fair condition and is at its useful life expectancy. Approx. 80 Mbh.	Replace with like and kind in the next 5 years.	1	EA			\$ 2,000.00	\$ 2,000						\$ 3,055	\$ 3,457	\$ 4,425
4.14	Gas Fired Unit Heater - Ceiling Hung	Cage Storage 2			2	3	Ceiling hung gas fired unit heater is in fair to poor condition and is at its useful life expectancy. 160 Mbh.	Replace with like and kind in the next 5 years.	1	EA			\$ 2,500.00	\$ 2,500						\$ 3,819	\$ 4,321	\$ 5,531
4.15	Gas Fired Unit Heater - Ceiling Hung	Meter Shop			2	3	Ceiling hung gas fired unit heater is in fair to poor condition and is at its useful life expectancy. 160 Mbh.	Replace with like and kind in the next 5 years.	2	EA			\$ 2,700.00	\$ 5,400						\$ 8,248	\$ 9,332	\$ 11,946
4.16	Radiant Gas Fired Unit Heater - Ceiling Hung	Meter Shop			5	6	Ceiling hung gas fired radiant heater is in fair condition and operational.	Replace with like and kind in the next 5-10 years.	1	EA			\$ 2,000.00	\$ 2,000						\$ 3,055	\$ 3,457	\$ 4,425
4.17	Gas Fired Unit Heater - Ceiling Hung	DPW Garage			2	3	Ceiling hung gas fired unit heater is in fair to poor condition and is at its useful life expectancy. 160 Mbh.	Replace with like and kind in the next 5 years.	2	EA			\$ 2,500.00	\$ 5,000								
4.18	O2 and Nox space sensors	DPW Garage			3	3	Limited sensing capability for O2 and Nox within the space.	Add additional O2 and Nox sensors with in the space tie into existing BAS.	2	EA			\$ 2,300.00	\$ 4,600				\$ 6,210	\$ 6,687	\$ 7,026	\$ 7,949	\$ 10,176
4.19	Roof Exhaust Fan-6	Fleet Maintenance			3	3	Existing roof mounted fan is in fair condition and operational.	Replace fan in five to ten years with like and kind. Re-use roof curb, provide new power feed.	1	EA			\$ 3,500.00	\$ 3,500			\$ 150	\$ 4,725	\$ 5,088	\$ 5,346	\$ 6,048	\$ 7,742
4.20	Roof Exhaust Fan-7	Fleet Maintenance			3	3	Existing roof mounted fan is in fair condition and operational.	Replace fan in five to ten years with like and kind. Re-use roof curb, provide new power feed.	1	EA			\$ 3,500.00	\$ 3,500			\$ 150	\$ 4,725	\$ 5,088	\$ 5,346	\$ 6,048	\$ 7,742
4.21	Roof Exhaust Fan-8	Fleet Maintenance			3	3	Existing roof mounted fan is in fair condition and operational.	Replace fan in five to ten years with like and kind. Re-use roof curb, provide new power feed.	1	EA			\$ 3,500.00	\$ 3,500			\$ 150	\$ 4,725	\$ 5,088	\$ 5,346	\$ 6,048	\$ 7,742
4.22	Roof Exhaust Fan-9	Fleet Maintenance			3	3	Existing roof mounted fan is in fair condition and operational.	Replace fan in five to ten years with like and kind. Re-use roof curb, provide new power feed.	1	EA			\$ 3,500.00	\$ 3,500			\$ 150	\$ 4,725	\$ 5,088	\$ 5,346	\$ 6,048	\$ 7,742
4.23	AHU-X - Ceiling Hung	Fleet Maintenance		PWMF-M-6	2	2	This Weather-Rite gas-fired ceiling hung 100% outdoor air make-up unit looks to be 20+ years old and is at the end of its useful life. 19,500 CFM, 2,140 MBH input.	Replace with high efficiency unit. Re-use existing infrastructure provide new cat walk, gas and electrical service.	1	EA			\$ 48,000.00	\$ 48,000			\$ 2,300	\$ 64,800	\$ 69,783	\$ 73,315	\$ 82,949	\$ 106,182
4.24	Gas Fired Duct Furnace	Fleet Maintenance		PWMF-M-7	2	2	Ceiling hung gas fired unit heater is in fair to poor condition and is at its useful life expectancy. 160 Mbh.	Replace with like and kind in the next 5 years.	9	EA			\$ 2,500.00	\$ 22,500			\$ 350	\$ 30,375	\$ 32,711	\$ 34,367	\$ 38,883	\$ 49,773
4.25	Gas Fired Duct Furnace	Fleet Maintenance		PWMF-M-8	2	2	Ceiling hung gas fired unit heater is in fair to poor condition and is at its useful life expectancy. 255 Mbh.	Replace with like and kind in the next 5 years.	3	EA			\$ 3,200.00	\$ 9,600			\$ 350	\$ 12,960	\$ 13,957	\$ 14,663	\$ 16,590	\$ 21,236

Note: Project Cost includes 35% mark-ups and fees
Annual Maintenance includes labor and material only

City of Troy
Facility Condition Assessment
April 2018

DPW Main Facility

Building Information	Deficiency Priorities	Deficiency Categories
Address: 4693 Rochester Road	Priority 1: Currently Critical	Category 1: Scheduled Maintenance
Building Area: 53,341 SF	Priority 2: Potentially Critical	Category 2: Deferred Maintenance
No. of Floors: 1	Priority 3: Necessary - Not Yet Critical	Category 3: Capital Renewal
Year Built: 1975	Priority 4: Recommended	Category 4: Energy and Sustainability
Evaluation Date: February 2018	Priority 5: Appearance	Category 5: Security
	Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"	Category 6: Other
	Priority 7: Other	
		*Lower score equals higher priority
		Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.26	Gas Fired Unit Heaters	Fleet Maintenance, loft above tools		PWMF-M-9	2	2	Ceiling hung gas fired unit heater is in fair condition and is at its useful life expectancy. 100 Mbh.	Replace with like and kind in the next 5 years.	1	EA			\$ 2,000.00	\$ 2,000			\$ 350	\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
4.27	Gas Fired Unit Heater	Fleet Maintenance Wash Bay			2	2	Ceiling hung gas fired unit heater is in fair condition and is at its useful life expectancy. 160 Mbh.	Replace with like and kind in the next 5 years.	1	EA			\$ 3,200.00	\$ 3,200			\$ 350	\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079
4.28	Hi Pressure Heater/Washer	Fleet Maintenance Wash Bay			7	6	Floor mounted high pressure heater/washer is newer and in excellent operating condition.	Replace with like and kind in 15 years. New power feed and stack at that time.	1	EA			\$ 10,000.00	\$ 10,000				\$ 13,500	\$ 14,538	\$ 15,274	\$ 17,281	\$ 22,121
4.29	Thru Wall Exhaust Fan	Battery Storage			4	3	Existing thru wall exhaust is operational and in fair condition.	Replace with like and kind in 5 years.	1	EA			\$ 1,200.00	\$ 1,200			\$ 150	\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
4.30	Radiant Heaters - Ceiling Hung	Streets Equipment Garage		PWMF-M-10	4	4	Reflect-O-Ray radiant heater is in fair condition.	Replace with like and kind in 5 years.	3	EA			\$ 3,500.00	\$ 10,500						\$ 16,038	\$ 18,145	\$ 23,228
4.31	REF-X	Streets Equipment Garage Roof			2	2	Two large roof mounted exhaust fans serving the street garage are in poor condition and beyond their useful life.	Replace with updated like and kind. Provide new power and roof curb as required.	2	EA			\$ 4,200.00	\$ 8,400			\$ 150	\$ 11,340	\$ 12,212	\$ 12,830	\$ 14,516	\$ 18,582
4.30	Building Automation Controls	Electrical Room			4	4	Andover DDC controls supplement the local RTU controls and misc. exhaust fan interlock and scheduling.	Building automation system requires annual maintenance, software updates and component replacement.	50,000	SF			\$ 3.00	\$ 150,000					\$ 218,070	\$ 229,110	\$ 259,217	\$ 331,820
5.0	Plumbing System																					
5.1	Plumbing Fixtures	Toilet Rooms			4	2	Toilet fixtures, faucets, shower heads and flush valves are fair condition.	Plan on replacing major fixtures in ten years. Flush valves every five to ten years.	1	LS			\$ 50,000.00	\$ 50,000				\$ 67,500	\$ 72,690	\$ 76,370	\$ 86,406	\$ 110,607
5.2	Domestic Water Heater 1	Compressor Room			7	3	Gas fired domestic water heater is new and functioning well.	Replace with like and kind in 10 years.	1	LS			\$ 4,000.00	\$ 4,000							\$ 6,913	\$ 8,849
5.3	Domestic Water Heater 2	Compressor Room			7	3	Gas fired domestic water heater is new and functioning well.	Replace with like and kind in 10 years.	1	LS			\$ 4,000.00	\$ 4,000							\$ 6,913	\$ 8,849
5.4	Domestic Water Heater 3	Meter Shop Near Hand Sink			7	3	Electric domestic water heater is new and functioning well.	Replace with like and kind in 10 years.	1	LS			\$ 2,000.00	\$ 2,000							\$ 3,456	\$ 4,425
5.5	Domestic Water Heater 4	Kitchenette under counter			7	3	Electric domestic water heater is new and functioning well.	Replace with like and kind in 10 years.	1	LS			\$ 2,000.00	\$ 2,000							\$ 3,456	\$ 4,425
5.6	Sanitary Piping	Underground Throughout Building			7	6	Single slow drain reported in the entire facility. No other major issues reported.	No action necessary.														
5.7	Storm System and roof sumps	At Walls and Underground Throughout Building	PWMF-328		3	3	Reported that ground water leaks into the DPW garage on the north wall.	Scope storm pipe in that area and install drain tile and sump system as necessary.	1	LS			\$ 16,000.00	\$ 16,000				\$ 21,600	\$ 23,261	\$ 24,438	\$ 27,650	\$ 35,394
5.8	Wet Pipe Fire Suppression System	Entire Building			7	3	Existing black pipe system covers the entire building.	Modify system and replace heads as required by renovation. No further action required.														
												\$ 1,470,188		\$ 502,900		\$ 414,130	\$ 19,333	\$ 1,579,767	\$ 1,919,307	\$ 2,196,528	\$ 3,506,047	\$ 5,386,164

6.0	Site																					
6.1	Site Wall	South Entrance			4	2	The mortar joints have deteriorated between the cap sections; allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the cap sections. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged cap sections. Rake the cap mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 3,200.00	\$ 3,200						\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079
6.2	Asphalt Parking Lot	East of Main Facility	PWMF-573		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in good condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	16,115	SF	\$ 4.00	\$ 64,460									\$ 111,394	\$ 142,594
6.3	Asphalt Parking Lot	Southwest of Main Facility	PWMF-642		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in good condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	48,000	SF	\$ 4.00	\$ 192,000									\$ 331,798	\$ 424,729

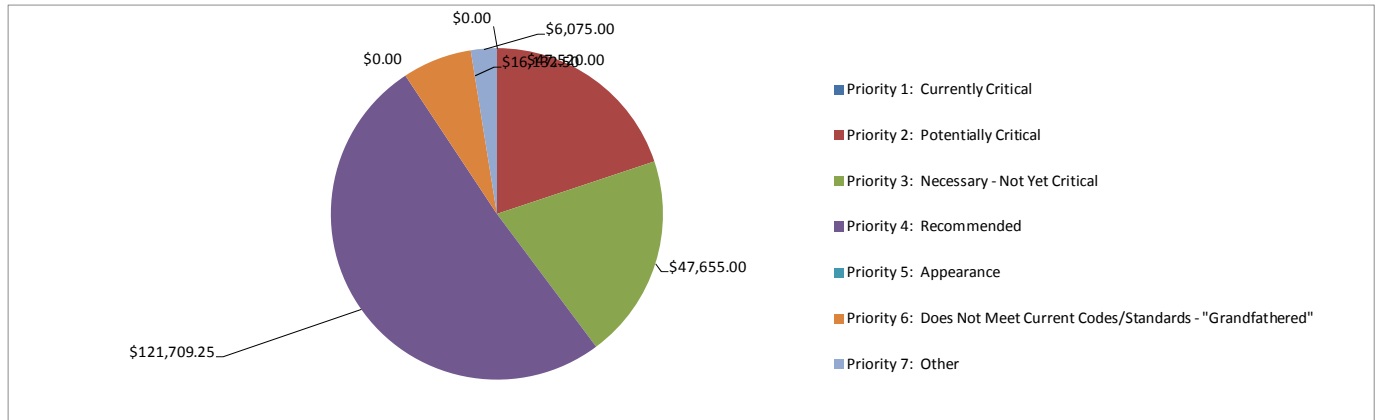
City of Troy
Facility Condition Assessment
April 2018

DPW Main Facility

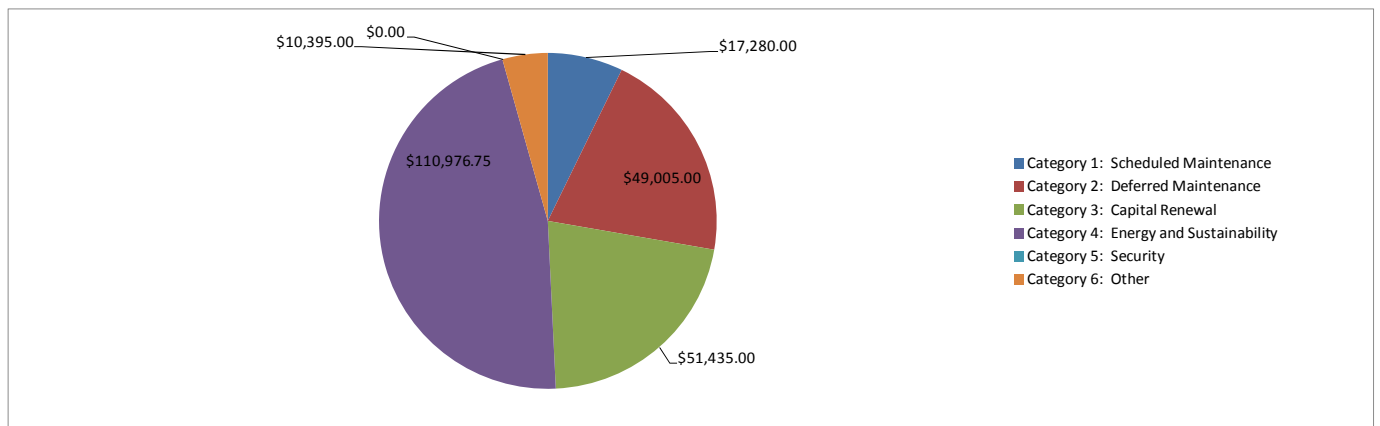
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Building Area: 53,341 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
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Year Built: 1975				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees														
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
6.4	Asphalt Parking Lot	North of Main Facility	PWMF-598		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in good condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	10,665	SF	\$ 4.00	\$ 42,660									\$ 73,721	\$ 94,370
6.5	Asphalt Parking Lot	East of Parks Garage	PWMF-610		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2023. Remove both layers of asphalt and recompact drainage course and add 2-2/12 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	23,185	SF	\$ 4.00	\$ 92,740								\$ 141,652	\$ 160,266	\$ 205,154
6.6	Asphalt Parking Lot	Facilities Storage Building Parks and Fire Department Storage Building Street Storage Building Water and Fleet Storage Building	PWMF-620		4	3	The asphalt pavement in the parking lot has cracked in several locations, does not drain and is in poor condition overall.	Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	10,874	SF	\$ 4.00	\$ 43,496					\$ 58,720	\$ 63,235	\$ 66,436	\$ 75,166	\$ 96,219	
6.7	Asphalt Parking Lot	East of Storage Building	PWMF-621		4	3	The asphalt pavement in the parking lot has cracked in several locations, does not drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2023. Remove both layers of asphalt and recompact drainage course and add 2-2/12 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	10,874	SF	\$ 4.00	\$ 43,496								\$ 66,436	\$ 75,167	\$ 96,220
6.8	Concrete Pavement	West of Main Facility	PWMF-602 PWMF-604		4	3	The concrete pavement has cracked in several sections; specifically at the garage doors. The pavement, however, does drain and is in good condition overall.	Plan on replacing the concrete pavement in 2028 with 8 inch thick concrete on a 6 inch compacted gravel base.	15,337	SF	\$ 20.00	\$ 306,740									\$ 530,082	\$ 678,549
6.9	Concrete Pavement	Drives South of Parks Garage and Storage Building and Between the Two Buildings	PWMF-628		4	3	The concrete pavement has cracked in several sections; specifically at the joints. The pavement, however, does drain and is in fair condition overall.	Plan on replacing the concrete pavement in 2023 with 8 inch thick concrete on a 6 inch compacted gravel base.	30,870	SF	\$ 20.00	\$ 617,400								\$ 943,018	\$ 1,066,938	\$ 1,365,771
6.10	Concrete Pavement	Drive South of Parks and Fire Department Storage Building	PWMF-640		4	3	The concrete pavement has cracked in several sections; specifically at the joints. The pavement, however, does drain and is in good condition overall.	Plan on replacing the concrete pavement in 2028 with 8 inch thick concrete on a 6 inch compacted gravel base.	7,700	SF	\$ 20.00	\$ 154,000									\$ 266,130	\$ 340,669
6.11	Control Joints	Concrete Pavement			3	2	The control joints cut/formed in the concrete sidewalks are not sealed.	Seal joints with an exterior grade silicone sealant.	10,000	LF	\$ 2.00	\$ 20,000					\$ 27,000	\$ 29,076	\$ 30,548	\$ 34,562	\$ 44,243	
6.12	Fence	North Side of Building	PWMF-565		3	3	The wood fence has weathered and the metal cyclone fence has trees growing through it.	Plan to replace both fences with a vinyl fence in 2023.	1	LS	\$ 1,750.00	\$ 1,750								\$ 2,673	\$ 3,024	\$ 3,871
6.13	Brick Pavers	East of Main Facility	PWMF-578		2	2	The brick pavers have settled unevenly; creating trip hazards.	Salvage and clean brick pavers. Re-compact sub-grade and add filler where needed. Replace edging with concrete and reset brick pavers with a slope to one side.	700	SF	\$ 10.00	\$ 7,000					\$ 9,450	\$ 10,177	\$ 10,692	\$ 12,097	\$ 15,485	
6.14	Site Lighting	Visitor Parking and Yard	PWMF-286	PWMF-E-19	4	4	An assortment of poles and fixtures are used in the yard and visitor parking.	A site lighting system with LED fixtures will provide uniform illumination and lower energy costs.	1	LS					\$ 45,000	\$ 45,000	\$ 400	\$ 60,750	\$ 65,421	\$ 68,733	\$ 77,765	\$ 99,546
												\$ 1,588,942	\$ -		\$ 45,000	\$ 400	\$ 160,240	\$ 172,561	\$ 1,335,075	\$ 2,823,640	\$ 3,614,497	

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

DPW Parks Garage

Building Information				Deficiency Priorities				Deficiency Categories																
Address: 4695 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																
Building Area: 8,250 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																
Year Built: ?				Priority 4: Recommended				Category 4: Energy and Sustainability																
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security																
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																				Note: Project Cost includes 35% mark-ups and fees				
																				Annual Maintenance includes labor and material only				
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost		
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal								
1.0	Building Exterior																							
1.1	Gutters and Downspouts	West Roof	PWPG-192 PWPG-193		2	6	The size of the gutters and downspouts is inadequate for the amount of water collected at the west roof edge. This has resulted in ice dams on the roof, water collecting at an exterior door and large icicles forming over work/storage areas.	Replace the undersized gutter and downspouts with sections sized for the expected rain. Transition the larger gutter section to the downspout at the south elevation.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309		
1.2	Exterior Wood Siding	South Elevation	PWPG-192		4	2	The paint has weathered and delaminated from the exterior wood siding.	Paint with an exterior grade high-performance coating.	1	LS	\$ 6,000.00	\$ 6,000						\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273		
1.3	Sealant Joints	Building Perimeter	PWPG-187		4	3	The urethane based sealant at the CMU walls has failed.	Remove the urethane based sealant. Reseal with an exterior grade silicone sealant.	130	LF	\$ 15.00	\$ 1,950						\$ 2,633	\$ 2,835	\$ 2,978	\$ 3,370	\$ 4,314		
1.4	CMU	Main Entrance	PWPG-185		3	2	The bottom course of CMU at the main entrance have been damaged from salt.	Patch the damaged units with patching mortar and paint with an exterior grade paint.	1	LS	\$ 1,800.00	\$ 1,800						\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982		
1.5	Windows	Garage			4	4	Existing steel window frames have corroded bottoms, are non-thermally broken and have non-insulating glass.	Replace windows with thermally broken, aluminum storefront framing with one inch insulating glass units. Seal the window frame with exterior grade silicone sealant.	308	SF	\$ 65.00	\$ 20,020						\$ 27,027	\$ 29,105	\$ 30,579	\$ 34,597	\$ 44,287		
1.6	Asphalt Shingles	Roof			4	3	The asphalt shingles are in good condition.	Plan on replacing asphalt shingles, underlayment and flashings in 2028.	10,367	SF	\$ 4.00	\$ 41,468									\$ 71,661	\$ 91,732		
2.0	Building Interior																							
2.1	Garage Doors	Garage			4	3	The non-insulated garage doors and power door operators are in good condition.	Plan on replacing the 25 foot by 14 foot garage doors with thermally insulated garage doors and the garage door components (i.e., door springs, wires, power door operator controls) in 2028.	700	SF	\$ 20.00	\$ 14,000									\$ 24,194	\$ 30,970		
2.2	Carpet Tile	Office			5	3	The carpet tiles are in good condition.	Plan on replacing the carpet tiles in 2028.	165	SF	\$ 5.50	\$ 908									\$ 1,568	\$ 2,007		
2.3	Flooring	Corridor, Men, Women, Lounge	PWPG-139 PWPG-140		5	6	The vinyl composition tile (VCT)) flooring is in fair condition; but due to the foot traffic moisture collected on the floors, the joints have separated and the VCT has buckled in one area.	Replace the VCT in 2023 with a resilient sheet flooring system with welded seams and an integral base.	1587	SF	\$ 6.00	\$ 9,522								\$ 14,544	\$ 16,455	\$ 21,064		
2.4	Third Grab Bar	Men, Women			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	2	EA	\$ 400.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770		
3.0	Electrical System																							
3.1	Emergency Egress Lighting	Entire Building			6	3	Additional fixtures with emergency back-up are required to comply with the current code.	Test units regularly. Add emergency battery packs to select fixtures.	1	LS						\$ 1,000.00	\$ 1,000	\$ 200	\$ 1,350	\$ 1,454	\$ 1,527	\$ 1,728	\$ 2,212	
3.2	Emergency Power	Garage		PWPG-E-8 PWPG-E-9	6	3	A 5 kW natural gas generator provides standby power to the vehicle fuel pumps.	The generator and ATS are in poor condition and should be replaced	1	LS						\$ 10,150.00	\$ 10,150	\$ 500	\$ 13,703	\$ 14,756	\$ 15,503	\$ 17,540	\$ 22,453	
3.3	Service Entrance Switchboard	Storage 3		PWPG-E-1	3	3	The switchboard is old, by Park Detroit, and near the end of its life cycle	Replacement parts are hard to find. Replace the switchboard	1	EA						\$ 25,000.00	\$ 25,000		\$ 33,750	\$ 36,345	\$ 38,185	\$ 43,203	\$ 55,303	
3.4	Secondary Distribution	Storage 3 and Garage		PWPG-E-2 thru PWPG-E-7	2	2	Much of the equipment is old, and near the end of its life cycle. Panels in the garage are obsolete and in very poor condition.	Replacement parts are hard to find. Replace the distribution equipment.	4	EA						\$ 5,000.00	\$ 20,000		\$ 27,000	\$ 29,076	\$ 30,548	\$ 34,562	\$ 44,243	
3.5	Lighting Control System	Entire Building			4	4	Lights are manually controlled.	Install occupancy sensors in all spaces.	25	EA						\$ 389.00	\$ 9,725		\$ 13,129	\$ 14,138	\$ 14,854	\$ 16,806	\$ 21,513	
3.6	Interior Building Lighting	Entire Building			4	4	Fluorescent lighting consists of obsolete T-12 lamps.	Replace fixtures with LED fixtures.	8,250	SF						\$ 5.00	\$ 41,250	\$ 165	\$ 55,688	\$ 59,969	\$ 63,005	\$ 71,285	\$ 91,250	
3.7	Exterior Building Lighting	East side		PWPG-E-10	4	4	Wall packs with yellowed lenses and out of date lamps	Replace fixtures with LED fixtures.	2	EA						\$ 495.00	\$ 990	\$ 40	\$ 1,337	\$ 1,439	\$ 1,512	\$ 1,711	\$ 2,190	
3.8	Exterior Building Lighting	Canopy			4	4	Low bay fixtures with out of date HID lamps	Replace fixtures with LED fixtures.	6	EA						\$ 870.00	\$ 5,220	\$ 50	\$ 7,047	\$ 7,589	\$ 7,973	\$ 9,021	\$ 11,547	

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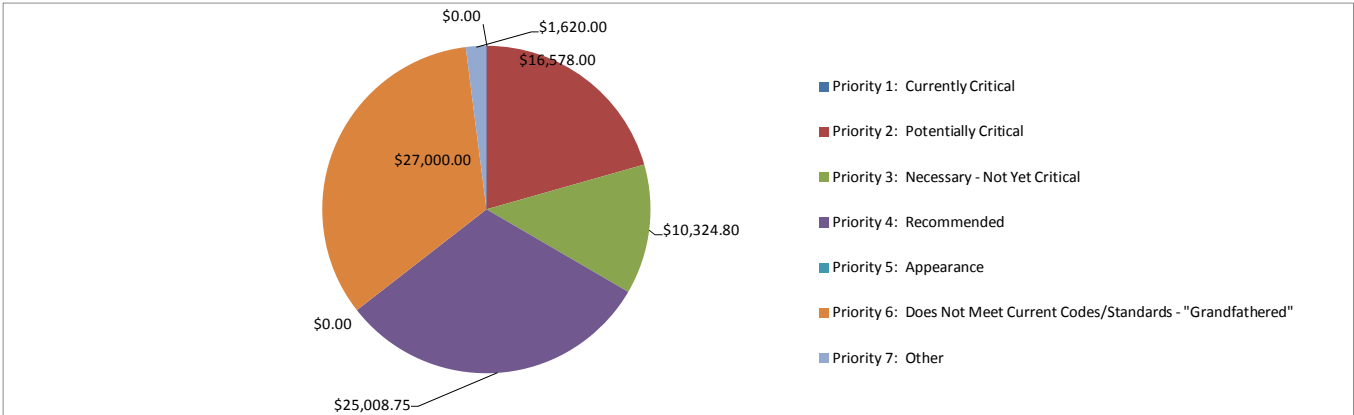
DPW Parks Garage

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											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.0	Mechanical System																					
4.1	Furnace	Center Furnace Closet		PWPG-M-1	5	4	Existing hi efficient Carrier 120 MBH with DX cooling unit is in good condition and operational.	Replace with like and kind in 10 years.	1	LS			\$ 5,000.00	\$ 5,000			\$ 350				\$ 8,641	\$ 11,061
4.2	Furnace	East Center Storage		PWPG-M-2	7	6	Newer hi efficient Lennox furnace mounted horizontally is in good condition.	Replace with like and kind in 10 years.	1	LS			\$ 3,000.00	\$ 3,000			\$ 350				\$ 5,184	\$ 6,636
4.3	Gas-Fired Ceiling Hung Unit Heaters	High-Bay Work Area		PWPG-M-3	2	1	Existing Carrier gas fired ceiling hung unit heaters are in poor condition. One of four units is operating. 175 Mbh.	Replace with current version of same unit. Provide new support and exhaust stack.	4	EA			\$ 3,200.00	\$ 12,800				\$ 17,280	\$ 18,609	\$ 19,551	\$ 22,120	\$ 28,315
4.4	Gas-Fired Ceiling Hung Unit Heater	Utility Area/Tool Crib		PWPG-M-4	5	4	Existing Sterling gas fired ceiling hung unit heater is in fair condition. 100 Mbh.	Replace with like and kind in 10 years.	1	LS			\$ 2,600.00	\$ 2,600							\$ 4,493	\$ 5,751
4.5	Gas-Fired Ceiling Hung Air Handler	Signs		PWPG-M-5	3	2	Existing ceiling hung standard efficeincy Reznor unit is in fair/poor condition. 950 cfm, approx. 175 Mbh unit.	Replace with like and kind near future. Modifications to the existing infrastructure and ductwork will be required.	1	LS			\$ 8,500.00	\$ 8,500			\$ 330	\$ 11,475	\$ 12,357	\$ 12,983	\$ 14,689	\$ 18,803
4.6	Electric Domestic Water Heater 1	High Bay Loft		PWPG-M-6	7	6	Newer Rheem electric domestic water heater is in good condition.	Replace with natural gas unit in 10 years. Install new stack thru roof.	1	LS			\$ 3,000.00	\$ 3,000							\$ 5,184	\$ 6,636
4.7	Gas Fired Domestic Water Heater 2	High Bay Mounted on Elevated Wall Platform		PWPG-M-7	7	6	Old Lochinvar gas fired domestic water heater is in very poor condition.	Replace with like and kind.	1	LS			\$ 4,500.00	\$ 4,500				\$ 6,075	\$ 6,542	\$ 6,873	\$ 7,777	\$ 9,955
4.8	Electric Domestic Water Heater 3	Shop Area Under the Stairs		PWPG-M-8	7	6	Newer Lochinvar electric domestic water heater is in good conditions.	Replace with like and kind in 10 years.	1	LS			\$ 2,000.00	\$ 2,000							\$ 3,456	\$ 4,425
4.9	Building Automation Controls	Electrical Room			4	4	Andover DDC controls supplement the local unit controls and misc. exhaust fan interlock and scheduling.	Building automation system requires annual maintenance, software updates and component replacement.	1	LS			\$ 5,000.00	\$ 5,000				\$ 6,750	\$ 7,269	\$ 7,637	\$ 8,641	\$ 11,061
5.0	Plumbing System																					
5.1	Plumbing Fixtures	Toilet Rooms			4	3	Toilet fixtures, faucets, shower head and flush valves are fair condition.	Plan on replacing major fixtures in five years. Flush valves every five to ten years.	1	LS			\$ 7,500.00	\$ 7,500						\$ 11,456	\$ 12,961	\$ 16,592
5.2	Sanitary Piping	Underground Throughout Building			7	6	No slow drains observed. No other major issues reported.	No action necessary.														
												\$ 98,868	\$ 53,900	\$ 113,335	\$ 1,985	\$ 239,092	\$ 257,476	\$ 296,510	\$ 459,855	\$ 588,654		
6.0	Site																					
												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

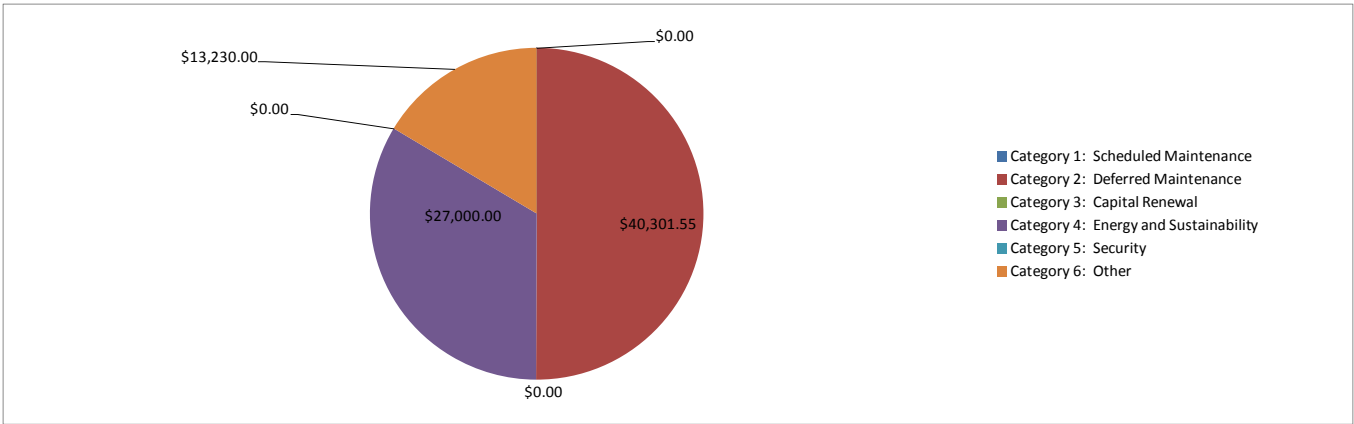


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

DPW Facilities Storage Building

Building Information			Deficiency Priorities					Deficiency Categories															
Address: 4699 Rochester Road			Priority 1: Currently Critical					Category 1: Scheduled Maintenance															
Building Area: 2,000 SF			Priority 2: Potentially Critical					Category 2: Deferred Maintenance															
No. of Floors: 1			Priority 3: Necessary - Not Yet Critical					Category 3: Capital Renewal															
Year Built: ?			Priority 4: Recommended					Category 4: Energy and Sustainability															
Evaluation Date: February 2018			Priority 5: Appearance					Category 5: Security															
			Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"					Category 6: Other															
			Priority 7: Other																				
Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
1.0	Building Exterior																						
1.1	Gutters and Downspouts	Roof	PWFS-005		2	6	The sloped metal panel roofing system dos not have a gutter downspout system for collecting and directing water away from the building. Additionally, large icicles form at the roof edge, creating an unsafe work zone under them.	Add 6-inch gutters and downspouts with open faces. Reinforce the roof overhangs with galvanized steel angles behind the gutters.	100	LF	\$ 80.00	\$ 8,000						\$ 10,800	\$ 11,630	\$ 12,219	\$ 13,825	\$ 17,697	
1.2	Exterior Metal Siding	All Elevations	PWFS-005		4	2	The paint has delaminated from the exterior vertical metal siding in numerous locations. The fasteners have corroded. Several sections have been damaged from vehicles.	Replace all corroded fasteners with stainless steel fasteners and neoprene washers. Replace damaged sections of metal siding. Strip and repaint all metal siding.	1	LS	\$ 16,000.00	\$ 16,000						\$ 21,600	\$ 23,261	\$ 24,438	\$ 27,650	\$ 35,394	
1.3	Ridge Flashing	Roof	PWFS-007		4	6	The ridge flashing over the garage door at the peak of the roof is missing.	Replace missing ridge flashing.	1	LS	\$ 600.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327	
1.4	Metal Roof Panels	Roof	PWFS-024		3	2	The sloped metal panel roofing system has corrosion over all panels and fasteners.	Replace all corroded fasteners with stainless steel fasteners. Remove loose and flaking metal particles. Fabric tape all seams. Coat with a corrosion stabilizing primer. Coat panels with a fluid applied flexible acrylic waterproofing system.	1,912	SF	\$ 4.00	\$ 7,648						\$ 10,325	\$ 11,119	\$ 11,682	\$ 13,217	\$ 16,918	
2.0	Building Interior																						
2.1	Exterior Door and Frame	Facilities Storage			2	2	The bottoms of the hollow metal door and frame are corroded.	Replace the frame with an aluminum frame. Replace the door with a fiberglass reinforced polyester (FRP) door.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636	
2.2	Garage Door	Facilities Storage			2	2	The steel jambs, steel head and manually operated non-insulated garage door are corroded.	Remove corrosion from the steel jambs and head with power tools and paint with an exterior grade high-performance coating system. Replace the garage door with a thermally insulated garage door. Replace garage door springs and wires and add a power door operator and controls.	64	SF	\$ 20.00	\$ 1,280						\$ 1,728	\$ 1,861	\$ 1,955	\$ 2,212	\$ 2,832	
2.3	Insulation	Walls and Roof	PWFS-013 PWFS-015		6	4	The interior faces of the vertical metal wall siding and metal roof were not manufactured with a rigid insulation component. Instead, rigid foam insulation was glued to the interior face of the metal. The majority of the insulation has been damaged, fallen off or been removed. Additionally, the remaining foam insulation is a code violation for not having a tested flame and smoke classification.	Remove the remaining foam insulation. Reinsulate the walls and roof with 2-inch thick high-strength rigid fiberglass insulation boards secured to horizontally installed galvanized hat channels.	4,000	SF	\$ 5.00	\$ 20,000						\$ 27,000	\$ 29,076	\$ 30,548	\$ 34,562	\$ 44,243	
3.0	Electrical System																						
3.1	Main Disconnect	Adjacent to Overhead Door		PWFS-E-1	4	2	One (1) disconnect serves multiple circuits.	Install panelboard with main breaker.	1	EA					\$ 1,925.00	\$ 1,925		\$ 2,599	\$ 2,799	\$ 2,940	\$ 3,327	\$ 4,258	
3.2	Site Light Pole	East of Building	PWFS-001 PWFS-005	PWFS-E-2	7	6	HID light fixture.	Replace head with LED fixture.	1	EA					\$ 1,200.00	\$ 1,200		\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655	
4.0	Mechanical System																						
4.1	Gas-Fired Ceiling Hung Unit Heater	Open Work Area		PWFS-M-1	5	4	Dayton gas-fired ceiling hung unit heaters are in good to fair condition. 100 Mbh and 125 Mbh.	Replace with like and kind in 2028.	2	EA			\$ 3,000.00	\$ 6,000						\$ 10,368	\$ 13,272		
5.0	Plumbing System																						
	No comments.																						
												\$ 56,528	\$ 6,000	\$ 3,125	\$ -	\$ 80,532	\$ 86,724	\$ 91,114	\$ 113,455	\$ 145,233			

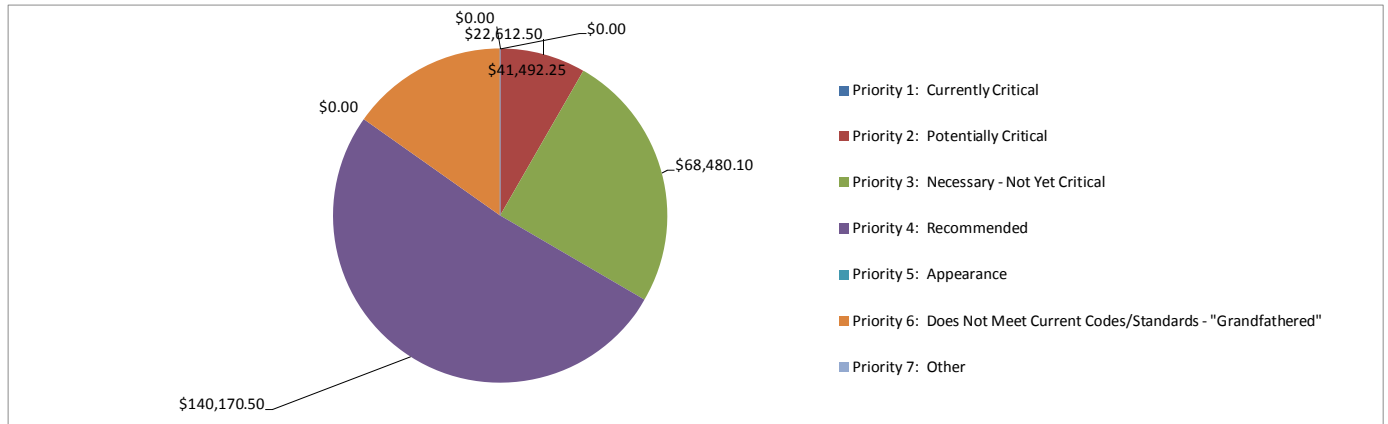
City of Troy
Facility Condition Assessment
April 2018

DPW Facilities Storage Building

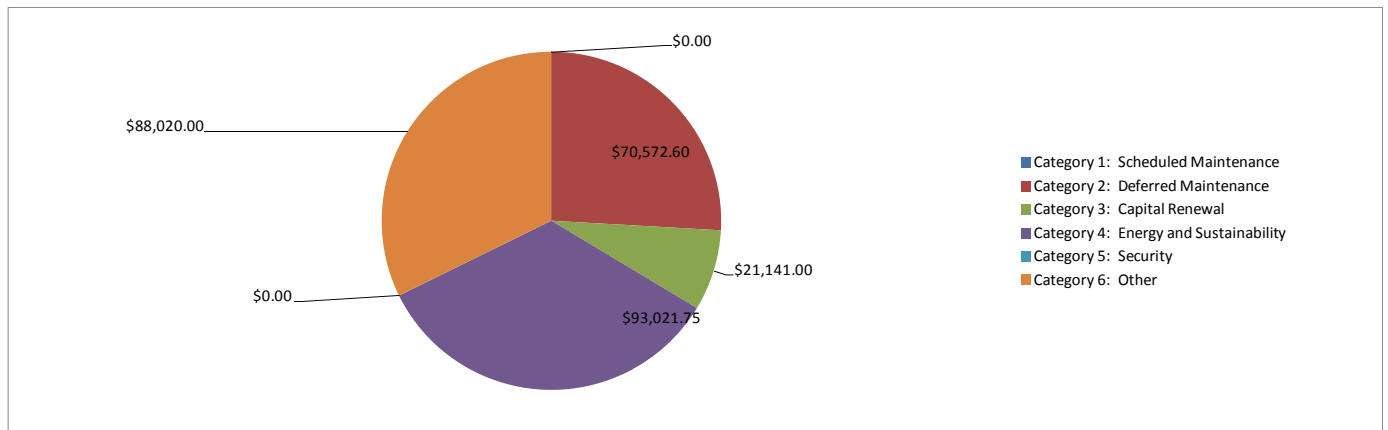
Building Information Address: 4699 Rochester Road Building Area: 2,000 SF No. of Floors: 1 Year Built: ? Evaluation Date: February 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other *Lower score equals higher priority												Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only					
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost			
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal									
6.0	Site																								
	No comments.																								
												\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

DPW Street Storage Building

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 4699 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 3,950 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: ?				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
*Lower score equals higher priority																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Gutters and Downspouts	Roof	PWSS-008		2	6	The sloped metal panel roofing system does not have a gutter and downspout system for collecting and directing water away from the building. Additionally, large icicles form at the roof edge creating an unsafe work zone under them.	Add 6-inch gutters and downspouts with open faces. Reinforce the roof overhangs with galvanized steel angles behind the gutters.	190	LF	\$ 80.00	\$ 15,200						\$ 20,520	\$ 22,098	\$ 23,216	\$ 26,267	\$ 33,624
1.2	Exterior Metal Siding	All Elevations	PWSS-006 PWSS-007		4	6	The galvanized coating has weathered from the exterior vertical metal siding in numerous locations. The fasteners have corroded. Several sections have been damaged.	Replace all corroded fasteners with stainless steel fasteners and neoprene washers. Replace damaged sections of metal siding. Remove corrosion with power tools and paint all metal siding with a two-coat polyvinylidene fluoride (PVDF) paint system.	1	LS	\$ 50,000.00	\$ 50,000						\$ 67,500	\$ 72,690	\$ 76,370	\$ 86,406	\$ 110,607
1.3	Open Bays	South Elevation			4	4	The south side of the building consists of three open bays and one enclosed with non-preserved-treated plywood. This has permitted weather to infiltrate the interior of the building affecting building components and stored items.	Enclose the south side of the building with non-insulated, vertical metal siding supported by new structural steel columns and girts. The metal siding will have a two-coat polyvinylidene fluoride (PVDF) paint system. Insulate the walls with 2-inch thick high-strength rigid fiberglass boards secured to horizontally installed galvanized hat channels.	1,045	SF	\$ 26.00	\$ 27,170						\$ 36,680	\$ 39,500	\$ 41,499	\$ 46,953	\$ 60,104
1.4	Metal Roof Panels	Roof	PWSS-019		3	2	The sloped metal panel roofing system has corrosion over all panels and fasteners.	Replace all corroded fasteners with stainless steel fasteners. Remove loose and flaking metal particles. Fabric tape all seams. Coat with a corrosion stabilizing primer. Coat panels with a fluid applied flexible acrylic waterproofing system.	3,794	SF	\$ 4.00	\$ 15,176						\$ 20,488	\$ 22,063	\$ 23,180	\$ 26,226	\$ 33,571
2.0	Building Interior																					
2.1	Steel Structure	All Rooms			3	2	Due to the open south side of the building, moisture has corroded all structural steel members.	Remove, by hand, all loose corrosion and dirt. Apply a high-performance coating formulated to bond with corrosion on all steel surfaces.	3950	SF	\$ 9.00	\$ 35,550						\$ 47,993	\$ 51,683	\$ 54,299	\$ 61,434	\$ 78,641
2.2	Plywood Partitions	Between Each Room			4	3	The partitions consist of non-preserved-treated plywood on wood studs. Due to the open south end of the building, moisture has weathered all wood inside the building.	Remove plywood partitions and replace with 8-inch concrete masonry units (CMU) and paint.	1305	SF	\$ 12.00	\$ 15,660						\$ 21,141	\$ 22,767	\$ 23,919	\$ 27,062	\$ 34,642
2.3	Exterior Door and Frame	Open Storage 1, et.al.			4	4	The south side of the building consists of three open bays and one enclosed with non-preserved-treated plywood. This has permitted weather to infiltrate the interior of the building, affecting building components and stored items.	Under a previous line item, it is recommended this side of the building be permanently enclosed. Include in each storage bay a fiberglass reinforced polyester (FRP) door with an aluminum frame.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
2.4	Garage Doors	Open Storage 1, et.al.			4	4	The south side of the building consists of three open bays and one enclosed with non-preserved-treated plywood. This has permitted weather to infiltrate the interior of the building, affecting building components and stored items.	Under a previous line item, it is recommended this side of the building be permanently enclosed. Include in each storage bay a 10 foot by 10 foot thermally insulated garage door, tracks, power door operator and controls. Frame each opening with galvanized structural steel channels.	400	SF	\$ 20.00	\$ 8,000						\$ 10,800	\$ 11,630	\$ 12,219	\$ 13,825	\$ 17,697
2.5	Insulation	Walls and Roof			6	4	The interior faces of the vertical metal wall siding and metal roof were not manufactured with a rigid insulation component.	Insulate the walls and roof with 2-inch thick high-strength rigid fiberglass insulation boards secured to horizontally installed galvanized hat channels.	6,147	SF	\$ 5.00	\$ 30,735						\$ 41,492	\$ 44,683	\$ 46,945	\$ 53,114	\$ 67,990

Note: Project Cost includes 35% mark-ups and fees
Annual Maintenance includes labor and material only

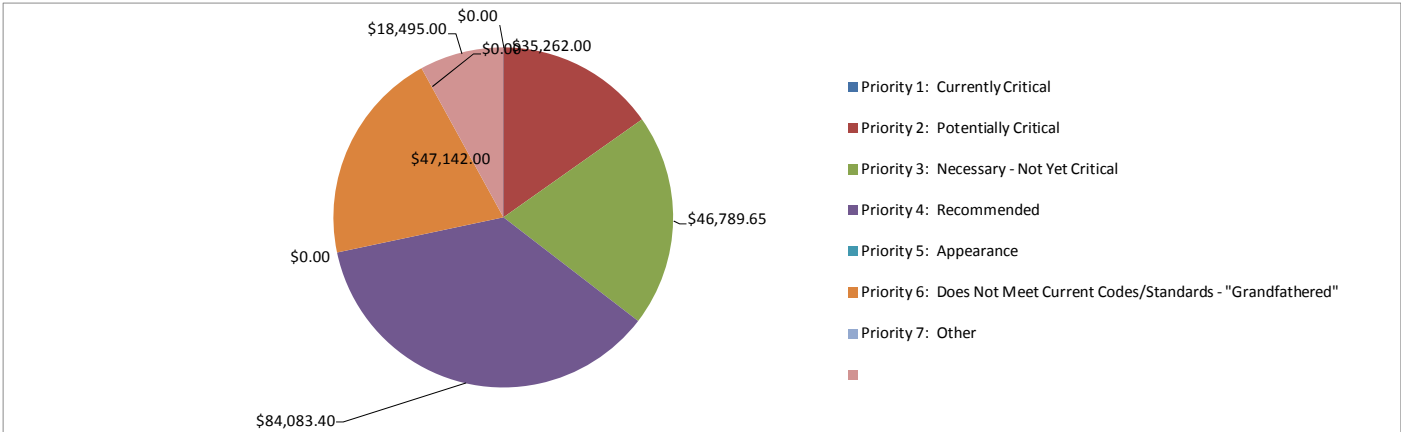
City of Troy
Facility Condition Assessment
April 2018

DPW Street Storage Building

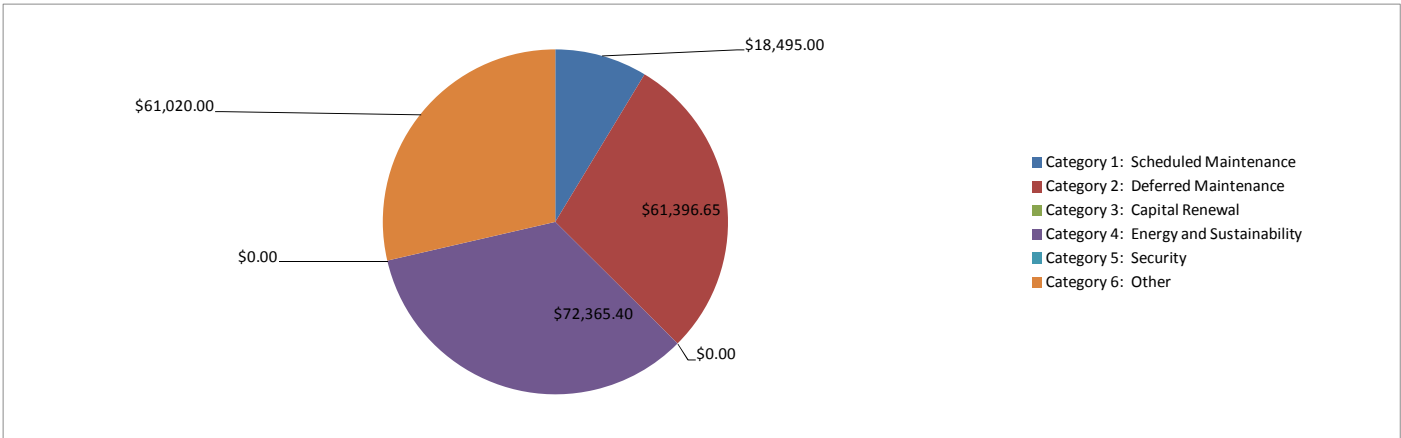
Building Information							Deficiency Priorities				Deficiency Categories													
Address: 4699 Rochester Road							Priority 1: Currently Critical				Category 1: Scheduled Maintenance													
Building Area: 3,950 SF							Priority 2: Potentially Critical				Category 2: Deferred Maintenance													
No. of Floors: 1							Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal													
Year Built: ?							Priority 4: Recommended				Category 4: Energy and Sustainability													
Evaluation Date: February 2018							Priority 5: Appearance				Category 5: Security													
							Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other													
							Priority 7: Other																	
*Lower score equals higher priority																								
Note: Project Cost includes 35% mark-ups and fees																								
Annual Maintenance includes labor and material only																								
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost		
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal								
3.0	Electrical System																							
3.1	Main Disconnect	None Found		PWSS-E-1	2	2	No main disconnect was observed.	Install panelboard with main breaker.	1	EA					\$ 1,550.00	\$ 1,550		\$ 2,093	\$ 2,253	\$ 2,367	\$ 2,679	\$ 3,429		
4.0	Mechanical System																							
	No comments.																							
5.0	Plumbing System																							
	No comments.																							
												\$ 200,491		\$ -		\$ 1,550	\$ -	\$ 272,755	\$ 293,728	\$ 308,598	\$ 349,150	\$ 446,941		
6.0	Site																							
	No comments.																							
												\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

DPW Water and Fleet Storage Building

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 4703 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 3,988 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: ?				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
																		Note: Project Cost includes 35% mark-ups and fees				
																		Annual Maintenance includes labor and material only				
																		*Lower score equals higher priority				
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Gutters and Downspouts	Roof	PWWF-026		2	6	The sloped metal panel roofing system does not have a gutter and downspout system for collecting and directing water away from the building. Additionally, large icicles form at the roof edge creating an unsafe work zone under them.	Add 6-inch gutters and downspouts with open faces. Reinforce the roof overhangs with galvanized steel angles behind the gutters.	190	LF	\$ 80.00	\$ 15,200						\$ 20,520	\$ 22,098	\$ 23,216	\$ 26,267	\$ 33,624
1.2	Exterior Metal Siding	All Elevations	PWWF-017		4	6	The galvanized coating has weathered from the exterior vertical metal siding in numerous locations resulting in corrosion. The fasteners have corroded. Several sections have been damaged.	Replace all corroded fasteners with stainless steel fasteners and neoprene washers. Replace damaged sections of metal siding. Remove corrosion with power tools and paint all metal siding with a two-coat polyvinylidene fluoride (PVDF) paint system.	1	LS	\$ 30,000.00	\$ 30,000						\$ 40,500	\$ 43,614	\$ 45,822	\$ 51,843	\$ 66,364
1.3	Steel Structure	All Rooms	PWWF-025		3	2	The structural steel at the south side of the building is exposed to the exterior and has corroded in numerous locations.	Remove, by hand, all loose corrosion and dirt. Apply a high-performance coating formulated to bond with corrosion on all steel surfaces.	570	SF	\$ 9.00	\$ 5,130						\$ 6,926	\$ 7,458	\$ 7,836	\$ 8,865	\$ 11,348
1.4	CMU	South Elevation	PWWF-036 PWWF-037		4	2	The exterior CMU wall has been damaged at the corners of the garage doors.	Patch damaged CMU.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
1.5	CMU	South Elevation			4	1	The exterior CMU wall has never been painted.	Paint the exterior CMU wall with an exterior grade high-performance coating.	1	LS	\$ 3,200.00	\$ 3,200						\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079
1.6	Garage Door Jambs and Head	South Elevation	PWWF-036		4	2	The exterior wood garage door jambs and head have weathered and been damaged.	Replace the wood with preservative-treated wood. Allow to weather for one year and then paint with an exterior grade high-performance coating.	1	LS	\$ 8,000.00	\$ 8,000						\$ 10,800	\$ 11,630	\$ 12,219	\$ 13,825	\$ 17,697
1.7	Metal Roof Panels	Roof	PWWF-038		3	2	The sloped metal panel roofing system has corrosion over all panels and fasteners.	Replace all corroded fasteners with stainless steel fasteners. Remove loose and flaking metal particles. Fabric tape all seams. Coat with a corrosion stabilizing primer. Coat panels with a fluid applied flexible acrylic waterproofing system.	3,776	SF	\$ 4.00	\$ 15,104						\$ 20,390	\$ 21,958	\$ 23,070	\$ 26,101	\$ 33,412
2.0	Building Interior																					
2.1	Wood Roof Structure	All Rooms	PWWF-024		3	1	Due to the age and partial conditioning of the rooms, the wood roof structure has weathered.	Prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	4,200	SF	\$ 2.50	\$ 10,500						\$ 14,175	\$ 15,265	\$ 16,038	\$ 18,145	\$ 23,227
2.2	Exterior Door	Storage 2	PWWF-016		3	2	The exterior surface of the hollow metal door is corroded.	Replace the door with a fiberglass reinforced polyester (FRP) door.	1	LS	\$ 2,000.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
2.3	Garage Doors	Storage 1 and Storage 2			2	2	The garage doors are made of wood and have weathered due to inadequate paint coverage. Several garage door panels have been damaged.	Replace each garage door with a 10 foot by 11 foot thermally insulated garage door, tracks, power door operator and controls.	440	SF	\$ 18.00	\$ 7,920						\$ 10,692	\$ 11,514	\$ 12,097	\$ 13,687	\$ 17,520
2.4	Insulation	Walls and Roof	PWWF-035		6	4	The interior faces of the vertical metal wall siding and metal roof were not manufactured with a rigid insulation component. Instead, rigid foam insulation was glued to the interior face of the metal. This foam insulation is a code violation for not having a tested flame and smoke classification.	Remove the foam insulation. Reinsulate the walls and roof with 2-inch thick high-strength rigid fiberglass insulation boards secured to horizontally installed galvanized hat channels.	6,984	SF	\$ 5.00	\$ 34,920						\$ 47,142	\$ 50,767	\$ 53,337	\$ 60,346	\$ 77,248

City of Troy
Facility Condition Assessment
April 2018

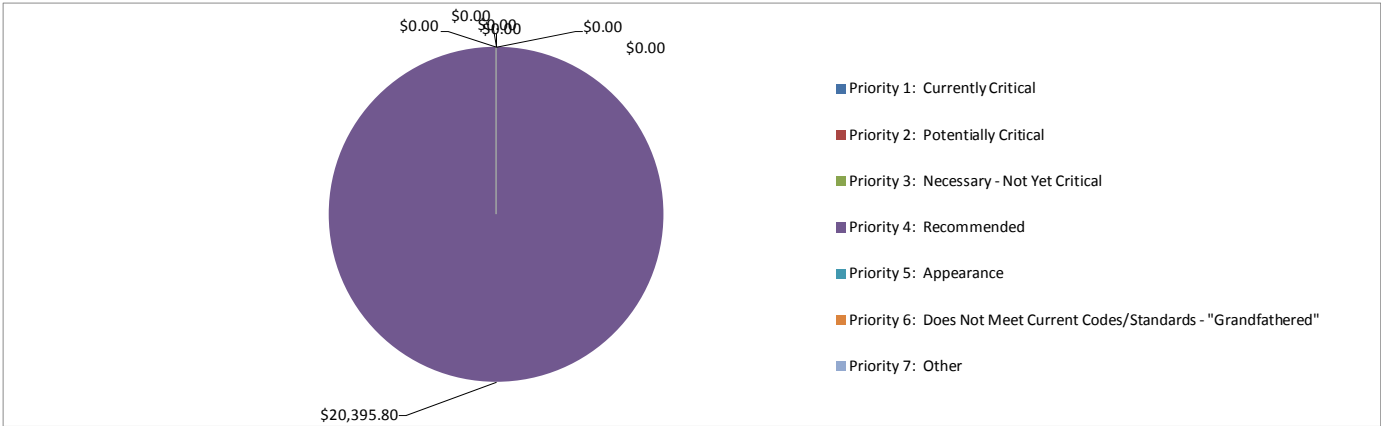
DPW Water and Fleet Storage Building

Building Information			Deficiency Priorities				Deficiency Categories																
Address: 4703 Rochester Road			Priority 1: Currently Critical				Category 1: Scheduled Maintenance																
Building Area: 3,988 SF			Priority 2: Potentially Critical				Category 2: Deferred Maintenance																
No. of Floors: 1			Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																
Year Built: ?			Priority 4: Recommended				Category 4: Energy and Sustainability																
Evaluation Date: February 2018			Priority 5: Appearance				Category 5: Security																
			Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																
			Priority 7: Other																				
*Lower score equals higher priority																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
3.0	Electrical System																						
3.1	Main Panelboard	Southeast Corner of Fleet Storage	PWWF-001 PWWF-003	PWWF-E-1	3	2	Panelboard is in poor condition. Working space is obstructed by car transmission.	Replace panelboard with new.	1	EA					\$ 1,925.00	\$ 1,925		\$ 2,599	\$ 2,799	\$ 2,940	\$ 3,327	\$ 4,258	
3.2	Lighting Control System	Entire Building			4	4	Lights are manually switched.	Install occupancy sensors to turn lights off when unoccupied	6	EA					\$ 389.00	\$ 2,334		\$ 3,151	\$ 3,393	\$ 3,565	\$ 4,033	\$ 5,163	
3.3	Interior Building Lighting	Fleet Storage	PWWF-018	PWPF-E-2	4	4	Fluorescent strips with obsolete 8 foot T-12 lamps	Replace with LED fixtures.	18	EA					\$ 545.00	\$ 9,810	\$ 475	\$ 13,244	\$ 14,262	\$ 14,984	\$ 16,953	\$ 21,701	
3.4	Interior Building Lighting	Water Storage	PWWF-027	PWPF-E-2	4	4	2x4 and industrial fluorescent fixtures	Replace with LED fixtures.	12	EA					\$ 545.00	\$ 6,540	\$ 79	\$ 8,829	\$ 9,508	\$ 9,989	\$ 11,302	\$ 14,467	
4.0	Mechanical System																						
4.1	Gas-Fired Ceiling Hung Unit Heater	Open Bay Area	PWWF-009	PWWF-M-1	7	6	Existing Sterling gas-fired ceiling hung unit heater is in good condition. 200 Mbh.	Replace with like and kind in 10 years.	1	LS				\$ 3,000.00	\$ 3,000						\$ 5,184	\$ 6,636	
4.2	Gas-Fired Ceiling Hung Unit Heater	Open Bay Area	PWWF-011	PWWF-M-2	2	2	Existing Luxaire gas-fired ceiling hung unit heater is in very poor condition and non-functioning. 200 Mbh.	Replace unit immediately with like and kind.	1	LS				\$ 3,000.00	\$ 3,000			\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636	
5.0	Plumbing System																						
	No comments.																						
												\$ 134,374		\$ 6,000		\$ 20,609	\$ 554	\$ 213,277	\$ 229,676	\$ 241,303	\$ 278,197	\$ 356,115	
6.0	Site																						
	No comments.																						
												\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

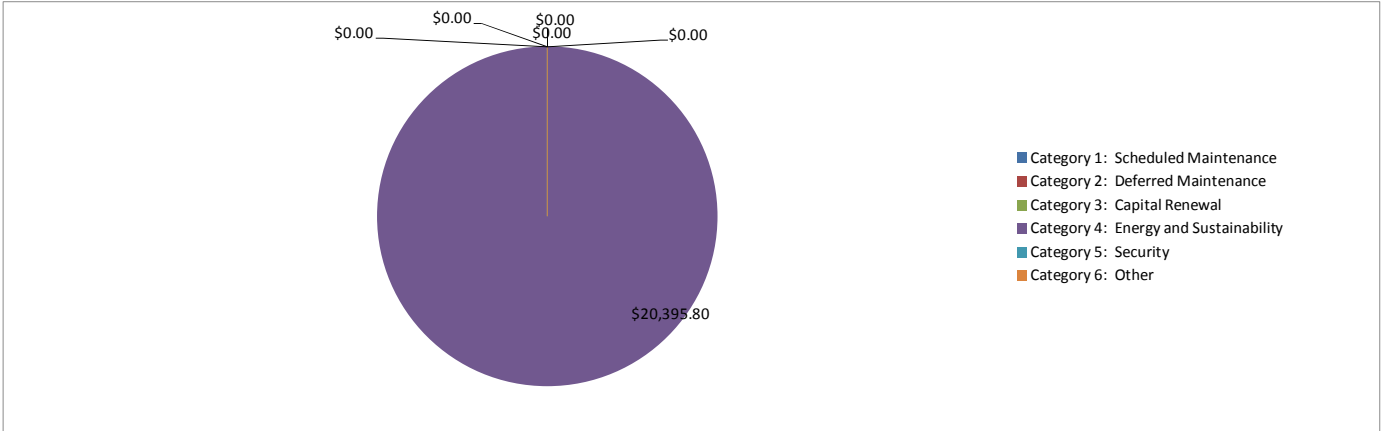


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



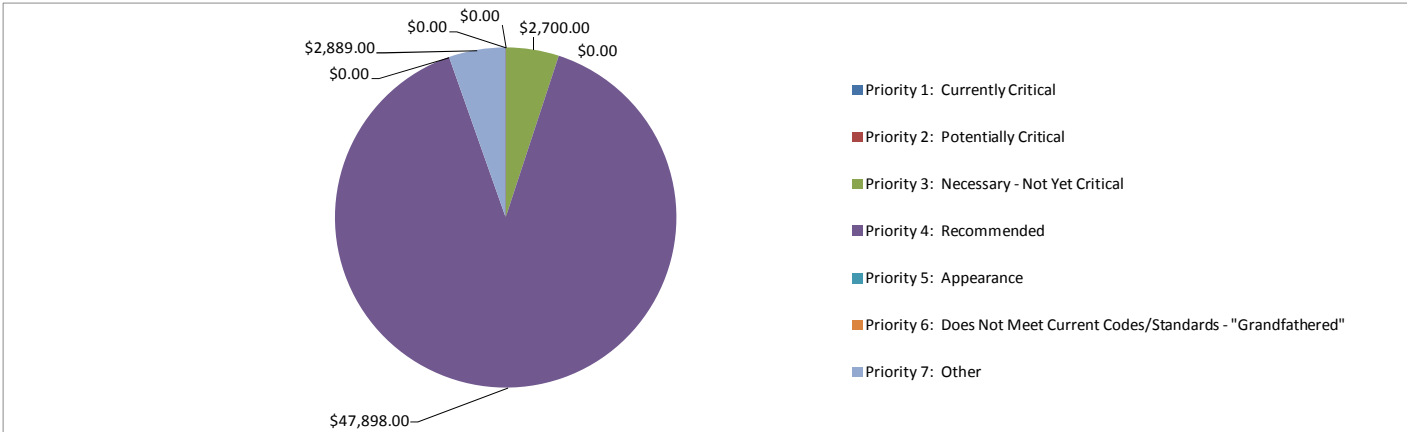
City of Troy
Facility Condition Assessment
April 2018

DPW Storage Building

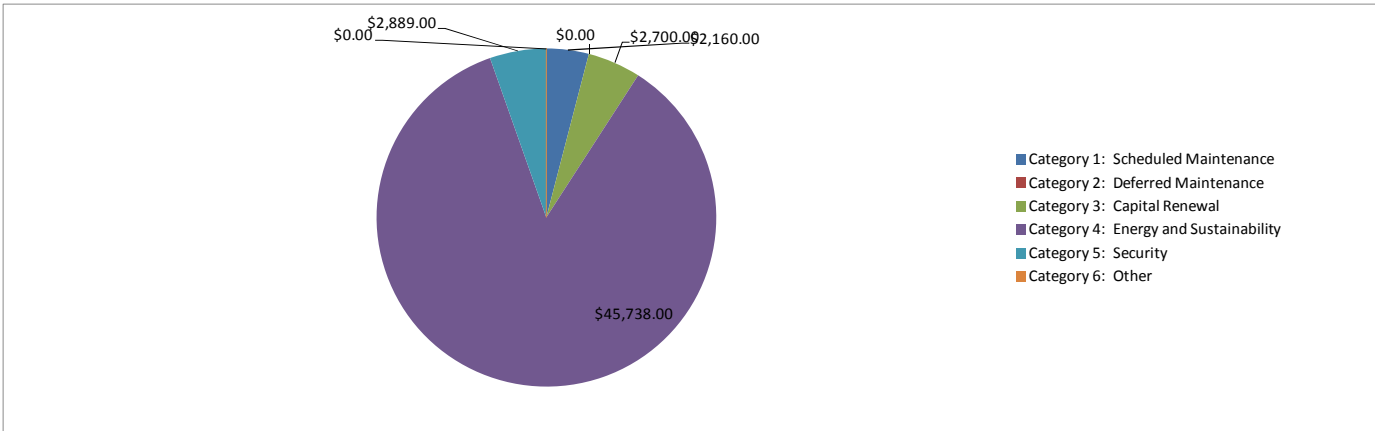
Building Information				Deficiency Priorities				Deficiency Categories														
Address: 4699 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 9,600 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2002				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
								*Lower score equals higher priority														
								Note: Project Cost includes 35% mark-ups and fees														
								Annual Maintenance includes labor and material only														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
	No comments.																					
2.0	Building Interior																					
	No comments.																					
3.0	Electrical System																					
3.1	Service Entrance Panelboard	Northwest Corner	PWS-002 PWS-003	PWS-E-1	7	6	Panelboard was installed in 2002.	Plan on replacing panel in 2052.	1	EA					\$ 5,900.00	\$ 5,900						
3.2	Lighting Control System	Panelboard	PWS-004		4	4	HID lights are manually controlled from the panel.	Install occupancy sensors.	12	EA					\$ 389.00	\$ 4,668		\$ 6,302	\$ 6,786	\$ 7,130	\$ 8,067	\$ 10,326
3.3	Interior Building Lighting	Entire Building	PWS-008	PWS-E-2	4	4	Lighting consists of low bay HID fixtures with slow warm-up, high maintenance and energy use.	Replace with LED fixtures.	12	EA					\$ 870.00	\$ 10,440	\$ 360	\$ 14,094	\$ 15,178	\$ 15,946	\$ 18,042	\$ 23,095
4.0	Mechanical System																					
	No comments.																					
5.0	Plumbing System																					
	No comments.																					
												\$ -		\$ -		\$ 21,008	\$ 360	\$ 20,396	\$ 21,964	\$ 23,076	\$ 26,108	\$ 33,421
6.0	Site																					
	No comments.																					
												\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

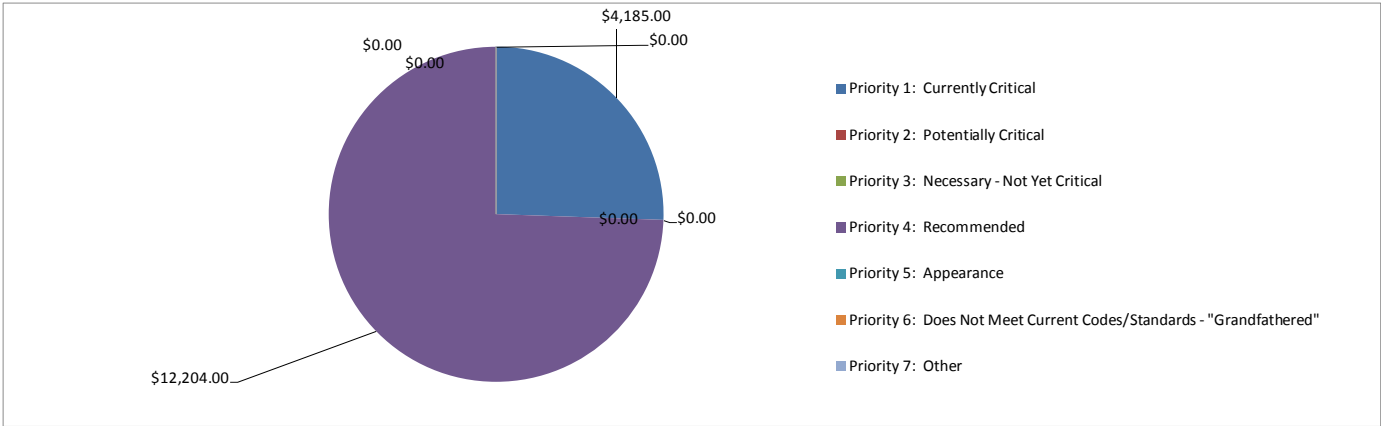
DPW Parks and Fire Department Storage Building

Building Information			Deficiency Priorities				Deficiency Categories																
Address: 4703 Rochester Road			Priority 1: Currently Critical				Category 1: Scheduled Maintenance																
Building Area: 13,100 SF			Priority 2: Potentially Critical				Category 2: Deferred Maintenance																
No. of Floors: 1			Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																
Year Built: 2002			Priority 4: Recommended				Category 4: Energy and Sustainability																
Evaluation Date: February 2018			Priority 5: Appearance				Category 5: Security																
			Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																
			Priority 7: Other																				
																	Note: Project Cost includes 35% mark-ups and fees						
																	Annual Maintenance includes labor and material only						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
1.0	Building Exterior																						
	No comments.																						
2.0	Building Interior																						
2.1	Exterior Door	DPW Parks Storage	PWPF-019		3	3	The exterior surface of the hollow metal door is corroded.	Replace the door with a fiberglass reinforced polyester (FRP) door.	1	LS	\$ 2,000.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424	
2.2	Exterior Door and Frame Paint Finish	DPW Parks Storage DPW Fire Department Storage	PWPF-001 PWPF-020		4	1	The exterior paint finish on the surfaces of the hollow metal doors and frames has weathered.	Refinish the doors and frames with an exterior grade high-performance coating system.	4	EA	\$ 400.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539	
3.0	Electrical System																						
3.1	Emergency Egress Lighting	Entire Building			7	5	Emergency Battery fixtures appear adequate.	Low temperature units should be installed in the unconditioned Parks side.	4	EA					\$ 535.00	\$ 2,140	\$ 1,000	\$ 2,889	\$ 3,111	\$ 3,269	\$ 3,698	\$ 4,734	
3.2	Service Entrance Panelboards	Northeast Corner away from doors		PWPF-E-1 PWPF-E-3	7	6	The panelboardwas installed in 2002.	Replace the panelboard in 34 years.	2	EA					\$ 3,875.00	\$ 7,750							
3.3	Lighting Control System	Entire Building			4	4	HID lights are manually controlled from the panel.	Install occupancy sensors.	20	EA					\$ 389.00	\$ 7,780		\$ 10,503	\$ 11,311	\$ 11,883	\$ 13,445	\$ 17,210	
3.4	Interior Building Lighting	Entire Building		PWPF-E-4	4	4	Lighting consists of low bay HID fixtures with slow warm-up, high maintenance and high energy use.	Replace with LED fixtures.	30	EA					\$ 870.00	\$ 26,100	\$ 900	\$ 35,235	\$ 37,944	\$ 39,865	\$ 45,104	\$ 57,737	
4.0	Mechanical System																						
4.1	Gas-Fired Ceiling Hung Radiant Heater	Fire Storage Side of Building		PWPF-M-1	5	4	Existing Gordon Ray BH gas fired ceiling hung radiant unit heater is in good condition.	Replace with like and kind in 2028.	3	EA			\$ 3,000.00	\$ 9,000							\$ 15,553	\$ 19,910	
5.0	Plumbing System																						
5.1	Water Service	Northeast Corner interior			7	6	Serves single hose bib via PEX pipe	No action required.															
												\$ 3,600		\$ 9,000		\$ 43,770	\$ 1,900	\$ 53,487	\$ 57,600	\$ 60,516	\$ 84,021	\$ 107,554	
6.0	Site																						
	No comments.																						
												\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

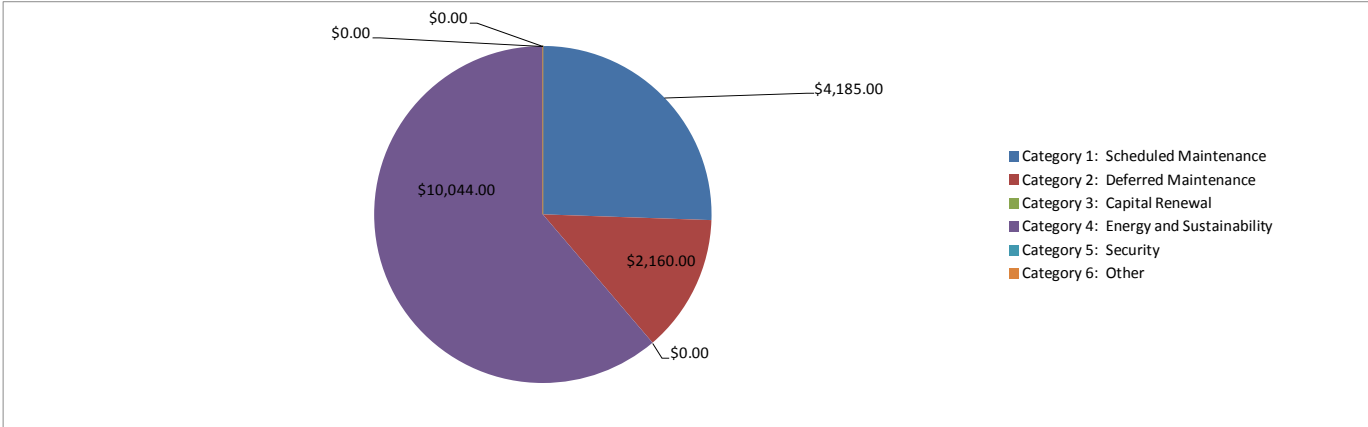


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



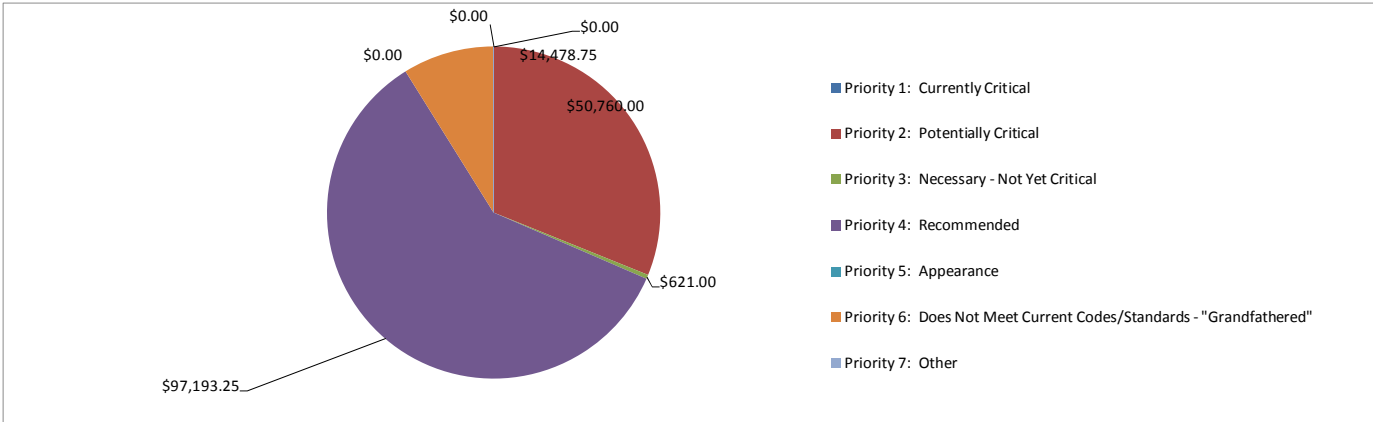
City of Troy
Facility Condition Assessment
April 2018

DPW Salt Storage Dome

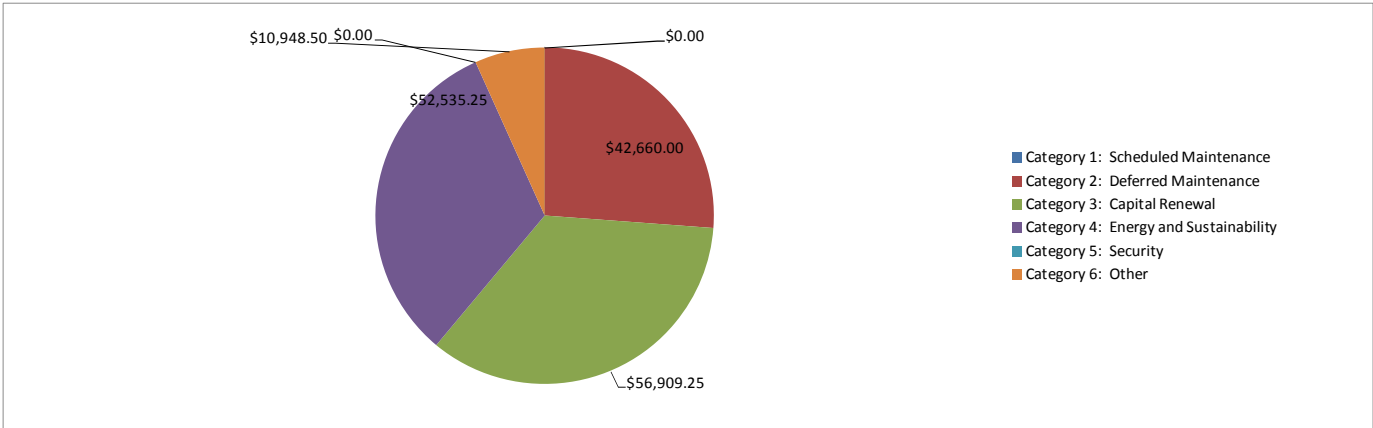
Building Information			Deficiency Priorities				Deficiency Categories															
Address: 4693 Rochester Road			Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 6,950 SF			Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1			Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: ?			Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: February 2018			Priority 5: Appearance				Category 5: Security															
			Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
			Priority 7: Other																			
							*Lower score equals higher priority															
							Note: Project Cost includes 35% mark-ups and fees															
							Annual Maintenance includes labor and material only															
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Asphalt Shingles	Roof			4	3	The asphalt shingles were installed in 2015 and have a 20 year warranty.	Plan on replacing asphalt shingles, underlayment and flashings in 2038.	16,800	SF	\$ 4.00	\$ 67,200									\$ 148,655	
1.2	Concrete Walls	Entrance	PWSD-010 PWSD-011		4	2	There are cracks in the concrete wall at the base of the dome.	The concrete wall should be monitored for further cracking. As an interim correction, the joints should be raked of loose material and filled with patching mortar. Seismic strips should be placed over the corrected joints and monitored four times a year.	2	EA	\$ 800.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
2.0	Building Interior																					
	No comments.																					
3.0	Electrical System																					
3.1	Main Panelboard	Exterior Wall North of Entrance	PWSD-001 PWSD-003	PWSD-E-1	1	1	Panel enclosure is very corroded with likely damage to circuit breakers.	Replace with new panel in NEMA 4X, stainless steel enclosure.	1	EA					\$ 3,100.00	\$ 3,100		\$ 4,185	\$ 4,507	\$ 4,735	\$ 5,357	\$ 6,858
3.2	Interior Lighting	Dome	PWSD-007	PWSD-E-2	4	4	Three (3) HID fixtures and one (1) quartz fixture.	Replace HID fixtures with LED fixture; remove quartz fixture.	3	EA					\$ 2,150.00	\$ 6,450	\$ 250	\$ 8,708	\$ 9,377	\$ 9,852	\$ 11,146	\$ 14,268
3.3	Exterior Lighting	Entry	PWSD-012		4	4	Two (2) HID wall packs.	Replace with LED fixtures	2	EA					\$ 495.00	\$ 990		\$ 1,337	\$ 1,439	\$ 1,512	\$ 1,711	\$ 2,190
4.0	Mechanical System																					
	No comments.																					
5.0	Plumbing System																					
	No comments																					
											\$ 68,800		\$ -		\$ 10,540		\$ 250	\$ 16,389	\$ 17,649	\$ 18,543	\$ 20,979	\$ 175,510
6.0	Site																					
	No comments																					
											\$ -		\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Fire Station One

Building Information				Deficiency Priorities				Deficiency Categories													
Address: 1019 East Big Beaver Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance													
Building Area: 6,616 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance													
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal													
Year Built: 1988				Priority 4: Recommended				Category 4: Energy and Sustainability													
Evaluation Date: January 2018				Priority 5: Appearance				Category 5: Security													
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other													
				Priority 7: Other																	

City of Troy
Facility Condition Assessment
April 2018

Fire Station One

Building Information		Deficiency Priorities		Deficiency Categories	
Address: 1019 East Big Beaver Road		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area: 6,616 SF		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
No. of Floors: 1		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
Year Built: 1988		Priority 4: Recommended		Category 4: Energy and Sustainability	
Evaluation Date: January 2018		Priority 5: Appearance		Category 5: Security	
		Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"		Category 6: Other	
		Priority 7: Other			
				*Lower score equals higher priority	
				Note: Project Cost includes 35% mark-ups and fees	
				Annual Maintenance includes labor and material only	

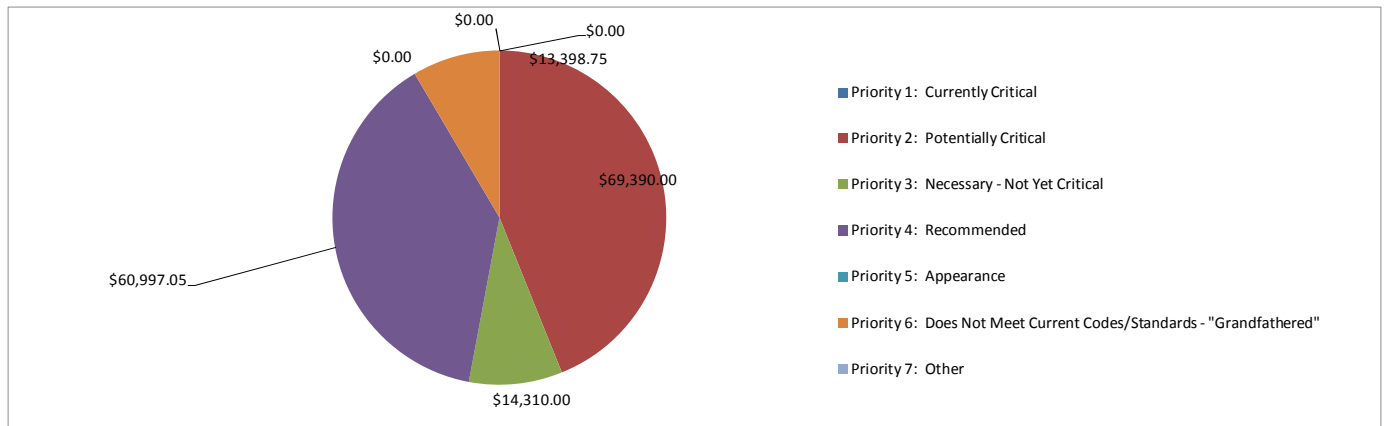
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.0	Mechanical System																					
4.1	Controls	Mechanical Room			4	3	Existing Andover system is in good/fair condition.	Update hardware and software on regular intervals of not more than five years.	6,616	SF			\$ 5.00	\$ 33,080				\$ 44,658	\$ 48,092	\$ 50,526	\$ 57,166	\$ 73,177
4.2	Infrared Heaters	Garage			4	2	Equipment is in fair condition.	Plan on replacing in 2023.	5,000	SF			\$ 3.00	\$ 15,000				\$ -	\$ 21,807	\$ 22,911	\$ 25,922	\$ 33,182
4.3	Kitchen Range, Hood and Make-up Air/Exhaust	Kitchen			3	3	Equipment is in fair condition.	Plan on replacing in 2028.	1	LS			\$ 60,000.00	\$ 60,000			\$ 150				\$ 103,687	\$ 132,728
4.4	Furnace with Air Conditioning	Mechanical Room		FS1-M-1	4	2	The gas fired furnace with DX cooling coil and its associated condensing unit are in fair condition.	Plan on replacing the units with like kind in 2023.	1	EA			\$ 9,800.00	\$ 9,800			\$ 550			\$ 14,968	\$ 16,935	\$ 21,678
4.5	Duct Furnace	Mechanical Room		FS1-M-2	4	2	The gas fired suspended furnace is in poor condition.	Plan on replacing with like kind in 2023.	1	EA			\$ 17,000.00	\$ 17,000			\$ 350			\$ 25,966	\$ 29,378	\$ 37,607
5.0	Plumbing System																					
5.1	Fire Water Service	Throughout			4	1	Domestic water piping, valves, flow switches and double-check valves are new and in excellent condition.	Plan on replacing in 2038.	6,616	SF			\$ 4.00	\$ 26,464								\$ 99,104
5.2	Domestic Water Heater	Mechanical Room		FS1-P-1	4	2	The 80 MBH gas fired commercial water heater is in fair condition.	Plan on replacing the water heater with like kind in 2038.	1	EA			\$ 10,000.00	\$ 10,000		\$ -						\$ 22,121
5.3	Plumbing Fixtures	Toilet Rooms			4	2	Equipment is in fair condition.	Plan on replacing in 2038.	1	LS			\$ 50,000.00	\$ 50,000		\$ -						\$ 110,607
												\$ 104,456	\$ 221,344	\$ 70,590	\$ 2,055	\$ 163,053	\$ 197,397	\$ 248,325	\$ 482,800	\$ 917,428		

6.0 Site																						
6.1	Asphalt Pavement	Parking Lot	FS1-104 FS1-118		4	3	The asphalt pavement in the parking lots has cracked in several locations.	Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	14,700	SF	\$ 4.00	\$ 58,800						\$ 79,380	\$ 85,484	\$ 89,811	\$ 101,613	\$ 130,073
6.2	Control Joints	Concrete Pavement at Garage Doors	FS1-097		4	3	The control joints in the concrete drives are sealed with a bituminous sealant. This type of sealant does not hold dits shape at the top edge of the concrete and will expand over the top of the concrete and be pulled out by vehicular traffic. Afterwards, water will penetrate the joint and wear the edge of the concrete.	Remove bituminous sealant and reseal joints with an exterior grade silicone sealant.	2,110	LF	\$ 2.50	\$ 5,275						\$ 7,121	\$ 7,669	\$ 8,057	\$ 9,116	\$ 11,669
6.3	Control Joints	Concrete Pavement	FS1-106		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	230	LF	\$ 2.00	\$ 460						\$ 621	\$ 669	\$ 703	\$ 795	\$ 1,018
6.4	Site Lighting	Parking Lots		FS1-E-6	7	6	Fixtures have been changed to LED.	Plan on replacing in 2038.	3	EA					\$ 1,200.00	\$ 3,600					\$ 7,963	
												\$ 64,535	\$ -	\$ 3,600	\$ -	\$ 87,122	\$ 93,821	\$ 98,571	\$ 111,524	\$ 150,723		

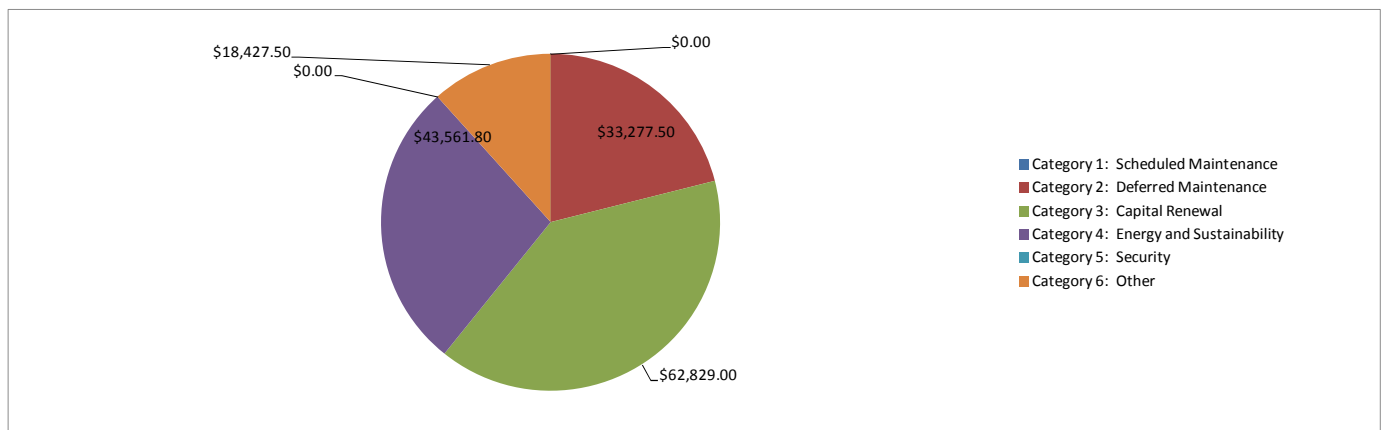


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Fire Station Two

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 5600 Livernois Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 5,520 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 1993				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				*Lower score equals higher priority														
								Note: Project Cost includes 35% mark-ups and fees														
								Annual Maintenance includes labor and material only														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Asphalt Pavement	Parking Lot	FS2-251 FS2-257		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2023. Remove both layers of asphalt and compact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	25,300	SF	\$ 4.00	\$ 101,200								\$ 154,573	\$ 174,885	\$ 223,868
1.2	Control Joints	Concrete Pavement at Garage Doors	FS2-241		4	3	The control joints in the concrete drives are sealed with a bituminous sealant. This type of sealant does not hold its shape at the top edge of the concrete and will expand over the top of the concrete and be pulled out be vehicular traffic. Afterwards, water will penetrate the joint and wear the edge of the concrete	Remove bituminous sealant and reseal joints with an exterior grade silicone sealant.	1,466	SF	\$ 2.50	\$ 3,665						\$ 4,948	\$ 5,328	\$ 5,598	\$ 6,334	\$ 8,107
1.3	Soffit	West Apparatus Bay Garage Doors	FS2-239		4	6	The underside of the metal soffit has several corroded scratches.	Remove all paint with power tools and apply an exterior ferrous-metal primer. Apply two finish coats of exterior low-luster acrylic paint over primer.	1	LS	\$ 2,600.00	\$ 2,600						\$ 3,510	\$ 3,780	\$ 3,971	\$ 4,493	\$ 5,752
1.4	Concrete Pavement	West Sidewalk at Entrance	FS2-242 FS2-245		3	2	The concrete adjacent to the main drive has spalled. The concrete ramp at visitor parking has cracked.	Replace the damaged sections.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
1.5	Frost Slab	Main Entrance at Vestibule	FS2-243 FS2-244		4	2	Several large cracks have formed at the top of the frost slab at the main entrance.	Route the cracks open and fill with patching mortar.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
1.6	Sign Wall	Property Entrance			4	3	The mortar joints, over time, will deteriorate between the limestone and brick cap sections; allowing water to infiltrate, freeze and push out the mortar.	Plan on the following remediation in 2028. Remove and salvage the limestone cap sections. Remove and dispose of the brick cap. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections and new limestone cap sections formed with positive slopes. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 3,200.00	\$ 3,200								\$ 5,530	\$ 7,079	
1.7	Site Wall	Patio			4	3	The mortar joints, over time, will deteriorate between the limestone cap sections; allowing water to infiltrate, freeze and push out the mortar.	Plan on the following remediation in 2028. Remove and salvage the limestone cap sections. Remove and dispose of the brick cap. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections and new limestone cap sections formed with positive slopes. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 4,200.00	\$ 4,200								\$ 7,258	\$ 9,291	
1.8	Site Wall	South Property Line	FS2-255		2	2	The urethane based sealant at the vertical joints has failed. The porous and flat cap stones have deteriorated. The mortar joints between the cap stones have failed, permitting water into the wall.	Remove the cap stones and sealant in vertical control joints. Infill vertical control joints with backer rod and an exterior grade silicone sealant. Cap the top of the wall with rubberized asphalt flashing and install new limestone cap sections formed with positive slopes. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant.	200	LF	\$ 60.00	\$ 12,000					\$ 16,200	\$ 17,446	\$ 18,329	\$ 20,737	\$ 26,546	
1.9	Window Sealant Joints	Office 1, et.al.	FS2-264		3	6	The urethane based sealant around the windows has failed.	Replace with an exterior grade silicone sealant.	5	EA	\$ 400.00	\$ 2,000					\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424	
1.10	Sealant Joints	Building Perimeter	FS2-266		4	3	The urethane based sealant at the brick walls has failed.	Replace with an exterior grade silicone sealant.	120	LF	\$ 15.00	\$ 1,800					\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982	

Note: Project Cost includes 35% mark-ups and fees
Annual Maintenance includes labor and material only

City of Troy
Facility Condition Assessment
April 2018

Fire Station Two

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 5600 Livernois Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 5,520 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 1993				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
Note: Project Cost includes 35% mark-ups and fees																						
Annual Maintenance includes labor and material only																						
*Lower score equals higher priority																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.11	Steel Lintel	Office 1, et.al.	FS2-267		4	2	The steel lintels at the wood windows have corroded.	Remove all paint and corrosion with power tools and apply an exterior ferrous-metal primer. Apply two finish coats of exterior low-luster acrylic paint over primer.	5	EA	\$ 650.00	\$ 3,250						\$ 4,388	\$ 4,725	\$ 4,964	\$ 5,616	\$ 7,189
1.12	Asphalt Shingles	Roof			2	3	The asphalt shingles are in poor condition as evidenced by numerous roof leaks.	Replace the asphalt shingles, underlayment and flashings.	8,000	SF	\$ 4.00	\$ 32,000						\$ 43,200	\$ 46,522	\$ 48,877	\$ 55,300	\$ 70,788
2.0	Building Interior																					
2.1	Carpet Tile	Office 1, Office 2, Training/Day Room			5	3	The carpet tiles are in good condition, but are showing signs of wear.	Plan on replacing the carpet tiles in 2028.	969	SF	\$ 5.50	\$ 5,330								\$ 9,210	\$ 11,789	
2.2	Non-Insulated Lavatory Piping	Women's, Men's, Shower			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	3	EA	\$ 150.00	\$ 450						\$ 608	\$ 654	\$ 687	\$ 778	\$ 995
2.3	Third Grab Bar	Women's			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	1	EA	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
2.4	Exterior Door Frame	Corridor 2	FS2-260		2	2	The bottoms of the hollow metal door frame are corroded.	Remove corrosion and paint with a rust-inhibitive high-performance coating.	1	LS	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
2.5	Steel Sidelites	Vestibule	FS2-246		4	2	The bottoms of the sidelites at the main entrance have corroded.	Remove corrosion and paint with a rust-inhibitive high-performance coating.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
2.6	Exterior Door and Frame	Hose Drying and Storage	FS2-262		2	2	The bottoms of the hollow metal door frame are corroded.	Repair bottom of the hollow metal frame with plates and autobody putty, sand and paint entire frame. Remove corrosion from door bottom and paint with a rust-inhibitive high-performance coating. Replace exterior weather stripping.	1	LS	\$ 1,000.00	\$ 1,000						\$ 1,350	\$ 1,454	\$ 1,527	\$ 1,728	\$ 2,212
2.7	Wood Windows	Office 1, et.al.	FS2-263		3	2	The paint on the wood window frames has delaminated from the wood.	Remove all loose paint, sand to bare wood and prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	5	EA	\$ 800.00	\$ 4,000						\$ 5,400	\$ 5,815	\$ 6,110	\$ 6,912	\$ 8,849
2.8	Walk-Off Mat	Vestibule			4	3	The walk-off mat is in good condition, but will be expensive to replace when worn.	Plan to replace the walk-off mat with walk-off carpet tiles in 2028.	25	SF	\$ 5.50	\$ 138								\$ 238	\$ 304	
2.9	Partition	Corridor 2	FS2-178		3	6	The gypsum board partition has cracked.	Salvage resilient wall base. Remove outer layer of gypsum board up to underside of acoustical lay-in ceiling system. Verify the studs are flush and vertical. Install new gypsum board over existing studs. Tape, mud and sand joints. Prime with an interior gypsum board primer. Apply two finish coats of interior low-luster acrylic enamel over primer. Reinstall resilient wall base.	1	LS	\$ 2,200.00	\$ 2,200						\$ 2,970	\$ 3,198	\$ 3,360	\$ 3,802	\$ 4,867
2.10	Flooring	Hose Drying and Storage	FS2-219		5	3	The epoxy floor system has been damaged in one area, but is in good condition overall.	This is restricted to one area, but the system will prematurely wear in this area and gradually in other areas of heavy use. Plan to replace the epoxy floor system with a traffic coating system in 2028.	340	SF	\$ 5.00	\$ 1,700								\$ 2,938	\$ 3,761	
2.11	Garage Doors	Apparatus Bay			2	6	The bottoms of the garage exit doors have been hit by exiting vehicles due to ineffective door operator controls.	Replace door operator controls with multiple sensors tied to a timer.	3	EA	\$ 2,000.00	\$ 6,000						\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273
2.12	Vehicle Exhaust System	Apparatus Bay			4	3	The vehicle exhaust system functions correctly.	Plan on replacing the hoses, controls and exhaust fan in 2038.	3	EA	\$ 7,000.00	\$ 21,000									\$ 46,454	

City of Troy
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Fire Station Two

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Building Area: 5,520 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 1993				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
3.0	Electrical System																						
3.1	Emergency Egress Lighting	Entire Building			6	3	Additional fixtures are required on the generator to comply with required illumination.	Extend life safety circuits to select existing fixtures.	1	LS					\$ 3,500.00	\$ 3,500		\$ 4,725	\$ 5,088	\$ 5,346	\$ 6,048	\$ 7,742	
3.2	Emergency Power	Storage Area and Generator in SCBA Storage		FS2-E-4 FS2-E-5 FS2-E-7	6	3	Life safety and equipment loads are not separated as required per NEC 700.5(D).	Add a Life Safety ATS and panel and move Life Safety loads from the equipment panel.	1	LS					\$ 5,575.00	\$ 5,575	\$ 500	\$ 7,526	\$ 8,105	\$ 8,515	\$ 9,634	\$ 12,333	
3.3	Service Entrance	Storage Area		FS2-E-1 FS2-E-2 FS2-E-3	4	3	100A Service with 10 Spaces in RP-A	Plan on replacing in 2043.	1	EA					\$ 5,800.00	\$ 5,800							
3.4	Lighting Control System	Entire Building			4	4	No building wide lighting control system	Install occupancy sensors through out to switch lights off when unoccupied.	12	EA					\$ 389.00	\$ 4,668		\$ 6,302	\$ 6,786	\$ 7,130	\$ 8,067	\$ 10,326	
3.5	Building Lighting	Entire Building			4	4	Fluorescent lighting with T-8 lamps.	Replace fixtures with LED fixtures.	5,520	SF					\$ 5.00	\$ 27,600	\$ 276	\$ 37,260	\$ 40,125	\$ 42,156	\$ 47,696	\$ 61,055	
4.0	Mechanical System																						
4.1	Furnace	Mech/Telecom Room		FS2-M-1	5	5	The gas fired furnace with DX cooling coil is in fair condition and operating adequately.	Replace the gas fired furnace and associated refrigerant piping with a like kind in the next 20 years.	1	EA				\$ 3,800.00	\$ 3,800		\$ 350					\$ 8,406	
4.2	Outdoor Condensing Unit (Furnace F-1)	Exterior Grade South		FS2-M-2	5	5	The 5 ton outdoor condensing unit is in good condition.	Replace the outdoor condensing unit with a like kind in the next 20 years along with furnace replacement.	1	EA				\$ 6,000.00	\$ 6,000		\$ 200					\$ 13,273	
4.3	Infrared Heaters	Roof			4	4	The heaters are in fair condition.	The radiant heaters should be replaced with a like kind in the next 10 years. Providing the same MBH as existing.	3,000	SF				\$ 3.00	\$ 9,000						\$ 15,553	\$ 19,910	
4.4	Exhaust Fan	Roof/Garage			3	3	The rooftop fans are in fair condition and are functional.	Replace fans with a like kind in the next 10 years and match curb.	2	EA				\$ 1,800.00	\$ 3,600		\$ 300				\$ 6,222	\$ 7,964	
4.5	Electric Unit Heater	Men's Toilet Room		FS2-M-3	3	3	The electric unit heater is in good condition; however, electric heating elements have a short equipment life of 10 years.	Replace the unit heater with a like kind in the next 10 years.	1	EA				\$ 700.00	\$ 700					\$ 1,070	\$ 1,210	\$ 1,549	
4.6	Electric Cabinet Unit Heater	West Vestibule		FS2-M-4	3	3	The electric unit heater is in good condition; however, electric heating elements have a short equipment life of 10 years.	Replace the cabinet unit heater with a like kind in the next 10 years.	1	EA				\$ 1,200.00	\$ 1,200					\$ 1,833	\$ 2,074	\$ 2,655	
4.7	Natural Gas Unit Heater	Generator Room		FS2-M-5	3	3	The unit heater is in poor condition and is approaching the end of its useful life, but has a new motor from 2016.	Replace the unit heater with a like kind in the next 5 years.	1	EA				\$ 1,300.00	\$ 1,300					\$ 1,986	\$ 2,247	\$ 2,876	
4.8	Kitchen Range, Hood and Make-up Air/Exhaust	Kitchen			3	3	Equipment is in fair condition.	Plan on replacing in 2028.	1	LS				\$ 60,000.00	\$ 60,000		\$ 150				\$ 103,687	\$ 132,728	
4.9	Controls	Throughout			4	4	Existing Andover system is in good/fair condition.	Update hardware and software on regular intervals of not more than five years.	5,520	SF				\$ 5.00	\$ 27,600					\$ 40,125	\$ 42,156	\$ 47,696	\$ 61,055
5.0	Plumbing System																						
5.1	Domestic Water Heater	Mech/Telecom Room		FS2-P-1	4	4	The 76 MBH 75 gallon gas domestic water heater appears to be in good condition.	Replace the water heater with a like kind in 2028. Any replacement should be put on a concrete housekeeping pad to reduce contact with standing water.	1	EA				\$ 7,000.00	\$ 7,000						\$ 12,097	\$ 15,485	
5.2	Domestic Water and Sanitary Piping	Mechanical Room/Toilet Rooms/Kitchen			4	4	The domestic water and sanitary piping is in good condition.	New domestic supply piping and sanitary/vent piping should be replaced when new plumbing fixtures are installed.	3000	LF				\$ 1.00	\$ 3,000						\$ 5,184	\$ 6,636	

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April 2018

Fire Station Two

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Building Area: 5,520 SF							Priority 2: Potentially Critical				Category 2: Deferred Maintenance												
No. of Floors: 1							Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal												
Year Built: 1993							Priority 4: Recommended				Category 4: Energy and Sustainability												
Evaluation Date: February 2018							Priority 5: Appearance				Category 5: Security												
							Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other												
							Priority 7: Other																
																			Note: Project Cost includes 35% mark-ups and fees				
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
5.3	Plumbing Fixtures	Toilet Rooms/Kitchen			4	4	Plumbing fixtures (porcelain, flush valves, faucets, mixing valves, fixture carriers) are in good condition.	Plumbing fixtures (water closets, urinals, lavatories, sinks) should be replaced with a like kind and size in the next 10 years.	1	LS			\$ 32,300.00	\$ 32,300							\$ 55,818	\$ 71,452	
5.4	Automatic Sprinkler System/Fire Service	All Rooms			4	4	Sprinkler piping and fire service are in good condition.	Replacement can be deferred for approximately 20 years and should be replaced with similar equipment and sizing.	5,520	SF			\$ 4.00	\$ 22,080								\$ 48,844	
												\$ 212,532		\$ 155,500		\$ 47,143		\$ 1,776	\$ 158,096	\$ 210,377	\$ 380,489	\$ 654,223	\$ 954,439

6.0	Site																				
6.1	Asphalt Pavement	Parking Lot	FS2-251 FS2-257		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2023. Remove both layers of asphalt and compact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	25,300	SF	\$ 4.00	\$ 101,200							\$ 154,573	\$ 174,885	\$ 223,868
6.2	Control Joints	Concrete Pavement at Garage Doors	FS2-241		4	3	The control joints in the concrete drives are sealed with a bituminous sealant. This type of sealant does not hold its shape at the top edge of the concrete and will expand over the top of the concrete and be pulled out by vehicular traffic. Afterwards, water will penetrate the joint and wear the edge of the concrete.	Remove bituminous sealant and reseal joints with an exterior grade silicone sealant.	1,466	SF	\$ 2.50	\$ 3,665					\$ 4,948	\$ 5,328	\$ 5,598	\$ 6,334	\$ 8,107
6.3	Concrete Pavement	West Sidewalk at Entrance	FS2-242 FS2-245		3	2	The concrete adjacent to the main drive has spalled. The concrete ramp at visitor parking has cracked.	Replace the damaged sections.	1	LS	\$ 2,400.00	\$ 2,400					\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
6.4	Frost Slab	Main Entrance at Vestibule	FS2-243 FS2-244		4	2	Several large cracks have formed at the top of the frost slab at the main entrance.	Route the cracks open and fill with patching mortar.	1	LS	\$ 800.00	\$ 800					\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
6.5	Sign Wall	Property Entrance			4	3	The mortar joints, over time, will deteriorate between the limestone and brick cap sections; allowing water to infiltrate, freeze and push out the mortar.	Plan on the following remediation in 2028. Remove and salvage the limestone cap sections. Remove and dispose of the brick cap. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections and new limestone cap sections formed with positive slopes. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 3,200.00	\$ 3,200								\$ 5,530	\$ 7,079
6.6	Site Wall	Patio			4	3	The mortar joints, over time, will deteriorate between the limestone cap sections; allowing water to infiltrate, freeze and push out the mortar.	Plan on the following remediation in 2028. Remove and salvage the limestone cap sections. Remove and dispose of the brick cap. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections and new limestone cap sections formed with positive slopes. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 4,200.00	\$ 4,200								\$ 7,258	\$ 9,291

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April 2018

Fire Station Two

Building Information

Address: 5600 Livernois Road
Building Area: 5,520 SF
No. of Floors: 1
Year Built: 1993
Evaluation Date: February 2018

Deficiency Priorities

Priority 1: Currently Critical
Priority 2: Potentially Critical
Priority 3: Necessary - Not Yet Critical
Priority 4: Recommended
Priority 5: Appearance
Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"
Priority 7: Other

Deficiency Categories

Category 1: Scheduled Maintenance
Category 2: Deferred Maintenance
Category 3: Capital Renewal
Category 4: Energy and Sustainability
Category 5: Security
Category 6: Other

Note: Project Cost includes 35% mark-ups and fees

Annual Maintenance includes labor and material only

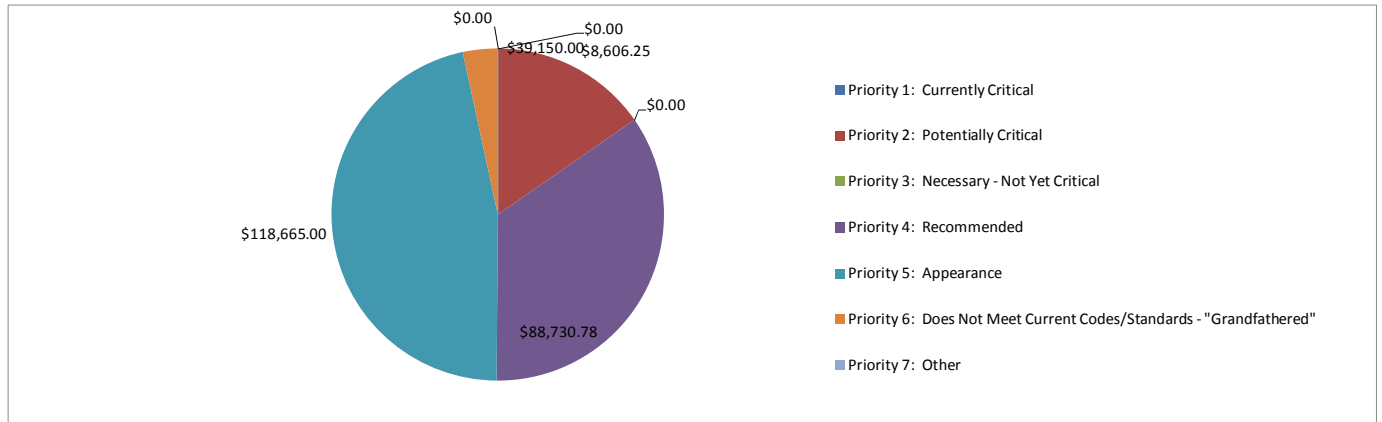
*Lower score equals higher priority

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
6.7	Site Wall	South Property Line	FS2-255		2	2	The urethane based sealant at the vertical joints has failed. The porous and flat cap stones have deteriorated. The mortar joints between the cap stones have failed, permitting water into the wall.	Remove the cap stones and sealant in vertical control joints. Infill vertical control joints with backer rod and an exterior grade silicone sealant. Cap the top of the wall with rubberized asphalt flashing and install new limestone cap sections formed with positive slopes. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant	200	LF	\$ 60.00	\$ 12,000						\$ 16,200	\$ 17,446	\$ 18,329	\$ 20,737	\$ 26,546
6.8	Site Lighting	Parking Lots		FS2-E-8	7	6	Fixtures have been changed to LED.	Plan on replacing in 2038.	3	EA					\$ 1,200.00	\$ 3,600						\$ 7,963
												\$ 127,465		\$ -		\$ 3,600	\$ -	\$ 25,468	\$ 27,426	\$ 183,388	\$ 220,275	\$ 289,933

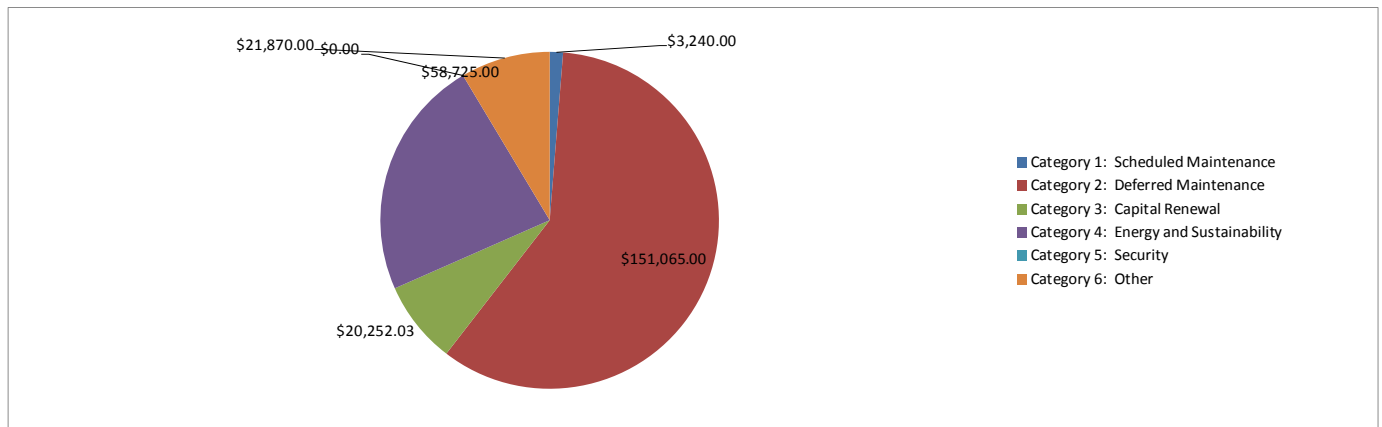


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
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April 2018

Fire Station Three

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 2400 West Big Beaver Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 8,700 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2003				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
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											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Sealant Joints	Building Perimeter	FS3-122 FS3-168		4	3	The urethane based sealant at the brick walls has failed.	Remove the urethane based sealant. Reseal with exterior grade silicone sealant.	200	LF	\$ 15.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
1.2	Brick	South and West Elevations	FS3-134		5	1	Efflorescence and road salt cover sections of the exterior brick wall.	Clean brick with a non-acidic cleaning agent.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
1.3	Brick	South Elevation	FS3-145		4	6	The building should have control joints 2 feet from one side of brick wall outside corners. Because control joints were not installed, the brick has expanded past the corner and cracked the brick in one location.	Remove brick at south corner of exterior wall. Verify flashing was correctly set in cavity. Rebuild with new brick and add a vertical control joint 2 feet from corner of wall and seal with an exterior grade silicone sealant.	1	LS	\$ 6,400.00	\$ 6,400						\$ 8,640	\$ 9,304	\$ 9,775	\$ 11,060	\$ 14,158
1.4	Exterior Wall Ledge	All Elevations	FS3-136		4	2	The mortar joints have deteriorated between the limestone cap sections; allowing water to infiltrate, freeze and push out the mortar.	Grind out 1/2 inch of the limestone cap mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 8,000.00	\$ 8,000						\$ 10,800	\$ 11,630	\$ 12,219	\$ 13,825	\$ 17,697
1.5	Exterior Wall Ledge	West Elevation	FS3-136		4	2	The tops of the limestone sill caps have cracks throughout the units. These may be due to improper handling during installation or poor fabrication.	Clean and coat each damaged unit with a clear, acrylic based, water repellant, sealer.	1	LS	\$ 900.00	\$ 900						\$ 1,215	\$ 1,308	\$ 1,375	\$ 1,555	\$ 1,991
1.6	Steel Framing	Underside of Roof Overhang	FS3-137		5	2	The paint on the steel members is failing and delaminating from the steel due to corrosion.	Remove paint and corrosion and prime/paint with a high-performance coating.	1	LS	\$ 80,000.00	\$ 80,000						\$ 108,000	\$ 116,304	\$ 122,192	\$ 138,249	\$ 176,971
2.0	Building Interior																					
2.1	Carpet Tile	Day Room			5	3	The carpet tiles are in acceptable condition.	Plan on replacing the carpet tiles in 2028.	1000	SF	\$ 5.50	\$ 5,500						\$ 7,425	\$ 7,996	\$ 8,401	\$ 9,505	\$ 12,167
2.2	Wood Floor	Office			4	3	The wood flooring is in acceptable condition, but is showing signs of wear.	Plan to refinish wood flooring in 2028 with machine sanding, fill and repair of seams and defects and two coats of urethane.	215	SF	\$ 2.50	\$ 538						\$ 726	\$ 781	\$ 821	\$ 929	\$ 1,189
2.3	Concrete Floor	Apparatus Bay	FS3-062		4	6	The concrete floor has a clear epoxy flooring system. The control joints are not sealed and cracks have formed at the trench drains.	Route out cracks and fill with patching mortar. Seal control joints with a urethane based sealant. Apply a coat of clear epoxy flooring over the joints and cracks.	1	LS	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
2.4	Third Grab Bar	Women's, Men's			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	2	EA	\$ 400.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
2.5	Exterior Door and Frame	Vestibule	FS3-135		2	2	The bottoms of the aluminum door and frame are corroded.	Replace frame with a thick wall aluminum frame. Replace door with a fiberglass reinforced polyester door. Replace the side lite panel with 1 inch insulating glass.	1	EA	\$ 3,400.00	\$ 3,400						\$ 4,590	\$ 4,943	\$ 5,193	\$ 5,876	\$ 7,521
2.6	Exterior Door and Frame	Entry and Walkway	FS3-120 FS3-121		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace frame with an aluminum frame. Replace door with a fiberglass reinforced polyester door. Replace the glass transom panel with 1 inch insulating glass.	1	EA	\$ 3,400.00	\$ 3,400						\$ 4,590	\$ 4,943	\$ 5,193	\$ 5,876	\$ 7,521
2.7	Exterior Door and Frame	Apparatus Bay	FS3-061		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace frame with an aluminum frame. Replace door with a fiberglass reinforced polyester door. Replace the glass transom panel with 1 inch insulating glass.	2	EA	\$ 3,400.00	\$ 6,800						\$ 9,180	\$ 9,886	\$ 10,386	\$ 11,751	\$ 15,042
2.8	Exterior Door and Frame	Storage 1	FS3-162		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace frame with an aluminum frame. Replace door with a fiberglass reinforced polyester door.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
2.9	Exterior Door and Frame	Corridor 3	FS3-163 FS3-164		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace frame with an aluminum frame. Replace door with a fiberglass reinforced polyester door. Replace the glass transom panel with 1 inch insulating glass.	1	EA	\$ 3,400.00	\$ 3,400						\$ 4,590	\$ 4,943	\$ 5,193	\$ 5,876	\$ 7,521

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Fire Station Three

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No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
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																		Annual Maintenance includes labor and material only				
*Lower score equals higher priority																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
2.10	Exterior Door and Frame	Corridor 4	FS3-170 FS3-171		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace frame with an aluminum frame. Replace door with a fiberglass reinforced polyester door.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
2.11	Garage Doors	Apparatus Bay			2	6	The bottoms of the garage exit doors have been hit by exiting vehicles due to ineffective door operator controls.	Replace door operator controls with multiple sensors tied to a timer.	3	EA	\$ 2,000.00	\$ 6,000						\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273
2.12	Vehicle Exhaust System	Apparatus Bay			4	3	The vehicle exhaust system functions correctly.	Plan on replacing the hoses, controls and exhaust fan in 2038.	3	EA	\$ 7,000.00	\$ 21,000										\$ 46,454
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Entire Building			4	3	2003 construction should comply with code minimum illumination.	Maintain operation of fixtures on generator.														
3.2	Emergency Power	Mechanical/Electrical		FS3-E-4 FS3-E-5 FS3-E-6 FS3-E-8	6	3	Life safety and equipment loads are not separated as required per NEC 700.5(D).	Add a life safety ATS and panel and move life safety loads to new panel.	1	EA					\$ 5,575.00	\$ 5,575	\$ 500	\$ 7,526	\$ 8,105	\$ 8,515	\$ 9,634	\$ 12,333
3.3	Service Entrance Switchboard	Mechanical/Electrical		FS3-E-1	4	3	Electrical Room must not be used for storage. Switchboard has five spare switches.	Plan on replacing in 2038.	1	EA					\$ 5,800.00	\$ 5,800					\$ -	\$ 12,830
3.4	Lighting Control System	Entire Building			4	3	Lights are manually controlled with occupancy sensors in some areas.	Install occupancy sensors in all areas.	1	EA					\$ 389.00	\$ 389		\$ 525	\$ 566	\$ 594	\$ 672	\$ 861
3.5	Building Lighting	Apparatus Bay			4	4	Original HID fixtures should be replaced with LED	Plan on replacing in 2023.	12	EA					\$ 975.00	\$ 11,700				\$ 17,870	\$ 20,218	\$ 25,881
3.6	Building Lighting	Training/Day Room			4	4	Original incandescent fixtures should be re-lamped with LED lamps	Plan on replacing in 2023.	14	EA					\$ 10.00	\$ 140				\$ 214	\$ 242	\$ 310
3.7	Fire Alarm Control Panel	Storage 1		FS3-E-9	4	3	The Fire Alarm system is 10 years old and the building has some strobe and horn coverage.	Install system software updates and replace the batteries in 2023.	1	LS					\$ 500.00	\$ 500				\$ 764	\$ 864	\$ 1,106
3.8	Interior Building Lighting	Entire Building			4	4	Recessed 2 x 4 fluorescent and high bay HID in Apparatus.	Replace with LED fixtures.	8,700	SF					\$ 5.00	\$ 43,500	\$ 218	\$ 58,725	\$ 63,240	\$ 66,442	\$ 75,173	\$ 96,228
3.9	Exterior Lighting	Canopy and Apparatus doors	FS3-112		4	4	Fixtures should be relamped or replaced with LED	Plan on replacing in 2023.	12	EA					\$ 1,200.00	\$ 14,400	\$ 120				\$ 24,885	\$ 31,855
4.0	Mechanical System																					
4.1	Unit Heater	Fire Station 3		FS3-M-1 FS3-M-2	3	4	The gas fired suspended unit heaters are in good condition.	Replace the unit heaters with like kind in 2028.	2	EA			\$ 5,075.00	\$ 10,150							\$ 17,540	\$ 22,453
4.2	Condensing Unit	Outdoors		FS3-M-3 FS3-M-4 FS3-M-5	4	4	The 3-4 ton condensing units are in good condition.	Replace the condensing units with like kind in 2028.	3	EA			\$ 6,000.00	\$ 18,000			\$ 600				\$ 31,106	\$ 39,818
4.3	Furnace	Mechanical		FS3-M-6 FS3-M-7 FS3-M-8	3	4	The gas fired furnaces with DX cooling coils are in fair condition and operating adequately.	Replace the furnaces with like kind in 2028.	3	EA			\$ 3,800.00	\$ 11,400			\$ 1,050				\$ 19,700	\$ 25,218
4.4	Kitchen Range, Hood and Make-up Air/Exhaust	Kitchen			3	3	Equipment is in fair condition.	Plan on replacing in 2028.	1	LS			\$ 60,000.00	\$ 60,000			\$ 150				\$ 103,687	\$ 132,728
4.5	Infrared Heaters	Fire Station 3			4	4	The infrared heaters are in good condition.	Replace infrared heaters in 2038.	5,000	SF			\$ 3.00	\$ 15,000								\$ 33,182
4.6	Dehumidifier	Hose Room			4	1	Equipment is new and in excellent condition.	Plan on replacing in 2038.	1	EA			\$ 5,000.00	\$ 5,000								\$ 11,061
4.7	Controls	Throughout			3	3	Existing Andover system is in good/fair condition.	Update hardware and software on regular intervals of not more than five years.	9,000	SF			\$ 5.00	\$ 45,000					\$ 65,421	\$ 68,733	\$ 77,765	\$ 99,546
5.0	Plumbing System																					
5.1	Water Heater	Corridor 4		FS3-P-1	4	4	The 76 MBH 100 gallon gas fired water heater is in good condition.	Replace the water heater with like kind in 2028.	1	EA			\$ 5,025.00	\$ 5,025							\$ 8,684	\$ 11,116
5.2	Water Heater	Mechanical		FS3-P-2	4	4	The 76 MBH 75 gallon gas fired water heater is in good condition.	Replace the water heater with like kind in 2028.	1	EA			\$ 5,025.00	\$ 5,025							\$ 8,684	\$ 11,116
5.3	Plumbing Fixtures	Throughout			3	4	Plumbing fixtures are in good condition.	Replace the fixtures in 2028.	1	LS			\$ 25,900.00	\$ 25,900							\$ 44,759	\$ 57,295
5.4	Fire Protection	Throughout			4	3	The fire protection piping is in good condition.	Replace the system in 2038.	9000	SF			\$ 4.00	\$ 36,000								\$ 79,637
												\$ 160,538	\$ 236,500		\$ 82,004	\$ 2,638	\$ 255,152	\$ 340,192	\$ 376,262	\$ 684,750	\$ 1,059,703	

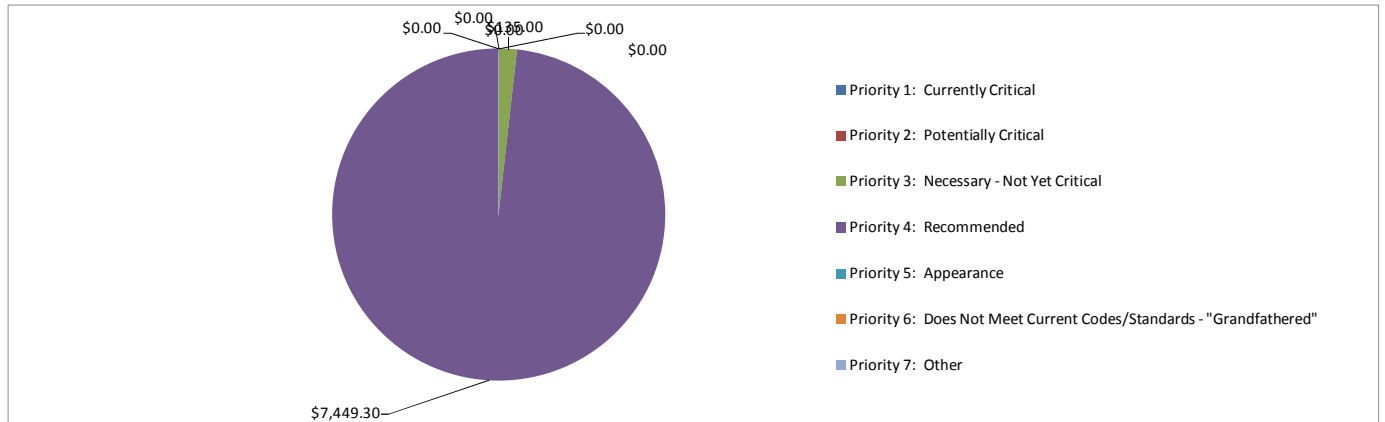
Fire Station Three

Building Information				Deficiency Priorities				Deficiency Categories															
Address: 2400 West Big Beaver Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 8,700 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 2003				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only															
*Lower score equals higher priority																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
6.0	Site																						
6.1	Concrete Pavement	Main Drive	FS3-112 FS3-118		2	6	The top surface of the concrete pavement has cracked and spalled.	Replace the concrete pavement with 8 inch thick concrete on a 6 inch compacted gravel base.	2,700	SF	\$ 12.00	\$ 32,400						\$ 43,740	\$ 47,103	\$ 49,488	\$ 55,991	\$ 71,673	
6.2	Asphalt Pavement	Parking Lot	FS3-119 FS3-155		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact the drainage course and ad 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	43,000	SF	\$ 4.00	\$ 172,000								\$ 297,236	\$ 380,487		
6.3	Control Joints	Sidewalks			3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	820	LF	\$ 2.00	\$ 1,640						\$ 2,214	\$ 2,384	\$ 2,505	\$ 2,834	\$ 3,628	
6.4	Sign Wall	Property Entrance	FS3-114		2	2	The mortar joints have deteriorated between the bricks and the limestone cap. Water infiltration has frozen behind the bricks and cracked the bricks and mortar joints.	Remove and salvage masonry ledge, consisting of brick and limestone cap, to concrete foundation wall. Rebuild sign wall with salvaged brick. Cap the top of the brick wall with rubberized asphalt flashing and salvaged limestone cap sections. Rake the limestone mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 4,800.00	\$ 4,800						\$ 6,480	\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618	
6.5	Sign Wall	Property Entrance	FS3-116		2	6	The galvanized cold-formed metal framing, supporting the roofing system, has corroded due to salt water spray from Big Beaver Road.	Remove corrosion with power tools and coat cold-formed metal framing with a high-performance coating. Enclose the open underside of the roof with aluminum composite panels. Replace the light fixtures with exterior grade, directional LED fixtures.	1	LS	\$ 7,200.00	\$ 7,200						\$ 9,720	\$ 10,467	\$ 10,997	\$ 12,442	\$ 15,927	
6.6	Sign Wall	Property Entrance	FS3-117		2	6	The edge of the painted, galvanized standing seam metal roof panels are corroded from salt water spray from Big Beaver Road.	Remove corrosion with power tools and coat the panels with a high-performance coating.	1	LS	\$ 1,600.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539	
6.7	Pier	South Entrance	FS3-139 FS3-141		2	2	The mortar joints have deteriorated between the bricks and the limestone cap. Water infiltration has frozen behind the bricks and cracked the bricks and mortar joints.	Remove and salvage masonry ledge, consisting of brick and limestone cap, to concrete foundation wall. Rebuild sign wall with salvaged brick. Cap the top of the brick pier with rubberized asphalt flashing and salvaged limestone cap sections. Rake the limestone mortar joints and fill with an exterior grade silicone sealant. Clean the efflorescence from the bottom of the pier with a non-acidic cleaning agent.	1	LS	\$ 2,200.00	\$ 2,200						\$ 2,970	\$ 3,198	\$ 3,360	\$ 3,802	\$ 4,867	
6.8	Pier and Site Wall	Patio	FS3-160 FS3-161		2	2	The mortar joints have deteriorated between the bricks and the limestone cap. Water infiltration has frozen behind the bricks and cracked the bricks and mortar joints.	Remove and salvage limestone cap ledge. Cap the top of the brick pier with rubberized asphalt flashing and salvaged limestone cap sections. Rake the limestone mortar joints and fill with an exterior grade silicone sealant. Clean the efflorescence from the bottom of the pier with a non-acidic cleaning agent.	1	LS	\$ 5,200.00	\$ 5,200						\$ 7,020	\$ 7,560	\$ 7,942	\$ 8,986	\$ 11,503	
6.9	Privacy Screen	Refuse Container			4	2	The privacy fence steel base supports are corroded and one fence post is damaged.	Replace each steel base support with galvanized supports and stainless steel hardware. Replace damaged fence post.	1	LS	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636	
6.10	Site Lighting	Parking Lot			7	6	Fixtures are LED and in good condition.	Plan on replacing in 2038.	8	EA					\$ 1,200.00	\$ 9,600					\$ 21,237		
												\$ 230,040	\$ -	\$ 9,600	\$ -	\$ 78,354	\$ 84,379	\$ 88,650	\$ 397,535	\$ 530,116			

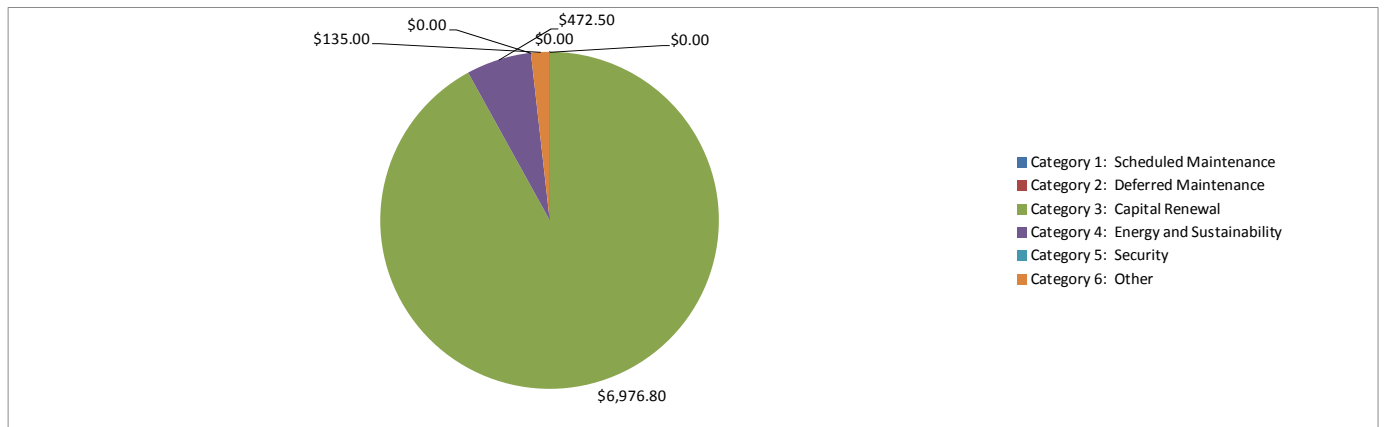


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Fire Station Four

Building Information				Deficiency Priorities				Deficiency Categories																
Address: 2117 East Maple Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																
Building Area: 11,002 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																
Year Built: 2017				Priority 4: Recommended				Category 4: Energy and Sustainability																
Evaluation Date: January 2018				Priority 5: Appearance				Category 5: Security																
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																
				Priority 7: Other																				
*Lower score equals higher priority																				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only				
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost		
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal								
1.0	Building Exterior																							
1.1	Control Joints	Sidewalks	FS4-288		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	50	LF	\$ 2.00	\$ 100						\$ 135	\$ 145	\$ 153	\$ 173	\$ 221		
1.2	EPDM Roofing System	Roof			4	3	The EPDM roofing system has a warranty that will expire September 6, 2037.	Plan on replacing EPDM roofing system in 2038.	6,000	SF	\$ 13.00	\$ 78,000									\$ 172,546			
2.0	Building Interior																							
2.1	Carpet Tile	Office			5	3	The carpet tiles are new.	Plan on replacing the carpet tiles in 2028.	273	SF	\$ 5.50	\$ 1,502									\$ 2,594	\$ 3,321		
2.2	Carpet Tile	Training/Day Room			5	3	The carpet tiles are new.	Plan on replacing the carpet tiles in 2028.	500	SF	\$ 5.50	\$ 2,750									\$ 4,752	\$ 6,083		
3.0	Electrical System																							
3.1	Emergency Egress Lighting	Entire Building			4	3	Equipment is new and in excellent condition.	Maintain operation of fixtures on generator.																
3.2	Emergency Power	Mechanical/Electrical and Exterior Generator		FS4-E-2 FS4-E-7 FS4-E-8 FS4-E-11	4	3	Equipment is new and in excellent condition with capacity to support the entire building. 150 kW generator.	Plan on replacing in 2048.	1	EA					\$ 109,000.00	\$ 109,000	\$ 1,000							
3.3	Service Disconnects	Mechanical/Electrical		FS4-E-1 FS4-E-6	4	3	Equipment is new and in excellent condition.	Plan on replacing in 2068.	2	EA					\$ 2,380.00	\$ 4,760								
3.4	Lighting Control System	Entire Building			4	3	No building wide lighting control system	Install occupancy sensors through out to switch lights off when unoccupied.	12	EA					\$ 389.00	\$ 4,668		\$ 6,302	\$ 6,786	\$ 7,130	\$ 8,067	\$ 10,326		
3.5	Interior Building Lighting	Entire Building			4	4	Recessed 2 x 4 and high bay in Training Room and Apparatus Bay.	Replace/relamp LED fixtures in 2038.	11,002	SF					\$ 5.00	\$ 55,010						\$ 121,690		
3.6	Building Lighting	Entry and walkway			4	4	Fixtures may already have LED sources.	Replace lamps with LED replacements.	14	EA					\$ 25.00	\$ 350		\$ 473	\$ 509	\$ 535	\$ 605	\$ 774		
3.7	Fire Alarm Control Panel	Entire Building		FS4-E-10	4	3	Equipment is new and in excellent condition.	Install system software updates and replace the batteries in 5-year increments.	1	LS					\$ 500.00	\$ 500		\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106		
4.0	Mechanical System																							
4.1	Dehumidifier	Hose Room			4	1	Equipment is new and in excellent condition.	Plan on replacing in 2038.	1	EA				\$ 5,000.00	\$ 5,000							\$ 11,061		
4.2	Infrared Heaters	Apparatus Bay			4	1	Equipment is new and in excellent condition.	Plan on replacing in 2038.	4,000	SF				\$ 3.00	\$ 12,000							\$ 26,545		
4.3	Kitchen Range, Hood and Make-up Air/Exhaust	Kitchen			4	1	Equipment is new and in excellent condition.	Plan on replacing in 2038.	1	LS				\$ 80,000.00	\$ 80,000		\$ 150					\$ 176,970		
4.4	Rooftop HVAC Unit (RTU-1)	Apparatus Bay		FS4-M-1	4	1	Equipment is new and in excellent condition.	Plan on replacing in 2038.	1	EA				\$ 12,600.00	\$ 12,600		\$ 1,900					\$ 27,873		
4.5	Rooftop HVAC Unit (RTU-2)	Roof		FS4-M-2	4	1	Equipment is new and in excellent condition.	Plan on replacing in 2038.	1	EA				\$ 25,200.00	\$ 25,200		\$ 1,900					\$ 55,745		
4.6	Rooftop HVAC Unit (RTU-3)	Roof		FS4-M-3	4	1	Equipment is new and in excellent condition.	Plan on replacing in 2038.	1	EA				\$ 10,080.00	\$ 10,080		\$ 1,900					\$ 22,298		
4.7	Controls	Throughout			4	3	Existing Schneider system is in good/fair condition.	Update hardware and software on regular intervals of not more than five years.	11,200	SF				\$ 5.00	\$ 56,000				\$ 81,413	\$ 85,534	\$ 96,774	\$ 123,879		

City of Troy
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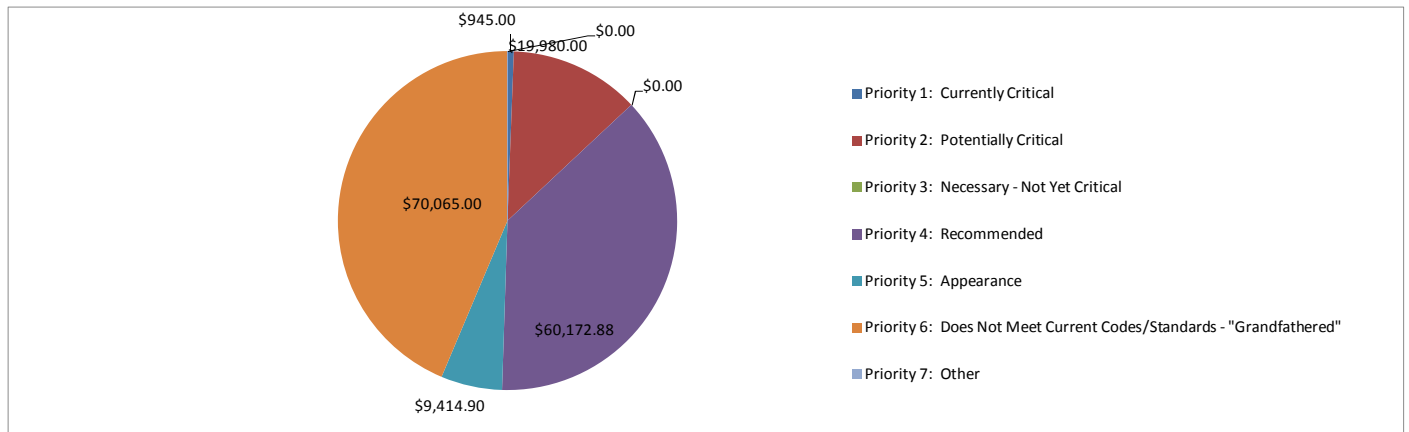
Fire Station Four

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 2117 East Maple Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 11,002 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2017				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: January 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
								*Lower score equals higher priority														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
5.0	Plumbing System																					
5.1	Domestic Water Service	Mechanical Room			4	1	Domestic water piping, meter and backflow preventer are new and in excellent condition.	Plan on replacing in 2038.	11,200	SF			\$ 3.00	\$ 33,600								\$ 74,328
5.2	Fire Water Service	Mechanical Room			4	1	Domestic water piping, valves, flow switches and double-check valves are new and in excellent condition.	Plan on replacing in 2038.	11,200	SF			\$ 4.00	\$ 44,800								\$ 99,104
5.3	Domestic Water Heater	Mechanical Room		FS4-P-1	4	1	Equipment is new and in excellent condition.	Plan on replacing in 2038.	1	EA			\$ 10,000.00	\$ 10,000								\$ 22,121
5.4	Plumbing Fixtures	Toilet Rooms			4	1	Equipment is new and in excellent condition.	Plan on replacing in 2038.	11,200	SF			\$ 3.40	\$ 38,080								\$ 84,239
												\$ 82,352	\$ 327,360	\$ 174,288	\$ 6,850	\$ 7,584	\$ 89,580	\$ 94,115	\$ 113,829	\$ 1,040,231		
6.0	Site																					
6.1	Asphalt Pavement	Parking Lot			4	3	The asphalt pavement in the parking lots is new.	Plan on removing both layers of asphalt, recompactng the drainage course, adding 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	12,000	SF	\$ 4.00	\$ 48,000										\$ 106,182
6.2	Site Lighting	Parking Lots		FS4-E-12	7	6	Fixtures are new LED and in excellent condition.	Plan on replacing in 2038.	6	EA					\$ 1,200.00	\$ 7,200						\$ 15,927
												\$ 48,000	\$ -	\$ 7,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 122,109		

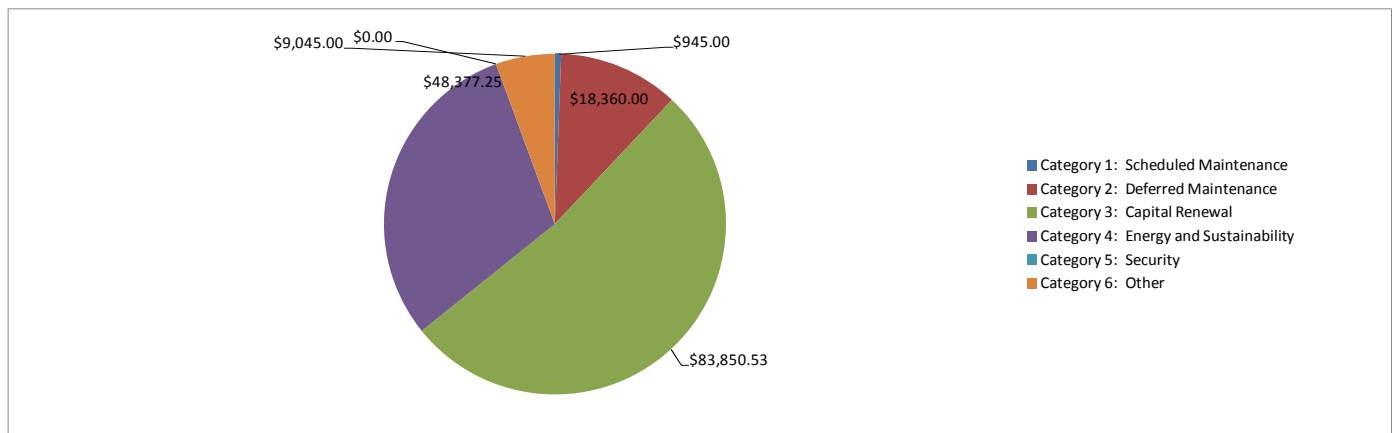


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Fire Station Five

Building Information				Deficiency Priorities				Deficiency Categories															
Address: 6399 John R. Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 6,000 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 1990				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other																			
																		Note: Project Cost includes 35% mark-ups and fees					
																		Annual Maintenance includes labor and material only					
																		*Lower score equals higher priority					
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
1.0	Building Exterior																						
1.1	Garage Doors	Apparatus Bay	FS5-066 FS5-067		4	2	The bottoms of the garage doors have corroded.	Remove corrosion and paint with a rust-inhibitive high-performance coating.	6	EA	\$ 800.00	\$ 4,800						\$ 6,480	\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618	
1.2	Asphalt Shingles	Roof			4	3	The asphalt shingles are in good condition.	Plan on replacing asphalt shingles, underlayment and flashings in 2028.	10,000	SF	\$ 4.00	\$ 40,000								\$ 69,125	\$ 88,485		
2.0	Building Interior																						
2.1	Carpet Tile	Office, Training/Day Room, Exercise Room			5	3	The carpet tiles are in fair condition, but are showing signs of accelerated wear.	Plan on replacing the carpet tiles in 2023.	1,268	SF	\$ 5.50	\$ 6,974						\$ 9,415	\$ 10,139	\$ 10,652	\$ 12,052	\$ 15,427	
2.2	Non-Insulated Lavatory Piping	Men and Unisex			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	2	EA	\$ 150.00	\$ 300						\$ 405	\$ 436	\$ 458	\$ 518	\$ 664	
2.3	Third Grab Bar	Unisex			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	1	EA	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885	
2.4	Exterior Door and Frame	Vestibule	FS5-062		2	2	The bottoms of the hollow metal door and frame are corroded.	Repair bottom of the hollow metal frame with plates and autobody putty, sand and paint entire frame. Replace door with fiberglass reinforced polyester door.	1	LS	\$ 2,000.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424	
2.5	Exterior Door and Frame	Apparatus Bay	FS5-069		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace the frame with an aluminum frame. Replace door with a fiberglass reinforced polyester door.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636	
2.6	Exterior Door and Frame	Corridor	FS5-075		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace the frame with an aluminum frame. Replace door with a fiberglass reinforced polyester door.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636	
2.7	Settlement Crack	Apparatus Bay	FS5-110		2	2	The CMU partition mortar joints have cracked in a stepped pattern indicating differential settlement under the partition.	The partition should be monitored for further settlement. As an interim correction, the joints should be raked of mortar and filled with mortar and tooled, but not painted. Seismic strips should be placed over the corrected joints and monitored four times a year.	1	EA	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770	
2.8	Walk-Off Mat	Vestibule			4	3	The walk-off mat is in acceptable condition, but will be expensive to replace when worn.	Plan to replace walk-off mat with carpet tiles in 2028.	25	SF	\$ 5.50	\$ 138						\$ 186	\$ 200	\$ 210	\$ 238	\$ 304	
2.9	Garage Doors	Apparatus Bay			2	6	The bottoms of the garage exit doors have been hit by exiting vehicles due to ineffective door operator controls.	Replace door operator controls with multiple sensors tied to a timer.	3	EA	\$ 2,000.00	\$ 6,000						\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273	
2.10	Vehicle Exhaust System	Apparatus Bay			4	3	The vehicle exhaust system functions correctly.	Plan on replacing the hoses, controls and exhaust fan in 2038.	3	EA	\$ 7,000.00	\$ 21,000										\$ 46,454	
3.0	Electrical System																						
3.1	Emergency Egress Lighting	Entire Building			6	3	Additional fixtures on the generator are required to comply with the current code.	Extend life safety circuits to select existing fixtures.	1	LS						\$ 2,000.00	\$ 2,000		\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
3.2	Emergency Power	Mechanical/Electrical			6	3	Life safety and equipment loads are not separated as required per NEC 700.5(D).	Add a life safety ATS and panel and move life safety loads to new panel. Replace generator within 10 years.	1	LS						\$ 49,200.00	\$ 49,200	\$ 500	\$ 66,420	\$ 71,527	\$ 75,148	\$ 85,023	\$ 108,837
3.3	Service Entrance Switchboard	Mechanical/Electrical			4	3	Electrical Room must not be used for storage. Switchboard has five spare switches.	Plan on replacing in 2038.	1	EA						\$ 5,800.00	\$ 5,800						\$ 12,830
3.4	Lighting Control System	Entire Building			4	4	No building wide lighting control system	Install occupancy sensors through out to switch lights off when unoccupied.	15	EA						\$ 389.00	\$ 5,835		\$ 7,877	\$ 8,483	\$ 8,912	\$ 10,084	\$ 12,908
3.5	Interior Building Lighting	Entire Building			4	4	Recessed, pendant and industrial fluorescent.	Replace with LED fixtures.	6,000	SF						\$ 5.00	\$ 30,000	\$ 120	\$ 40,500	\$ 43,614	\$ 45,822	\$ 51,843	\$ 66,364
3.6	Building Lighting	Entry and walkway			4	4	Original incandescent fixtures should be re-lamped with LED lamps	Plan on replacing in 2028.	14	EA						\$ 1,200.00	\$ 16,800					\$ 29,032	\$ 37,163

City of Troy
Facility Condition Assessment
April 2018

Fire Station Five

Building Information		Deficiency Priorities		Deficiency Categories	
Address: 6399 John R. Road		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area: 6,000 SF		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
No. of Floors: 1		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
Year Built: 1990		Priority 4: Recommended		Category 4: Energy and Sustainability	
Evaluation Date: February 2018		Priority 5: Appearance		Category 5: Security	
		Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"		Category 6: Other	
		Priority 7: Other			
				*Lower score equals higher priority	
				Note: Project Cost includes 35% mark-ups and fees	
				Annual Maintenance includes labor and material only	

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.0	Mechanical System																					
4.1	Furnace	Mechanical/Telecom Room		FS5-M-1	4	3	The gas fired furnace with DX cooling coil is in fair condition and operating adequately.	Replace the furnace in 10 years.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350	\$ 5,130	\$ 5,524	\$ 5,804	\$ 6,566	\$ 8,405
4.2	Outdoor Condensing Unit (Furnace F-1)	Exterior Grade West		FS5-M-1	1	2	The 5 ton outdoor condensing unit is in poor condition.	Replace the outdoor condensing unit in the next 5 years.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200		\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273
4.3	Infrared Heaters	Roof			2	3	The heaters are in fair condition.	The heaters should be replaced in 5 years.	3,000	SF			\$ 3.00	\$ 9,000					\$ 13,084	\$ 13,747	\$ 15,553	\$ 19,909
4.4	Kitchen Range, Hood and Make-up Air/Exhaust	Kitchen			3	3	Equipment is in fair condition.	Plan on replacing in 2028.	1	LS			\$ 60,000.00	\$ 60,000			\$ 150				\$ 103,687	\$ 132,728
4.5	Exhaust Fan	Roof/Garage			3	3	The fans are in fair condition and are function, but are approaching the end of their useful life.	Replace fans in 5 years.	1	EA			\$ 1,800.00	\$ 1,800			\$ 150		\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982
4.6	Generator Exhaust	Exterior North			1	1	The generator exhaust terminates under soffit overhang.	Extend and support generator exhaust immediately.	1	EA			\$ 700.00	\$ 700				\$ 945	\$ 1,018	\$ 1,069	\$ 1,210	\$ 1,548
4.7	Controls	Throughout			4	3	Existing Andover system is in good/fair condition.	Update hardware and software on regular intervals of not more than five years.	21,136	SF			\$ 5.00	\$ 105,680					\$ 153,638	\$ 161,416	\$ 182,627	\$ 233,778
5.0	Plumbing System																					
5.1	Domestic Water Heater	Mechanical/Telecom Room		FS5-P-1	3	2	The 88 MBH 100 gallon gas domestic water heater appears to be in fair condition, but is approaching the end of its useful life.	Replace the water heater in 5 years. Any replacement should be put on a concrete housekeeping pad to reduce contact with standing water.	1	EA			\$ 7,000.00	\$ 7,000						\$ 10,692	\$ 12,097	\$ 15,486
5.2	Automatic Sprinkler System/Fire Service	All Rooms			3	3	Sprinkler piping and fire service are in good condition.	Replacement can be deferred for approximately 10 years.	21,136	SF			\$ 4.00	\$ 84,544							\$ 146,102	\$ 187,023
5.3	Domestic Water and Sanitary Piping	Mechanical Room			3	2	The domestic water and sanitary piping is in fair condition.	New domestic supply piping and sanitary/vent piping should be replaced when new plumbing fixtures are installed.	3000	SF			\$ 1.00	\$ 3,000							\$ 5,184	\$ 6,636
5.4	Plumbing Fixtures	Toilet Rooms/Kitchen			4	3	Plumbing fixtures (porcelain, flush valves, faucets, mixing valves, fixture carriers) are in good condition.	Plumbing fixtures (water closets, urinals, lavatories, sinks) should be replaced in 10 years.	1	LS			\$ 33,150.00	\$ 33,150							\$ 57,287	\$ 73,332
												\$ 88,412	\$ 314,674	\$ 109,635	\$ 1,470	\$ 160,578	\$ 350,986	\$ 379,447	\$ 839,725	\$ 1,134,204		

6.0	Site																				
6.1	Asphalt Pavement	Parking Lot	FS5-073 FS5-082		4	3	The asphalt pavement in the parking lot has cracked in three locations, but does drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2023. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	15,900	SF	\$ 4.00	\$ 63,600							\$ 97,143	\$ 109,908	\$ 140,692
6.2	Control Joints	Concrete Pavement at Garage Doors	FS5-065		4	3	The control joints in the concrete drives are sealed with a bituminous sealant. This type of sealant does not hold its shape at the top edge of the concrete and will expand over the top of the concrete and be pulled out by vehicular traffic. Afterwards, water will penetrate the joint and wear the edge of the concrete.	Remove bituminous sealant and reseal joints with an exterior grade silicone sealant.	1,647	LF	\$ 2.50	\$ 4,118					\$ 5,559	\$ 5,986	\$ 6,289	\$ 7,116	\$ 9,108
6.3	Control Joints	Concrete Pavement	FS5-064		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	588	LF	\$ 2.00	\$ 1,176					\$ 1,588	\$ 1,710	\$ 1,796	\$ 2,032	\$ 2,601

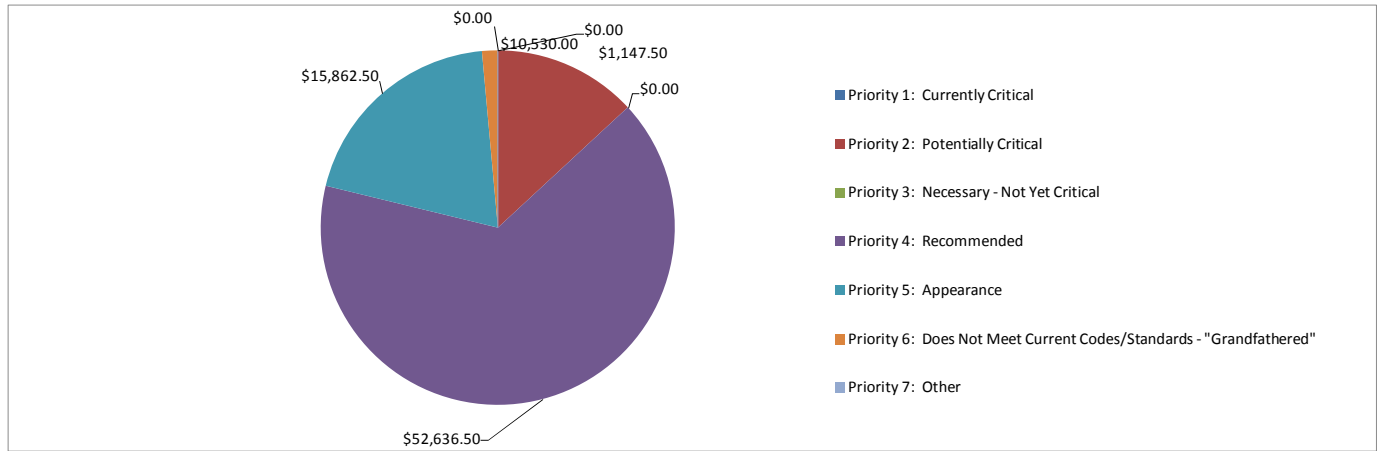
City of Troy
Facility Condition Assessment
April 2018

Fire Station Five

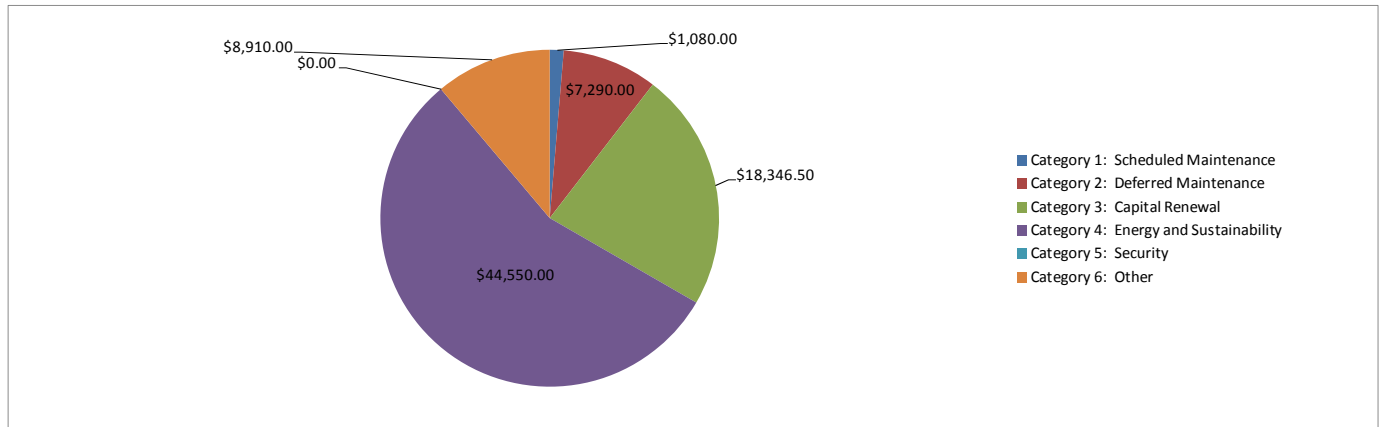
Building Information				Deficiency Priorities				Deficiency Categories														
Address: 6399 John R. Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 6,000 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 1990				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
*Lower score equals higher priority																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
6.4	Concrete Pavement	Sidewalk at Main Entrance	FS5-063		1	2	The concrete pavement slab adjacent to the main entrance frost slab has sunk and presents a tripping hazard.	Remove slab and recompact sub-soil. Pre-drill the concrete frost slab along its edge and place 8 inch long number 4 reinforcement steel each 16 inches on center to a depth of 4 inches and secure with non-shrink/non-metallic grout. Pour a new 4 inch thick concrete slab up to the concrete frost slab and pitch to the existing concrete pavement.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
6.5	Privacy Wall	Kitchen Exterior	FS5-079		4	2	The mortar joints have deteriorated between the limestone cap sections, allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the limestone cap sections. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 2,200.00	\$ 2,200						\$ 2,970	\$ 3,198	\$ 3,360	\$ 3,802	\$ 4,867
6.6	Concrete Ramp	Parking Lot	FS5-084		3	2	The top of the concrete ramp and curbs adjacent to the barrier-free parking spaces have spalled.	Replace the damaged sections and curbs.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
6.7	Site Wall	Southeast Corner of Exterior Wall	FS5-087		4	2	The mortar joints have deteriorated between the limestone cap sections, allowing water to infiltrate, freeze and push out the mortar.	Remove and salvage the limestone cap sections. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant. Tuckpoint cracked mortar joints in the stone wall.	1	LS	\$ 1,400.00	\$ 1,400						\$ 1,890	\$ 2,035	\$ 2,138	\$ 2,419	\$ 3,097
6.8	Sign Wall	Property Entrance			4	2	The mortar joints have deteriorated between the limestone cap sections, allowing water to infiltrate, freeze and push out the mortar. The adjacent brick cap has mortar joints at the top horizontal surface that will eventually crack and allow water between the bricks.	Remove and salvage the limestone cap sections. Remove and dispose of the brick cap. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the salvaged limestone cap sections and new limestone cap sections formed with positive slopes. Rake the limestone cap mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 3,200.00	\$ 3,200						\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079
6.9	Site Lighting	Parking Lots			7	6	Fixtures have been changed to LED.	Plan on replacing in 2038.	1	EA					\$ 1,200.00	\$ 1,200					\$ 2,655	
												\$ 79,294		\$ -		\$ 1,200	\$ -	\$ 21,186	\$ 22,815	\$ 121,113	\$ 137,028	\$ 178,063

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Fire Station Six

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 5901 Coolidge Highway				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 6,600 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 1994				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees														
								Annual Maintenance includes labor and material only														
*Lower score equals higher priority																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Brick	North Elevation	FS6-119 FS6-154		5	1	Efflorescence covers two sections of the exterior brick wall.	Clean brick with a non-acidic cleaning agent.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
1.2	Asphalt Shingles	Roof			4	3	The asphalt shingles were installed in 1994 and are in good condition.	Plan on replacing the asphalt shingles, underlayment and flashings in 2028.	8,853	SF	\$ 4.00	\$ 35,412								\$ 61,196	\$ 78,336	
2.0	Building Interior																					
2.1	Walk-Off Mat	Vestibule			4	3	The walk-off mat is in good condition, but will be expensive to replace when worn.	Plan to replace walk-off mat with walk-off carpet tiles in 2028.	25	SF	\$ 5.50	\$ 138								\$ 238	\$ 304	
2.2	Carpet Tile	Day Room, Office			5	3	The carpet tiles are in acceptable condition, but are showing signs of wear.	Plan on replacing the carpet tiles in 2028.	1000	SF	\$ 5.50	\$ 5,500								\$ 9,505	\$ 12,167	
2.3	Flooring	Corridor 2	FS6-032		5	6	The vinyl composition tile (VCT) flooring system seams have opened due to standing water.	Replace the VCT with a resilient sheet flooring system with welded seams and an integral base.	250	SF	\$ 7.00	\$ 1,750						\$ 2,363	\$ 2,544	\$ 2,673	\$ 3,024	\$ 3,871
2.4	Concrete Floor	Apparatus Bay	FS6-088 FS6-089		4	3	The concrete floor was ground smooth and sealed with a clear sealer. Cracks have formed at the trench drains and a patched section of concrete is loose.	Plan on the following remediation in 2028. Route out cracks and loose sections and fill with patching mortar. Polish and seal entire concrete floor.	1	LS	\$ 3,000.00	\$ 3,000								\$ 5,184	\$ 6,636	
2.5	Non-Insulated Lavatory Piping	Men's, Women's			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	3	EA	\$ 150.00	\$ 450						\$ 608	\$ 654	\$ 687	\$ 778	\$ 995
2.6	Third Grab Bar	Women's			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	1	EA	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
2.7	Finishes	Shower	FS6-046 FS6-048		5	3	The finishes throughout the shower are in poor condition.	Replace the ceramic tile floor and base with a porcelain tile floor and base. Clean and repaint the CMU walls with epoxy paint. Replace the acoustical lay-in ceiling system with an epoxy painted gypsum board ceiling system. Upgrade the lighting to LED. Replace the fan vent opening and controls. Replace the wood bench with a seat wall capped with a solid surface bench top. Replace the barrier-free fold-down shower seat. Replace the shower controls with adjustable barrier-free shower controls. Replace the grab bar with a stainless steel grab bar.	1	LS	\$ 9,200.00	\$ 9,200						\$ 12,420	\$ 13,375	\$ 14,052	\$ 15,899	\$ 20,352
2.8	Exterior Door Frame	Vestibule, Corridor 2, Apparatus Bay	FS6-113		2	2	The bottoms of the hollow metal door frames are corroded. The hollow metal doors were installed in 2016.	Remove corrosion and paint with a rust-inhibitive high-performance coating.	1	LS	\$ 1,600.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
2.9	Garage Doors	Apparatus Bay	FS6-143		4	2	The bottoms of the garage entrance doors have corroded.	Remove corrosion and paint with a rust-inhibitive high-performance coating.	2	EA	\$ 800.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
2.10	Garage Doors	Apparatus Bay	FS6-091		2	6	The bottoms of the garage exit doors have been hit by exiting vehicles due to ineffective door operator controls.	Replace door operator controls with multiple sensors tied to a timer.	2	EA	\$ 2,000.00	\$ 4,000						\$ 5,400	\$ 5,815	\$ 6,110	\$ 6,912	\$ 8,849
2.11	Garage Door Frames	Apparatus Bay	FS6-142		2	2	The bottoms of the garage door frames and piers are corroded.	Remove corrosion and coat frames with a high-performance coating.	1	LS	\$ 2,200.00	\$ 2,200						\$ 2,970	\$ 3,198	\$ 3,360	\$ 3,802	\$ 4,867
2.12	Vehicle Exhaust System	Apparatus Bay	FS6-093 FS6-094		4	3	The vehicle exhaust system functions correctly.	Plan on replacing the hoses, controls and exhaust fan in 2038.	2	EA	\$ 7,000.00	\$ 14,000										\$ 30,970
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Entire Building			4	3	Equipment is 34 years old and in good condition.	Maintain operation of fixtures on generator.														
3.2	Emergency Power	Mechanical/Generator		FS6-E-6 FS6-E-7 FS6-E-8	4	3	Equipment is 34 years old. Life safety and equipment loads are not separated as required per NEC 700.5(D).	Add a life safety ATS and panel and move life safety loads to new panel. Replace generator in 2028.	1	LS					\$ 25,000.00	\$ 25,000	\$ 400				\$ 43,203	\$ 55,303
3.3	Service Disconnects	Mechanical/Generator		FS6-E-1 FS6-E-2 FS6-E-3	4	3	Equipment is 34 years old and in good condition.	Plan on replacing in 2038.	3	EA					\$ 1,250.00	\$ 3,750					\$ 8,295	

City of Troy
Facility Condition Assessment
April 2018

Fire Station Six

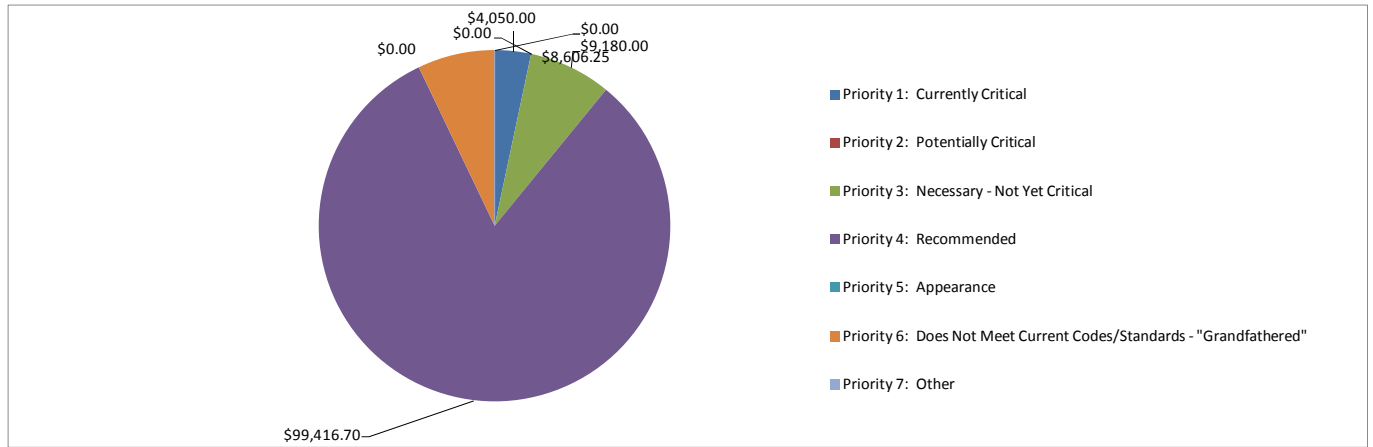
<u>Building Information</u>		<u>Deficiency Priorities</u>		<u>Deficiency Categories</u>	
Address: 5901 Coolidge Highway		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area: 6,600 SF		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
No. of Floors: 1		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
Year Built: 1994		Priority 4: Recommended		Category 4: Energy and Sustainability	
Evaluation Date: April 2018		Priority 5: Appearance		Category 5: Security	
		Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"		Category 6: Other	
		Priority 7: Other			
				Note: Project Cost includes 35% mark-ups and fees	
				Annual Maintenance includes labor and material only	
*Lower score equals higher priority					

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
3.4	Panelboards	Mechanical/Generator		FS6-E-4 FS6-E-5	4	3	Equipment is 34 years old and in good condition.	Plan on replacing in 2038.	3	EA					\$ 3,100.00	\$ 9,300						\$ 20,572
3.5	Lighting Control System	Entire Building			4	3	There are occupancy sensors in some spaces.	Install occupancy sensors throughout to switch lights off when unoccupied.	10	EA					\$ 389.00	\$ 3,890		\$ 5,252	\$ 5,655	\$ 5,942	\$ 6,722	\$ 8,605
3.6	Building Lighting	Entire Building			4	4	Fluorescent 2x4 and downlights with incandescent lamps	2x4 should be replaced with LED fixtures and downlights relamped with LED lamps	6,600	SF					\$ 5.00	\$ 33,000	\$ 132	\$ 44,550	\$ 47,975	\$ 50,404	\$ 57,028	\$ 73,000
3.7	Fire Alarm Communicator	Entire Building		FS6-E-9	4	3	A fire alarm system is in good condition.	Replace the batteries in 5-year increments.	1	LS					\$ 500.00	\$ 500	\$ 500	\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
4.0	Mechanical System																					
4.1	Furnace	Mechanical		FS6-M-1	3	3	The gas fired furnace with DX cooling coil is in fair condition and operating adequately.	Replace the furnace with like kind in 2023.	1	LS			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405
4.2	Condensing Unit	Outdoors		FS6-M-2	3	3	The 5 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2023.	1	LS			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
4.3	Kitchen Range, Hood and Make-up Air/Exhaust	Kitchen			3	3	Equipment is in fair condition.	Plan on replacing in 2028.	1	LS			\$ 60,000.00	\$ 60,000			\$ 150					
4.4	Infrared Heaters	Fire Station 6			4	4	The infrared heaters are in good condition.	Replace infrared heaters in 2038.	3,500	SF			\$ 3.00	\$ 10,500								\$ 23,227
4.5	Controls	Fire Station 6			3	3	Existing Andover system is in good/fair condition.	Update hardware and software on regular intervals of not more than five years.	7,000	SF			\$ 5.00	\$ 35,000				\$ 50,883	\$ 53,459	\$ 60,484	\$ 77,425	
5.0	Plumbing System																					
5.1	Water Heater	Corridor 4		FS6-P-1	3	3	The 76 MBH 75 gallon gas fired water heater is in good condition.	Replace the water heater with like kind in 2023.	1	LS			\$ 5,025.00	\$ 5,025						\$ 7,675	\$ 8,683	\$ 11,115
5.2	Plumbing Fixtures	Throughout			3	4	Plumbing fixtures are in good condition.	Replace the fixtures in 2028.	1	LS			\$ 22,400.00	\$ 22,400							\$ 38,710	\$ 49,552
5.3	Fire Protection	Throughout			4	3	The fire protection piping is in good condition.	Replace the system in 2028.	7,000	SF			\$ 4.00	\$ 28,000							\$ 48,387	\$ 61,939
												\$ 80,050	\$ 170,725		\$ 75,440	\$ 1,732		\$ 80,177	\$ 137,224	\$ 166,814	\$ 395,157	\$ 588,899

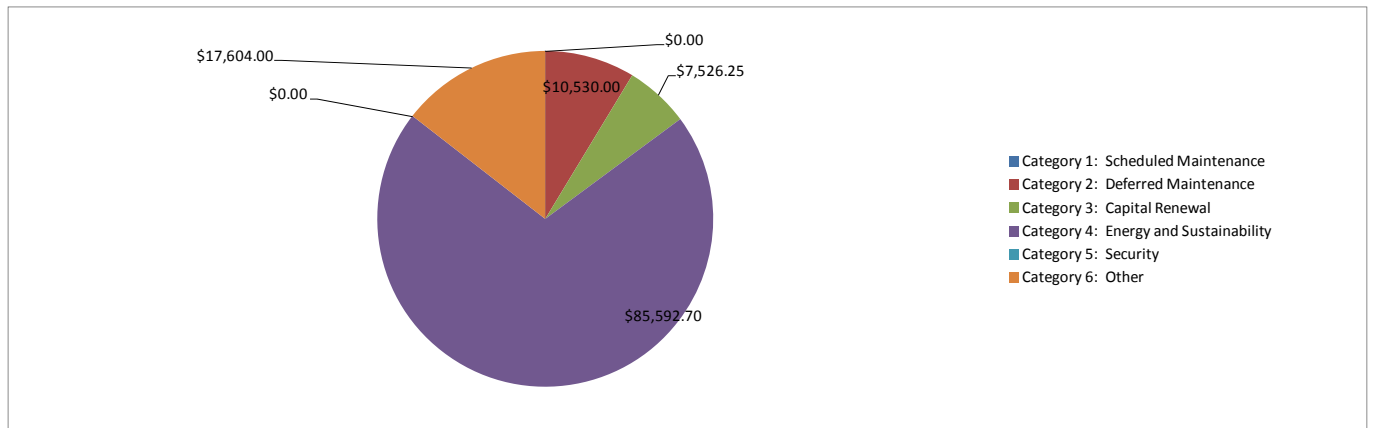
6.0	Site																					
6.1	Asphalt Pavement	Parking Lot	FS6-106 FS6-128		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in good condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	21,325	SF	\$ 4.00	\$ 85,300									\$ 147,408	\$ 188,694
6.2	Control Joints	Concrete Pavement at Patio and Sidewalks			3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	400	LF	\$ 2.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
6.3	Control Joints	Concrete Pavement at Garage Doors	FS6-140		4	3	The control joints in the concrete drives are sealed with a bituminous sealant. This type of sealant does not hold its shape at the top edge of the concrete and will expand over the top of the concrete and be pulled out by vehicular traffic. Afterwards, water will penetrate the joint and wear the edge of the concrete.	Remove bituminous sealant and reseal joints with an exterior grade silicone sealant.	1,461	LF	\$ 2.50	\$ 3,653						\$ 4,931	\$ 5,310	\$ 5,579	\$ 6,312	\$ 8,080
6.4	Concrete Pavement	Sidewalk, Patio	FS6-129 FS6-164		3	2	Several large cracks have formed at the top of the concrete pavement and spalled the top surfaces.	Route the cracks open and fill with patching mortar.	1	LS	\$ 3,200.00	\$ 3,200						\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Police/Fire Training

Building Information				Deficiency Priorities				Deficiency Categories																	
Address: 4850 John R. Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																	
Building Area: 21,136 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																	
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																	
Year Built: 2001				Priority 4: Recommended				Category 4: Energy and Sustainability																	
Evaluation Date: January 2018				Priority 5: Appearance				Category 5: Security																	
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																	
				Priority 7: Other																					
*Lower score equals higher priority																									
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost			
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal									
1.0	Building Exterior																								
1.1	Louvers	Electrical			4	4	The emergency generator was removed and the air intake and exhaust openings in the exterior walls are no longer needed. Additionally, the non-insulated louvers are energy inefficient.	Remove the louvers, sealant, controls and sheet metal plenum. Infill openings with jumbo brick matching the existing jumbo brick. Match the overall wall thickness and insulate the brick wall cavity with rigid insulation. Provide full-height cavity wall waterproofing and weep/vents at the bottoms of the infilled bricks.	1	LS	\$ 6,400.00	\$ 6,400						\$ 8,640	\$ 9,304	\$ 9,775	\$ 11,060	\$ 14,158			
1.2	Concrete Floor Slope	Fire Tower Exterior Fourth Floor	FPT-462		4	6	The exterior concrete floor slab does not slope to the drain at the southeast corner and instead ponds water at the northwest corner.	Scarify the concrete floor slab from the northwest corner to the floor drain at the southeast corner. Apply a top coating of patching mortar. Cover entire concrete floor slab with a traffic coating consisting of a urethane primer, a liquid urethane elastomeric waterproofing base coat, a flexible epoxy resin intermediate coat and a aliphatic polyurethane top coat.	288	SF	\$ 30.00	\$ 8,640						\$ 11,664	\$ 12,561	\$ 13,197	\$ 14,931	\$ 19,113			
1.3	Roof Leak	North End of Corridor	FPT-469 FPT-470		1	2	There is a roof leak at the back side of the coping above the exterior door at the north side of the corridor. Water has come through the acoustical lay-in ceiling system and stained the brick and corroded the bottom of the exterior hollow metal door and frame.	The roofing system is under warranty and the repair, if performed under the warranty, will be at no cost to the City. Clean the brick with a non-acidic cleaning agent. Salvage the door hardware. Replace the frame with an aluminum frame. Replace the door with a fiberglass reinforced polyester door and reinstall door hardware.	1	LS	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636			
1.4	Gutter	North Entrance	FPT-461 FPT-499		3	2	The gutter above the door is too small for the amount of rain it collects and the excess rain water spills out of the gutter and onto the door and concrete slab. The concentration of water has corroded the bottom of the hollow metal door and frame.	Replace the undersized gutter with a gutter section sized for the expected rain. Transition the larger gutter section to the downspout at the north elevation. Remove the corrosion from the hollow metal door and frame with power tools. Prime and repaint entire exterior door and frame surfaces. Note, this door and frame can be replaced under Item No. xxx.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309			
1.5	Standing Seam Metal Roof	East and West Roofs	FPT-461		3	2	There are small areas of corrosion on the standing seam metal roof panels.	Remove corrosion and coat with a fluoropolymer two-coat system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with physical properties and coating performance requirements of AAMA 2604. Match existing color.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309			
1.6	Roofing System	Roof			3	3	The roofing system is a 3-ply modified asphalt built-up roof with gravel surfacing.	Warranty expires in 2021. Replace with same in 2028.	3,757	SF	\$ 25.00	\$ 93,925									\$ 162,313	\$ 207,774			
2.0	Building Interior																								
2.1	Carpet Tile	Classroom A, et.al.	FPT-159		5	3	The carpet tiles are showing excessive wear.	Plan on replacing the carpet tiles in 2021.	4446	SF	\$ 5.50	\$ 24,453							\$ 35,550	\$ 37,350	\$ 42,258	\$ 54,094			
2.2	Generator Concrete Curb	Electrical			4	6	The concrete curb at the former emergency generator location is no longer required.	Remove the concrete curb. Patch the floor at the removed curb with patching mortar.	1	LS	\$ 1,600.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539			
2.3	Third Grab Bar	Women and Men			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	2	EA	\$ 400.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770			

City of Troy
Facility Condition Assessment
April 2018

Police/Fire Training

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 4850 John R. Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 21,136 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2001				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: January 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees														
								Annual Maintenance includes labor and material only														
*Lower score equals higher priority																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
2.4	Shower Tile	Men's Locker	FPT-066		3	6	The floor and wall tile joints have opened up and permitted moisture under the tile.	Remove wall and floor tile. Replace waterproofing system over the cement board. Reset tile with a thin-set mastic and epoxy grout joints.	1	LS	\$ 2,000.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Entire Building			7	7	Egress lighting is served from generator.	2001 construction should have sufficient fixtures to comply with current Code. Maintain fixture operation.														
3.2	Emergency Power	Electrical Room and Exterior Generator and ATS		FPT-E-5 FPT-E-6 FPT-E-7	6	3	Life safety and equipment loads are not separated as required per NEC 700.5(D).	Add a Life Safety ATS and panel and move life safety loads from the equipment panel.	1	LS					\$ 5,575.00	\$ 5,575	\$ 1,000	\$ 7,526	\$ 8,105	\$ 8,515	\$ 9,634	\$ 12,333
3.3	Service Entrance Switchboard	Electrical		FPT-E-1	4	3	Electrical Room must not be used for storage. Switchboard has NO spare switches.	Plan on replacing in 2051.	1	EA					\$ 6,800.00	\$ 6,800						
3.4	Interior Building Lighting	Entire Building			4	4	Recessed 2 x 4 fluorescent and LED in Training/Vehicle Garage.	Replace 2 x 4 fluorescent with LED.	10,000	SF					\$ 5.00	\$ 50,000	\$ 200	\$ 67,500	\$ 72,690	\$ 76,370	\$ 86,406	\$ 110,607
3.5	Lighting Control System	Entire Building			4	4	No building wide lighting control system. A handful of occupancy sensors which don't function well.	Install new occupancy sensors through out to switch lights off when unoccupied.	18	EA					\$ 389.00	\$ 7,002		\$ 9,453	\$ 10,180	\$ 10,695	\$ 12,100	\$ 15,489
4.0	Mechanical System																					
4.1	Rooftop Unit (RTU-1)	Roof		FPT-M-1	2	3	The rooftop unit has 5 tons of DX cooling and 125 MBH of natural gas heating is in fair condition and is functional, but is approaching the end of its useful life.	Replace the rooftop unit in the next 5 years with a like kind and size.	1	LS			\$ 9,000.00	\$ 9,000			\$ 1,900			\$ 13,746	\$ 15,553	\$ 19,909
4.2	Rooftop Unit (RTU-2)	Roof		FPT-M-2	2	3	The rooftop unit has 5 tons of DX cooling and 125 MBH of natural gas heating is in fair condition and is functional, but is approaching the end of its useful life.	Replace the rooftop unit in the next 5 years with a like kind and size.	1	LS			\$ 9,000.00	\$ 9,000			\$ 1,900			\$ 13,746	\$ 15,553	\$ 19,909
4.3	Rooftop Unit (RTU-3)	Roof		FPT-M-3	2	3	The rooftop unit has 5 tons of DX cooling and 125 MBH of natural gas heating is in fair condition and is functional, but is approaching the end of its useful life.	Replace the rooftop unit in the next 5 years with a like kind and size.	1	LS			\$ 9,000.00	\$ 9,000			\$ 1,900			\$ 13,746	\$ 15,553	\$ 19,909
4.4	Rooftop Unit (RTU-4)	Roof		FPT-M-4	2	3	The rooftop unit has 5 tons of DX cooling and 125 MBH of natural gas heating is in fair condition and is functional, but is approaching the end of its useful life.	Replace the rooftop unit in the next 5 years with a like kind and size.	1	LS			\$ 9,000.00	\$ 9,000			\$ 1,900			\$ 13,746	\$ 15,553	\$ 19,909
4.5	Rooftop Unit (RTU-5)	Roof		FPT-M-5	2	3	The rooftop unit has 5 tons of DX cooling and 125 MBH of natural gas heating is in fair condition and is functional, but is approaching the end of its useful life.	Replace the rooftop unit in the next 5 years with a like kind and size.	1	LS			\$ 9,000.00	\$ 9,000			\$ 1,900			\$ 13,746	\$ 15,553	\$ 19,909
4.6	Rooftop Unit (RTU-6)	Roof		FPT-M-6	2	3	The rooftop unit has 5 tons of DX cooling and 125 MBH of natural gas heating is in fair condition and is functional, but is approaching the end of its useful life.	Replace the rooftop unit in the next 5 years with a like kind and size.	1	LS			\$ 9,000.00	\$ 9,000			\$ 1,900			\$ 13,746	\$ 15,553	\$ 19,909
4.7	Infrared Heaters	Roof			3	3	The heaters throughout the garage are in fair condition.	Replace the infrared heating system in the garage in the next 5 years.	6,000	SF			\$ 3.00	\$ 18,000						\$ 27,493	\$ 31,106	\$ 39,818
4.8	Exhaust Fans	Roof/Garage			3	3	The rooftop exhaust fans are in fair condition and are functional, but are approaching the end of their useful life.	Replace the existing rooftop exhaust fans in the next 5 years with a like kind and curb.	4	EA			\$ 1,800.00	\$ 7,200			\$ 600			\$ 10,997	\$ 12,442	\$ 15,927
4.9	Automatic Sprinkler System/Fire Service	All Rooms		FPT-M-7 thru FPT-M-10	3	3	Sprinkler piping and fire service are in good condition. Replacement can be deferred for approximately 10 years.	Replace the sprinkler piping and fire service in 2028 with like equipment.	21,136	SF			\$ 4.00	\$ 84,544							\$ 146,102	\$ 187,023

City of Troy
Facility Condition Assessment
April 2018

Police/Fire Training

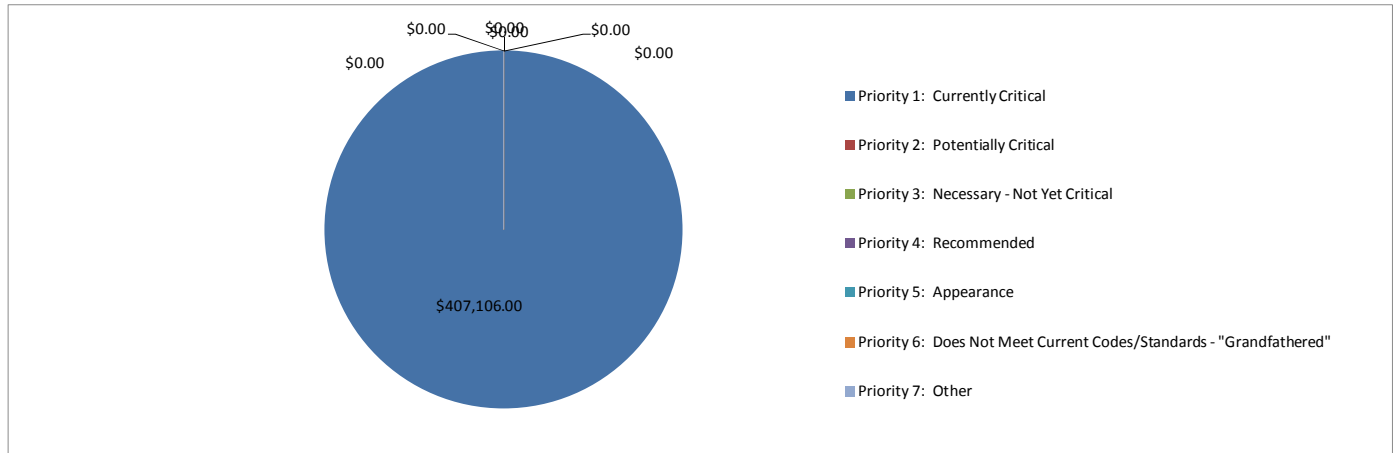
Building Information				Deficiency Priorities				Deficiency Categories														
Address: 4850 John R. Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 21,136 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2001				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: January 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
								*Lower score equals higher priority														
								Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
5.0	Plumbing System																					
5.1	Domestic Water Heater	Mechanical Room		FPT-P-1	3	2	The gas domestic water heater appears to be in fair condition, but is approaching the end of its useful life. Any replacement should be put on a concrete housekeeping pad to reduce contact with standing water.	Plan on replacing water heater in the next 5 years with a like kind.	1	LS			\$ 7,000.00	\$ 7,000						\$ 10,692	\$ 12,097	\$ 15,486
5.2	Domestic Water and Sanitary Piping	Mechanical Room			3	2	The domestic water and sanitary piping is in fair condition. Appears to be newer than the building and plumbing fixtures. It is a mix of copper and PVC. It should be replaced when new plumbing fixtures are installed.	Plan on replacing piping in the next 5 years with a like system.	21136	SF			\$ 1.00	\$ 21,136						\$ 32,284	\$ 36,526	\$ 46,756
5.3	Plumbing Fixtures	Toilet Rooms, Kitchenette, Classroom 20			2	2	Plumbing fixtures (porcelain, flush valves, faucets, mixing valves, fixture carriers) are in fair condition, but are approaching the end of their useful lives.	Plan on replacing plumbing fixtures in the next 5 years with a like kind.	1	LS			\$ 38,000.00	\$ 38,000						\$ 58,041	\$ 65,668	\$ 84,060
												\$ 145,618	\$ 229,880	\$ 69,377	\$ 13,200	\$ 121,253	\$ 166,126	\$ 396,521	\$ 757,042	\$ 969,078		

6.0	Site																				
6.1	Asphalt Pavement	Parking Lots	FPT-458 FPT-464		1	3	The asphalt pavement in the parking lots has cracked in several locations.	Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	41,338	SF	\$ 4.00	\$ 165,352					\$ 223,225	\$ 240,389	\$ 252,559	\$ 285,747	\$ 365,780
6.2	Control Joints	Concrete Pavement			3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	563	LF	\$ 2.00	\$ 1,126					\$ 1,520	\$ 1,637	\$ 1,720	\$ 1,946	\$ 2,491
6.3	Sign Wall	Property Entrance	FPT-475 FPT-476		2	2	The mortar joints have deteriorated between the bricks and the limestone cap. Water infiltration has frozen behind the bricks and cracked the bricks and mortar joints.	Remove and salvage the signage. Remove brick and limestone cap to concrete foundation wall and dispose of masonry. Rebuild sign wall with new brick and cast stone caps. Cap the top of the brick wall with rubberized asphalt flashing and cast stone sections formed with positive slopes. Rake the cast stone mortar joints and fill with an exterior grade silicone sealant. Reinstall signage.	1	LS	\$ 10,000.00	\$ 10,000					\$ 13,500	\$ 14,538	\$ 15,274	\$ 17,281	\$ 22,121
6.4	Site Wall	South Property Line	FPT-505		2	2	Vertical cracks have formed at the third points between the control joints due to excessive expansion in the brick.	Remove the metal coping. At each crack, sawcut through the brick to a depth of 1 inch each side of the site wall. Infill sawcut opening with backer rod and an exterior grade silicone sealant. Before reinstallation of the metal coping, place a 2-foot long number 4 reinforcement bar into the cavity centered on the new joint. Grout solid the reinforcement bar into the cavity. Cap the top of the brick wall with rubberized asphalt flashing and reinstall the metal coping.	15	EA	\$ 300.00	\$ 4,500					\$ 6,075	\$ 6,542	\$ 6,873	\$ 7,777	\$ 9,955
6.5	Site Lighting	Parking Lots		FPT-E-8	7	6	Fixtures are currently LED.	Plan on replacing in 2038.	6	EA					\$ 1,200.00	\$ 7,200					\$ 15,927
												\$ 180,978	\$ -	\$ 7,200	\$ -	\$ 244,320	\$ 263,106	\$ 276,426	\$ 312,751	\$ 416,274	

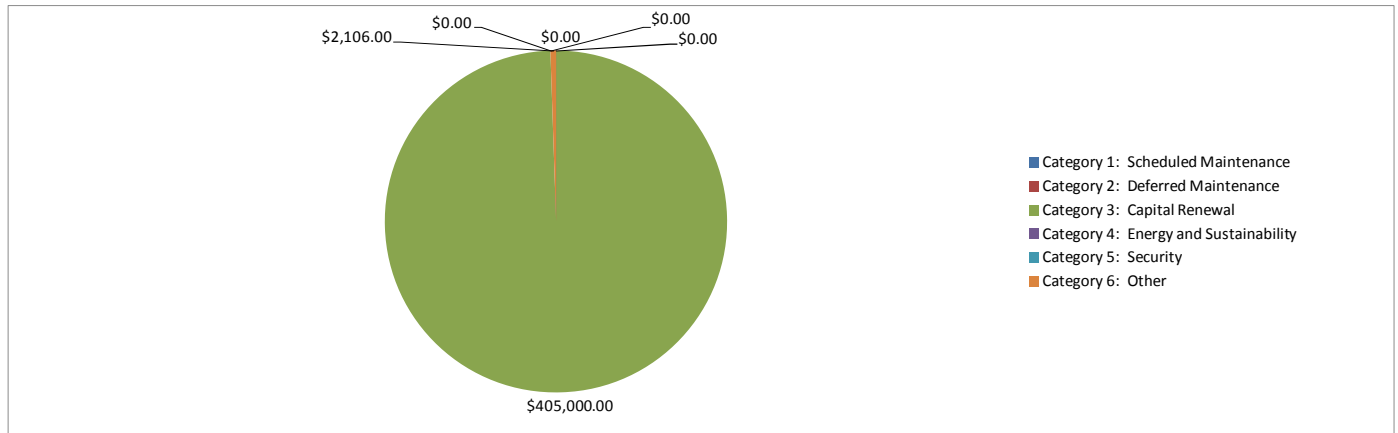


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Historic Village Barnard House

Building Information Address: 60 West Wattles Road Building Area: 2,000 SF No. of Floors: 2 Year Built: 1837 Evaluation Date: March 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only									
								*Lower score equals higher priority													

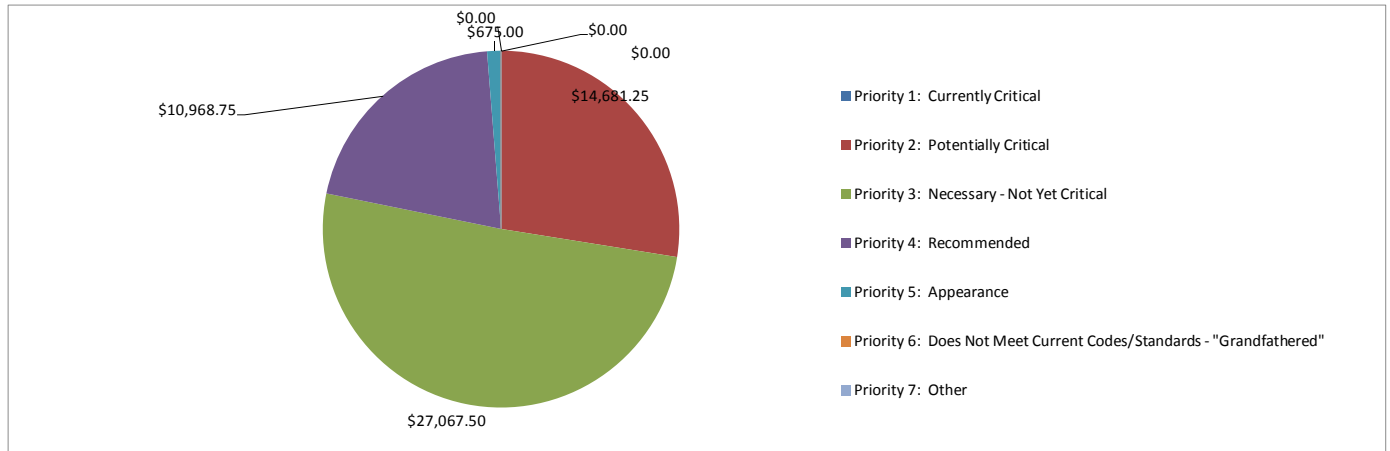
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Wood Siding	All Elevations	HVBH-061		7	6	The paint has delaminated from the wood siding.	As part of a \$450,000 project, the wood siding and the finish are being renovated up through the 2018-2019 fiscal year.														
1.2	Wood Window Trim	All Elevations			7	6	The paint has delaminated from the wood window trim.	As part of a \$450,000 project, the wood window trim and the finish are being renovated up through the 2018-2019 fiscal year.														
1.3	Wood Windows	All Elevations	HVBH-063		7	6	The paint has delaminated from the wood windows.	As part of a \$450,000 project, the wood windows and the finish are being renovated up through the 2018-2019 fiscal year.														
1.4	Asphalt Shingles	Roof	HVBH-069		7	6	The asphalt shingles are in poor condition and the wood roof sheathing has sagged.	As part of a \$450,000 project, the roofing system is being renovated up through the 2018-2019 fiscal year.														
2.0	Building Interior																					
2.1	Flooring	First Floor	HVBH-014		7	6	The flooring system throughout the first floor has been damaged beyond reuse.,	As part of a \$450,000 project, the flooring systems are being renovated up through the 2018-2019 fiscal year.,														
2.2	Doors	First Floor	HVBH-019		7	6	The doors throughout the first floor have been damaged beyond reuse.	As part of a \$450,000 project, the doors are being renovated up through the 2018-2019 fiscal year.,														
2.3	Walls	First Floor	HVBH-021		7	6	The wall finishes throughout the first floor have been damaged beyond reuse.	As part of a \$450,000 project, the wall finishes are being renovated up through the 2018-2019 fiscal year.														
2.4	Walls	Stair 2	HVBH-021		7	6	The finishes throughout the stair have been damaged beyond reuse.	As part of a \$450,000 project, the finishes are being renovated up through the 2018-2019 fiscal year.														
2.5	Ceiling	First Floor	HVBH-009 HVBH-016		7	6	The ceiling system throughout the first floor has been damaged beyond reuse,	As part of a \$450,000 project, the ceiling system is being renovated up through the 2018-2019 fiscal year.														
2.6	Flooring, Doors, Walls, Ceilings	Second Floor	HVBH-025 HVBH-028		1	3	The flooring system, doors, wall finishes and ceilings throughout the second floor have been damaged beyond reuse.	Replace all damaged systems with historically accurate systems.	1	LS	\$ 300,000.00	\$ 300,000						\$ 405,000	\$ 436,141	\$ 458,220	\$ 518,434	\$ 663,640
2.7	9 Inch by 9 Inch Vinyl Floor Tile	Apartment Space, Closet 3			1	6	Original vinyl floor tiles.	Replace with a historically accurate flooring system.	624	SF	\$ 2.50	\$ 1,560						\$ 2,106	\$ 2,268	\$ 2,383	\$ 2,696	\$ 3,451
3.0	Electrical System																					
3.1	Service Entrance Panelboard (2017)	Basement		HVBH-E-1	4	3	Equipment is in new condition.	Plan on replacing in 2058. Building has its own service, not from Historic Village service in General Store.	1	EA					\$ 5,600.00	\$ 5,600					\$ 12,387	
3.2	The first floor renovation occurs in 2018-2019																					
4.0	Mechanical System																					
4.1	Furnace	Basement		HVBH-M-1	4	3	The 97 MBH gas fired furnace is in good condition.	Replace the furnace with like kind in the next 10 to 20 years.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350				\$ 6,567	\$ 8,406
4.2	Miscellaneous	Throughout	HVBH-001 HVBH-002		3	3	The house does not currently have air conditioning. Its convectors are in poor condition and not piped.	Install a condensing unit and cooling coil. Install new piping to new convectors. Install new ductwork.	2,000	SF			\$ 40.00	\$ 80,000					\$ 116,304	\$ 122,192	\$ 138,249	\$ 176,971
5.0	Plumbing System																					
5.1	Miscellaneous	Throughout			3	3	The house does not have a water heater. Its plumbing fixtures are in poor condition and not piped.	Install new piping, water heater, and fixtures.	2,000	SF			\$ 10.00	\$ 20,000					\$ 29,076	\$ 30,548	\$ 34,562	\$ 44,243
												\$ 301,560	\$ 103,800		\$ 5,600	\$ 350	\$ 407,106	\$ 583,789	\$ 613,343	\$ 700,508	\$ 909,097	

6.0	Site																						
	No comments.																						
												\$	-	\$	-	\$	-	\$	-	\$	-	\$	-

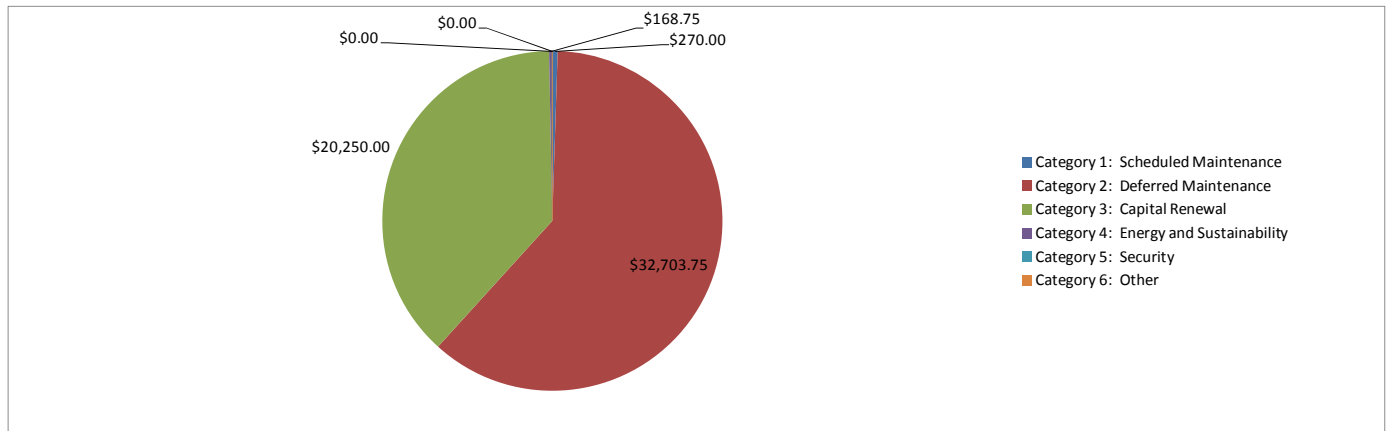


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



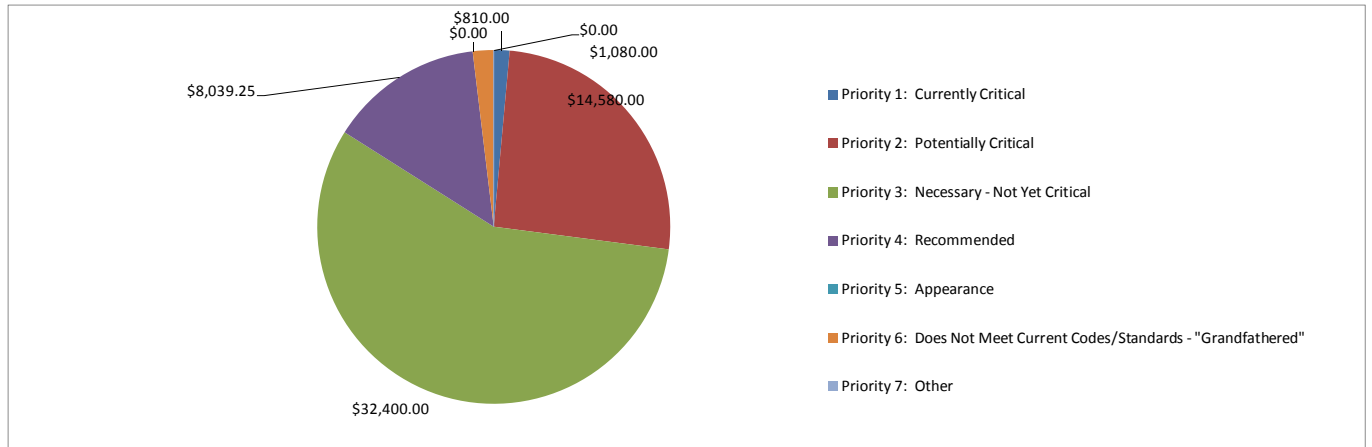
City of Troy
Facility Condition Assessment
April 2018

Historic Village Caswell House

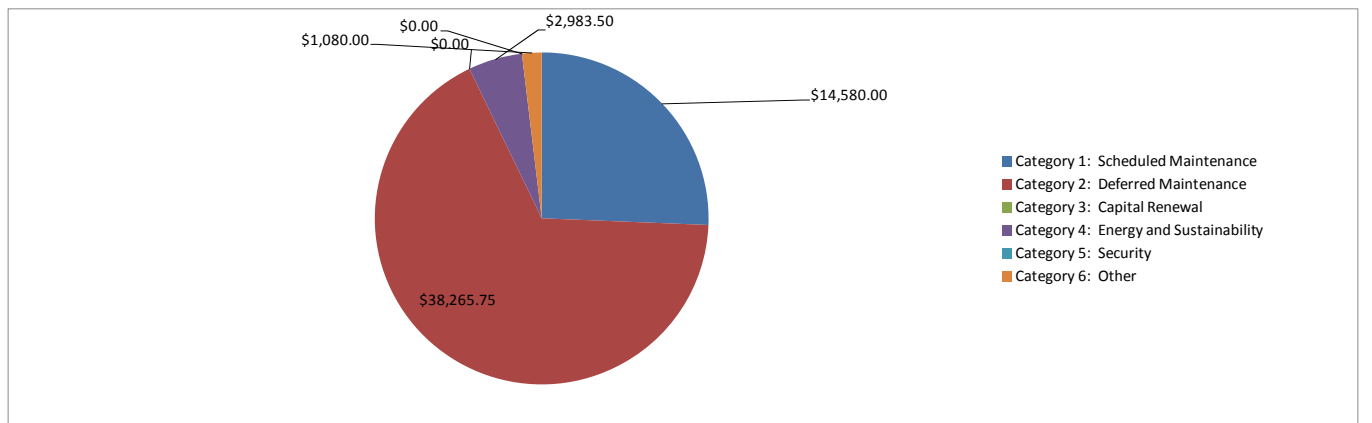
Building Information				Deficiency Priorities				Deficiency Categories																
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																
Building Area: 1,350 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																
Year Built: 1832				Priority 4: Recommended				Category 4: Energy and Sustainability																
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security																
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost		
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal								
1.0	Building Exterior																							
1.1	Wood Trim	All Elevations	HVCH-036		3	2	The paint has delaminated from the wood trim.	Replace damaged wood trim. Paint new wood trim. Remove delaminating paint and repaint wood trim.	1	LS	\$ 2,000.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424		
1.2	Wood Siding	All Elevations	HVCH-041		3	2	The paint has delaminated from the wood siding. The wood siding has been damaged at the north elevation.	Replace damaged wood siding. Paint new wood siding. Remove delaminating paint and repaint wood siding.	1	LS	\$ 16,000.00	\$ 16,000						\$ 21,600	\$ 23,261	\$ 24,438	\$ 27,650	\$ 35,394		
1.3	Wood Doors	All Elevations	HVCH-037 HVCH-042		3	2	The paint has delaminated from the wood doors.	Remove delaminating paint and repaint wood doors.	1	LS	\$ 150.00	\$ 150						\$ 203	\$ 218	\$ 229	\$ 259	\$ 332		
1.4	Site	North and West Walls			2	3	Negative drainage along north and west walls. Some water puddling along north wall. Earth is saturated along north and west walls.	Create swale a minimum of 10 feet from north and west walls at a depth to permit positive drainage from building. Slope swale to southwest to drain into future pond at west edge of site.	1	LS	\$ 7,000.00	\$ 7,000						\$ 9,450	\$ 10,177	\$ 10,692	\$ 12,097	\$ 15,485		
1.5	Foundation	North Wall of Addition			2	2	Stone foundation is deteriorated on north wall of lean-to addition.	Remove and reset loose foundation stones.	1	LS	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636		
1.6	Wood Doors	North Door			2	2	Water damage at the bottom of north door and sill.	Repair door and sill, prep and paint. Provide concealed weather seal at bottom of door.	1	LS	\$ 675.00	\$ 675						\$ 911	\$ 981	\$ 1,031	\$ 1,166	\$ 1,493		
1.7	Windows	North Window on Lean-To			2	1	Paint is peeling at sill of north window on lean-to addition on north side of building.	Prep and repaint window.	1	LS	\$ 200.00	\$ 200						\$ 270	\$ 291	\$ 305	\$ 346	\$ 442		
2.0	Building Interior																							
2.1	Windows	Living/Dining, Bedroom 2	HVCH-017		3	2	Paint has delaminated from the window glazing compound.	Replace failing glazing compound. Repaint glazing compound.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770		
2.2	Ceiling	Bedroom 2	HVCH-027		3	2	The paint is delaminating from the ceiling and the ceiling has cracked.	Locate and remediate source of damage to the ceiling. Repair ceiling system and repaint entire ceiling.	1	LS	\$ 600.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327		
2.3	Walls	Living/Dining			5	2	Some scuffing and damage on plaster on east wall of living room between door and window.	Clean residue, repaint entire wall.	1	LS	\$ 300.00	\$ 300						\$ 405	\$ 436	\$ 458	\$ 518	\$ 664		
2.4	Walls	Entry			3	2	Cracked plaster at wall beneath stair stringer.	Remove loose material, repair plaster. Repaint entire ceiling.	1	LS	\$ 500.00	\$ 500						\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106		
2.5	Door Casings	Entry			5	2	Minor damage to door casing finishes at openings to living room.	Prep and repaint door casing.	1	LS	\$ 200.00	\$ 200						\$ 270	\$ 291	\$ 305	\$ 346	\$ 442		
3.0	Electrical System																							
3.1	Panelboard (2004)	Basement		HVCH-E-1	4	3	Main panel is 14 years old and in good condition. Fused panel is older.	Plan on replacing equipment in 2054.	1	EA					\$ 4,900.00	\$ 4,900					\$ 10,840			
3.2	Fuse Panel with 2-wire system?	Basement	HVCH-014	HVCH-E-2	4	3	Equipment may be 50 years old with a 2-wire (ungrounded) system.	Replace fuse panel and wiring with 3 wire (grounded) system.	1	EA					\$ 8,000.00	\$ 8,000		\$ 10,800	\$ 11,630	\$ 12,219	\$ 13,825	\$ 17,697		
3.3	Interior Building Lighting	Basement			4	4	Incandescent lamps in porcelain sockets	Replace lamps with LED	5	EA					\$ 25.00	\$ 125		\$ 169	\$ 182	\$ 191	\$ 216	\$ 277		
4.0	Mechanical System																							
4.1	Furnace	Basement		HVCH-M-1	4	3	The 66 MBH gas fired furnace is in good condition.	Replace the furnace with like kind in the next 10 years.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350				\$ 6,567	\$ 8,406		
4.2	Air Conditioning Unit/Condensing Unit	Basement/Outdoors		HVCH-M-2 HVCH-M-3	4	3	The ~3 ton air conditioning unit and associated condensing unit are in good condition.	Replace the air conditioning unit and associated condensing unit with like kind in the next 10 years.	1	LS			\$ 10,000.00	\$ 10,000			\$ 550				\$ 17,281	\$ 22,121		
5.0	Plumbing System																							
5.1	Sump Pump	Building			4	3	The sump pump is in fair condition.	Replace the sump pump in the next 10 years.	1	EA			\$ 500.00	\$ 500							\$ 864	\$ 1,106		
												\$ 31,425	\$ 14,300		\$ 13,025		\$ 900	\$ 53,393	\$ 57,498	\$ 60,409	\$ 93,059	\$ 129,963		
6.0	Site																							
	No comments.																							
												\$ -	\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Historic Village Church

Building Information				Deficiency Priorities				Deficiency Categories													
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance													
Building Area: 1,610 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance													
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal													
Year Built: 1837				Priority 4: Recommended				Category 4: Energy and Sustainability													
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security													
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other													
				Priority 7: Other																	
								*Lower score equals higher priority													

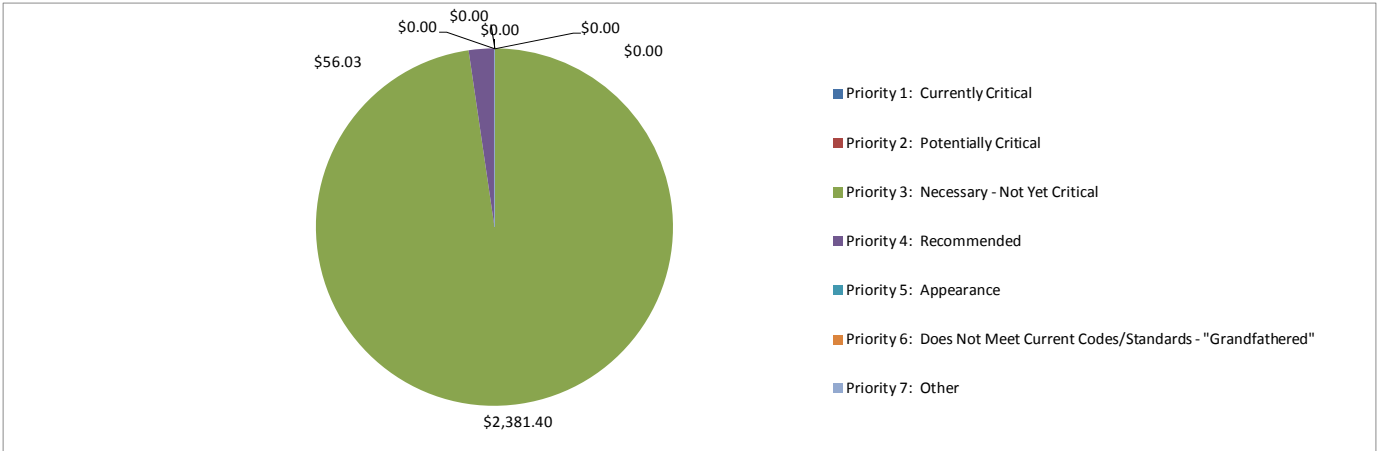
City of Troy
Facility Condition Assessment
April 2018

Historic Village Church

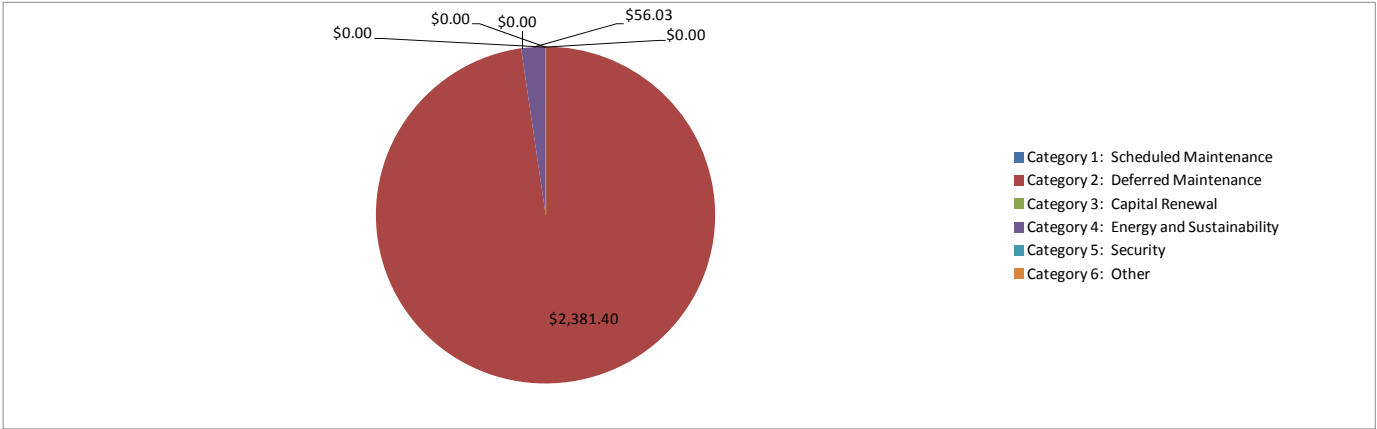
Building Information				Deficiency Priorities				Deficiency Categories															
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 1,610 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 1837				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other																			
								*Lower score equals higher priority															
								Note: Project Cost includes 35% mark-ups and fees															
								Annual Maintenance includes labor and material only															
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
4.0	Mechanical System																						
4.1	Furnace/Condensing Unit	Basement/Outdoors	HVC-002	HVC-M-1 HVC-M-2	4	3	The 92 MBH gas fired furnace and associated 3.5 ton condensing unit are in fair condition.	Replace the furnace and associated condensing unit with like kind in the next 5 to 10 years.	1	LS			\$ 9,800.00	\$ 9,800			\$ 550			\$ 14,968	\$ 16,935	\$ 21,678	
4.2	Furnace/Condensing Unit	Basement/Outdoors	HVC-002	HVC-M-3 HVC-M-4	4	3	The 92 MBH gas fired furnace and associated 3.5 ton condensing unit are in fair condition.	Replace the furnace and associated condensing unit with like kind in the next 5 to 10 years.	1	LS			\$ 9,800.00	\$ 9,800			\$ 550			\$ 14,968	\$ 16,935	\$ 21,678	
5.0	Plumbing System																						
5.1	Water Heater	Basement		HVC-P-1	3	3	The 30 gallon electric water heater is in fair condition.	Replace the water heater with like kind in the next 5 to 10 years.	1	EA			\$ 5,025.00	\$ 5,025						\$ 7,675	\$ 8,683	\$ 11,115	
5.2	Plumbing Fixtures	Throughout			4	3	Plumbing fixtures (water closets, lavatories, sinks, sump pump) are in fair condition.	Replace the fixtures in the next 10 to 20 years.	1	LS			\$ 15,000.00	\$ 15,000						\$ 25,922	\$ 33,182		
5.3	Fire Protection	Building			4	3	The fire protection service and sprinkler piping is in good condition.	Replace the system in the next 10 to 20 years.	1600	SF			\$ 4.00	\$ 6,400						\$ 11,060	\$ 14,157		
												\$ 38,200		\$ 46,025		\$ 11,505	\$ 1,475	\$ 56,909	\$ 64,193	\$ 105,054	\$ 155,840	\$ 211,765	
6.0	Site																						
	No comments.																						
												\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

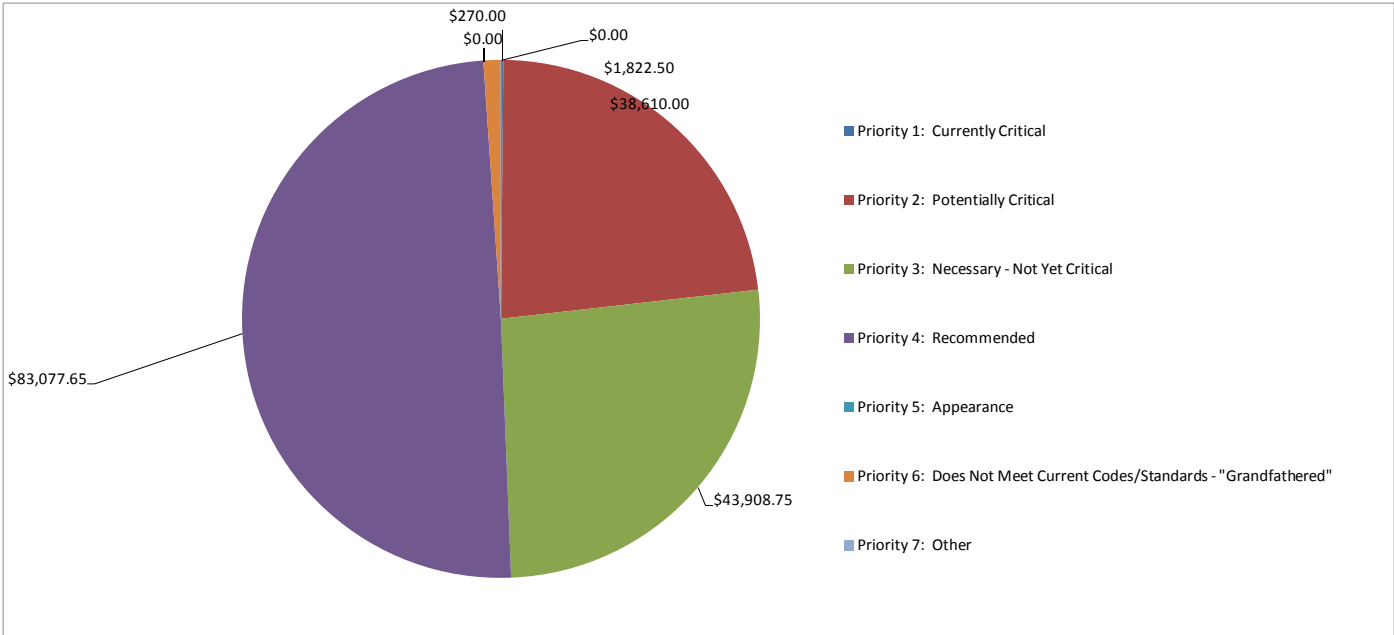
Historic Village Gazebo

Building Information			Deficiency Priorities				Deficiency Categories															
Address: 60 West Wattles Road			Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 270 SF			Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1			Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 2002			Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: March 2018			Priority 5: Appearance				Category 5: Security															
			Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
			Priority 7: Other																			
																		Note: Project Cost includes 35% mark-ups and fees				
																		Annual Maintenance includes labor and material only				
																		*Lower score equals higher priority				
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Stairs	Exterior	HVG-003		3	2	The paint is delaminating from the stairs' treads and risers.	Remove delaminating paint and repaint wood treads and risers.	1	LS	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
1.2	Cupola	Roof	HVG-005		3	2	The paint is delaminating from the wood trim on each side of the cupola.	Remove delaminating paint and repaint wood trim.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
2.0	Building Interior																					
2.1	Floor	Patio	HVG-004		3	2	The paint is delaminating from the wood floor boards.	Remove delaminating paint and repaint wood floor boards.	188	SF	\$ 3.00	\$ 564						\$ 761	\$ 820	\$ 861	\$ 975	\$ 1,248
3.0	Electrical System																					
3.1	Lighting	Ceiling		HVG-E-1	4	4	Fluorescent lamp in the only fixture.	Lamp should be replaced with vintage look LED lamp.	1	EA					\$ 41.50	\$ 42		\$ 56	\$ 60	\$ 63	\$ 72	\$ 92
4.0	Mechanical System																					
	No comments.																					
5.0	Plumbing System																					
	No comments.																					
												\$ 1,764	\$ -		\$ 42		\$ -	\$ 2,437	\$ 2,625	\$ 2,758	\$ 3,120	\$ 3,994
6.0	Site																					
6.1	Site Lighting	Parking Lot and Village Green			4	4	HID lamps in antique look fixtures.	Fixtures should be retrofit with LED lamps.	9	EA					\$ 150.00	\$ 1,350		\$ 1,823	\$ 1,963	\$ 2,062	\$ 2,333	\$ 2,986
												\$ -	\$ -		\$ 1,350		\$ -	\$ 1,823	\$ 1,963	\$ 2,062	\$ 2,333	\$ 2,986

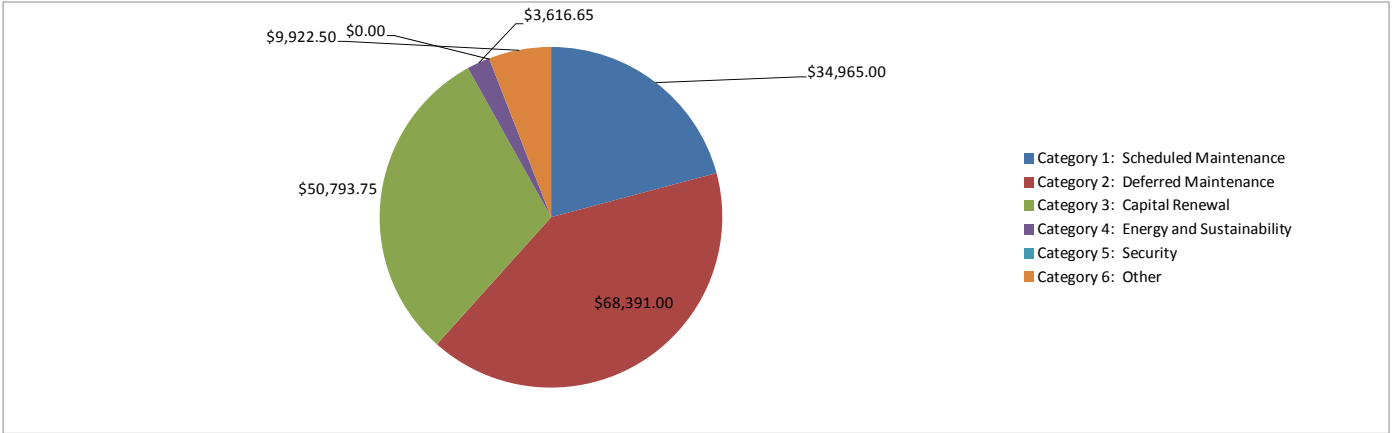


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

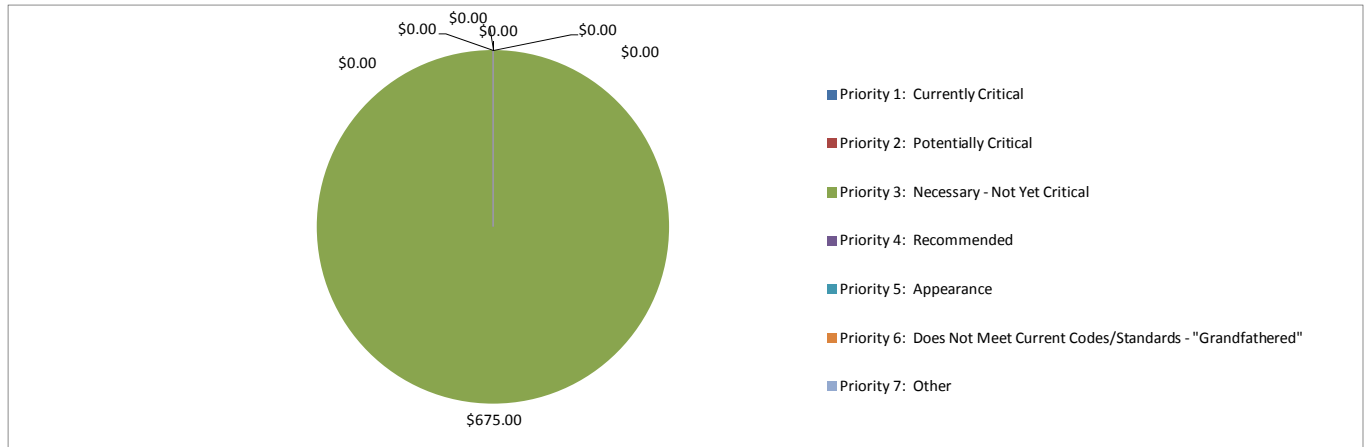
Historic Village General Store

Building Information			Deficiency Priorities					Deficiency Categories														
Address: 60 West Wattles Road			Priority 1: Currently Critical					Category 1: Scheduled Maintenance														
Building Area: 2,200 SF			Priority 2: Potentially Critical					Category 2: Deferred Maintenance														
No. of Floors: 2			Priority 3: Necessary - Not Yet Critical					Category 3: Capital Renewal														
Year Built: 1989			Priority 4: Recommended					Category 4: Energy and Sustainability														
Evaluation Date: March 2018			Priority 5: Appearance					Category 5: Security														
			Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"					Category 6: Other														
			Priority 7: Other																			
																	Note: Project Cost includes 35% mark-ups and fees					
																	Annual Maintenance includes labor and material only					
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Wood Columns	Front Porch	HVGS-070 HVGS-071		3	2	The paint has delaminated from the wood columns.	Remove delaminating paint and repaint wood columns.	1	LS	\$ 500.00	\$ 500						\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
1.2	Flooring	Front Porch	HVGS-072		3	3	The wood floor boards are unfinished and have cracked and weathered.	Replace all wood floor boards.	1	LS	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
1.3	Wood Siding	All Elevations and Chimney	HVGS-075		3	2	The paint has delaminated from the wood siding.	Remove delaminating paint and repaint wood siding.	1	LS	\$ 21,000.00	\$ 21,000						\$ 28,350	\$ 30,530	\$ 32,075	\$ 36,290	\$ 46,455
1.4	Handrail	Ramp	HVGS-073		2	2	The components of the ramp's vinyl handrail have disconnected from each other.	Repair disconnected sections. Consider replacement with a more durable and structurally sound system.	1	LS	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
1.5	Elevator Load Testing	Elevator			4	1	Recommended safety testing from the elevator service contractor.	To verify the integrity of the in-ground hydraulic elevator piston seals, a full load needs to be applied to the car for a pre-determined amount of time. A certified elevator technician will inspect the seals around the piston for any leaks.	1	LS	\$ 1,400.00	\$ 1,400						\$ 1,890	\$ 2,035	\$ 2,138	\$ 2,419	\$ 3,097
1.6	Soft Starter	Elevator			4	3	The existing motor starter controls the electrical voltage and current from your building power source to the elevator. The existing motor starter is obsolete and parts to repair may not be available, which can lead to extended downtime and unplanned costs to return the elevator to service.	A soft starter will add phase, over-voltage and under-voltage protection to major elevator components. This protection helps prevent the motor from burnout during phase loss and enhances motor life. It will also provide potential energy savings by changing the amount of energy used by the motor according to the load on the motor, while keeping the motor speed the same.	1	LS	\$ 3,600.00	\$ 3,600						\$ 4,860	\$ 5,234	\$ 5,499	\$ 6,221	\$ 7,964
1.7	Elevator Power Unit and Pump	Elevator			4	1	The existing elevator power unit and pump have exceeded their expected serviceable life.	Replace elevator power unit and pump.	1	LS	\$ 21,500.00	\$ 21,500						\$ 29,025	\$ 31,257	\$ 32,839	\$ 37,154	\$ 47,561
1.8	Elevator Modernization	Elevator			4	3	The existing elevator car finishes, power unit, pump, motor, controls and safety features should be replaced in 2038.	Replace all hydraulic elevator serviceable components and car finishes.	1	LS	\$ 130,000.00	\$ 130,000										\$ 287,577
2.0	Building Interior																					
2.1	Non-Insulated Lavatory Piping	Men's, Women's			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	9	EA	\$ 150.00	\$ 1,350						\$ 1,823	\$ 1,963	\$ 2,062	\$ 2,333	\$ 2,986
2.2	Floors	Store			3	1	Floor finish is completely worn away.	Refinish floor.	1	LS	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
2.3	Walls	Store			4	2	Wall finishes around rear double doors are deteriorated.	Remove loose and deteriorated finishes, prep and paint.	1	LS	\$ 300.00	\$ 300						\$ 405	\$ 436	\$ 458	\$ 518	\$ 664
2.4	Doors	Store			1	2	Bottom bolt on passive leaf of rear double doors is missing.	Provide new bottom manual bolt.	1	LS	\$ 200.00	\$ 200						\$ 270	\$ 291	\$ 305	\$ 346	\$ 442
2.5	Doors	Store			4	3	Front entry door is anachronistic.	No action. Door is scheduled to be replaced in pending restoration effort.	1	LS												

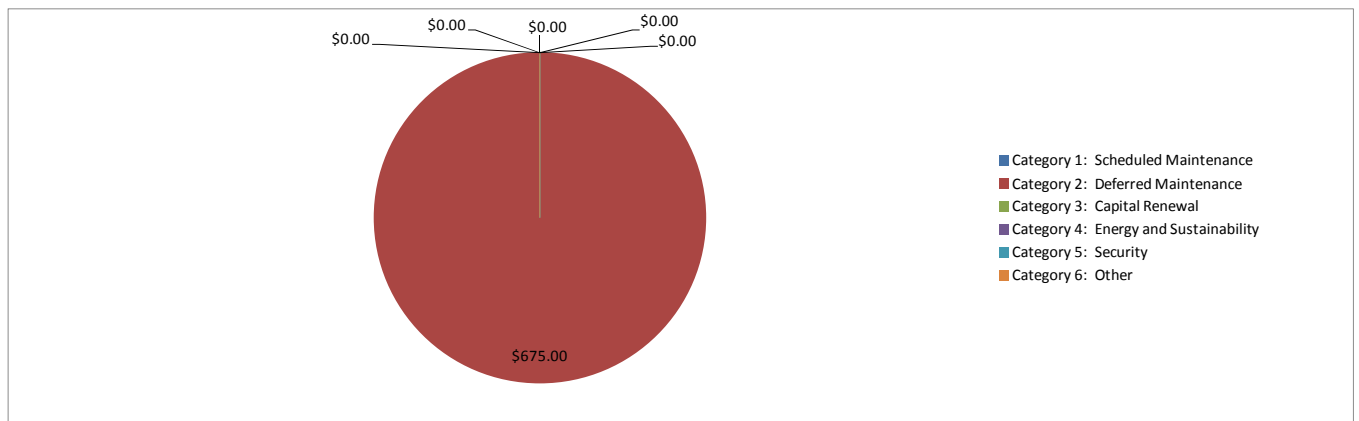


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



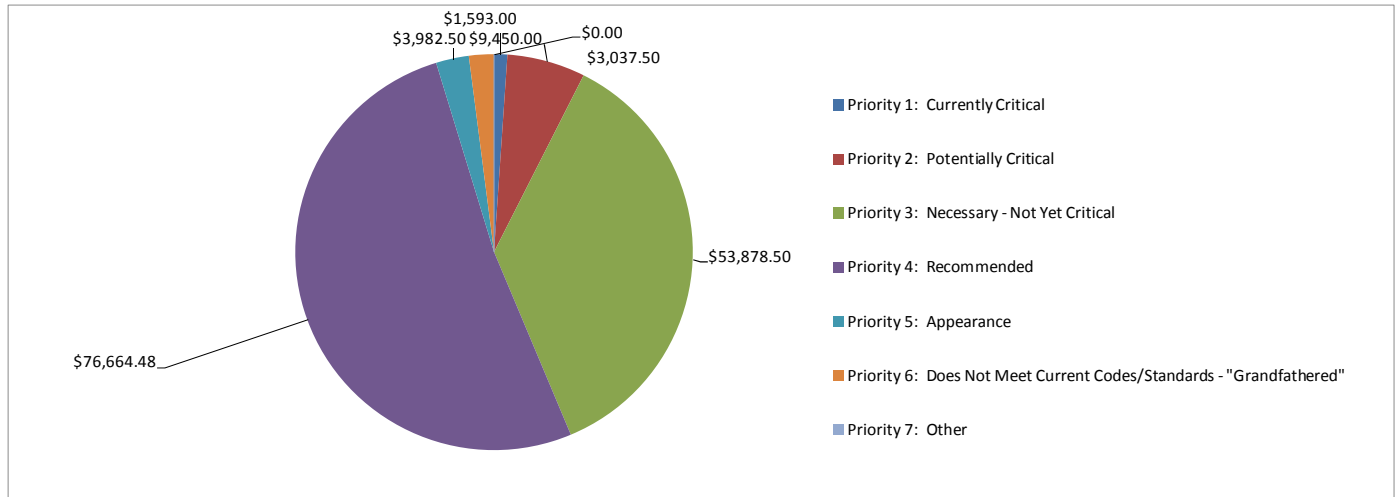
City of Troy
Facility Condition Assessment
April 2018

Historic Village Log Cabin

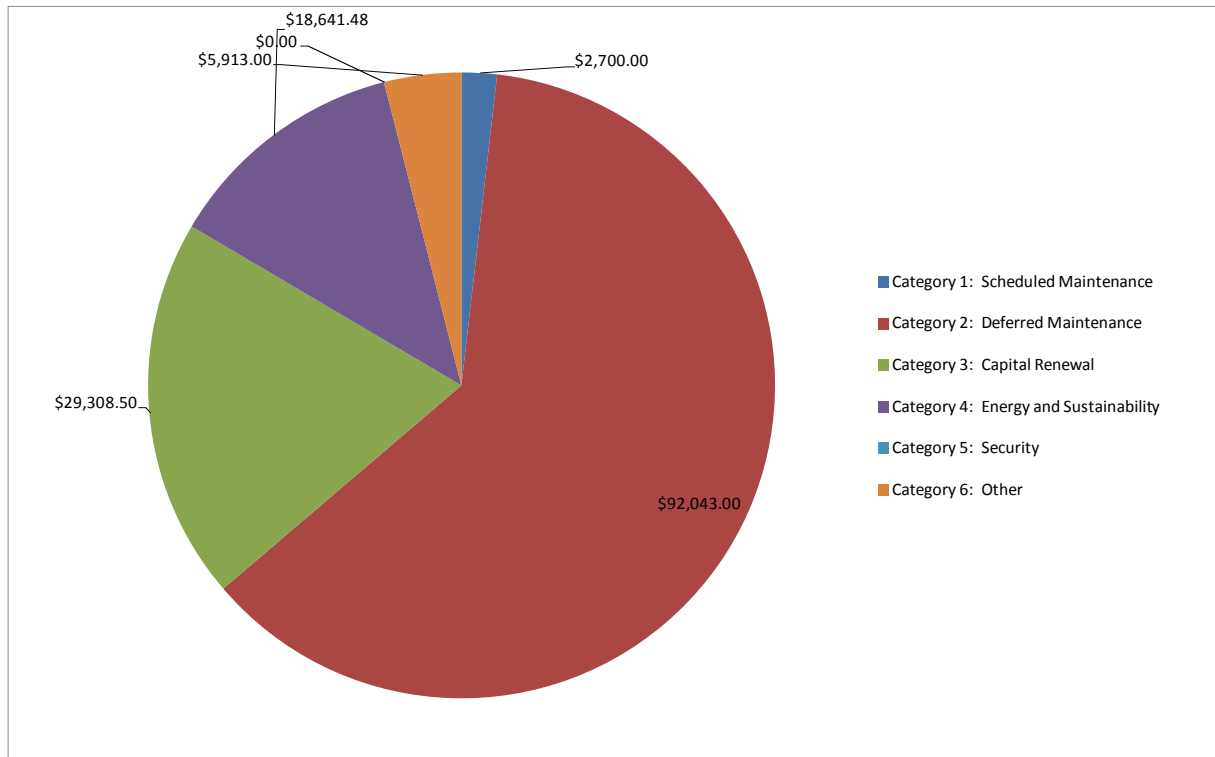
Building Information				Deficiency Priorities				Deficiency Categories														
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 700 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 1840				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
								*Lower score equals higher priority														
								Note: Project Cost includes 35% mark-ups and fees														
								Annual Maintenance includes labor and material only														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Chinking	West Elevation	HVLC-011		3	2	Woodpeckers have damaged the synthetic chinking between the logs.	Patch damaged synthetic chinking.	1	LS	\$ 500.00	\$ 500						\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
2.0	Building Interior																					
	No comments.																					
3.0	Electrical System																					
	No comments.																					
4.0	Mechanical System																					
	No comments.																					
5.0	Plumbing System																					
	No comments.																					
												\$ 500		\$ -		\$ -	\$ -	\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
6.0	Site																					
	No comments.																					
												\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Historic Village Museum

Building Information				Deficiency Priorities				Deficiency Categories																	
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance																	
Building Area: 3,676 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance																	
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal																	
Year Built: 1927				Priority 4: Recommended				Category 4: Energy and Sustainability																	
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security																	
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other																	
				Priority 7: Other																					
Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only																									
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost			
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal									
1.0	Building Exterior																								
1.7	Wood Trim	All Elevations, Front Porch	HVM-154		3	2	The paint has delaminated from the wood trim.	Remove delaminating paint and repaint wood trim and shutters.	1	LS	\$ 5,000.00	\$ 5,000						\$ 6,750	\$ 7,269	\$ 7,637	\$ 8,641	\$ 11,061			
1.8	Steel Lintel	Windows	HVM-164		4	2	The steel lintels at the wood windows have corroded.	Remove all paint and corrosion with power tools and apply an exterior ferrous-metal primer. Apply two finish coats of exterior low-luster acrylic paint over primer.	24	EA	\$ 650.00	\$ 15,600						\$ 21,060	\$ 22,679	\$ 23,827	\$ 26,959	\$ 34,509			
1.9	Steel Outriggers	East and West Eave Ends			4	6	Rust jacking at outriggers supporting brick at the soffit overhangs.	Carefully remove brick, remove pack rust by blasting or wire brush, coat with epoxy primer and paint with two coats of exterior paint.	6	EA	\$ 500.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636			
1.10	Slate Shingles	Roof	HVM-155 HVM-187		3	2	Slate shingles have dislodged from the roof.	Reattach slate shingles with wire of copper sheet retrofit hangers.	1	LS	\$ 2,500.00	\$ 2,500						\$ 3,375	\$ 3,635	\$ 3,819	\$ 4,320	\$ 5,530			
1.11	Brick	South Elevation	HVM-156 HVM-165		4	2	The brick and mortar joints have been damaged from removed signage.	Replace damaged brick and tuck point damaged mortar joints.	1	LS	\$ 500.00	\$ 500						\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106			
1.12	Wood Windows	All Elevations	HVM-182		3	2	The paint has delaminated from the wood windows.	Remove delaminating paint and repaint wood windows.	30	EA	\$ 150.00	\$ 4,500						\$ 6,075	\$ 6,542	\$ 6,873	\$ 7,777	\$ 9,955			
1.13	Handrails	Front Porch			3	2	The paint has delaminated from the steel handrails; permitting moisture to corrode the steel.	Remove delaminated paint and corrosion with power tools. Repaint.	38	LF	\$ 650.00	\$ 24,700						\$ 33,345	\$ 35,909	\$ 37,727	\$ 42,684	\$ 54,640			
1.19	Bench	Site	HVM-209		4	3	The picnic tables have wood tops and benches that are showing signs of wear.	Refinish all wood surfaces with an oil-modified polyurethane.	12	EA	\$ 400.00	\$ 4,800						\$ 6,480	\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618			
1.20	Picnic Table	Site	HVM-210		4	3	The picnic tables have wood tops and benches that are showing signs of wear.	Refinish all wood surfaces with an oil-modified polyurethane.	7	EA	\$ 600.00	\$ 4,200						\$ 5,670	\$ 6,106	\$ 6,415	\$ 7,258	\$ 9,291			
1.21	Former Coal Chute	North Elevation			3	2	Door has corrosion and failed paint.	Scrape, remove corrosion with wire brush, prime and paint.	1	LS	\$ 150.00	\$ 150						\$ 203	\$ 218	\$ 229	\$ 259	\$ 332			
1.22	Fire Escape Door	North Elevation, 2nd Floor			2	2	Bottom and panels of door are deteriorated.	Replace with new stile and rail wood door rated for outdoor exposure.	1	LS	\$ 500.00	\$ 500						\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106			
2.0	Building Interior																								
2.1	9 Inch by 9 Inch Vinyl Floor Tile	Storage 4	HVM-061		1	6	Original vinyl floor tiles.	Replace with a historically accurate flooring system.	472	SF	\$ 2.50	\$ 1,180						\$ 1,593	\$ 1,715	\$ 1,802	\$ 2,039	\$ 2,610			
2.2	Carpet	Gift Shop, Office 1, Office 2, Office 3, Office 4, Storage 6, Storage 7	HVM-094		5	3	The carpet and carpet tiles are in good condition, but are showing signs of wear.	Plan on replacing with carpet tiles in 2028.	2563	SF	\$ 5.50	\$ 14,097								\$ 24,360	\$ 31,183				
2.3	Ceiling	Storage 4	HVM-062 HVM-065		3	2	The plaster ceiling has failed and fallen from the metal lathe.	Replace the damaged plaster ceiling.	120	SF	\$ 8.00	\$ 960						\$ 1,296	\$ 1,396	\$ 1,466	\$ 1,659	\$ 2,124			
2.4	Exterior Doors and Frames	Boiler, Storage 4	HVM-183		2	2	The bottoms of the hollow metal doors and frames are corroded.	Replace frames with an aluminum frames. Replace doors with a fiberglass reinforced polyester doors.	2	EA	\$ 3,000.00	\$ 6,000						\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273			
2.5	Maple Flooring	First Floor Room 1			3	1	Maple strip flooring is moderately worn.	Refinish wood floor.	1	LS	\$ 1,500.00	\$ 1,500						\$ 2,025	\$ 2,181	\$ 2,291	\$ 2,592	\$ 3,318			
2.6	Wood Trim and Casings	Entry			5	2	Transparent finished wood trim and casings near floors is worn and weathered.	Refinish wood trim.	1	LS	\$ 750.00	\$ 750						\$ 1,013	\$ 1,090	\$ 1,146	\$ 1,296	\$ 1,659			
2.7	Wood Base	Office 3			5	6	Wood base under former radiators lacks paint.	Paint wood base under former radiators to match the rest of the base in the room.	1	LS	\$ 200.00	\$ 200						\$ 270	\$ 291	\$ 305	\$ 346	\$ 442			
2.8	Wood Windows	Office 3			3	2	Sash cords in at least one window are broken.	Replace sash cords. Work by qualified historic window restoration firm.	1	LS	\$ 200.00	\$ 200						\$ 270	\$ 291	\$ 305	\$ 346	\$ 442			
2.9	Wood Windows	Kitchen			3	2	One sash cord and pulley missing at west window.	Replace sash cord and pulley. Work by qualified historic window restoration firm.	1	LS	\$ 200.00	\$ 200						\$ 270	\$ 291	\$ 305	\$ 346	\$ 442			
2.10	Wood Windows	Room 2			3	2	Southwest dormer window sash cords and pulleys are missing.	Replace sash cords and pulleys. Work by qualified historic window restoration firm.	1	LS	\$ 200.00	\$ 200						\$ 270	\$ 291	\$ 305	\$ 346	\$ 442			
2.11	Wood Windows	Room 2			2	1	Southwest dormer window transparent finish significantly weathered.	Refinish window.	1	LS	\$ 500.00	\$ 500						\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106			
2.12	Ceiling	Kitchen			5	3	Historically inappropriate "popcorn" finish.	Provide new gypsum board ceiling.	1	LS	\$ 2,000.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424			

City of Troy
Facility Condition Assessment
April 2018

Historic Village Museum

Building Information Address: 60 West Wattles Road Building Area: 3,676 SF No. of Floors: 2 Year Built: 1927 Evaluation Date: March 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only									
								*Lower score equals higher priority													

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
2.13	Doors	Throughout Building			6	3	Doors have lever latches.	Provide new historically compatible lever latches. Repair doors at removed latch locations.	15	EA	\$ 150.00	\$ 2,250						\$ 3,038	\$ 3,271	\$ 3,437	\$ 3,888	\$ 4,977
3.0	Electrical System																					
3.1	Service Entrance Panelboard (2014)	Basement, Storage 3		HVM-E-1	4	3	Equipment is 4 years old and in good condition.	Plan on replacing in 2054. Building has its own service, not from Historic Village service in General Store.	1	EA					\$ 5,600.00	\$ 5,600		\$ 7,560	\$ 8,141	\$ 8,553	\$ 9,677	\$ 12,388
3.2	Fuse Panels with 2-wire system? (Original 1927?)	First Floor Entry and Second floor Room 2	HVM-088 HVM-132 HVM-134	HVM-E-2 HVM-E-3	4	3	First floor panel may be 90 years old. Second floor panel has pullout fuse blocks.	Replace fuse panels and wiring with 3 wire system.	1	EA					\$ 2,150.00	\$ 2,150		\$ 2,903	\$ 3,126	\$ 3,284	\$ 3,715	\$ 4,756
3.2	Lighting Control System	Entire Building			4	4	Lights are manually controlled.	Install occupancy sensors to automatically shut off lighting in unoccupied spaces.	22	EA					\$ 285.00	\$ 6,270		\$ 8,465	\$ 9,115	\$ 9,577	\$ 10,835	\$ 13,870
3.3	Interior Building Lighting	First Floor			4	4	Incandescent lamps in antique fixtures.	Lamps should be replaced with vintage look LED lamps.	15	EA					\$ 41.50	\$ 623	\$ 175	\$ 840	\$ 905	\$ 951	\$ 1,076	\$ 1,377
3.4	Interior Building Lighting	Basement and Second floor			4	4	Incandescent and fluorescent fixtures.	Lamps should be replaced with LED lamps. Fluorescent fixtures with LED fixtures.	25	EA					\$ 270.00	\$ 6,750	\$ 213	\$ 9,113	\$ 9,813	\$ 10,310	\$ 11,665	\$ 14,932
3.5	Building Mounted Lighting	Entrance			4	4	Incandescent lamps in antique fixtures.	Lamps should be replaced with vintage look LED lamps.	4	EA					\$ 41.50	\$ 166	\$ 50	\$ 224	\$ 241	\$ 254	\$ 287	\$ 367
3.6	Exit Signs	Basement			4	3	Some exit signs are not illuminated.	Replace with battery back up exit signs.	2	EA					\$ 355.00	\$ 710		\$ 959	\$ 1,032	\$ 1,084	\$ 1,227	\$ 1,571
3.7	Emergency Egress Lighting	Entire Building			4	2	Limited egress lighting was observed.	Add battery back up egress lighting in storage, corridors and stairs.	12	EA					\$ 535.00	\$ 6,420	\$ 250	\$ 8,667	\$ 9,333	\$ 9,806	\$ 11,094	\$ 14,202
4.0	Mechanical System																					
4.1	Air Conditioning Unit/Condensing Unit	Basement/Outdoors		HVM-M-1 HVM-M-2	4	3	The 3 ton air conditioning unit and associated condensing unit are in fair condition.	Replace the air conditioning unit and associated condensing unit with like kind in the next 5 to 10 years.	1	LS			\$ 10,000.00	\$ 10,000			\$ 550			\$ 15,274	\$ 17,281	\$ 22,121
4.2	Air Conditioning Unit/Condensing Unit	Second Floor/Outdoors		HVM-M-3 HVM-M-4	4	3	The 4 ton air conditioning unit and associated condensing unit are in good condition.	Replace the air conditioning unit and associated condensing unit with like kind in the next 10 years.	1	LS			\$ 9,800.00	\$ 9,800			\$ 550				\$ 16,936	\$ 21,680
4.3	Boiler System	Basement		HVM-M-5	4	3	The boiler system is in good condition. It consists of a 285 MBH boiler, primary pump, two inline secondary pumps, expansion tank, and associated piping.	Replace the boiler system with a high efficient condensing unit in the next 15 to 20 years.	1	LS			\$ 50,000.00	\$ 50,000			\$ 450					\$ 110,607
4.4	Unit Heaters	Basement			3	3	The 8 MBH hot water suspended unit heaters are in fair condition.	Replace the unit heaters with like kind in the next 10 years.	6	EA			\$ 2,000.00	\$ 12,000							\$ 20,738	\$ 26,546
4.5	Hydronic Heating Devices	Throughout			3	3	The building consists of runtal radiators, floor mounted radiators, and pedestal finned tube radiation. These hydronic heating devices are in fair condition.	Replace the hydronic heating devices with like kind in the next 10 to 20 years.	1	LS			\$ 15,000.00	\$ 15,000							\$ 25,922	\$ 33,182
5.0	Plumbing System																					
5.1	Water Heater	Basement		HVM-P-1	3	3	The 20 gallon electric water heater is in fair condition.	Replace the water heater with like kind in the next 5 to 10 years.	1	EA			\$ 5,025.00	\$ 5,025						\$ 7,675	\$ 8,683	\$ 11,115
5.2	Plumbing Fixtures	Throughout			4	3	Plumbing fixtures (water closets, lavatories, sinks, sump pump) are in fair condition.	Replace the fixtures in the next 10 to 20 years.	1	LS			\$ 15,000.00	\$ 15,000							\$ 25,922	\$ 33,182
											\$ 95,487		\$ 116,825		\$ 28,689		\$ 2,238	\$ 148,606	\$ 160,032	\$ 191,083	\$ 330,070	\$ 533,125

6.0 Site																													
6.1	Site Sign	Main Site Entrance	HVM-148		2	2	The paint has delaminated from the wood trim. The mortar joints have deteriorated between the bricks and the limestone cap. Water infiltration has frozen behind the bricks and cracked the bricks and mortar joints.	Replace damaged wood trim. Paint new wood trim. Remove delaminating paint and repaint wood trim. Replace the mortar between the limestone caps. Rake the mortar joints and fill with an exterior grade silicone sealant. Replace damaged bricks and tuck point damaged brick mortar joints.	1	LS	\$	1,600.00	\$	1,600						\$	2,160	\$	2,326	\$	2,444	\$	2,765	\$	3,539

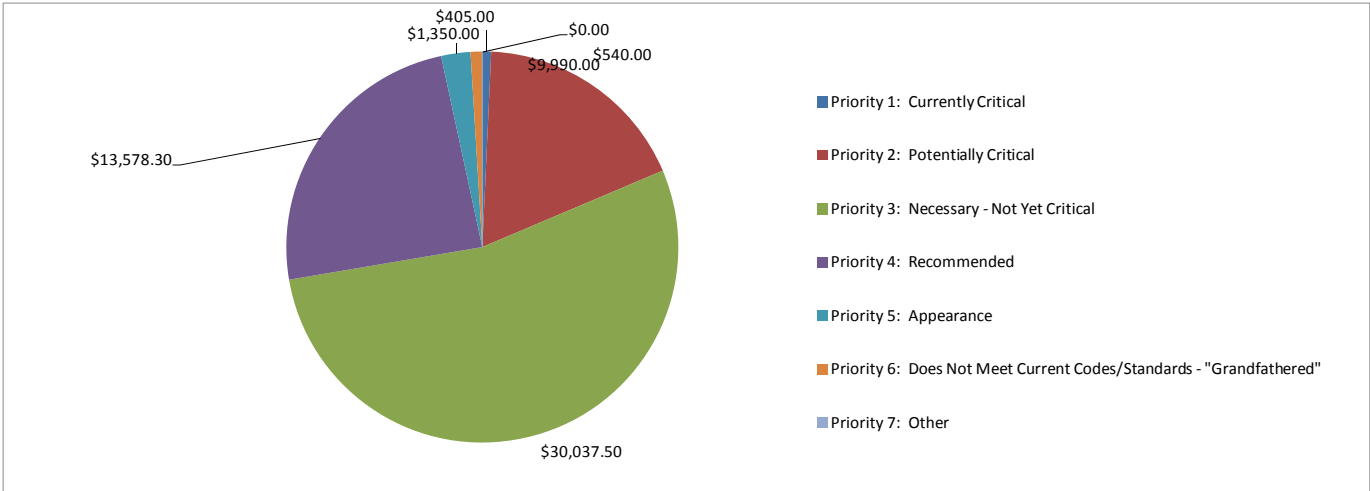
City of Troy
Facility Condition Assessment
April 2018

Historic Village Museum

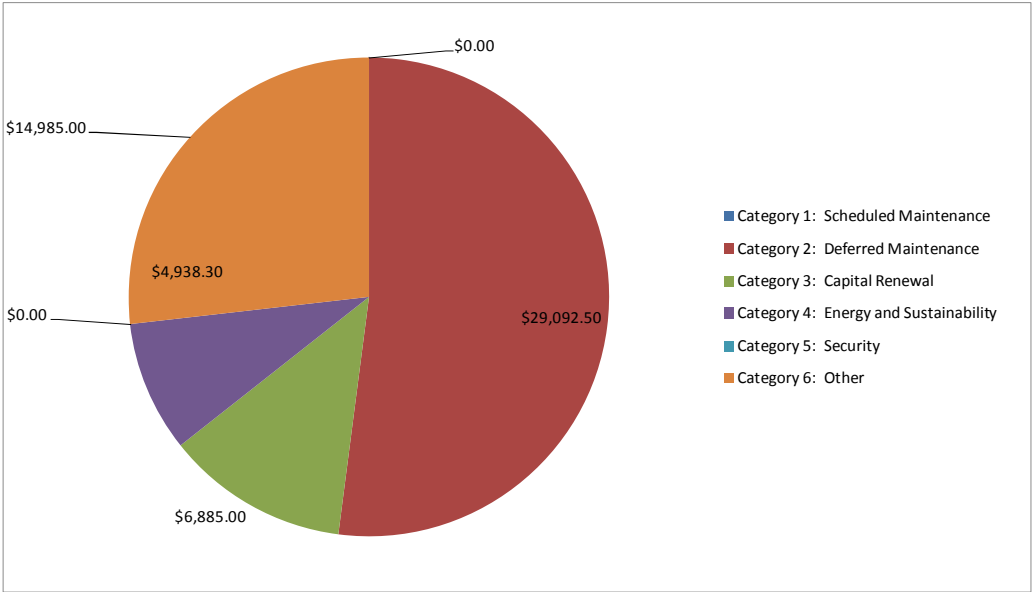
Building Information				Deficiency Priorities				Deficiency Categories															
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 3,676 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 1927				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other																			
Note: Project Cost includes 35% mark-ups and fees																							
Annual Maintenance includes labor and material only																							
*Lower score equals higher priority																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
6.2	Concrete Pavement	Main Entrance Sidewalk	HVM-150		1	2	Two sections of the concrete pavement sidewalk have sunk; presenting a tripping hazard.	Remove slab and recompact sub-soil. Pour a new 4-inch thick concrete slab and pitch to match the existing concrete pavement.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655	
6.3	Asphalt Pavement	East Parking Lot	HVM-213 HVM-215		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2023. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	6,307	SF	\$ 4.00	\$ 25,228								\$ 38,534	\$ 43,597	\$ 55,808	
6.4	Asphalt Pavement	Main Drive	HVM-216 HVM-218		4	3	The asphalt pavement has cracked in two locations, but does drain and is in good condition overall. The concrete curbs have been damaged in two locations.	Plan on replacing the asphalt drive in 2028. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course. Replace damaged concrete curbs.	5,558	SF	\$ 4.00	\$ 22,232								\$ 38,419	\$ 49,180		
6.5	Asphalt Pavement	West Parking Lot	HVM-215 HVM-222		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2023. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	13,481	SF	\$ 4.00	\$ 53,924								\$ 82,364	\$ 93,187	\$ 119,287	
6.6	Control Joints	Ramp and sidewalks	HVM-221		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	445	LF	\$ 2.00	\$ 890						\$ 1,202	\$ 1,294	\$ 1,359	\$ 1,538	\$ 1,969	
6.7	Handrails	Front Porch			4	2	Handrail post bases are corroded or missing.	Replace post bases.	1	LS	\$ 500.00	\$ 500						\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106	
6.8	Stairs	North Elevation	HVM-188		5	3	The steel stair is severely corroded and non-code compliant.	Replace the steel stair with a galvanized stair.	1	LS	\$ 7,000.00	\$ 7,000						\$ 9,450	\$ 10,177	\$ 10,692	\$ 12,097	\$ 15,485	
6.9	Guardrails	Site Perimeter	HVM-178 HVM-212		3	2	The paint has delaminated from the steel guardrails; permitting moisture to corrode the steel.	Remove delaminated paint and corrosion with power tools. Repaint.	1,247	LF	\$ 750.00	\$ 935,250						\$ 1,262,588	\$ 1,359,669	\$ 1,428,502	\$ 1,616,219	\$ 2,068,897	
6.10	Brick Pavers	Site	HVM-198 HVM-202		2	2	The brick pavers have settled and spalled in several locations; creating trip hazards.	Salvage and clean non-spalled brick pavers. Recompact sub-grade and add filler where needed. Replace edging with concrete and reset brick pavers with a slope to one side.	2,000	SF	\$ 10.00	\$ 20,000						\$ 27,000	\$ 29,076	\$ 30,548	\$ 34,562	\$ 44,243	
6.11	Control Joints	Stamped Concrete Pavement	HVM-207		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	716	LF	\$ 2.00	\$ 1,432						\$ 1,933	\$ 2,082	\$ 2,187	\$ 2,475	\$ 3,168	
												\$ 1,069,256		\$ -		\$ -	\$ -	\$ -	\$ 1,306,627	\$ 1,407,095	\$ 1,599,226	\$ 1,847,797	\$ 2,365,336

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Historic Village Parsonage

Building Information				Deficiency Priorities				Deficiency Categories															
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 1,500 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 1871				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees															
								Annual Maintenance includes labor and material only															

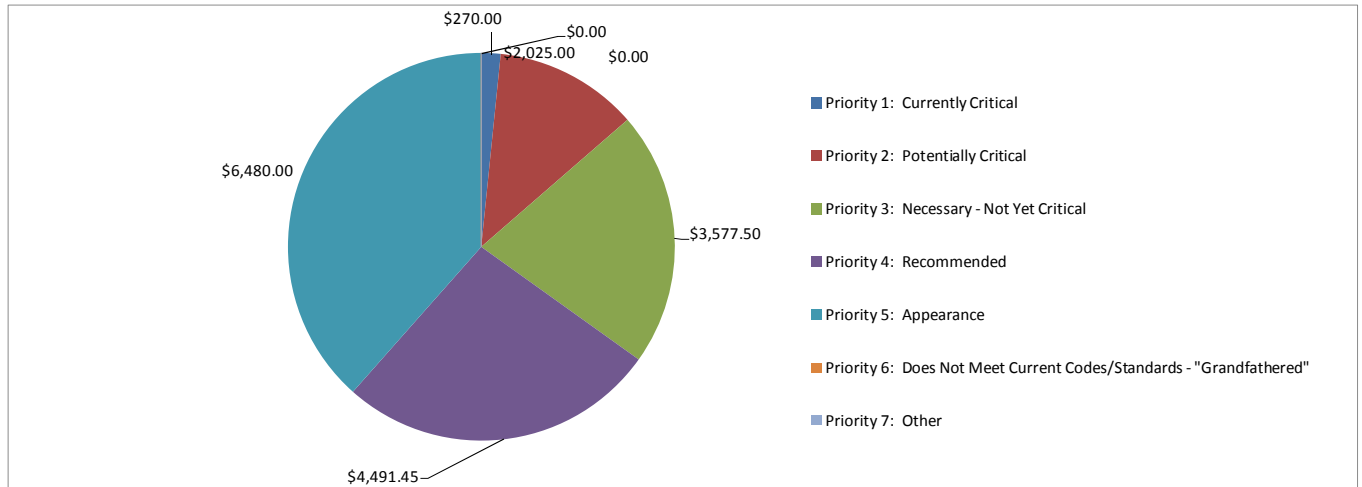
City of Troy
Facility Condition Assessment
April 2018

Historic Village Parsonage

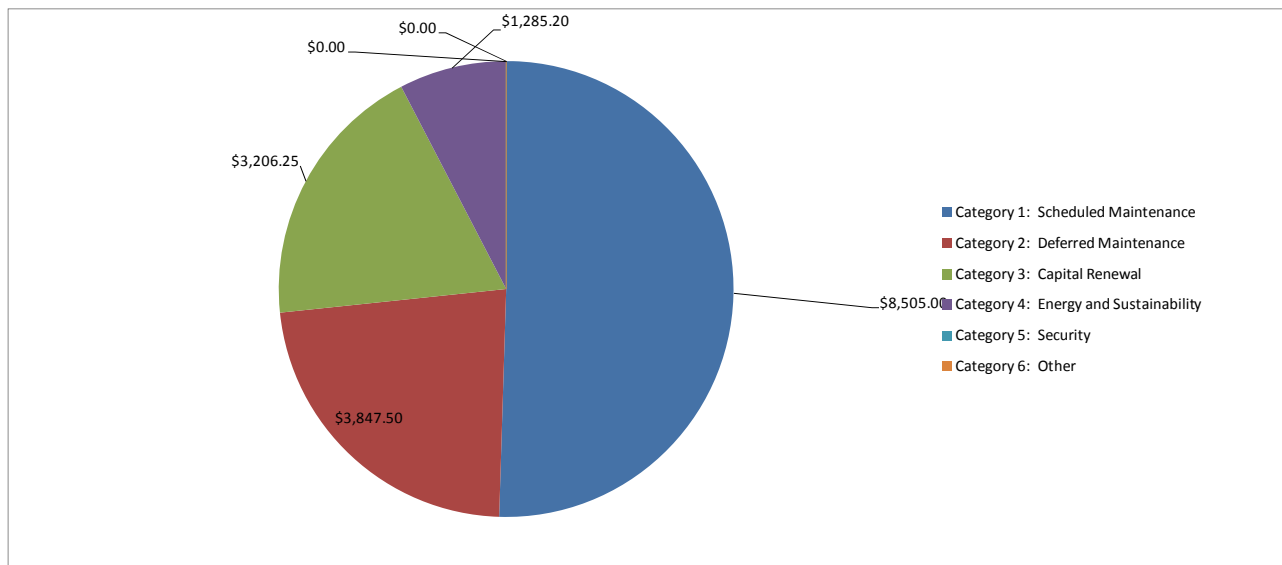
Building Information				Deficiency Priorities				Deficiency Categories														
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 1,500 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 1871				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
																Note: Project Cost includes 35% mark-ups and fees						
																Annual Maintenance includes labor and material only						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
5.0	Plumbing System																					
5.1	Water Heater	Basement		HVP-P-1	3	3	The 30 gallon electric water heater is in fair condition.	Replace the water heater with like kind in the next 5 to 10 years.	1	EA			\$ 5,025.00	\$ 5,025						\$ 7,675	\$ 8,683	\$ 11,115
5.2	Plumbing Fixtures	Throughout			4	3	Plumbing fixtures (sink, sump pump) are in good condition.	Replace the fixtures in the next 10 to 20 years.	1	LS			\$ 2,000.00	\$ 2,000							\$ 3,456	\$ 4,425
5.3	Fire Protection	Building			4	3	The fire protection service and sprinkler piping are in good condition.	Replace the system in the next 10 to 20 years.	1500	SF			\$ 4.00	\$ 6,000							\$ 10,368	\$ 13,272
												\$ 37,550		\$ 22,825		\$ 7,858	\$ 726	\$ 55,901	\$ 60,199	\$ 77,031	\$ 117,914	\$ 150,940
6.0	Site																					
	No comments.																					
												\$ -		\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



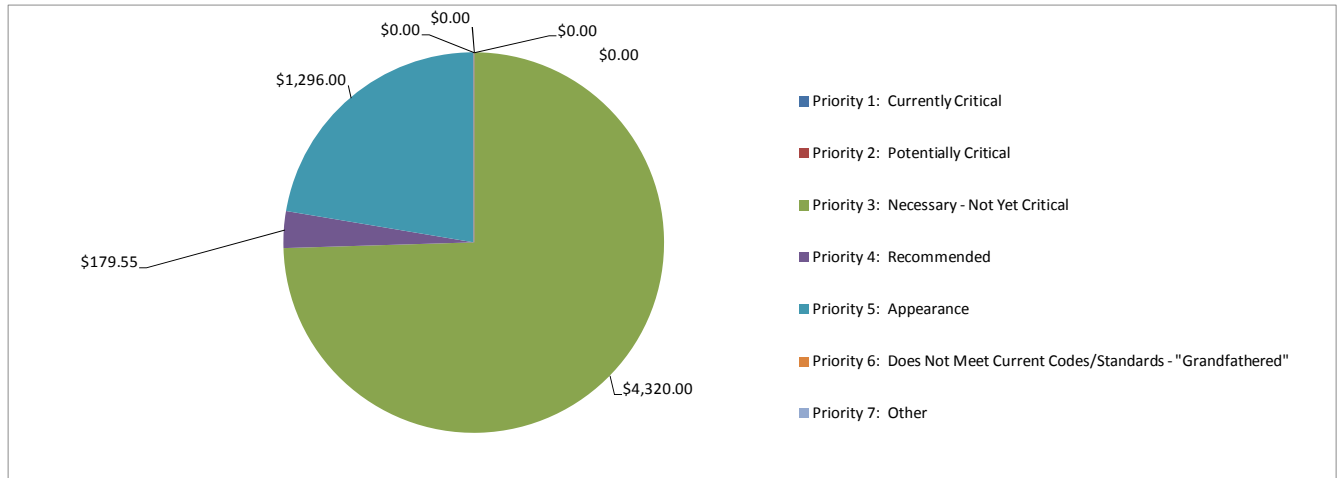
City of Troy
Facility Condition Assessment
April 2018

Historic Village Poppleton School

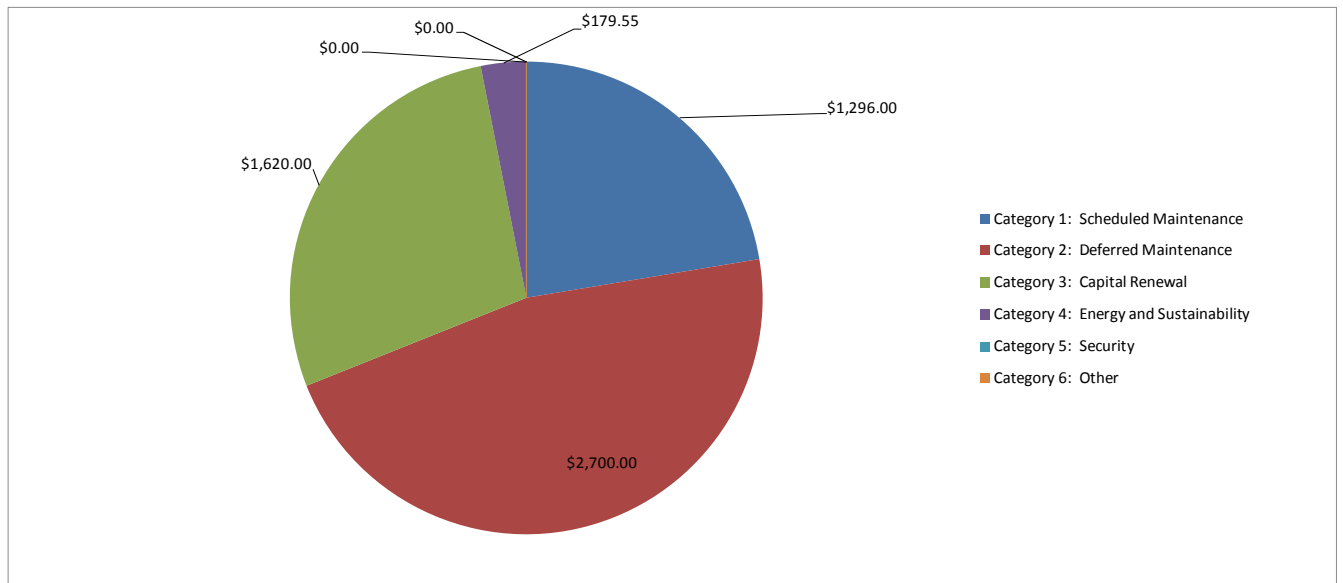
Building Information				Deficiency Priorities				Deficiency Categories													
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance													
Building Area: 1,500 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance													
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal													
Year Built: 1877				Priority 4: Recommended				Category 4: Energy and Sustainability													
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security													
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other													
				Priority 7: Other																	
								Note: Project Cost includes 35% mark-ups and fees													
								Annual Maintenance includes labor and material only													

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



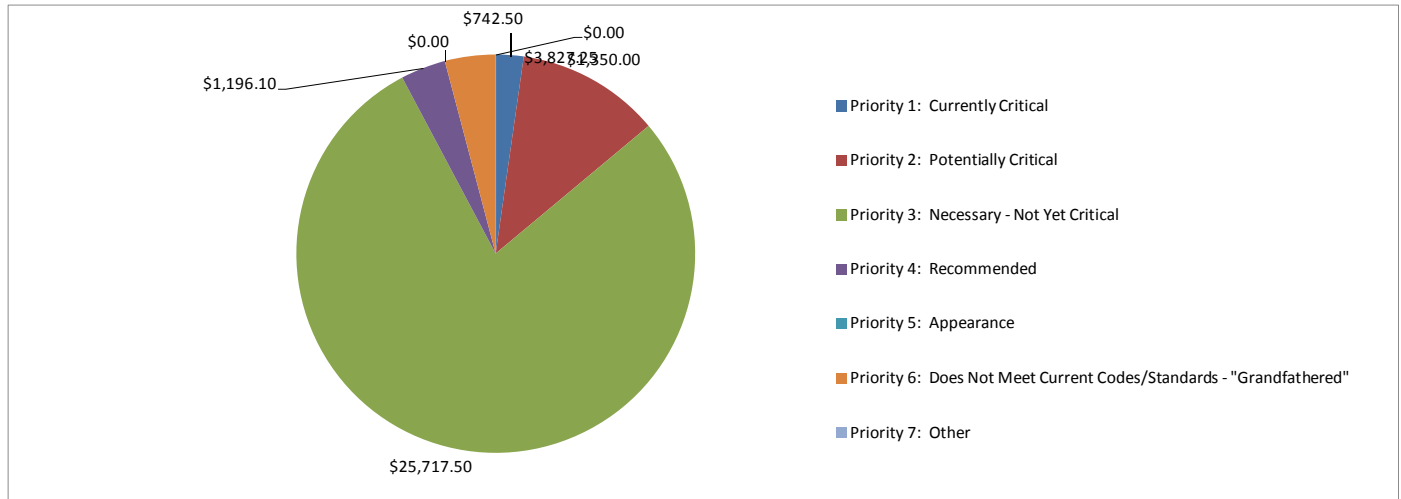
City of Troy
Facility Condition Assessment
April 2018

Historic Village Print Shop

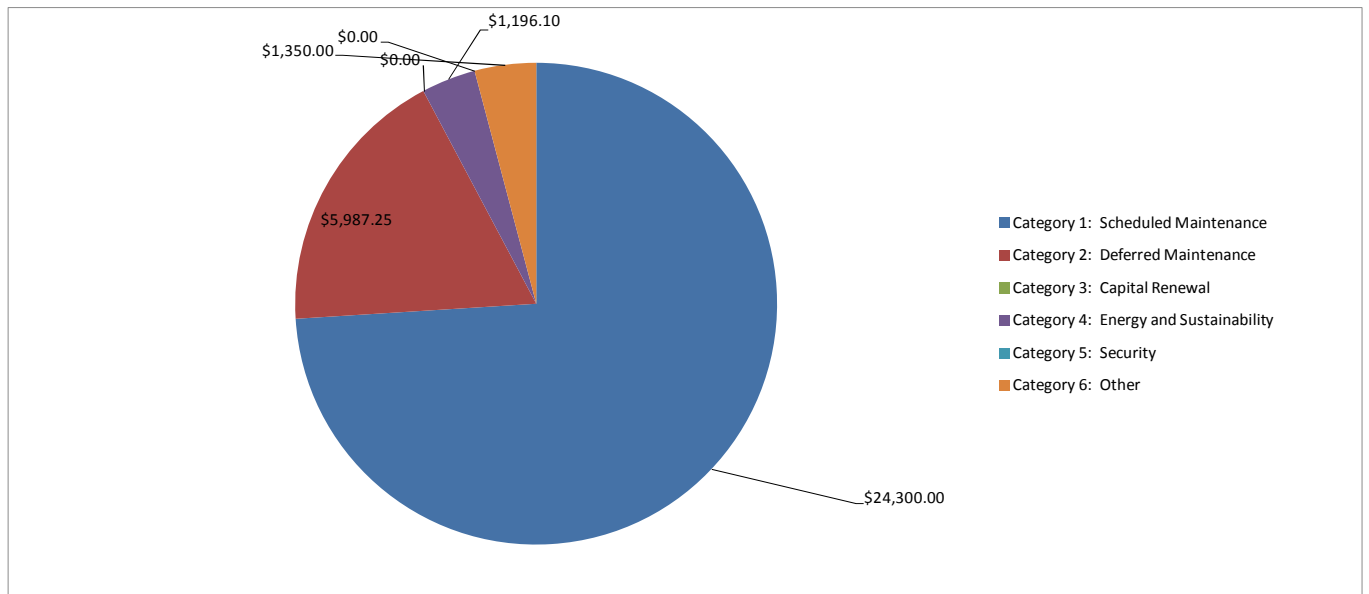
Building Information			Deficiency Priorities				Deficiency Categories															
Address: 60 West Wattles Road			Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 320 SF			Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1			Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 1968			Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: March 2018			Priority 5: Appearance				Category 5: Security															
			Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
			Priority 7: Other				*Lower score equals higher priority															
Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Floor	Front Porch	HVPR-016 HVPR-022		3	3	The wood floor boards do not have a finish and are severely weathered. Some are rotted on the ends and are loose, presenting a safety hazard.	Replace wood floor boards and subframing. New subframing should be treated lumber.	400	SF	\$ 3.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
1.2	Cedar Shingles	Roof	HVPR-014 HVPR-015		3	2	The cedar shingles have curled in several locations.	Replace curled shingles. Verify breather underlayment was installed.	1	LS	\$ 2,000.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
2.0	Building Interior																					
2.1	Floor	Work Room	HVPR-008		5	1	The wood floor finish has been worn away in several locations.	Refinish the wood floor.	320	SF	\$ 3.00	\$ 960						\$ 1,296	\$ 1,396	\$ 1,466	\$ 1,659	\$ 2,124
3.0	Electrical System																					
3.1	Panelboard	First Floor, South Wall		HVPR-E-1	4	3	Equipment is in good condition.	Plan on replacing in 2034.	1	EA					\$ 1,675.00	\$ 1,675						\$ 3,706
3.2	Lighting Control System	Attic			4	4	Lights are manually controlled.	Install occupancy sensors to automatically shut off lighting in unoccupied spaces.	1	EA					\$ 285.00	\$ 285						\$ 631
3.3	Interior Building Lighting	Work Room			4	4	Incandescent lamp in antique fixture.	Lamp should be replaced with vintage look LED lamp.	1	EA					\$ 41.50	\$ 42		\$ 56	\$ 60	\$ 63	\$ 72	\$ 92
3.4	Interior Building Lighting	Attic			4	4	Incandescent lamps in porcelain sockets.	Replace with LED lamps.	2	EA					\$ 25.00	\$ 50	\$ 25	\$ 68	\$ 73	\$ 76	\$ 86	\$ 111
3.5	Exterior Building Lighting	Entrance			4	4	Incandescent lamp in antique fixture.	Lamp should be replaced with vintage look LED lamp.	1	EA					\$ 41.50	\$ 42		\$ 56	\$ 60	\$ 63	\$ 72	\$ 92
4.0	Mechanical System																					
4.1	Furnace	Attic		HVPR-M-1	4	3	The 66 MBH horizontal gas fired furnace is in good condition.	Replace the furnace with like kind in the next 20 years.	1	EA			\$ 3,800.00	\$ 3,800								\$ 8,406
5.0	Plumbing System																					
5.1	Plumbing Fixtures	Throughout			3	3	The sink and faucet are in fair condition.	Replace the fixtures in the next 10 years.	1	LS			\$ 2,000.00	\$ 2,000							\$ 3,456	\$ 4,425
												\$ 4,160	\$ 5,800		\$ 2,093	\$ 25	\$ 5,796	\$ 6,241	\$ 6,557	\$ 10,875	\$ 26,664	
6.0	Site																					
	No comments.																					
												\$ -	\$ -		\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



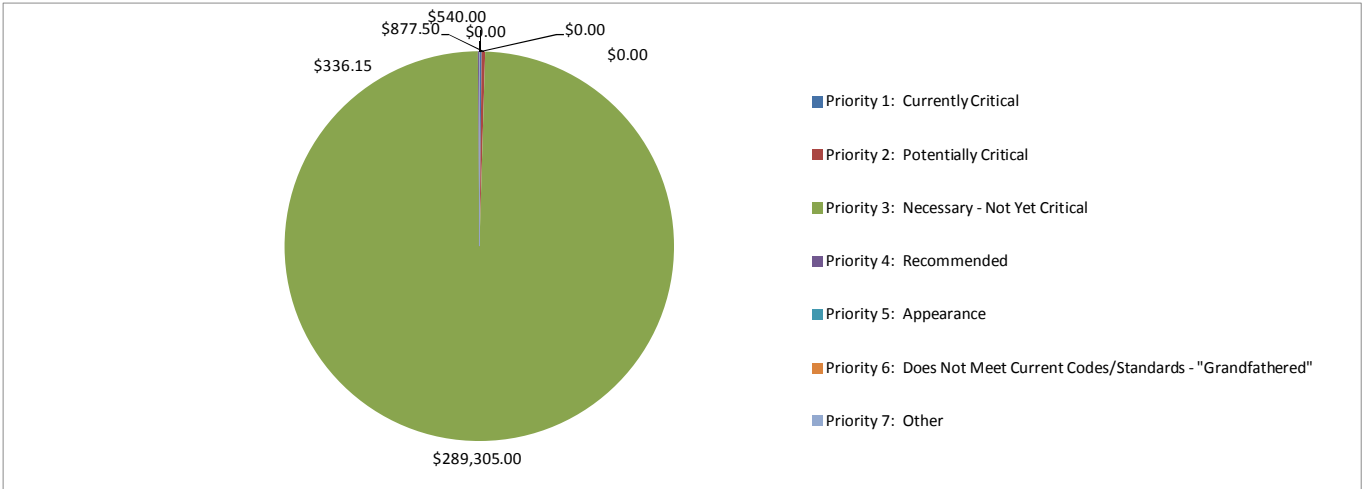
City of Troy
Facility Condition Assessment
April 2018

Historic Village Troy Hall

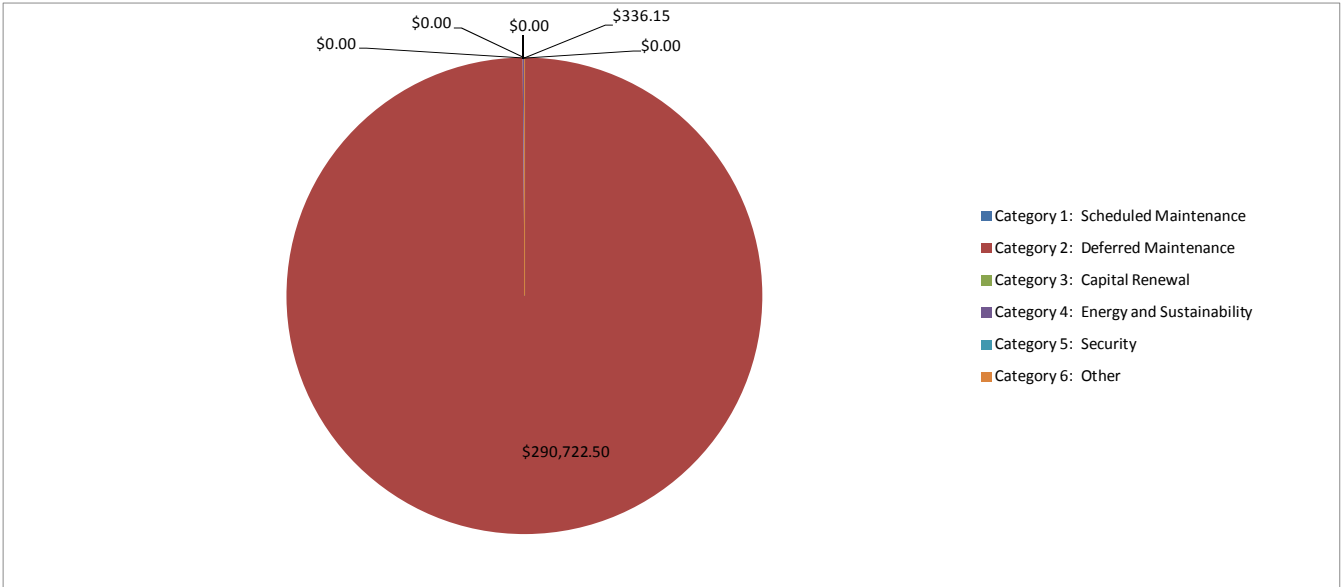
Building Information				Deficiency Priorities				Deficiency Categories													
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance													
Building Area: 500 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance													
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal													
Year Built: 1860				Priority 4: Recommended				Category 4: Energy and Sustainability													
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security													
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other													
				Priority 7: Other																	
								Note: Project Cost includes 35% mark-ups and fees													
								Annual Maintenance includes labor and material only													

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

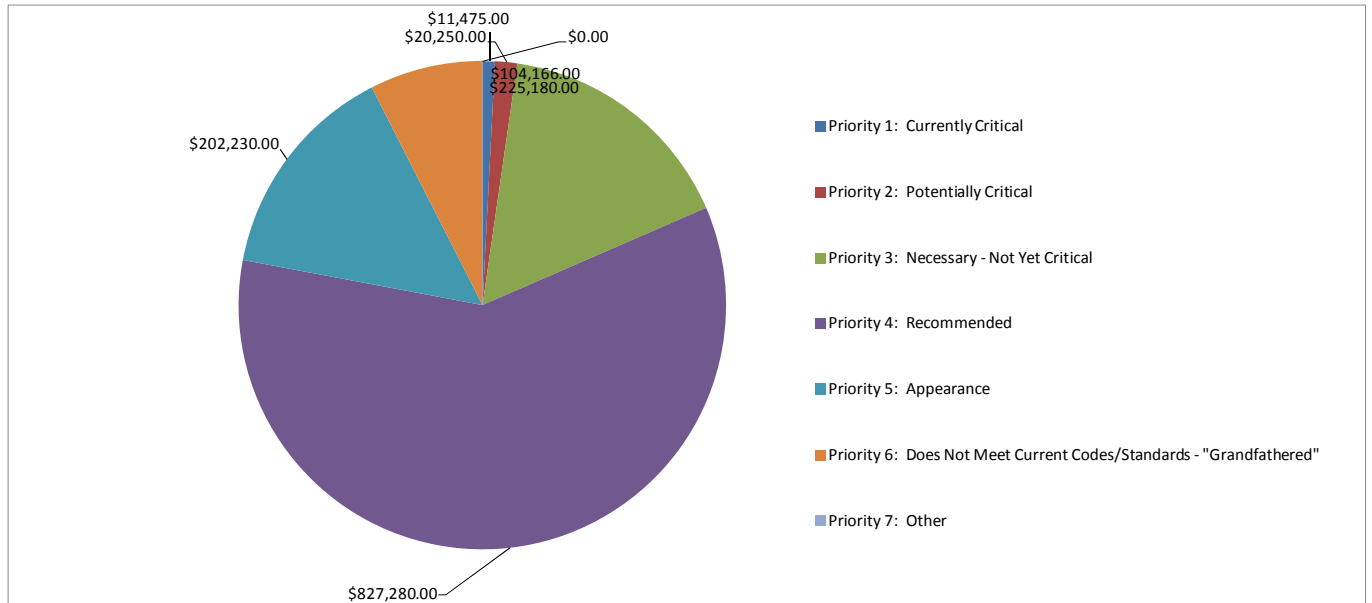
Historic Village Wagon Shop

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 60 West Wattles Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 600 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 1860				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
																		Note: Project Cost includes 35% mark-ups and fees				
																		Annual Maintenance includes labor and material only				
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Skirt Boards	All Elevations	HVWS-012 HVWS-019		3	2	The paint has delaminated from the wood skirt boards.	Remove delaminating paint and repaint wood skirt boards.	1	LS	\$ 300.00	\$ 300						\$ 405	\$ 436	\$ 458	\$ 518	\$ 664
1.2	Windows	West Elevation	HVWS-015		3	2	The paint has delaminated from the wood sill and the wood sill has rotted.	Replace the damaged wood sill and paint new wood sill.	1	LS	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
1.3	Cedar Shingles	Roof	HVWS-014		3	2	The cedar shingles have curled in several locations and the wood roof sheathing has sagged.	Replace damaged wood roof sheathing. Install underlayment, breather underlayment flashings and cedar shingles.	712	SF	\$ 300.00	\$ 213,600						\$ 288,360	\$ 310,532	\$ 326,253	\$ 369,125	\$ 472,511
1.4	Windows	East Elevation			1	2	Sill at east window is rotted at south end.	Provide dutchman repair of window. Employ qualified window restoration firm.	1	LS	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
1.5	Wood Trim	North Elevation			2	2	Bottom of board above door at north wall is rotted.	Replace rotted board with new board to match existing; prep and paint.	1	LS	\$ 200.00	\$ 200						\$ 270	\$ 291	\$ 305	\$ 346	\$ 442
1.6	Skirt Boards	All Elevations			2	2	Scattered rotting on wood drip cap.	Selectively replace drip cap to match existing.	1	LS	\$ 250.00	\$ 250						\$ 338	\$ 363	\$ 382	\$ 432	\$ 553
1.7	Batten Board	West Elevation			2	2	Bottom of batten board rotted at one location on west elevation.	Replace rotted portion of batten board with new to match existing.	1	LS	\$ 200.00	\$ 200						\$ 270	\$ 291	\$ 305	\$ 346	\$ 442
2.0	Building Interior																					
	No comments.																					
3.0	Electrical System																					
3.1	Power	Served from an unknown structure																				
3.2	Interior Building Lighting	Work Room			4	4	Incandescent lamps in antique fixtures.	Lamps should be replaced with vintage look LED lamps	6	EA					\$ 41.50	\$ 249	\$ 75	\$ 336	\$ 362	\$ 380	\$ 430	\$ 551
4.0	Mechanical System																					
	No comments.																					
5.0	Plumbing System																					
	No comments.																					
												\$ 215,350	\$ -	\$ 249	\$ 75	\$ 291,059	\$ 313,438	\$ 329,306	\$ 372,580	\$ 476,933		
6.0	Site																					
	No comments.																					
												\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

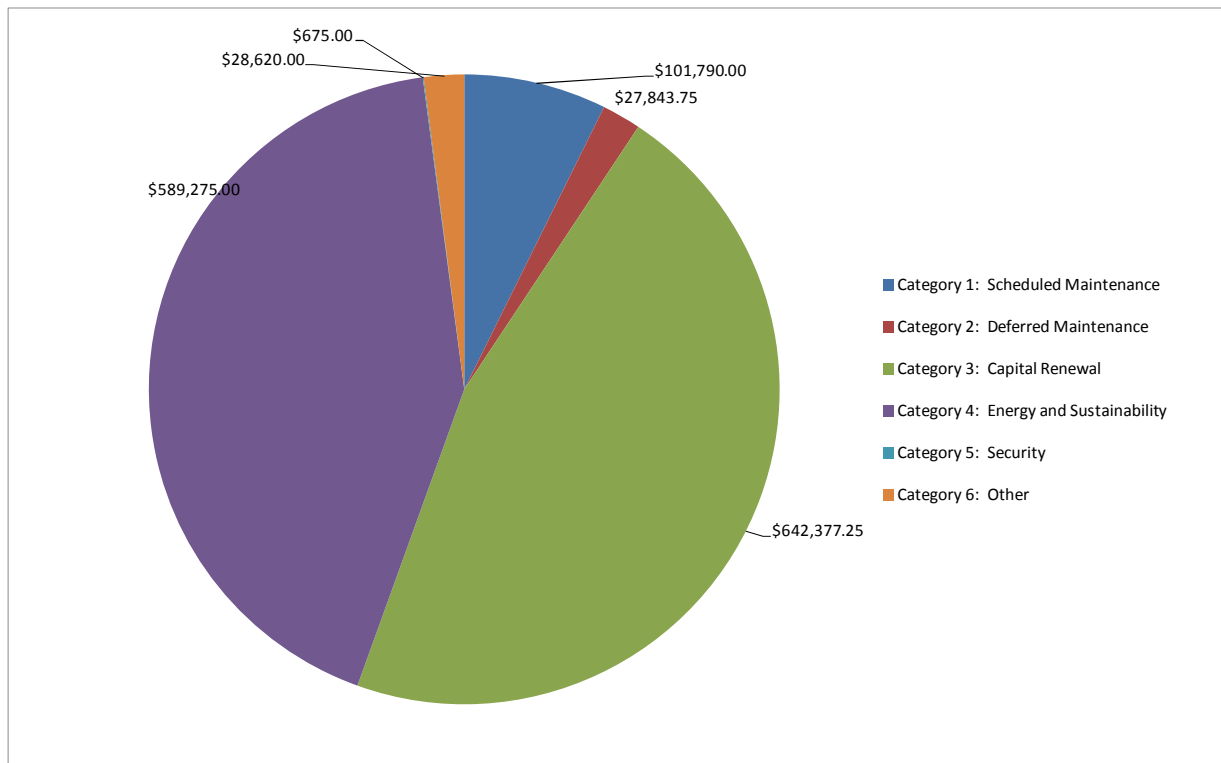


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
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April 2018

Troy Public Library

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 510 West Big Beaver Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area - Basement: 4,757 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
Building Area - First Floor: 39,873 SF				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Building Area - Total: 44,630 SF				Priority 4: Recommended				Category 4: Energy and Sustainability														
No. of Floors: 2				Priority 5: Appearance				Category 5: Security														
Year Built: 1969/1982				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
Evaluation Date: January 2018				Priority 7: Other																		
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1.0	Building Exterior																					
1.1	Steel Lintels	Above Doors and Windows			3	2	The steel brick lintels over each door and window opening is corroded.	Using mechanical tools, remove corrosion from the steel lintels. Prime and paint with an exterior grade paint.	35	LF	\$ 75.00	\$ 2,625						\$ 3,544	\$ 3,816	\$ 4,009	\$ 4,536	\$ 5,807
1.2	Door	Exterior Stair	TPL-040		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace frame with an aluminum frame. Replace door with a fiberglass reinforced polyester door.	1	LS	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
1.3	Roofing System	Roof			4	3	The roofing system is a 3-ply modified asphalt built-up roof with gravel surfacing.	Warranty expires on April 24, 2022. Replace with same in 2028.	39,873	SF	\$ 25.00	\$ 996,825								\$ 1,722,628	\$ 2,205,109	
1.4	Elevator Door Detection Edge	Elevator			4	3	The hoistway and elevator car doors do not have electronic eye detection. If the doors meet a restriction, they retract.	Install a 2D infrared door detection edge to the doors so they retract after detecting a restriction via electronic eye.	1	LS	\$ 3,600.00	\$ 3,600						\$ 4,860	\$ 5,234	\$ 5,499	\$ 6,221	\$ 7,964
1.5	Elevator Sill Support Angle	Elevator	TPL-400		1	1	The steel angle supporting the elevator hoistway sill in the basement is severely corroded due to water infiltration into the elevator pit.	Replace the steel angle with a galvanized steel angle. Salvage and reset the elevator hoistway sill on the new angle. Replace the corroded steel fascia.	1	LS	\$ 8,500.00	\$ 8,500						\$ 11,475	\$ 12,357	\$ 12,983	\$ 14,689	\$ 18,803
1.6	Elevator Load Testing	Elevator			4	1	Recommended safety testing from the elevator service contractor.	To verify the integrity of the in-ground hydraulic elevator piston seals, a full load needs to be applied to the car for a pre-determined amount of time. A certified elevator technician will inspect the seals around the piston for any leaks.	1	LS	\$ 1,400.00	\$ 1,400						\$ 1,890	\$ 2,035	\$ 2,138	\$ 2,419	\$ 3,097
1.7	Soft Starter	Elevator			4	3	The existing motor starter controls the electrical voltage and current from your building power source to the elevator. The existing motor starter is obsolete and parts to repair may not be available, which can lead to extended downtime and unplanned costs to return the elevator to service.	A soft starter will add phase, over-voltage and under-voltage protection to major elevator components. This protection helps prevent the motor from burnout during phase loss and enhances motor life. It will also provide potential energy savings by changing the amount of energy used by the motor according to load on the motor, while keeping the motor speed the same.	1	LS	\$ 3,600.00	\$ 3,600						\$ 4,860	\$ 5,234	\$ 5,499	\$ 6,221	\$ 7,964
1.8	Elevator Power Unit and Pump	Elevator			4	1	The existing elevator power unit and pump have exceeded their expected serviceable life.	Replace elevator power unit and pump.	1	LS	\$ 21,500.00	\$ 21,500						\$ 29,025	\$ 31,257	\$ 32,839	\$ 37,154	\$ 47,561
1.9	Elevator Modernization	Elevator			4	3	The existing car finishes, power unit, pump, motor, controls and safety features should be replaced in 2038.	Replace all hydraulic elevator serviceable components and car finishes.	1	LS	\$ 130,000.00	\$ 130,000										\$ 287,577
2.0	Building Interior																					
2.1	Blue Carpet Tiles	Adult Services, et.al.	TPL-019 TPL-020		5	3	The carpet tiles are severely worn.	Remove carpet tiles and replace with new carpet tiles in 2023.	43811	SF	\$ 5.50	\$ 240,961								\$ 368,043	\$ 416,407	\$ 533,037
2.2	Gypsum Board	Adult Services	TPL-021 TPL-023		3	2	Gypsum board has been damaged by moisture, furnishings and thermal expansion.	Remove damaged portion and replace with impact resistant grade gypsum board and paint.	1	LS	\$ 10,000.00	\$ 10,000						\$ 13,500	\$ 14,538	\$ 15,274	\$ 17,281	\$ 22,121
2.3	Acoustical Lay-in Ceiling Panels	Adult Services	TPL-024 TPL-025		3	2	Several ceiling panels are water damaged at the south side of Adult Services.	Repair leak and replace damaged ceiling panels.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
2.4	Window Treatments	Computers	TPL-026		5	2	The bottoms of horizontal window treatments are damaged.	Replace damaged metal slats.	1	LS	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
2.5	Terrazzo Floor	Corridor	TPL-027		3	2	The terrazzo at the bottom of the Corridor ramp has multiple cracks.	Grout cracks, polish to a natural finish and seal with an impregnator sealer.	200	SF	\$ 7.00	\$ 1,400						\$ 1,890	\$ 2,035	\$ 2,138	\$ 2,419	\$ 3,097
2.6	Windows	Original, South, Building	TPL-028		4	4	The windows are original single pane glass with non-thermally broken aluminum frames.	Replace with one inch insulating glass units in thermally broken aluminum frames. Replace perimeter sealant with an exterior grade silicone sealant.	500	SF	\$ 65.00	\$ 32,500						\$ 43,875	\$ 47,249	\$ 49,641	\$ 56,164	\$ 71,894
2.7	Interior Brick	Youth Reading Stacks, et.al.	TPL-029		5	1	Efflorescence and mortar debris cover multiple areas of the interior bricks.	Clean brick with a non-acidic cleaning agent.	1	LS	\$ 8,000.00	\$ 8,000						\$ 10,800	\$ 11,630	\$ 12,219	\$ 13,825	\$ 17,697

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2.8	Skylights	Youth Reading Area	TPL-030		2	1	The skylights are leaking and damaging interior finishes.	At the time of this report, the skylight installation is two years old and should have a warranty for materials and labor. The continuity of the flashing and sealant should be verified by the installing contractor. If defective, those items and/or other installed items should be corrected and repairs to the interior finishes be charged to the skylight contractor.	1	LS	\$ -	\$ -						\$ -	\$ -	\$ -	\$ -	\$ -
2.9	Countertop Height	Staff Lunch Room	TPL-032		6	3	The countertop height exceeds the code maximum height of 34 inches.	Replace base cabinets with shorter/code compliant base cabinets and install new solid surface counter. Replace sink and faucet.	14	LF	\$ 275.00	\$ 3,850	\$ 1,200.00	\$ 16,800				\$ 27,878	\$ 30,021	\$ 31,541	\$ 35,686	\$ 45,681
2.10	Ramp Slope	Staff Lunch Room			6	3	The floor slope into the room exceeds the code permitted maximum slope of 1:12 (4.7636 degrees).	Replace concrete floor slab with a concrete ramp no greater than the code permitted slope.	1	LS	\$ 4,000.00	\$ 4,000						\$ 5,400	\$ 5,815	\$ 6,110	\$ 6,912	\$ 8,849
2.11	Ceiling Height	Bookstore			6	3	The acoustical lay-in ceiling system height is lower than the code permitted minimum height of 7 feet 6 inches.	Raise the acoustical lay-in ceiling system height to a code compliant height. Modify above ceiling ducts to accommodate the higher ceiling elevation. Replace fluorescent light fixtures with flat LED panel light fixtures and new lighting controls.	932	SF	\$ 6.50	\$ 6,058	\$ 3.50	\$ 3,262	\$ 7.50	\$ 6,990		\$ 22,019	\$ 23,712	\$ 24,912	\$ 28,186	\$ 36,080
2.12	Water Infiltration	Book Storage 7	TPL-035		3	6	Water has infiltrated under the CMU foundation wall and into the south and east sides of the room.	Excavate top soil to foundation wall footing. Replace drain tile and verify connection to existing sump pump in Electrical Room. Route and fill cracks in CMU foundation wall. Apply membrane waterproofing over CMU foundation wall and top of concrete footing. Below the grade line, cut in a reglet with exterior grade silicone sealant. Apply drainage mat over membrane waterproofing. Apply rigid insulation over drainage mat. Cover drain tile with pea stone. Backfill and compress in 8 inch lifts top soil. Grade top soil away from building. Plant vegetation.	1	LS	\$ 12,000.00	\$ 12,000						\$ 16,200	\$ 17,446	\$ 18,329	\$ 20,737	\$ 26,546
2.13	Water Infiltration	Electrical Room (Basement)	TPL-036 TPL-037		3	6	Water has infiltrated under the CMU foundation wall and into the south side of the room.	The exterior floor drain at the bottom of the exterior stairs drains poorly and permits water infiltration into the Electrical Room. Remove all organic material and test water flow.	1	LS	\$ 2,000.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
2.14	Door Hardware	Stair	TPL-038		6	6	The type of exit hardware on the stair is not code compliant for the number of occupants in the basement.	Replace stair door hardware with panic hardware. Remove the non-code compliant door hold open device from the bottom of the stair door.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655

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2.15	Elevator Pit	Elevator	TPL-401		2	6	There is water in the elevator pit (code violation).	Prior to correction, the elevator pit and its equipment must be inspected, under the code required service agreement, by a licensed elevator inspector. They must be provided pit access and be present during the entire correction process. Remove all standing water and oil from the pit's concrete surfaces. Remove sump pump and cap piping inside elevator concrete pit wall. Fill opening in elevator concrete pit wall with concrete with a crystalline waterproofing admixture. Route all cracks and defective construction joints and fill with a cementitious packing mortar compatible with a crystalline waterproofing system. Apply an 1/8 inch thick slurry coat of a crystalline waterproofing system over all concrete surfaces. Add 1/4 inch thick perforated cover plate to the sump pit.	1	EA	\$ 6,000.00	\$ 6,000						\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Entire Building			6	3	Additional fixtures with emergency back-up are required to comply with the current code.	Add emergency battery packs to select existing fixtures.	50	EA					\$ 300.00	\$ 15,000	\$ 1,600	\$ 20,250	\$ 21,807	\$ 22,911	\$ 25,922	\$ 33,182
3.2	Exit Signs	Basement			3	3	Additional exit signs are required.	Add exit signs to direct to stairs.	3	EA					\$ 525.00	\$ 1,575		\$ 2,126	\$ 2,290	\$ 2,406	\$ 2,722	\$ 3,484
3.3	Emergency Egress Lighting Power	XA serves Adult Services and X serves Children's Services		TPL-E-17 TPL-E-18	6	3	Source for emergency power (sump pumps and egress lighting) is no longer code compliant.	Add 10 kW natural gas generator, emergency and standby ATS & panels.	1	EA					\$ 20,000.00	\$ 20,000		\$ 27,000	\$ 29,076	\$ 30,548	\$ 34,562	\$ 44,243
3.4	Service Entrance Switchboard (1983)	Entire Building		TPL-E-17	4	2	Rust at bottom of enclosure.	Address basement flooding. Inspect interior of switchboard and repair.	1	LOT					\$ 2,000.00	\$ 2,000		\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
3.5	Switchboard (1970)	Children's Services		TPL-E-2	2	3	Defective 200 amp switch. LP-D was relocated to 60 amp switch.	Replace switchboard with 600 amp distribution panel.	1	LOT					\$ 6,000.00	\$ 6,000		\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273
3.6	Lighting Control System	E & F serve Adult Services and C & D serve Children's Services		TPL-E-5 TPL-E-6 TPL-E-7 TPL-E-8	4	4	Manually switched breaker panels were replaced with remote controlled breaker panels.	Program system to reduce lighting levels to better match building use.	1	LS					\$ 6,000.00	\$ 6,000		\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273
3.7	Fire Alarm Control Panel	East Vestibule et. al.		TPL-E-21	4	5	Internal calendar has wrong date and time. System adequately serves the building.	Program system to correct date and time so recorded history can be matched to events for analysis. Replace batteries in 5-year increments.	1	LS					\$ 500.00	\$ 500		\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
3.8	Cove Lighting	Children's and Adult Services			4	4	Drawing E-2 indicates 32 2-lamp fluorescent fixtures in each cove.	Replace with half as many LED fixtures for significant energy and maintenance savings.	2,560	EA					\$ 110.00	\$ 281,600	\$ 893	\$ 380,160	\$ 409,391	\$ 430,116	\$ 486,637	\$ 622,936
4.0	Mechanical System																					
4.1	RTU-1	Roof		TPL-M-1	4	3	Existing RTU is in fair condition, standard efficiency, and approaching the end of its lifecycle. Unit uses R-22 refrigerant (phased out). 4 Ton.	Replace with high efficiency unit of like and kind model and size/output. 4 ton unit. Mount on existing curb.	1	LS			\$ 10,080.00	\$ 10,080	\$ 562.00	\$ 562	\$ 1,900	\$ 14,367	\$ 15,471	\$ 16,255	\$ 18,391	\$ 23,542
4.2	RTU-2	Roof		TPL-M-2	4	3	Existing RTU is in fair condition, standard efficiency, and approaching the end of its lifecycle. Unit uses R-22 refrigerant (phased out). 25 Ton.	Replace with high efficiency unit of like and kind model and size/output. 25 ton unit. Mount on existing curb.	1	LS			\$ 63,000.00	\$ 63,000	\$ 562.00	\$ 562	\$ 1,900	\$ 85,809	\$ 92,407	\$ 97,085	\$ 109,842	\$ 140,608
4.3	RTU-3	Roof		TPL-M-3	4	3	Existing RTU is in fair condition, standard efficiency, and approaching the end of its lifecycle. Unit uses R-22 refrigerant (phased out). 20 Ton.	Replace with high efficiency unit of like and kind model and size/output. 20 ton unit. Mount on existing curb.	1	LS			\$ 50,400.00	\$ 50,400	\$ 562.00	\$ 562	\$ 1,900	\$ 68,799	\$ 74,089	\$ 77,839	\$ 88,068	\$ 112,735
4.4	RTU-4	Roof		TPL-M-4	4	3	Existing RTU is in fair condition, standard efficiency, and approaching the end of its lifecycle. Unit uses R-22 refrigerant (phased out). 20 Ton.	Replace with high efficiency unit of like and kind model and size/output. 10 ton unit. Mount on existing curb.	1	LS			\$ 25,200.00	\$ 25,200	\$ 562.00	\$ 562	\$ 1,900	\$ 34,779	\$ 37,453	\$ 39,349	\$ 44,520	\$ 56,989

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4.5	RTU-5	Roof		TPL-M-5	4	3	Existing RTU is in fair condition, standard efficiency, and approaching the end of its lifecycle. Unit uses R-22 refrigerant (phased out).	Replace with high efficiency unit of like and kind model and size/output. 10 ton unit. Mount on existing curb.	1	LS			\$ 25,200.00	\$ 25,200	\$ 562.00	\$ 562	\$ 1,900	\$ 34,779	\$ 37,453	\$ 39,349	\$ 44,520	\$ 56,989		
4.6	RTU-6	Roof		TPL-M-6	4	3	Existing RTU is in fair condition, standard efficiency, and approaching the end of its lifecycle. Unit uses R-22 refrigerant (phased out).	Replace with high efficiency unit of like and kind model and size/output. 5 ton unit. Mount on existing curb.	1	LS			\$ 12,600.00	\$ 12,600	\$ 562.00	\$ 562	\$ 1,900	\$ 17,769	\$ 19,135	\$ 20,104	\$ 22,745	\$ 29,116		
4.7	RTU-7	Roof		TPL-M-7	4	3	Existing RTU is in fair condition, standard efficiency, and approaching the end of its lifecycle. Unit uses R-22 refrigerant (phased out).	Replace with high efficiency unit of like and kind model and size/output. 5 ton unit. Mount on existing curb.	1	LS			\$ 12,600.00	\$ 12,600	\$ 562.00	\$ 562	\$ 1,900	\$ 17,769	\$ 19,135	\$ 20,104	\$ 22,745	\$ 29,116		
4.8	RTU-8	Roof		TPL-M-8	4	3	Existing RTU is in fair condition, standard efficiency, and approaching the end of its lifecycle. Unit uses R-22 refrigerant (phased out).	Replace with high efficiency unit of like and kind model and size/output. 4 ton unit. Mount on existing curb.	1	LS			\$ 10,080.00	\$ 10,080	\$ 562.00	\$ 562	\$ 1,900	\$ 14,367	\$ 15,471	\$ 16,255	\$ 18,391	\$ 23,542		
4.9	RTU-9	Roof		TPL-M-9	4	3	Existing RTU is in fair condition, standard efficiency, and approaching the end of its lifecycle. Unit uses R-22 refrigerant (phased out).	Replace with high efficiency unit of like and kind model and size/output. 4 Ton Unit. Mount on existing curb.	1	LS			\$ 10,080.00	\$ 10,080	\$ 562.00	\$ 562	\$ 1,900	\$ 14,367	\$ 15,471	\$ 16,255	\$ 18,391	\$ 23,542		
4.10	RTU-10	Roof		TPL-M-10	4	3	Existing RTU is in fair condition, standard efficiency, and approaching the end of its lifecycle. Unit uses R-22 refrigerant (phased out).	Replace with high efficiency unit of like and kind model and size/output. 3 ton unit. Mount on existing curb.	1	LS			\$ 7,560.00	\$ 7,560	\$ 562.00	\$ 562	\$ 1,900	\$ 10,965	\$ 11,808	\$ 12,406	\$ 14,036	\$ 17,967		
4.11	Roof Condensers	Roof			4	3	Existing units are in fair condition. Uses R-22 refrigerant (phased out).	Replace with high efficiency unit of like and kind model and size/output. 1 ton output. Typical for three.	3	EA			\$ 7,500.00	\$ 22,500	\$ 560.00	\$ 1,680	\$ 600	\$ 32,643	\$ 35,153	\$ 36,933	\$ 41,786	\$ 53,489		
4.12	Roof Exhaust Fan 1	Roof			5	4	Existing REF is in fair condition.	Replace with like and kind at next capital project improvement cycle. Mount on existing curb.	1	EA			\$ 3,000.00	\$ 3,000	\$ 280.00	\$ 280	\$ 150	\$ 4,428	\$ 4,768	\$ 5,010	\$ 5,668	\$ 7,256		
4.13	Roof Exhaust Fan 2	Roof			5	4	Existing REF is in fair condition.	Replace with like and kind at next capital project improvement cycle. Mount on existing curb.	1	EA			\$ 3,000.00	\$ 3,000	\$ 280.00	\$ 280	\$ 150	\$ 4,428	\$ 4,768	\$ 5,010	\$ 5,668	\$ 7,256		
4.14	Roof Exhaust Fan 3	Roof			5	4	Existing REF is in fair condition.	Replace with like and kind at next capital project improvement cycle. Mount on existing curb.	1	EA			\$ 3,000.00	\$ 3,000	\$ 280.00	\$ 280	\$ 150	\$ 4,428	\$ 4,768	\$ 5,010	\$ 5,668	\$ 7,256		
4.15	Roof Exhaust Fan 4	Roof			5	4	Existing REF is in fair condition.	Replace with like and kind at next capital project improvement cycle. Mount on existing curb.	1	EA			\$ 3,000.00	\$ 3,000	\$ 280.00	\$ 280	\$ 150	\$ 4,428	\$ 4,768	\$ 5,010	\$ 5,668	\$ 7,256		
4.16	Roof Exhaust Fan 5	Roof			5	4	Existing REF is in fair condition.	Replace with like and kind at next capital project improvement cycle. Mount on existing curb.	1	EA			\$ 3,000.00	\$ 3,000	\$ 280.00	\$ 280	\$ 150	\$ 4,428	\$ 4,768	\$ 5,010	\$ 5,668	\$ 7,256		
4.17	Multizone AHU	Lower Level		TPL-M-16	3	4	Unit is in fair condition, but is inefficient.	21,500 CFM, 7 zones.	1	EA			\$ 100,000.00	\$ 100,000			\$ 2,300	\$ 135,000	\$ 145,380	\$ 152,740	\$ 172,811	\$ 221,213		
4.18	Outdoor Air Cooled Chiller	Exterior Slab on Grade			3	1							\$ -				\$ 500	\$ -	\$ -	\$ -	\$ -	\$ -		
4.19	Boiler	Lower Level		TPL-M-11	3	1	Boiler is in good condition.	Replace with like and kind.	1	EA			\$ 80,000.00	\$ 80,000			\$ 450				\$ 138,249	\$ 176,970		
4.20	HWH Pumps	Lower Level		TPL-M-12 TPL-M-13 TPL-M-14	3	1	Pumps are in fair condition.	Replace with like and kind.	4	EA			\$ 11,000.00	\$ 44,000			\$ 1,200				\$ 76,037	\$ 97,334		
4.21	Furnace	Lower Level		TPL-M-18	3	1	Furnace is in good condition.	Replace with like and kind.	1	EA			\$ 6,000.00	\$ 6,000			\$ 350				\$ 10,368	\$ 13,272		
4.22	Furnace	Lower Level		TPL-M-20	3	1	Furnace is in good condition.	Replace with like and kind.	1	EA			\$ 6,000.00	\$ 6,000			\$ 350				\$ 10,368	\$ 13,272		
4.23	Dehumidifier	Lower Level		TPL-M-19	3	1	Dehumidifier is in good condition.	Replace with like and kind.	1	EA			\$ 2,000.00	\$ 2,000							\$ 3,456	\$ 4,425		
4.24	Ductwork	Lower Level			4	3	Existing multi-zone distribution ductwork is run underground throughout the children's library.	Scope and balance existing ductwork for possible contamination and air leakage.	1	LS			\$ 3,500.00	\$ 3,500				\$ 4,725	\$ 5,088	\$ 5,346	\$ 6,048	\$ 7,742		
4.25	Building Controls	Throughout Building			5	3	Existing Andover DDC controls are adequately serving the building at the present time.	Control upgrades and BAS software upgrades should be planned for in 5-year increments.	1	LS			\$ 125,000.00	\$ 125,000				\$ 168,750	\$ 181,725	\$ 190,925	\$ 216,014	\$ 276,517		
4.26	Fire Protection Sprinkler System	Throughout Building											\$ -				\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		

City of Troy
Facility Condition Assessment
April 2018

Troy Public Library

Building Information Address: 510 West Big Beaver Road Building Area - Basement: 4,757 SF Building Area - First Floor: 39,873 SF Building Area - Total: 44,630 SF No. of Floors: 2 Year Built: 1969/1982 Evaluation Date: January 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only									
								*Lower score equals higher priority													

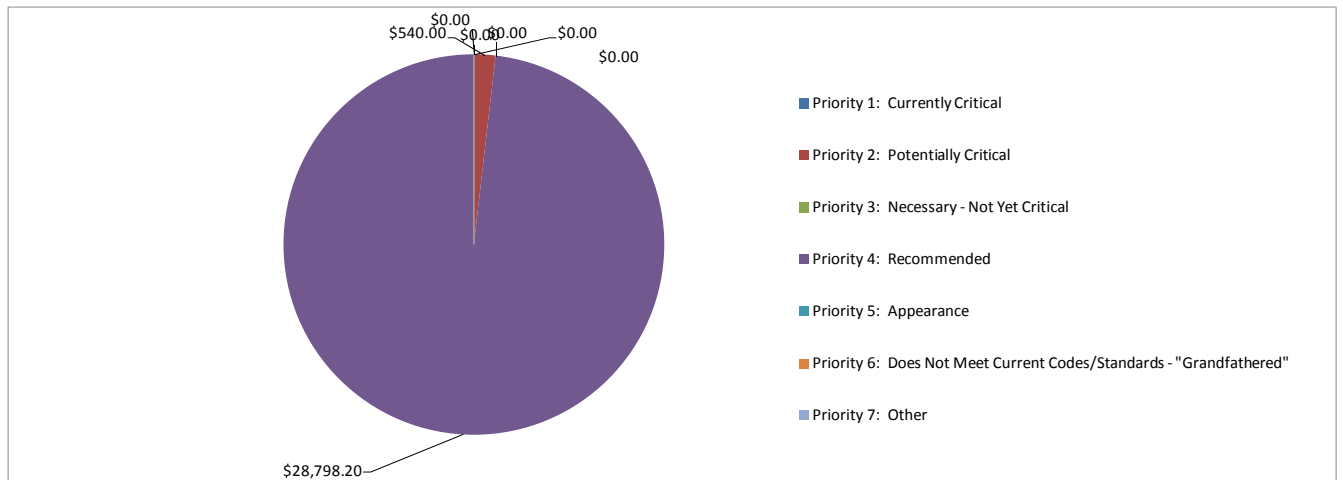
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
5.0	Plumbing System																					
5.1	Domestic Water Heater	Lower Level			3	1	Domestic water heater is in good condition.		1	EA			\$ 2,000.00	\$ 2,000				\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
5.2	Sump Pump	Lower Level			3	1	Pumps are in good condition. Sump and cover are in poor condition.		2	EA			\$ 2,000.00	\$ 4,000				\$ 5,400	\$ 5,815	\$ 6,110	\$ 6,912	\$ 8,849
5.3	Domestic Water Piping	Throughout Building			3	1	Appears to be in good/fair condition.		1	LS			\$ 30,000.00	\$ 30,000				\$ 40,500	\$ 43,614	\$ 45,822	\$ 51,843	\$ 66,364
5.4	Toilet Fixtures	Original Building			5	3								\$ -				\$ -	\$ -	\$ -	\$ -	\$ -
5.5	Toilet Fixtures	1984 Addition			5	3								\$ -				\$ -	\$ -	\$ -	\$ -	\$ -
5.6	Sanitary Piping	Throughout Building			6	5	Sanitary system is adequate and there are no reports of existing issues.	System replacement not anticipated within the study period.						\$ -				\$ -	\$ -	\$ -	\$ -	\$ -
5.7	Storm System	Throughout Building			6	5	Storm system is adequate and there are no reports of existing issues. Interior drain tile added to original building to mitigate lower level water issue.	System replacement not anticipated within the study period.						\$ -				\$ -	\$ -	\$ -	\$ -	\$ -
												\$ 1,500,619	\$ 686,862			\$ 348,365	\$ 27,993	\$ 1,390,581	\$ 1,497,504	\$ 1,941,358	\$ 4,157,576	\$ 5,609,626

6.0 Site																						
6.1	Control Joints	Sidewalks	TPL-041		3	6	The control joints cut/formed in the concrete sidewalks are not sealed.	Seal joints with an exterior grade silicone sealant.	1,667	LF	\$ 2.00	\$ 3,334						\$ 4,501	\$ 4,847	\$ 5,092	\$ 5,762	\$ 7,375
6.2	Asphalt Pavement	Parking Lots	TPL-043 TPL-044		3	3	The asphalt pavement in the northwest parking lot is cracked and does not slope to the drain. The asphalt pavement at the loading dock parking lot is cracked.	Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	30,000	SF	\$ 6.00	\$ 180,000						\$ 243,000	\$ 261,684	\$ 274,932	\$ 311,061	\$ 398,184
6.3	Concrete Sidewalk Curb	Northwest Parking Lot	TPL-046		3	2	The concrete curb has severe cracks.	Replace concrete curb.	1	LS	\$ 2,500.00	\$ 2,500						\$ 3,375	\$ 3,635	\$ 3,819	\$ 4,320	\$ 5,530
6.4	Dock Bumper	Loading Dock	TPL-047		3	2	The dock bumper is damaged and a second bumper is required.	Replace damaged bumper and add second dock bumper. Parge masonry face supporting loading dock slab.	1	LS	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
6.5	Site Lighting	Parking Lots			4	3	Fixtures have been changed to LED.	One pole has no fixture. Replace all poles in 2038.	1	EA					\$ 1,200.00	\$ 1,200					\$ 2,655	
												\$ 188,834		\$ -		\$ 1,200	\$ -	\$ 254,926	\$ 274,527	\$ 288,425	\$ 326,327	\$ 420,381

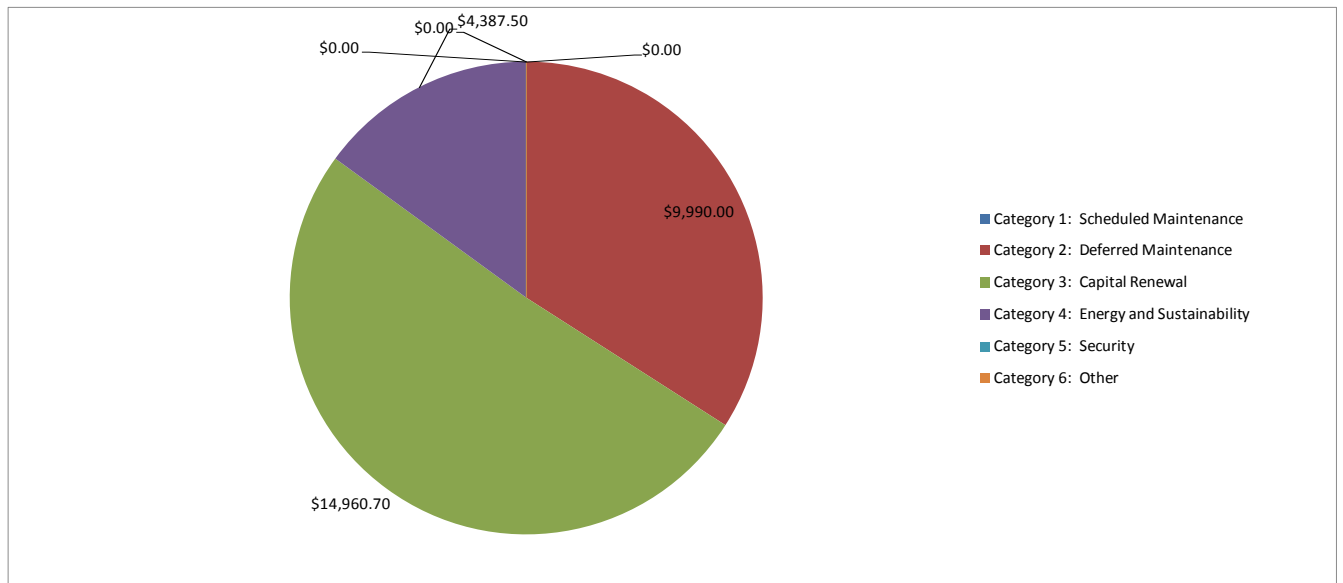


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



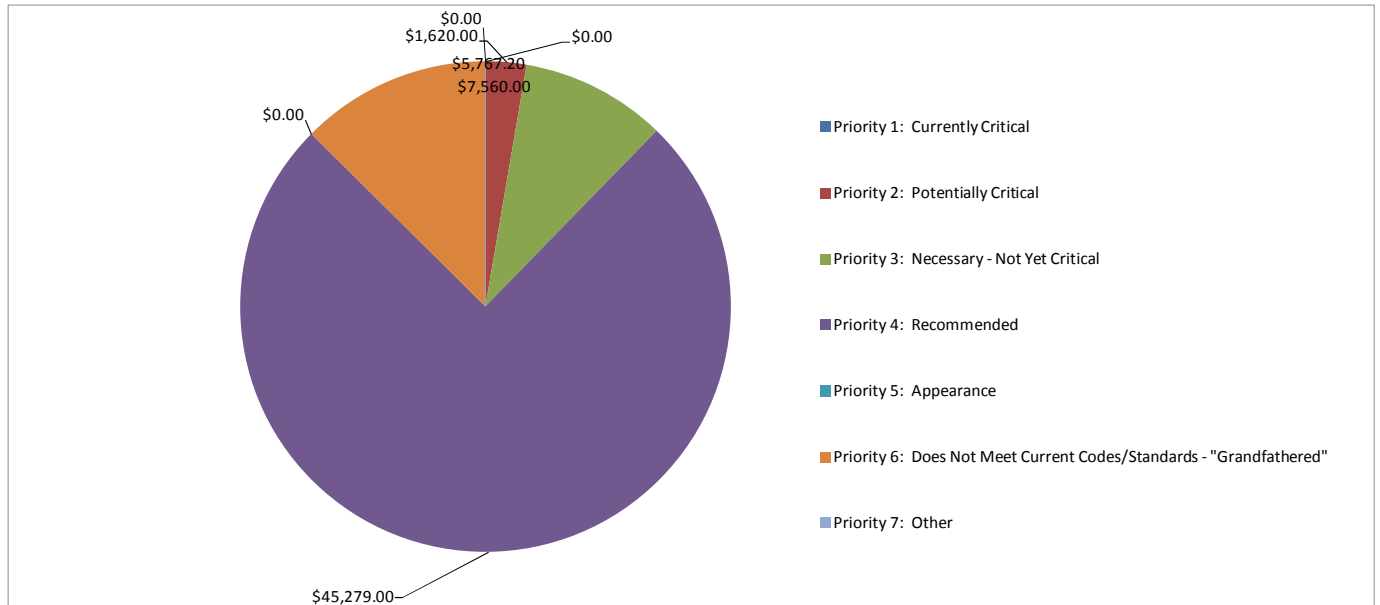
City of Troy
Facility Condition Assessment
April 2018

Lange House

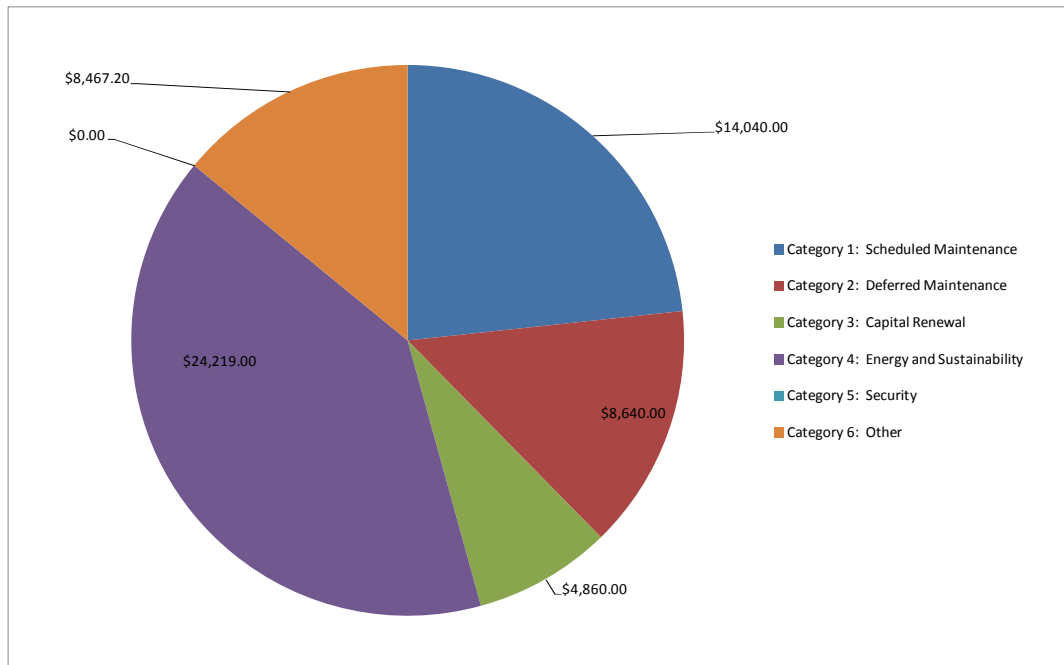
Building Information				Deficiency Priorities				Deficiency Categories														
Address: 109 Lange Street				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 2,814 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: ?				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only														
				*Lower score equals higher priority																		
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Wood Trim	Soffits, Fascias, Column Covers, Window Sills, Door Trim	LH-028 LH-031		4	2	The wood trim throughout the exterior has been damaged due to inadequate protection from moisture.	Replace all damaged wood trim with preservative-treated wood. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer. At wood in acceptable condition, remove paint and apply finish as previously indicated.	1	LS	\$ 7,000.00	\$ 7,000						\$ 9,450	\$ 10,177	\$ 10,692	\$ 12,097	\$ 15,485
1.2	Concrete Pavement	Front Porch	LH-027		2	2	There is a large crack in the concrete floor slab.	Route the crack open and fill with patching mortar.	1	LS	\$ 400.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
1.3	Asphalt Shingles	Roof			2	3	The asphalt shingles are in good condition.	Plan on replacing the asphalt shingles, underlayment and flashings in 2028.	2,125	SF	\$ 4.00	\$ 8,500								\$ 14,689	\$ 18,803	
2.0	Building Interior																					
2.1	Carpet, Linoleum	Stair, Sitting, Dining, et.al.	LH-055		4	3	The carpet has been soiled and the linoleum damaged by the use of spaces as storage.	Replace the carpet and linoleum with a resilient sheet flooring system with welded seams.	1847	SF	\$ 6.00	\$ 11,082						\$ 14,961	\$ 16,111	\$ 16,927	\$ 19,151	\$ 24,515
3.0	Electrical System																					
3.1	Panelboard (Original?)	Basement, Southwest Corner		LH-E-1	4	3	Equipment is 45? years old and in fair condition.	Plan on replacing in 2023.	1	EA					\$ 4,600.00	\$ 4,600				\$ 7,026	\$ 7,949	\$ 10,175
3.2	Lighting Control System	Entire Building			4	4	Lights are manually controlled.	Install occupancy sensors to automatically shut off lighting in unoccupied spaces.	10	EA					\$ 285.00	\$ 2,850		\$ 3,848	\$ 4,143	\$ 4,353	\$ 4,925	\$ 6,305
3.3	Interior Building Lighting	Entire Building			4	4	Incandescent lamps.	Lamps should be replaced with LED lamps.	16	EA					\$ 25.00	\$ 400		\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
4.0	Mechanical System																					
4.1	Furnace	Basement		LH-M-1	2	2	The gas fired furnace with DX cooling coil is in poor condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405
4.2	Air-Cooled Condensing Unit	Outdoors		LH-M-2	2	2	The 3.5 ton condensing unit is in poor condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
5.0	Plumbing System																					
5.1	Water Heater	Basement		LH-P-1	3	3	The 40 MBH 40 gallon water heater is in fair condition.	Replace the water heater with like kind in 2028.	1	EA			\$ 5,025.00	\$ 5,025							\$ 8,684	\$ 11,116
5.2	Plumbing Fixtures	Throughout Building			4	3	Plumbing fixtures (water closets, lavatories, shower, kitchen sink, disposal, laundry tub, sump pump) are in poor condition.	Replace the fixtures in the 2023.	1	LS			\$ 17,350.00	\$ 17,350						\$ 26,501	\$ 29,983	\$ 38,381
											\$ 26,982		\$ 32,175		\$ 7,850		\$ 550	\$ 29,338	\$ 31,594	\$ 81,688	\$ 115,795	\$ 148,228
6.0	Site																					
6.1	Concrete Pavement	Driveway	LH-087		4	3	The concrete pavement adjacent to the garage has cracked and is no longer level.	Remove damaged sections. Recompact subsoil. Pour new concrete with woven wire mesh. Form control joints and seal with an exterior grade silicone sealant. Seal existing control joints in remaining concrete pavement with an exterior grade silicone sealant.	712	SF	\$ 10.00	\$ 7,120						\$ 9,612	\$ 10,351	\$ 10,875	\$ 12,304	\$ 15,750
											\$ 7,120		\$ -		\$ -		\$ -	\$ 9,612	\$ 10,351	\$ 10,875	\$ 12,304	\$ 15,750

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

OEC/Nature Center/Sugar Shack

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 6685 Coolidge Highway				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 9,624 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2001				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
								*Lower score equals higher priority														
								Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Asphalt Pavement	Parking Lots and Drives	NC-226 NC-233		4	3	The asphalt pavement in the parking lots and drives has cracked in several locations, but does drain and is in good condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	37,000	SF	\$ 4.00	\$ 148,000								\$ 255,760	\$ 327,395	
1.2	Control Joints	Patio Concrete Pavement at Sidewalks Stamped Concrete	NC-223 NC-231		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	336	LF	\$ 2.00	\$ 672						\$ 907	\$ 977	\$ 1,026	\$ 1,161	\$ 1,487
1.3	Asphalt Pavement	Walking Path			4	3	The asphalt walking paths are in good condition.	Plan on replacing the 9-foot wide asphalt walking paths in 2038. Remove both layers and recompact the drainage course and add 2-1/2 inch thick bituminous binder course and 1 inch thick bituminous wear course.	3,996	SF	\$ 4.00	\$ 15,984									\$ 35,358	
1.4	Concrete Pavement	Patio	NC-185		3	2	The patio concrete pavement has cracked in one section.	Route the crack open and fill with patching mortar.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
1.5	Exterior Window Sills	All Elevations	NC-174		4	2	The mortar joints at the window sills have deteriorated between the limestone cap sections, allowing water to infiltrate, freeze and push out the mortar.	Grind out 1/2 inch of the limestone cap mortar joints and fill with an exterior grade silicone sealant.	1	LS	\$ 1,600.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
1.6	Wood Trim Finish	All Elevations	NC-176 NC-183		3	2	The wood trim paint has faded and sections of wood trim have been weather damaged.	Replace damaged wood trim sections. Prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	1	LS	\$ 1,600.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
1.7	Paint	Patio Front Porch			4	1	The ceilings and columns are painted and are in acceptable condition.	Plan on repainting the ceilings and columns in 2023 with an adhesion promoting primer and two finish coats of exterior low-luster acrylic enamel over the primer.	1	LS	\$ 4,000.00	\$ 4,000								\$ 6,109	\$ 6,912	\$ 8,848
1.8	Fence	North Side of Building	NC-173		3	3	The wood fence has weathered and the gate hardware partially holds the gate in place.	Plan to replace the wood fence with a vinyl fence in 2021.	1	LS	\$ 1,500.00	\$ 1,500							\$ 2,181	\$ 2,291	\$ 2,592	\$ 3,318
1.9	Asphalt Shingles	Roof			4	3	The asphalt shingles were installed in 2001 and are in good condition.	Plan on replacing the asphalt shingles, underlayment and flashings in 2028.	11,300	SF	\$ 4.00	\$ 45,200									\$ 78,111	\$ 99,989
1.10	Wood Siding	Sugar Shed	NC-203		4	1	The paint on the exterior wood siding, trim and soffit panels is in acceptable condition, but is weathering and is covered with organic material.	Pressure wash with a dirt, algae, mold and mildew stain removing solution and coat with an adhesion promoting primer and two finish coats of exterior low-luster acrylic enamel over the primer.	1	LS	\$ 4,000.00	\$ 4,000						\$ 5,400	\$ 5,815	\$ 6,110	\$ 6,912	\$ 8,849
1.11	Wood Siding	Fire Wood Shed	NC-207		4	1	The paint on the exterior wood siding, trim and soffit panels is in acceptable condition, but is weathering and is covered with organic material.	Pressure wash with a dirt, algae, mold and mildew stain removing solution and coat with an adhesion promoting primer and two finish coats of exterior low-luster acrylic enamel over the primer.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
1.12	Asphalt Shingles	Sugar Shack Roof	NC-204		4	3	The asphalt shingles are in poor condition and are covered in organic material.	Replace with asphalt shingles, underlayment and flashings.	800	SF	\$ 4.00	\$ 3,200						\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079
1.13	Cedar Shingles	Fire Wood Roof	NC-209		4	3	The cedar shingles are in poor condition and are covered in organic material.	Replace with asphalt shingles, underlayment and flashings.	100	SF	\$ 4.00	\$ 400						\$ 540	\$ 582	\$ 611	\$ 691	\$ 885
1.14	Bench	Walking Path	NC-215		2	2	The bench is made of wood and is weathering without protection (i.e. paint) and is covered in organic material. The condition of the bench is good and in character with the walking path.	Pressure wash with a dirt, algae, mold and mildew stain removing solution and coat with an oil-modified polyurethane.	3	EA	\$ 400.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655

City of Troy
Facility Condition Assessment
April 2018

OEC/Nature Center/Sugar Shack

Building Information				Deficiency Priorities				Deficiency Categories															
Address: 6685 Coolidge Highway				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 9,624 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 2001				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other																			
Note: Project Cost includes 35% mark-ups and fees																							
Annual Maintenance includes labor and material only																							
*Lower score equals higher priority																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
1.15	Picnic Table	Main Entrance	NC-229		4	1	The picnic table has wood tops and benches that have weathered.	Refinish all wood surfaces with an oil-modified polyurethane.	4	EA	\$ 800.00	\$ 3,200						\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079	
1.16	Bridge	Walking Path	NC-218		4	1	There is one pre-manufactured wood deck bridge with weathered steel guardrails and supports.	The weathered (i.e. corrosion) appearance is part of a protective, oxidation layer purposely designed into the steel guardrails and supports. Annual inspections, by a structural engineer, are recommended by the bridge manufacturer, Contech Engineered Solutions.	2	EA	\$ 1,200.00	\$ 2,400					\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309		
1.17	Bridge	Walking Path	NC-219		4	3	There is one pre-manufactured bridge with wood decks that, over time, will weather to an unsafe load capacity.	Plan to remove all wood decks and replace with preservative-treated wood decking and stainless steel fasteners in 2028.	1	EA	\$ 6,000.00	\$ 6,000								\$ 10,368	\$ 13,272		
2.0	Building Interior																						
2.1	Walk-off Mat	Vestibule			4	3	The walk-off mat is in good condition, but will be expensive to replace when worn.	Plan to replace walk-off mat with walk-off carpet tiles in 2028.	36	SF	\$ 5.50	\$ 198								\$ 342	\$ 437		
2.2	Carpet	Gift Shop Administration Library, et. al.			5	3	The carpet throughout is in good condition, but is showing signs of wear.	Plan on replacing the carpet tiles in 2028.	2354	SF	\$ 5.50	\$ 12,947								\$ 22,374	\$ 28,640		
2.3	Tile Flooring	Men's	NC-034		3	2	The quarry tile flooring has cracked at the urinal.	Remove damaged quarry tile. Inspect concrete slab for settlement. Patch concrete, if cracked, with patching mortar and install new quarry tile and grout.	1	LS	\$ 800.00	\$ 800					\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770		
2.4	Third Grab Bar	Men's Women's			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar	2	EA	\$ 400.00	\$ 800					\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770		
2.5	Door Hardware	Sugar Shack Doors	NC-196		6	6	The locksets have non-code compliant door knobs.	Replace with locksets utilizing code compliant levers.	3	EA	\$ 1,600.00	\$ 4,800					\$ 6,480	\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618		
3.0	Electrical System																						
3.1	Emergency Egress Lighting	Entire Nature Center			6	3	Emergency Battery Units (EBU) are in all spaces.	All EBU should be routinely tested and results recorded. Replace batteries and/or repair units.	1	LS					\$ 500.00	\$ 500	\$ 1,000		\$ 727	\$ 764	\$ 864	\$ 1,106	
3.2	Exit Signs	Entire Nature Center		NC-E-7	3	3	Exit signs with battery backup are in all spaces.	All Exit signs should be routinely tested and results recorded. Replace batteries.	1	LS					\$ 800.00	\$ 800	\$ 200		\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770	
3.3	Service Entrance Switchboard	Electrical/Mechanical/Storage		NC-E-1	7	3	The equipment appears in very good condition.	Plan on replacing in 2051.	1	EA					\$ 1,500.00	\$ 1,500							
3.4	Secondary Distribution	Elec/Mech/Storage & Mechanical & Storage 1		NC-E-2 NC-E-3 NC-E-4 NC-E-5	7	3	The equipment appears in very good condition.	Plan on replacing in 2051.	2	EA					\$ 2,800.00	\$ 5,600							
3.5	Interior Lighting	Entire Nature Center		NC-E-7	4	4	T-8 Fluorescent and Incandescent.	Retrofit fixtures with LED components.	62	EA					\$ 250.00	\$ 15,500	\$ 573	\$ 20,925	\$ 22,534	\$ 23,675	\$ 26,786	\$ 34,288	
3.6	Exterior Lighting	Porch/Entry Overhangs and exit doors			4	4	Recessed fixtures and wallpacks with compact fluorescent lamps.	Re-lamp with LED lamps.	12	EA					\$ 200.00	\$ 2,400	\$ 60	\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309	
3.7	Secondary Distribution	Sugar Shack	NC-196	NC-E-8	7	3	The equipment appears in good condition.	Plan on replacing in 2031.	1	EA						\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
3.8	Interior Lighting	Sugar Shack			4	4	Recessed fixtures with fluorescent lamps.	Replace with LED fixtures.	4	EA					\$ 10.00	\$ 40	\$ 18	\$ 54	\$ 58	\$ 61	\$ 69	\$ 88	
4.0	Mechanical System																						
4.1	Gas-Fired Furnace	Mechanical		NC-M-1	3	3	The 100 MBH gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405	
4.2	Gas-Fired Furnace	Mechanical/Storage		NC-M-2	3	3	The 100 MBH gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405	
4.3	Gas-Fired Furnace	Mechanical/Storage		NC-M-3	3	3	The 100 MBH gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405	
4.4	Gas-Fired Furnace	Animal Care		NC-M-4	3	3	The 100 MBH gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405	
4.5	Gas-Fired Furnace	Animal Care		NC-M-5	3	3	The 100 MBH gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405	

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OEC/Nature Center/Sugar Shack

Building Information Address: 6685 Coolidge Highway Building Area: 9,624 SF No. of Floors: 1 Year Built: 2001 Evaluation Date: April 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only									
								*Lower score equals higher priority													

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.6	Gas-Fired Furnace	Animal Care		NC-M-6	3	3	The 100 MBH gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2023.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350			\$ 5,804	\$ 6,566	\$ 8,405
4.7	Condensing Unit	Outdoors		NC-M-7	3	3	The 5 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
4.8	Condensing Unit	Outdoors		NC-M-8	3	3	The 4 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
4.9	Condensing Unit	Outdoors		NC-M-9	3	3	The 3.5 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
4.10	Condensing Unit	Outdoors		NC-M-10	3	3	The 5 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
4.11	Condensing Unit	Outdoors		NC-M-11	3	3	The 5 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
4.12	Condensing Unit	Outdoors		NC-M-12	3	3	The 4 ton condensing unit is in fair condition.	Replace the condensing unit with like kind in 2023.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200			\$ 9,165	\$ 10,369	\$ 13,273
4.13	Unit Heaters	Restrooms		NC-M-13 NC-M-14	4	4	The electric wall mounted unit heaters are in good condition.	Replace the unit heaters with like kind in 2028.	2	EA			\$ 750.00	\$ 1,500							\$ 2,592	\$ 3,318
5.0	Plumbing System																					
5.1	Water Heater	Mechanical		NC-P-1	3	3	The 40 gallon electric water heater is in good condition.	Replace the water heater with like kind in 2028.	1	EA			\$ 3,400.00	\$ 3,400							\$ 5,875	\$ 7,521
5.2	Water Heater	Mechanical/Storage		NC-P-2	3	3	The 30 gallon electric water heater is in good condition.	Replace the water heater with like kind in 2028.	1	EA			\$ 3,400.00	\$ 3,400							\$ 5,875	\$ 7,521
5.3	Water Heater	Animal Care		NC-P-3	3	3	The 30 gallon electric water heater is in good condition.	Replace the water heater with like kind in 2028.	1	EA			\$ 3,400.00	\$ 3,400							\$ 5,875	\$ 7,521
5.4	Plumbing Fixtures	Throughout			3	4	The plumbing fixtures are in fair condition.	Replace the fixtures in 2028.	1	LS			\$ 47,100.00	\$ 47,100							\$ 81,395	\$ 104,192
5.5	Fire Protection	Throughout			4	3	The fire protection piping is in good condition.	Replace the system in 2038.	10,000	SF			\$ 4.00	\$ 40,000								\$ 88,486
												\$ 260,501	\$ 157,600		\$ 26,340		\$ 5,151	\$ 60,226	\$ 68,928	\$ 168,336	\$ 659,025	\$ 967,452

6.0	Site																				
6.1	Asphalt Pavement	Parking Lots and Drives	NC-226 NC-233		4	3	The asphalt pavement in the parking lots and drives has cracked in several locations, but does drain and is in good condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	37,000	SF	\$ 4.00	\$ 148,000								\$ 255,760	\$ 327,395
6.2	Control Joints	Patio Concrete Pavement at Sidewalks Stamped Concrete	NC-223 NC-231		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	336	LF	\$ 2.00	\$ 672					\$ 907	\$ 977	\$ 1,026	\$ 1,161	\$ 1,487
6.3	Asphalt Pavement	Walking Path			4	3	The asphalt walking paths are in good condition.	Plan on replacing the 9-foot wide asphalt walking paths in 2038. Remove both layers and recompact the drainage course and add 2-1/2 inch thick bituminous binder course and 1 inch thick bituminous wear course.	3,996	SF	\$ 4.00	\$ 15,984									\$ 35,358
6.4	Concrete Pavement	Patio	NC-185		3	2	The patio concrete pavement has cracked in one section.	Route the crack open and fill with patching mortar.	1	LS	\$ 1,200.00	\$ 1,200					\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
6.5	Fence	North Side of Building	NC-173		3	3	The wood fence has weathered and the gate hardware partially holds the gate in place.	Plan to replace the wood fence with a vinyl fence in 2021.	1	LS	\$ 1,500.00	\$ 1,500						\$ 2,181	\$ 2,291	\$ 2,592	\$ 3,318
6.6	Bench	Walking Path	NC-215		2	2	The bench is made of wood and is weathering without protection (i.e. paint) and is covered in organic material. The condition of the bench is good and in character with the walking path.	Pressure wash with a dirt, algae, mold and mildew stain removing solution and coat with an oil-modified polyurethane.	3	EA	\$ 400.00	\$ 1,200					\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
6.7	Picnic Table	Main Entrance	NC-229		4	1	The picnic table has wood tops and benches that have weathered.	Refinish all wood surfaces with an oil-modified polyurethane.	4	EA	\$ 800.00	\$ 3,200					\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079

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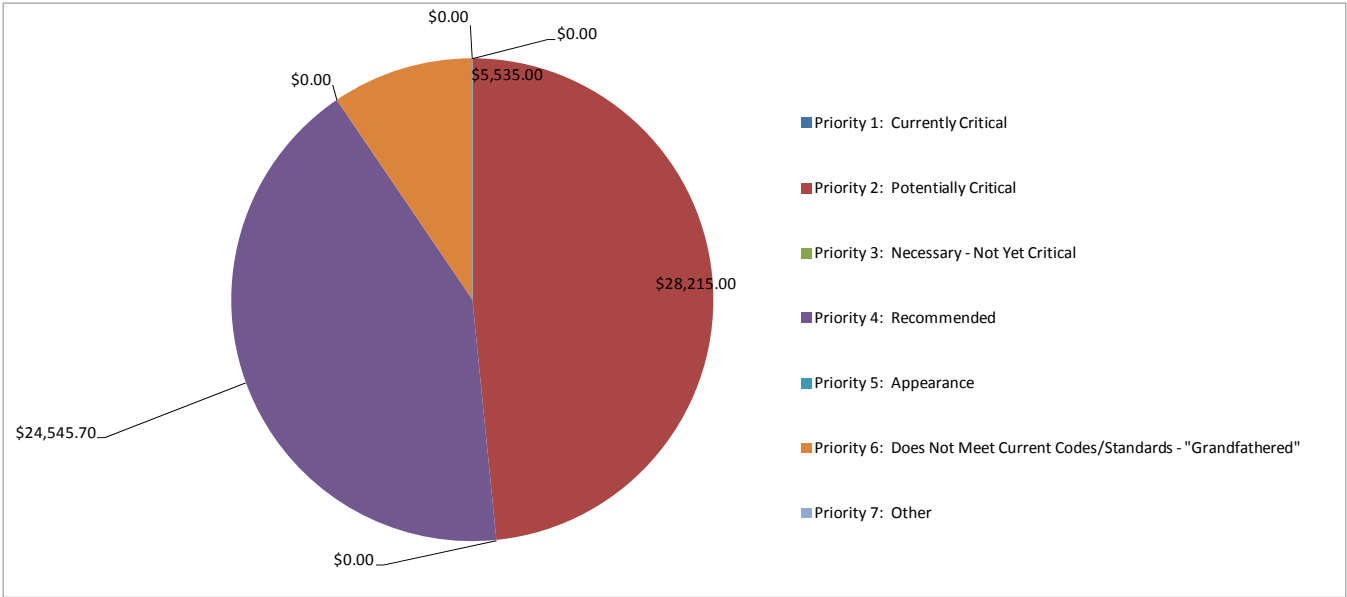
OEC/Nature Center/Sugar Shack

Building Information				Deficiency Priorities				Deficiency Categories															
Address: 6685 Coolidge Highway				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 9,624 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 2001				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: April 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other																			
Note: Project Cost includes 35% mark-ups and fees																							
Annual Maintenance includes labor and material only																							
*Lower score equals higher priority																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
6.8	Bridge	Walking Path	NC-218		4	1	There is one pre-manufactured wood deck bridge with weathered steel guardrails and supports.	The weathered (i.e. corrosion) appearance is part of a protective, oxidation layer purposely designed into the steel guardrails and supports. Annual inspections, by a structural engineer, are recommended by the bridge manufacturer, Contech Engineered Solutions	2	EA	\$ 1,200.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309	
6.9	Bridge	Walking Path	NC-219		4	3	There is one pre-manufactured bridge with wood decks that, over time, will weather to an unsafe load capacity.	Plan to remove all wood decks and replace with preservative-treated wood decking and stainless steel fasteners in 2028.	1	EA	\$ 6,000.00	\$ 6,000								\$ 10,368	\$ 13,272		
6.10	Site Lighting	Parking Lot		NC-E-9	4	4	HID Cobra head on existing poles.	Replace with LED fixtures on existing poles.	4	EA					\$ 1,200.00	\$ 4,800	\$ 960	\$ 6,480	\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618	
												\$ 180,156		\$ -		\$ 4,800		\$ 960	\$ 18,187	\$ 21,766	\$ 22,868	\$ 292,002	\$ 409,146

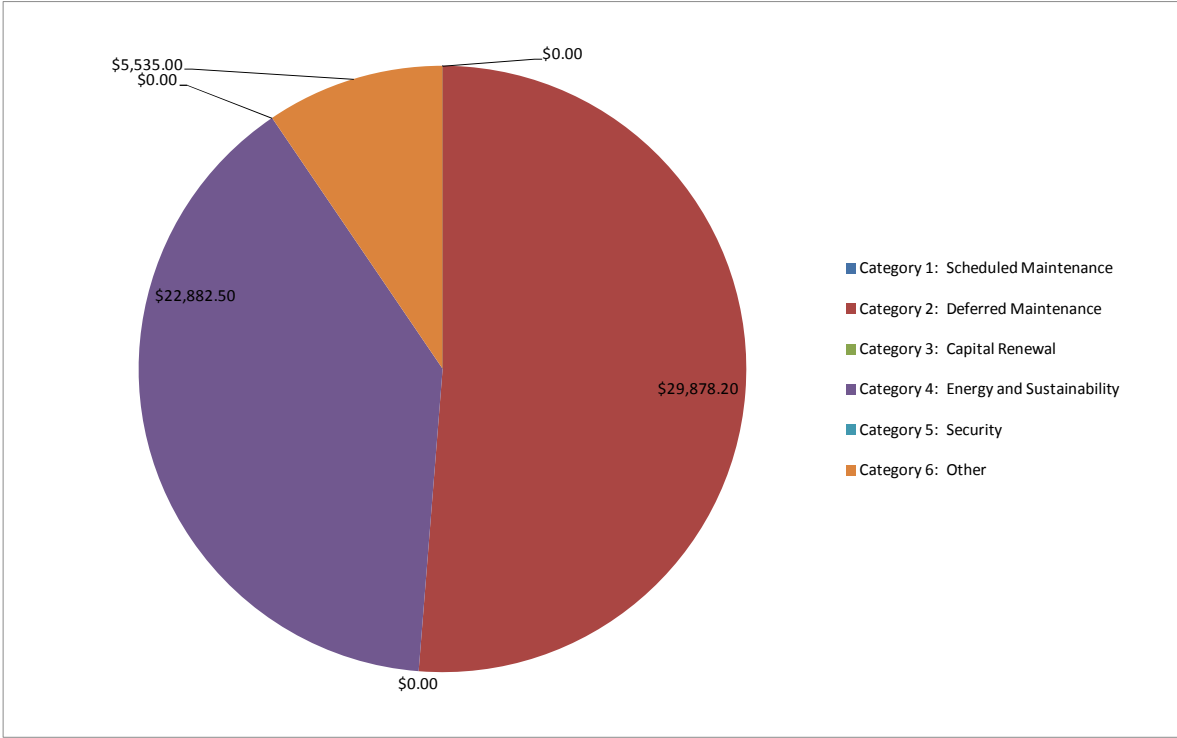


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



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Boulan Park

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 3671 Crooks Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 1,020 SF (Main Building)				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
Building Area: 1,100 SF (Concessions Building)				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Building Area: 900 SF (Pavilion 1)				Priority 4: Recommended				Category 4: Energy and Sustainability														
Building Area: 1,612 SF (Pavilion 2)				Priority 5: Appearance				Category 5: Security														
No. of Floors: 1				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
Year Built: ?				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees														
Evaluation Date: March 2018								Annual Maintenance includes labor and material only														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Asphalt Shingles	Main Building			4	3	The asphalt shingles are in good condition.	Remove organic build-up and visually inspect annually. Plan on replacing asphalt shingles, underlayment and flashings in 2038.	1,180	SF	\$ 4.00	\$ 4,720										\$ 10,442
1.2	Asphalt Shingles	Concessions Building			4	3	The asphalt shingles are in good condition.	Remove organic build-up and visually inspect annually. Plan on replacing asphalt shingles, underlayment and flashings in 2038.	1,948	SF	\$ 4.00	\$ 7,792										\$ 17,236
2.0	Building Interior																					
2.1	Paint	Pavilion 1	PB-007		5	1	The paint on the steel members is in fair condition. There is minor corrosion on the ridge beam.	Plan on removing paint and prime/paint with a high-performance coating in 2023.	1	LS	\$ 8,000.00	\$ 8,000								\$ 12,219	\$ 13,824	\$ 17,696
2.2	Paint	Pavilion 2	PB-007		5	1	The paint on the steel members is in good condition.	Plan on removing paint and prime/paint with a high-performance coating in 2028.	1	LS	\$ 8,000.00	\$ 8,000								\$ 13,825	\$ 17,697	
2.3	Floor	Storage 1	PB-043 PB-044		2	2	The concrete floor slab has cracked and sunk inside the building.	Remove damaged concrete sections. Fill depressed sub-grade with course aggregate and compact. Drill and epoxy set #4 reinforcement bars into the existing concrete slab. Pour a new 6 inch thick concrete floor slab.	100	SF	\$ 20.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
2.4	Exterior Door and Frame	Storage 1	PB-045		2	2	The bottom of the door does not open past the asphalt pavement. The hardware has been damaged and removed.	Remove protruding section of asphalt. Add hardware to door.	1	LS	\$ 1,900.00	\$ 1,900						\$ 2,565	\$ 2,762	\$ 2,902	\$ 3,283	\$ 4,203
2.5	Floor	Storage 2	PB-040		2	2	The concrete floor slab has cracked and sunk inside the building.	Remove damaged concrete sections. Fill depressed sub-grade with course aggregate and compact. Drill and epoxy set #4 reinforcement bars into the existing concrete slab. Pour a new 6 inch thick concrete floor slab.	100	SF	\$ 20.00	\$ 2,000						\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
2.6	Exterior Door and Frame	Storage 2	PB-035 PB-036 PB-037		2	2	The bottoms of the hollow metal door and frame are corroded. The hardware has been damaged and removed.	Replace the frame with an aluminum frame. Replace the door with fiberglass reinforced polyester (FRP) doors.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
2.7	Settlement Cracks	Storage 3	PB-050 PB-054		2	2	The concrete slab has cracked in two locations.	Remove loose concrete fragments and route the cracks open and fill with patching mortar.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
2.8	Garage Door	Storage 3			4	3	The garage door and tracks are in acceptable condition. The locking hardware is not original to the design of the manufactured garage door.	Replace the garage door, tracks and hardware with an exterior grade/vandal resistant garage door system in 2023.	1	LS	\$ 2,400.00	\$ 2,400								\$ 3,666	\$ 4,147	\$ 5,309
2.9	Non-Insulated Lavatory Piping	Men's 1, Men's 2 Women's 1, Women's 2			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	6	EA	\$ 150.00	\$ 900						\$ 1,215	\$ 1,308	\$ 1,375	\$ 1,555	\$ 1,991
2.10	Grab Bar	Men's 1, Men's 2 Women's 1, Women's 2			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	4	EA	\$ 800.00	\$ 3,200						\$ 4,320	\$ 4,652	\$ 4,888	\$ 5,530	\$ 7,079
2.11	Electric Hand Dryers	Men's 1, Men's 2 Women's 1, Women's 2			4	3	The electric hand dryers are functional and in fair condition.	Plan on replacing electric hand dryers in 2023.	4	EA	\$ 800.00	\$ 3,200								\$ 4,888	\$ 5,530	\$ 7,079
2.12	Quarry Tile Base	Men's 2 Women's 2	PB-125		4	2	The quarry tile base has delaminated from the CMU partitions.	Remove quarry tile and grout. Remove paint from CMU at base location. Thick-set new quarry tile base to the CMU partitions. Grout with epoxy grout.	154	LS	\$ 8.00	\$ 1,232						\$ 1,663	\$ 1,791	\$ 1,882	\$ 2,129	\$ 2,725
3.0	Electrical System																					
3.1	Service Entrance Disconnect (1983)	Main Building Storage		PB-E-1	4	3	Equipment is 35 years old and in fair condition.	Plan on replacing in 2038.	1	EA						\$ 4,275.00	\$ 4,275					\$ 11,005
3.2	Service Entrance Switchboard (1983)	Main Building Storage		PB-E-2	4	3	Equipment is 35 years old and in fair condition.	Plan on replacing in 2038.	1	EA						\$ 5,800.00	\$ 5,800					\$ 11,005
3.3	Panelboard	Main Building Storage		PB-E-3	4	3	Equipment is 35 years old and in fair condition.	Plan on replacing in 2038.	1	EA						\$ 2,500.00	\$ 2,500					\$ 5,530

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Boulan Park

Building Information		Deficiency Priorities		Deficiency Categories	
Address: 3671 Crooks Road		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area: 1,020 SF (Main Building)		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
Building Area: 1,100 SF (Concessions Building)		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
Building Area: 900 SF (Pavilion 1)		Priority 4: Recommended		Category 4: Energy and Sustainability	
Building Area: 1,612 SF (Pavilion 2)		Priority 5: Appearance		Category 5: Security	
No. of Floors: 1		Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"		Category 6: Other	
Year Built: ?		Priority 7: Other			
Evaluation Date: March 2018				*Lower score equals higher priority	
				Note: Project Cost includes 35% mark-ups and fees	
				Annual Maintenance includes labor and material only	

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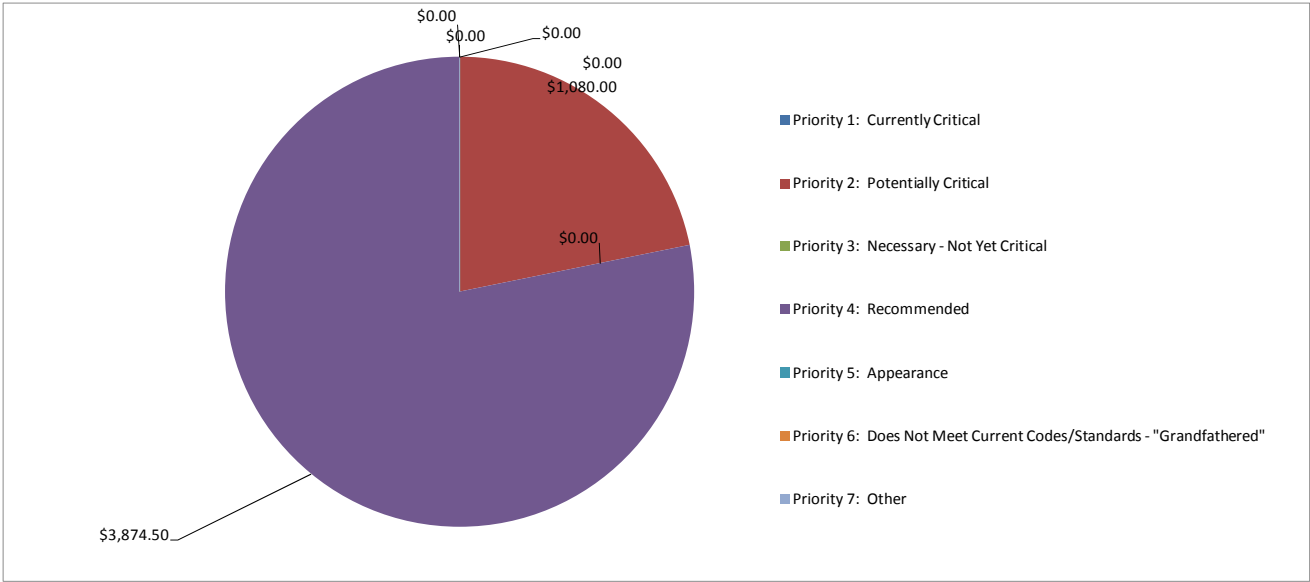
Boulan Park

Building Information			Deficiency Priorities				Deficiency Categories															
Address: 3671 Crooks Road			Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 1,020 SF (Main Building)			Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
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Building Area: 900 SF (Pavilion 1)			Priority 4: Recommended				Category 4: Energy and Sustainability															
Building Area: 1,612 SF (Pavilion 2)			Priority 5: Appearance				Category 5: Security															
No. of Floors: 1			Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
Year Built: ?			Priority 7: Other																			
Evaluation Date: March 2018							*Lower score equals higher priority															
							Note: Project Cost includes 35% mark-ups and fees															
							Annual Maintenance includes labor and material only															
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
6.3	Asphalt Pavement	Soccer Fields Parking Lot	PB-181		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in good condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact the drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	42,000	SF	\$ 4.00	\$ 168,000									\$ 290,323	\$ 371,638
6.4	Asphalt Pavement	Tennis Courts Parking Lot	PB-182		4	3	The asphalt pavement in the parking lot has cracked in a few locations, but does drain and is in good condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact the drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	8,800	SF	\$ 4.00	\$ 35,200									\$ 60,830	\$ 77,868
6.5	Asphalt Pavement	Main Parking Lot	PB-183		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in good condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact the drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	106,000	SF	\$ 4.00	\$ 424,000									\$ 732,720	\$ 937,944
6.6	Asphalt Pavement	Concession Building	PB-134 PB-135		4	3	The asphalt pavement is cracked in several locations, but does drain and is in fair condition overall.	Plan on replacing the asphalt parking lot in 2023. Remove both layers of asphalt and recompact the drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	9,530	SF	\$ 4.00	\$ 38,120								\$ 58,225	\$ 65,876	\$ 84,327
6.7	Asphalt Pavement	Main Building			4	3	The asphalt pavement is cracked and uneven in several locations.	Remove both layers of asphalt and recompact the drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course.	2,160	SF	\$ 4.00	\$ 8,640						\$ 11,664	\$ 12,561	\$ 13,197	\$ 14,931	\$ 19,113
6.8	Asphalt Pavement	Boulan Park Drive	PB-184		4	3	The asphalt pavement has very few cracks and is in good condition overall.	Plan on replacing the asphalt parking lot in 2038. Remove both layers of asphalt and recompact the drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	37,551	SF	\$ 4.00	\$ 150,204										\$ 332,272
6.9	Playing Surface	Tennis Court	PB-137 PB-139		4	3	Court surfaces are in good condition with minor cracks at the sidelines.	Plan on replacing with a 1 inch thick top asphalt layer and seal with acrylic emulsion, 3 coats and 2 colors in 2038.	92,954	SF	\$ 4.11	\$ 382,041										\$ 845,125
6.10	Artificial Turf	Playground Equipment			4	3	The artificial turf is in good condition.	Plan on replacing the artificial turf in 2028.	6,072	SF	\$ 5.00	\$ 30,360									\$ 52,466	\$ 67,160
6.11	Play Structures	Playground			7	3	The play structures are in good condition.	Plan on replacing play structures in 2038.	2	EA	\$ 40,000.00	\$ 80,000										\$ 176,970
6.12	Swings	Playground			7	3	The swing seats and chains are in good condition.	Plan on replacing in 2028.	1	LS	\$ 2,400.00	\$ 2,400									\$ 4,148	\$ 5,309
6.13	Mulch	Playground			4	1	The mulch is in good condition.	Remove any live organic material and add playground mulch.	419	SF	\$ 3.50	\$ 1,467						\$ 1,980	\$ 2,132	\$ 2,240	\$ 2,534	\$ 3,244
6.14	Picnic Tables	Park Grounds	PB-032		4	1	The picnic tables have wood tops and benches that have recently been refinished.	Plan on refinishing all wood surfaces with an oil-modified polyurethane in 2021.	9	EA	\$ 600.00	\$ 5,400							\$ 7,851	\$ 8,248	\$ 9,332	\$ 11,946
6.15	Picnic Tables	Pavilion 1	PB-006		4	1	The picnic tables have wood tops and benches that are showing signs of wear.	Refinish all wood surfaces with an oil-modified polyurethane.	21	EA	\$ 600.00	\$ 12,600						\$ 17,010	\$ 18,318	\$ 19,245	\$ 21,774	\$ 27,873
6.16	Picnic Tables	Pavilion 2	PB-016		4	1	The picnic tables have wood tops and benches that have recently been refinished.	Plan on refinishing all wood surfaces with an oil-modified polyurethane in 2021.	23	EA	\$ 600.00	\$ 13,800							\$ 20,062	\$ 21,078	\$ 23,848	\$ 30,527
6.17	Site Lighting	Sports Field Lighting		PB-E-12	4	4	Newer fixtures with HID lamps. Concrete poles manufactured in 1999.	Replace with LED fixture on existing poles in 2038.	128	EA					\$ 2,150.00	\$ 275,200	\$ 15,360					\$ 608,779
												\$ 1,660,231	\$ -		\$ 282,760	\$ 15,360	\$ 154,260	\$ 194,034	\$ 262,081	\$ 1,437,008	\$ 4,298,155	

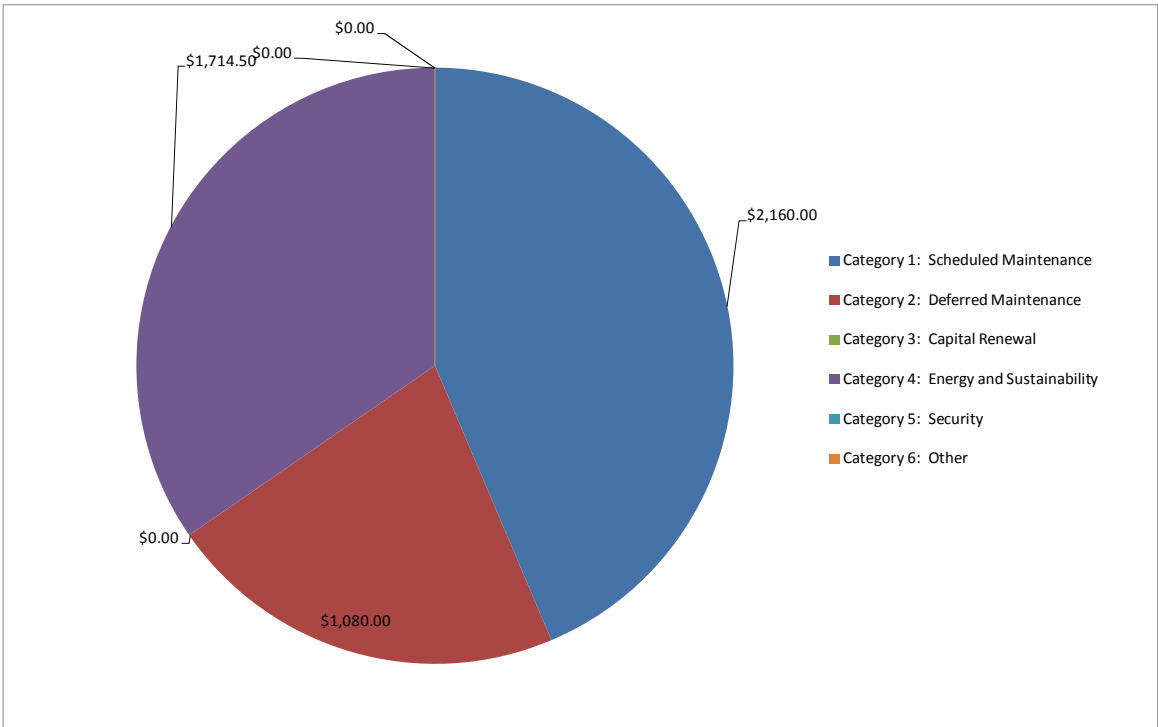


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Brinston Park

Building Information		Deficiency Priorities		Deficiency Categories	
Address: 2262 Brinston Drive		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area - Building: 540 SF		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
Building Area - Pavilion: 860 SF		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
No. of Floors: N/A		Priority 4: Recommended		Category 4: Energy and Sustainability	
Year Built: ?		Priority 5: Appearance		Category 5: Security	
Evaluation Date: January 2018		Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"		Category 6: Other	
		Priority 7: Other			
				*Lower score equals higher priority	
				Note: Project Cost includes 35% mark-ups and fees	
				Annual Maintenance includes labor and material only	

*Lower score equals higher priority

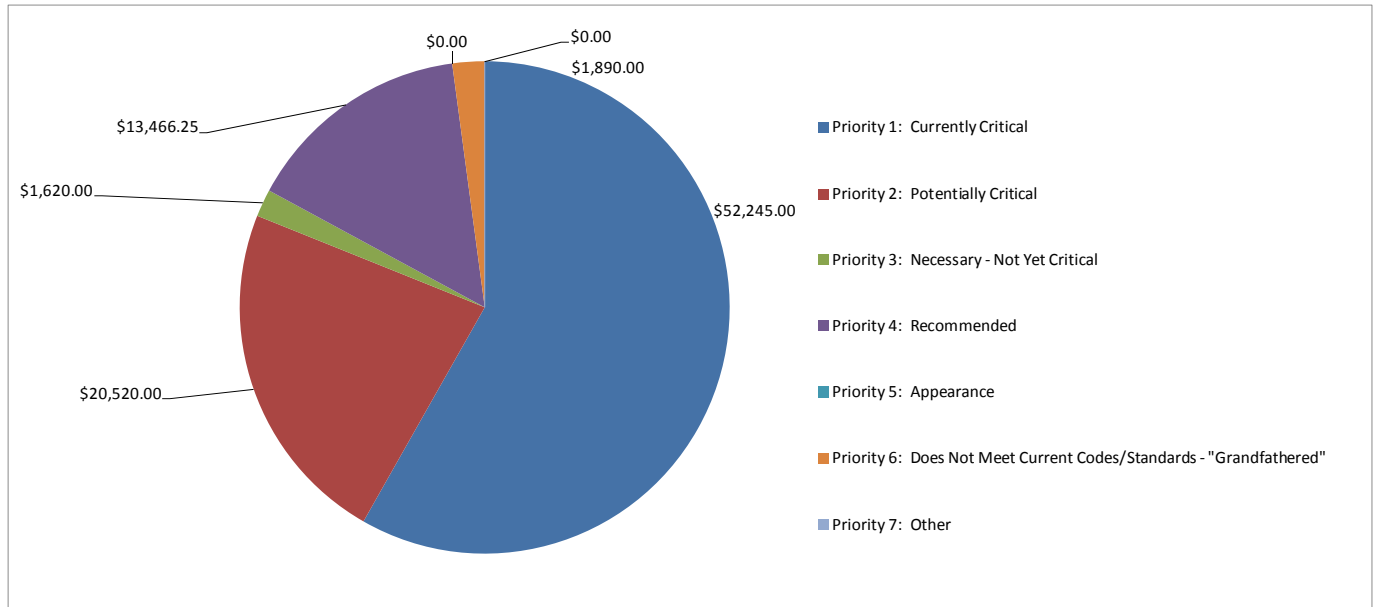
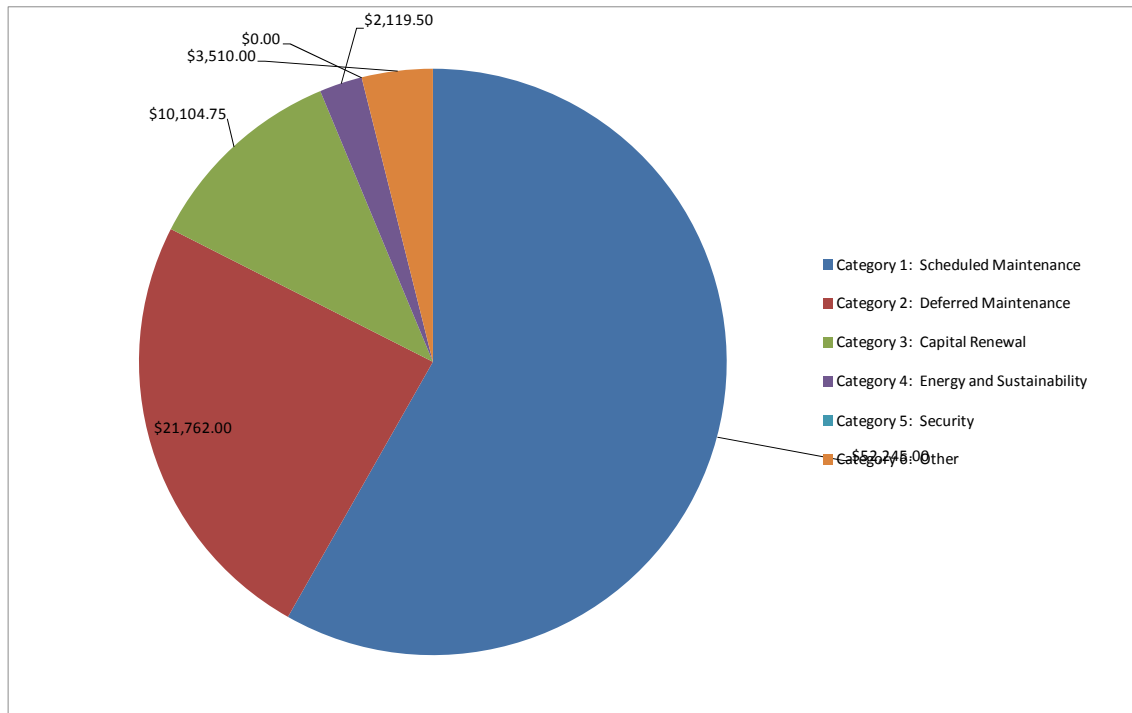
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Painted Wood	Toilet Building Roof			4	1	The paint over the wood at the roof fascia, soffit and cupola has weathered.	Prepare and/or replace the wood and paint with an exterior grade paint.	1	LS	\$ 1,600.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
1.2	Garage Door	Storage	PBR-041		4	3	The garage door and tracks are in acceptable condition. The locking hardware is not original to the design of the manufactured garage door.	Replace the garage door, tracks and hardware with an exterior grade/vandal resistant garage door system in 2023.	1	LS	\$ 2,400.00	\$ 2,400								\$ 3,666	\$ 4,147	\$ 5,309
1.3	Cedar Shingles	Toilet Building Roof			4	3	The cedar shingles are in good condition.	Remove organic build-up and visually inspect annually. Plan on replacing cedar shingles, underlayment and flashings in 2028.	560	SF	\$ 9.00	\$ 5,040									\$ 3,871	\$ 4,955
2.0	Building Interior																					
2.1	Paint	Pavilion			5	1	The paint on the steel members is in good condition.	Plan on removing paint and prime/paint with a high-performance coating in 2023.	1	LS	\$ 9,000.00	\$ 9,000								\$ 13,746	\$ 15,553	\$ 19,909
2.2	Electric Hand Dryers	Men and Women			4	3	The electric hand dryers are functional and in fair condition.	Plan on replacing electric hand dryers in 2023.	2	EA	\$ 800.00	\$ 1,600								\$ 2,444	\$ 2,765	\$ 3,539
2.3	Door Hardware	Men and Women	PBR-038		2	2	The door hardware is loose and does not function correctly.	Replace locks.	2	EA	\$ 400.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
3.0	Electrical System																					
3.1	Service Entrance Panelboard	Chase/Electrical		PBR-E-1	7	3	The panel appears in good condition	Plan on replacing panel in 2038.	1	EA					\$ 800.00	\$ 800						\$ 1,769
3.2	Lighting	Restroom Entrance		PBR-E-2	4	4	Old fixture with HID lamp	Replace with LED fixture	1	EA					\$ 150.00	\$ 150	\$ 25	\$ 203	\$ 218	\$ 229	\$ 259	\$ 332
3.3	Lighting	Men, Women and Chase/Electrical and Chase		PBR-E-2	4	4	T-8 Fluorescent	Retrofit fixtures with LED components	2	EA					\$ 100.00	\$ 200	\$ 11	\$ 270	\$ 291	\$ 305	\$ 346	\$ 442
3.4	Lighting	Pavilion		PBR-E-3	4	4	Old fixture with HID lamp	Replace with LED fixture	2	EA					\$ 460.00	\$ 920		\$ 1,242	\$ 1,337	\$ 1,405	\$ 1,590	\$ 2,035
4.0	Mechanical System																					
	No Comments.																					
5.0	Plumbing System																					
5.1	Domestic Water Heater	Plumbing Chase		PBR-P-1	3	2	The electric water heater is in fair condition.	Plan on replacing in 2023.	1	EA		\$ -	\$ 3,000.00	\$ 3,000						\$ 4,582	\$ 5,184	\$ 6,636
5.2	Plumbing Fixtures	Toilet Rooms			1	3	The fixtures are in fair condition.	Plan on replacing in 2023.	1	LS	\$ 1,200.00	\$ 1,200	\$ 30,000.00	\$ 30,000						\$ 47,655	\$ 53,918	\$ 69,019
												\$ 21,640		\$ 33,000		\$ 2,070	\$ 36	\$ 4,955	\$ 5,335	\$ 77,698	\$ 91,779	\$ 119,254

6.0	Site																					
6.1	Asphalt Pavement	Parking Lot	PBR-049 PBR-072		3	5	The asphalt pavement in the parking lots has cracked and does not slope to the drains.	Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	50,000	SF	\$ 4.00	\$ 200,000						\$ 270,000	\$ 290,760	\$ 305,480	\$ 345,623	\$ 442,426
6.2	Playing Surface	Tennis Court	PBR-007		4	3	Court surfaces are in good condition. The sidelines have several cracks.	Replace 1 inch thick top asphalt layer and seal with acrylic emulsion, 3 coats and 2 colors in 2023.	14,600	SF	\$ 4.11	\$ 60,006							\$ 91,653	\$ 103,697	\$ 132,741	
6.3	Ponding	Site	PBR-008		4	1	Several low areas in the fields are ponding due to depressed soil.	Add 50% top soil/50% peat blend, grade and add grass seed.	800	SF	\$ 3.70	\$ 2,960						\$ 3,996	\$ 4,303	\$ 4,521	\$ 5,115	\$ 6,548
6.4	Picnic Tables	Pavillion	PBR-068		4	1	The picnic tables have wood tops and benches that are showing signs of wear.	Refinish all wood surfaces with an oil-modified polyurethane.	24	EA	\$ 600.00	\$ 14,400						\$ 19,440	\$ 20,935	\$ 21,995	\$ 24,885	\$ 31,855
6.5	Mulch	Playground			3	2	Live organic material has grown through the mulch.	Remove live organic material and add playground mulch.	4,200	SF	\$ 3.50	\$ 14,700						\$ 19,845	\$ 21,371	\$ 22,453	\$ 25,403	\$ 32,518
6.6	Artificial Turf	Playground Equipment			4	3	The artificial turn is in good condition.	Plan on replacing the artificial turf in 2028.	1,500	SF	\$ 5.00	\$ 7,500									\$ 12,961	\$ 16,592
6.7	Asphalt Pavement	Walking Paths	PBR-020		3	2	The asphalt pavement in the walking paths has sunk in several locations.	Remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course and 1 inch thick bituminous wear course.	300	SF	\$ 4.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
6.8	Concrete Pavement	Walking Paths	PBR-042		1	2	The concrete pavement in the walking paths has settled and cracked.	Replace with concrete and recompact drainage course.	100	SF	\$ 64.00	\$ 6,400						\$ 8,640	\$ 9,304	\$ 9,775	\$ 11,060	\$ 14,158

City of Troy
Facility Condition Assessment
April 2018

Brinston Park

Building Information Address: 2262 Brinston Drive Building Area - Building: 540 SF Building Area - Pavilion: 860 SF No. of Floors: N/A Year Built: ? Evaluation Date: January 2018							Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other							Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only												
*Lower score equals higher priority																										
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost				
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal										
6.9	Brick Pavers	Walking Paths	PBR-042		1	2	The brick pavers have settled and have live organic growing through the joints.	Remove brick pavers and recompact drainage course and reinstall brick pavers.	100	SF	\$ 12.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655				
6.10	Play Structure	Playground			7	3	The play structure is in good condition.	Plan on replacing the play structure in 2038.	1	LS	\$ 25,000.00	\$ 25,000									\$ 55,303					
6.11	Swings	Playground			7	3	The swing seats and chains are in good condition.	Plan on replacing in 2028.	1	LS	\$ 2,400.00	\$ 2,400								\$ 4,148	\$ 5,309					
6.12	Site Lighting	Parking Lot		PBR-E-4	4	4	Old fixtures with HID lamps	Replace with LED fixture on existing pole	4	EA					\$ 1,200.00	\$ 4,800	\$ 250	\$ 6,480	\$ 6,978	\$ 7,332	\$ 8,295	\$ 10,618				
												\$ 335,766		\$ -		\$ 4,800	\$ 250	\$ 331,641	\$ 357,141	\$ 466,875	\$ 545,335	\$ 753,378				

DEFICIENCY COSTS**2018 Deficiency Priority****2018 Deficiency Category**

City of Troy
Facility Condition Assessment
April 2018

Don Flynn Park/Concession

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 1710 East South Boulevard				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area - Shed: 64 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
Building Area - Concessions Building: 1,136 SF				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
No. of Floors: 1				Priority 4: Recommended				Category 4: Energy and Sustainability														
Year Built: 2008				Priority 5: Appearance				Category 5: Security														
Evaluation Date: February 2018				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only														
*Lower score equals higher priority																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Wood Siding	Shed	PDF-051 PDF-054		2	2	The exterior T1-11 panels have severely weathered at grade and the wood corner trims are damaged.	Replace the wood corner trims. Paint the exterior with a high-performance exterior grade coating system.	1	LS	\$ 1,800.00	\$ 1,800						\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982
1.2	Wood Door	Shed	PDF-052		2	2	The wood door is in poor condition.	Replace the wood door with a solid wood door with exterior grade door hardware, including a continous hinge and mortise lockset. Replace the wood threshold with composite lumber.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
1.3	Cedar Shingles	Concessions Building Roof			4	3	The cedar shingles are in fair condition.	Plan on replacing cedar shingles, underlayment and flashings in 2023.	1,168	SF	\$ 9.00	\$ 10,512								\$ 16,056	\$ 18,165	\$ 23,253
1.4	Asphalt Shingles	Shed Roof			4	3	The asphalt shingles are in good condition.	Plan on replacing asphalt shingles, underlayment and flashings in 2038.	80	SF	\$ 4.00	\$ 320										\$ 708
2.0	Building Interior																					
2.1	Door Hardware	Concessions			4	3	The door hardware is in fair condition.	Plan on replacing door hardware in 2023.	1	EA	\$ 1,200.00	\$ 1,200								\$ 1,833	\$ 2,074	\$ 2,655
2.2	Flooring	Concessions	PDF-085		3	6	The vinyl composition tile (VCT) flooring system has cracked and the seams have opened up due to standing water.	Replace the VCT with a resilient sheet flooring system with welded seams and an integral base.	200	SF	\$ 6.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
2.3	Settlement Crack	Storage	PDF-104 PDF-106		2	2	The CMU partition mortar joints have cracked in a stepped pattern indicating differential settlement under the partition.	The partition should be monitored for further settlement. As an interim correction, the joints should be raked of mortar and filled with mortar and tooled, but not painted. Seismic strips should be placed over the corrected joints and monitored four times a year.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
2.4	Concrete Floor Slab	Storage	PDF-111		2	2	There is a large crack in the concrete floor slab.	Route the crack open and fill with patching mortar.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
2.5	Electric Hand Dryers	Men and Women			4	3	The electric hand dryers are functional and in fair condition.	Plan on replacing electric hand dryers in 2023.	2	EA	\$ 800.00	\$ 1,600								\$ 2,444	\$ 2,765	\$ 3,539
2.6	Exterior Door and Frame	Men, Women and Chase	PDF-126 PDF-127		2	2	The bottoms of the hollow metal door and frame are corroded. The chase's door binds with the exterior concrete slab. The men's and women's doors stick to the frames.	Replace the frames with aluminum frames. Replace doors with a fiberglass reinforced polyester doors.	3	EA	\$ 3,000.00	\$ 9,000						\$ 12,150	\$ 13,084	\$ 13,747	\$ 15,553	\$ 19,909
2.7	Non-Insulated Lavatory Piping	Men and Women			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	4	EA	\$ 150.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327
2.8	Quarry Tile Base	Men and Women	PDF-121 PDF-135		4	2	The quarry tile base has delaminated from the CMU partitions.	Remove quarry tile and grout. Remove paint from CMU at base location. Thick-set new quarry tile base to the CMU partitions. Grout with epoxy grout.	115	LF	\$ 8.00	\$ 920						\$ 1,242	\$ 1,337	\$ 1,405	\$ 1,590	\$ 2,035
2.9	Grab Bar	Men			6	6	The current Michigan Building Code 2015 requires two grab bars in an ambulatory barrier-free toilet stall. One is missing.	Add second grab bar.	1	EA	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
3.0	Electrical System																					
3.1	Transformer	Storage		PDF-E-1	4	3	The transformer appears in fair condition.	Plan on replacing in 2028.	1	EA					\$ 960.00	\$ 960		\$ 1,296	\$ 1,396	\$ 1,466	\$ 1,659	\$ 2,124
3.2	Transformer Secondary Disconnect	Storage		PDF-E-2	4	3	The disconnect appears in fair condition.	Plan on replacing in 2028.	1	EA					\$ 5,725.00	\$ 5,725		\$ 7,729	\$ 8,323	\$ 8,744	\$ 9,893	\$ 12,664
3.3	Panelboard	Storage		PDF-E-3	4	3	The panel appears in fair condition.	Plan on replacing in 2028.	1	EA					\$ 800.00	\$ 800		\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
3.4	Lighting	Entries		PDF-E-4	4	4	Old incandescent fixture relamped with LED.	Replace with LED fixture.	3	EA					\$ 150.00	\$ 450	\$ 38	\$ 608	\$ 654	\$ 687	\$ 778	\$ 995
3.5	Lighting	Men, Women and Concession and Storage		PDF-E-4	4	4	T-8 fluorescent and incandescent.	Retrofit fixtures with LED components.	2	EA					\$ 100.00	\$ 200	\$ 11	\$ 270	\$ 291	\$ 305	\$ 346	\$ 442
3.6	Receptacles	Concession and Restrooms		PDF-E-1	4	4	Only 2 circuit breakers are GFCI.	Add GFCI receptacles or circuit breakers for concession receptacles.	2	EA					\$ 460.00	\$ 920		\$ 1,242	\$ 1,337	\$ 1,405	\$ 1,590	\$ 2,035
3.7	Outdoor Primary Switch	Outdoor Between East Fields			4	3	Serves ball fields.	Plan on replacing in 2028.	1	EA					\$ 35,700.00	\$ 35,700					\$ 61,693	\$ 78,973

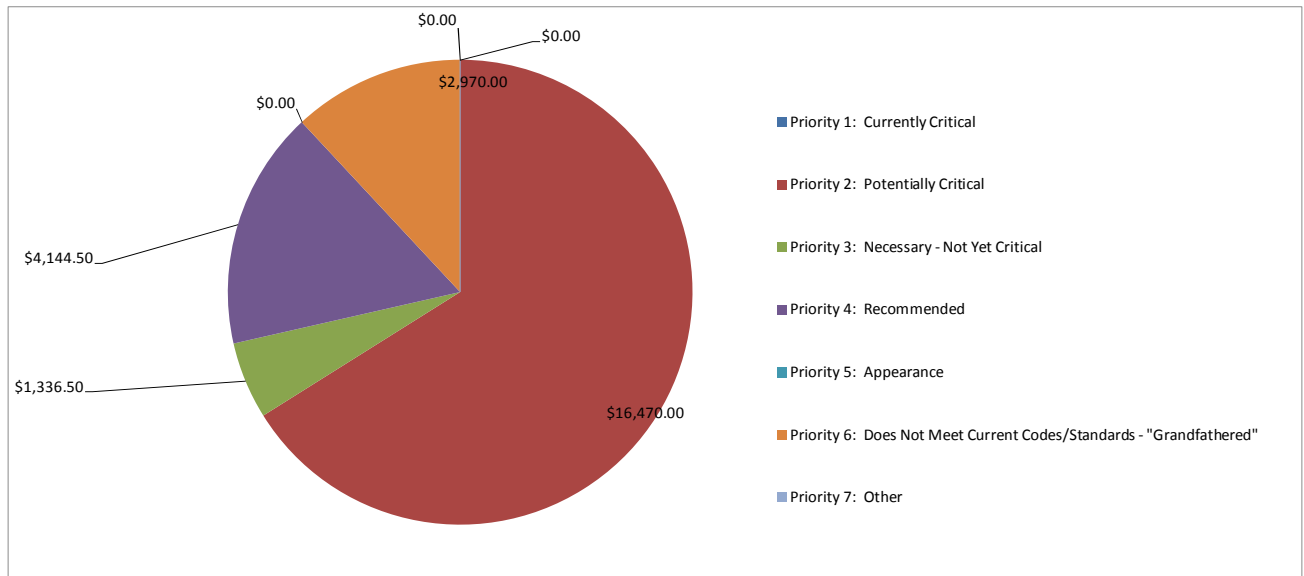
City of Troy
Facility Condition Assessment
April 2018

Don Flynn Park/Concession

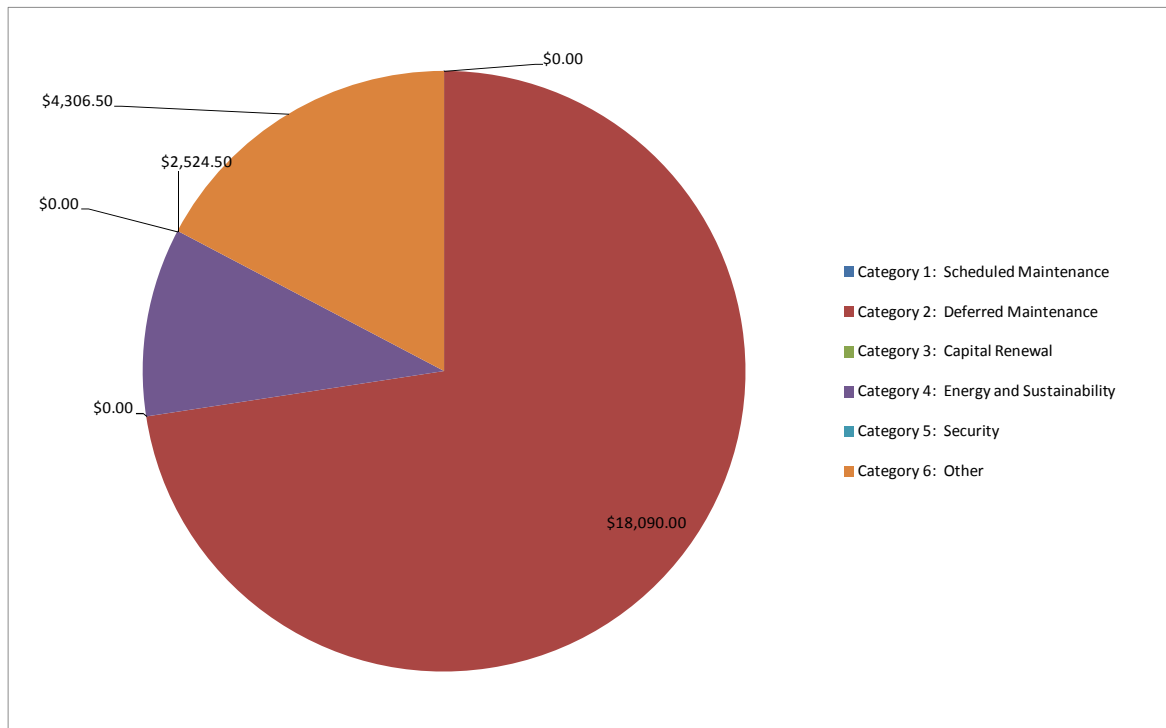
Building Information		Deficiency Priorities		Deficiency Categories	
Address: 1710 East South Boulevard		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area - Shed: 64 SF		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
Building Area - Concessions Building: 1,136 SF		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
No. of Floors: 1		Priority 4: Recommended		Category 4: Energy and Sustainability	
Year Built: 2008		Priority 5: Appearance		Category 5: Security	
Evaluation Date: February 2018		Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"		Category 6: Other	
		Priority 7: Other			

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Firefighters Park/Concession

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 1810 West Square Lake Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 960 SF (Concessions Building)				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
Building Area: 805 SF (Pavilion)				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Building Area: 95 SF (Pump House)				Priority 4: Recommended				Category 4: Energy and Sustainability														
No. of Floors: 1				Priority 5: Appearance				Category 5: Security														
Year Built: ?				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
Evaluation Date: April 2018				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Wood Trim	Pump House	PF-006		4	2	The wood fascia trim paint has delaminated from the wood.	Strip paint from wood trim and prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
1.2	Asphalt Shingles	Pump House			4	3	The asphalt shingles are in good condition.	Plan on replacing the asphalt shingles, underlayment and flashings in 2028.	120	SF	\$ 4.00	\$ 480								\$ 829	\$ 1,062	
1.3	Asphalt Shingles	Pavilion			4	3	The asphalt shingles are in good condition.	Plan on replacing the asphalt shingles, underlayment and flashings in 2028.	1,500	SF	\$ 4.00	\$ 6,000								\$ 10,368	\$ 13,272	
1.4	Cedar Shingles	Concessions Building	PF-062		3	1	The cedar shingles have curled in several locations, but there is no evidence of roof leaks.	Plan to replace the cedar shingles with asphalt shingles over an underlayment with flashings in 2028.	1,250	SF	\$ 4.00	\$ 5,000								\$ 8,641	\$ 11,061	
1.5	Cupola	Concessions Building	PF-063		2	2	The paint has delaminated from the wood and the fasteners have corroded; disengaging the wood slats.	Replace damaged wood and all fasteners. Strip paint from the wood and prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
2.0	Building Interior																					
2.1	Exterior Door and Frame	Pump Room	PF-017		4	3	The edges of the hollow metal door and frame are corroding. The hardware is difficult to operate.	Plan to replace the frame with an aluminum frame and door with a fiberglass reinforced polyester door in 2028.	1	EA	\$ 3,000.00	\$ 3,000								\$ 5,184	\$ 6,636	
2.2	Paint	Pavilion			5	3	The paint on the steel members is in acceptable condition. There is minor corrosion on the ridge beam.	Plan on removing paint and prime/paint with a high-performance coating in 2023.	1	LS	\$ 8,000.00	\$ 8,000								\$ 12,219	\$ 13,824	\$ 17,696
2.3	Garage Door	Storage	PF-069 PF-070		4	3	The garage door and tracks are in acceptable condition. The locking hardware is not original to the design of the manufactured garage door.	Replace the garage door, tracks and hardware with an exterior grade/vandal resistant garage door system in 2023.	1	LS	\$ 2,400.00	\$ 2,400								\$ 3,666	\$ 4,147	\$ 5,309
2.4	Exterior Door and Frame	Men's, Women's, Chase	PF-073		2	2	The bottoms of the hollow metal door and frame are corroded. The bottom of the Men's door frame has fallen off. Both doors bind to the frames and their hardware is difficult to operate.	Replace the frames with aluminum frames. Replace the doors with fiberglass reinforced polyester doors.	3	EA	\$ 3,000.00	\$ 9,000						\$ 12,150	\$ 13,084	\$ 13,747	\$ 15,553	\$ 19,909
2.5	Door Hardware	Concessions	PF-085		6	6	The lockset has non-code compliant door knobs.	Replace with a lockset utilizing code compliant levers.	1	EA	\$ 1,600.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
2.6	Flooring	Concessions	PF-090		3	6	The vinyl composition tile (VCT) flooring system has cracked and the seams have opened up due to standing water.	Replace the VCT with a resilient sheet flooring system with welded seams and an integral base.	165	SF	\$ 6.00	\$ 990						\$ 1,337	\$ 1,439	\$ 1,512	\$ 1,711	\$ 2,190
2.7	Concrete Floor Slab	Storage	PF-101		2	2	There is a large crack in the concrete floor slab.	Route the crack open and fill with patching mortar.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
2.8	Electric Hand Dryers	Men's, Women's			4	3	The electric hand dryers are functional and in fair condition.	Plan on replacing electric hand dryers in 2023.	2	EA	\$ 800.00	\$ 1,600								\$ 2,444	\$ 2,765	\$ 3,539
2.9	Non-Insulated Lavatory Piping	Men's, Women's			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	4	EA	\$ 150.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327
3.0	Electrical System																					
3.1	Service Entrance Equipment	Storage		PF-E-1 PF-E-2	7	3	The equipment appears in good condition.	Plan on replacing panel in 2044.	1	EA												
3.2	Service Entrance Equipment	Pump House		PF-E-3 PF-E-4 PF-E-5	7	3	The equipment appears in good condition.	Plan on replacing panel in 2038.	1	EA					\$ 1,500.00	\$ 1,500					\$ 3,318	
3.3	Exterior Lighting	Concession Canopy and Restroom Entrance	PF-063		4	4	Old fixture with HID lamp.	Replace with LED fixture.	4	EA					\$ 150.00	\$ 600		\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327
3.4	Interior Lighting	Entire Building		PF-E-8	4	4	T-8 Fluorescent and Incandescent.	Retrofit fixtures with LED components.	8	EA					\$ 100.00	\$ 800	\$ 18	\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
3.5	Exterior Lighting	Pavilion		PF-E-7	4	4	Original fixture with HID lamp.	Replace with LED fixture.	1	EA					\$ 460.00	\$ 460		\$ 621	\$ 669	\$ 703	\$ 795	\$ 1,018
3.6	Interior Lighting	Pump House			4	4	Original fixtures with HID lamps.	Replace with LED fixture on existing pole.	1	EA					\$ 10.00	\$ 10		\$ 14	\$ 15	\$ 15	\$ 17	\$ 22

City of Troy
Facility Condition Assessment
April 2018

Firefighters Park/Concession

Building Information				Deficiency Priorities				Deficiency Categories			
Address: 1810 West Square Lake Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance			
Building Area: 960 SF (Concessions Building)				Priority 2: Potentially Critical				Category 2: Deferred Maintenance			
Building Area: 805 SF (Pavilion)				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal			
Building Area: 95 SF (Pump House)				Priority 4: Recommended				Category 4: Energy and Sustainability			
No. of Floors: 1				Priority 5: Appearance				Category 5: Security			
Year Built: ?				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other			
Evaluation Date: April 2018				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only			

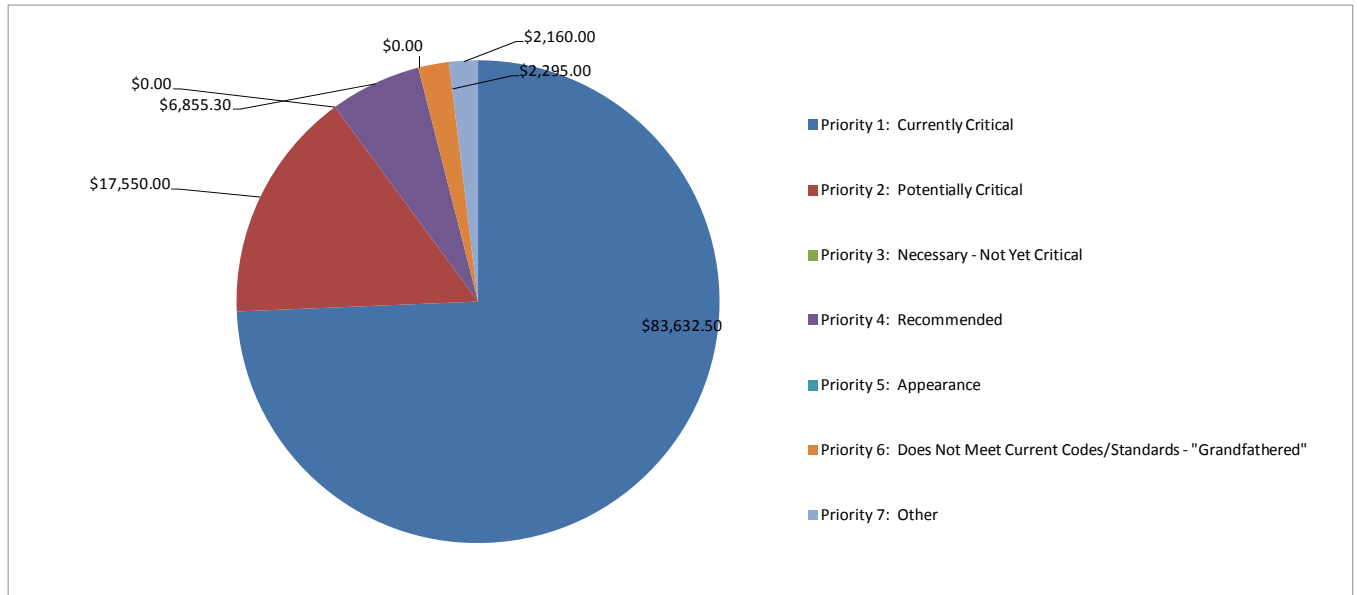
*Lower score equals higher priority

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.0	Mechanical System																					
4.1	Electric Finned Tube Radiation	Concessions Building		PF-M-1	2	3	The electric finned tube radiation is in poor condition and approaching the end of its useful life.	Replace with like and kind.	1	LS			\$ 1,000.00	\$ 1,000					\$ 1,454	\$ 1,528	\$ 1,728	\$ 2,212
5.0	Plumbing System																					
5.1	Water Heater	Concessions Building		PF-P-1	3	3	The 30 gallon electric water heater is in fair condition.	Replace the water heater with like kind in 2023.	1	EA			\$ 34,000.00	\$ 34,000						\$ 51,931	\$ 58,756	\$ 75,212
5.2	Pressure Tank	Pump House		PF-P-2	3	3	The 20 gallon domestic water pressure tank is in fair condition.	Replace the tank with like kind in 2023.	1	EA			\$ 1,000.00	\$ 1,000						\$ 1,528	\$ 1,728	\$ 2,212
5.3	Pump	Pump House		PF-P-3 PF-P-4	2	2	The 10 HP irrigation pumps are in poor condition.	Replace the pumps with like kind in 2023.	2	EA			\$ 6,000.00	\$ 12,000						\$ 18,329	\$ 20,738	\$ 26,546
5.4	Plumbing Fixtures	Throughout			3	3	The plumbing fixtures are in fair condition.	Replace the fixtures in 2023.	1	LS			\$ 38,050.00	\$ 38,050						\$ 58,117	\$ 65,755	\$ 84,171
												\$ 43,070	\$ 86,050	\$ 3,370	\$ 18	\$ 24,921	\$ 28,291	\$ 177,957	\$ 226,364	\$ 293,084		

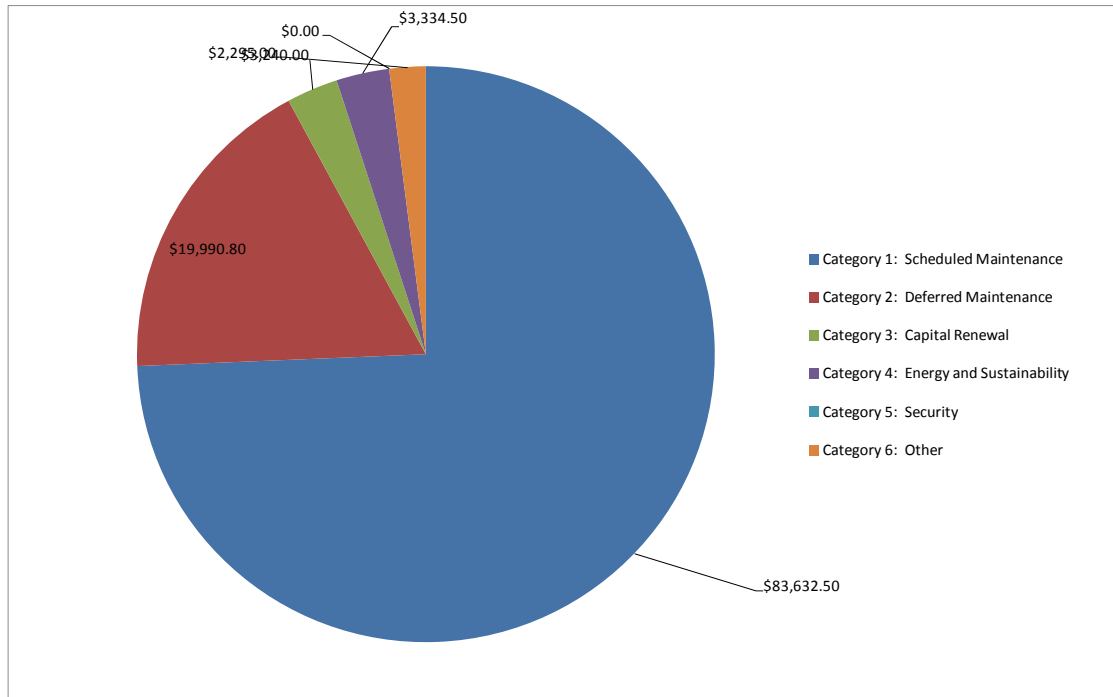
6.0	Site																					
6.1	Asphalt Pavement	Parking Lots and Drive	PF-050 PF-102		4	3	The asphalt pavement in the parking lot has cracked in a few locations, but does flow to the drains and is in good condition overall.	Plan on removing both layers of asphalt, recompact the drainage course, adding a 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	180,000	SF	\$ 4.00	\$ 720,000										\$ 1,592,735
6.2	Asphalt Pavement	Walking Path			4	3	The asphalt walking paths are in good condition.	Plan on replacing the 7 foot wide asphalt walking paths in 2038. Remove both layers of asphalt and recompact the drainage course and add 2-1/2 inch thick bituminous binder course and 1 inch thick bituminous wear course. Add striping and/or signage posts with marked distances.	22,477	SF	\$ 4.00	\$ 89,908										\$ 198,888
6.3	Bridge	Park Grounds	PF-019		4	1	There are three pre-manufactured wood deck bridges over rivers with weathered steel guardrails and supports.	The weathered (i.e. corrosion) appearance is part of a protective, oxidation layer purposely designed into the steel guardrails and supports. Annual inspections, by a structural engineer, are recommended by the bridge manufacturer, Contech Engineered Solutions.	6	EA	\$ 1,200.00	\$ 7,200					\$ 9,720	\$ 10,467	\$ 10,997	\$ 12,442	\$ 15,927	
6.4	Bridge	Park Grounds	PF-021		4	3	There are three pre-manufactured wood bridges over rivers with wood decks that, over time, will weather to an unsafe load capacity.	Plan to remove all wood decks and replace with preservative-treated wood decking and stainless steel fasteners in 2028.	3	EA	\$ 6,000.00	\$ 18,000								\$ 31,106	\$ 39,818	
6.5	Picnic Tables	Park Grounds	PF-028		4	1	The picnic tables have wood tops and benches that have recently been refinished.	Plan on refinishing all wood surfaces with an oil-modified polyurethane in 2021.	9	EA	\$ 600.00	\$ 5,400						\$ 7,851	\$ 8,248	\$ 9,332	\$ 11,946	
6.6	Picnic Tables	Pavilion	PF-043		4	1	The picnic tables have wood tops and benches that are showing signs of wear.	Refinish all wood surfaces with an oil-modified polyurethane.	28	EA	\$ 600.00	\$ 16,800					\$ 22,680	\$ 24,424	\$ 25,660	\$ 29,032	\$ 37,164	
6.7	Play Structure	Playground			7	3	The play structure is in good condition.	Plan on replacing structure in 2038.	1	LS	\$ 40,000.00	\$ 40,000									\$ 88,486	
6.8	Artificial Turf	Playground Equipment			4	3	The artificial turf is in good condition.	Plan on replacing the artificial turf in 2028.	1,200	SF	\$ 5.00	\$ 6,000								\$ 10,368	\$ 13,272	
6.9	Swings	Playground			7	3	The swing seats and chains are in good condition.	Plan on replacing in 2028.	1	LS	\$ 2,400.00	\$ 2,400								\$ 4,148	\$ 5,309	
6.10	Bench	Park Grounds	PF-056		2	1	The bench has wood construction that is showing signs of wear.	Refinish all wood surfaces with an oil-modified polyurethane.	1	EA	\$ 400.00	\$ 400					\$ 540	\$ 582	\$ 611	\$ 691	\$ 885	
6.11	Concrete Frost Slab	Exterior of Toilet Room Entrances	PF-074 PF-075		4	2	There is a large crack in the concrete frost slab.	Route the crack open and fill with patching mortar.	1	LS	\$ 800.00	\$ 800					\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770	
6.12	Site Lighting	Parking Lot		PF-E-9	4	4	Original incandescent socket relamped with fluorescent.	Replace with LED.	15	EA					\$ 1,200.00	\$ 18,000	\$ 1,050	\$ 24,300	\$ 26,168	\$ 27,493	\$ 31,106	\$ 39,818
												\$ 906,908	\$ -		\$ 18,000	\$ 1,050	\$ 58,320	\$ 70,655	\$ 74,232	\$ 129,608	\$ 2,046,018	

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Jaycee Park

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 1755 East Long Lake Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area - Building 1: 695 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
Building Area - Building 2: 306 SF				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Building Area - Pavilion: 1,240 SF				Priority 4: Recommended				Category 4: Energy and Sustainability														
No. of Floors: 1				Priority 5: Appearance				Category 5: Security														
Year Built: ?				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
Evaluation Date: February 2018				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only														
*Lower score equals higher priority																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Garage Door	Building 1: Storage	PJ-064		2	2	The garage door and tracks are in poor condition and the door is difficult to operate and close completely. The locking hardware is not original to the design of the manufactured garage door.	Replace the garage door, tracks and hardware with an exterior grade/vandal resistant garage door system.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
2.0	Building Interior																					
2.1	Paint	Pavilion			5	6	The paint on the wood members is in good condition.	Plan on painting in 2028.	1	LS	\$ 6,000.00	\$ 6,000									\$ 10,369	\$ 13,274
2.2	Electric Hand Dryers	Building 1: Men and Women			4	3	The electric hand dryers are functional and in fair condition.	Plan on replacing electric hand dryers in 2023.	2	EA	\$ 800.00	\$ 1,600								\$ 2,444	\$ 2,765	\$ 3,539
2.3	Exterior Door and Frame	Building 1: Men and Women	PJ-067 PJ-068		2	2	The bottoms of the hollow metal doors and frames are corroded.	Replace the frames with aluminum frames. Replace the doors with fiberglass reinforced polyester (FRP) doors.	2	EA	\$ 3,000.00	\$ 6,000						\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273
2.4	Non-Insulated Lavatory Piping	Building 1: Men and Women			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	4	EA	\$ 150.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327
2.5	Quarry Tile Base	Building 1: Men and Women	PJ-075 PJ-089		4	2	The quarry tile base has delaminated from the CMU partitions.	Remove quarry tile and grout. Remove paint from CMU at base location. Thick-set new quarry tile base to the CMU partitions. Grout with epoxy grout.	120	LF	\$ 8.00	\$ 960						\$ 1,296	\$ 1,396	\$ 1,466	\$ 1,659	\$ 2,124
2.6	Grab Bar	Building 1: Women			6	6	The current Michigan Building Code 2015 requires two grab bars in an ambulatory barrier-free toilet stall. One is missing.	Add second grab bar.	1	EA	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
2.7	Settlement Cracks	Building 1: Storage, Chase	PJ-058 PJ-059		2	2	The CMU partition mortar joints have cracked in a stepped pattern indicating differential settlement under the partition.	The partition should be monitored for further settlement. As an interim correction, the joints should be raked of mortar and filled with mortar and tooled, but not painted. Seismic strips should be placed over the corrected joints and monitored four times a year.	1	LS	\$ 1,600.00	\$ 1,600						\$ 2,160	\$ 2,326	\$ 2,444	\$ 2,765	\$ 3,539
2.8	Exterior Door and Frame	Building 2: Men	PJ-101		2	2	The bottoms of the hollow metal doors and frames are corroded.	Replace the frame with an aluminum frame. Replace the door with a fiberglass reinforced polyester (FRP) door.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
2.9	Non-Insulated Lavatory Piping	Building 2: Men and Women			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	2	EA	\$ 150.00	\$ 300						\$ 405	\$ 436	\$ 458	\$ 518	\$ 664
2.10	Electric Hand Dryers	Building 2: Men and Women			4	3	The electric hand dryers are functional and in fair condition.	Plan on replacing electric hand dryers in 2023.	2	EA	\$ 800.00	\$ 1,600								\$ 2,444	\$ 2,765	\$ 3,539
2.11	Quarry Tile Base	Building 2: Men and Women	PJ-117		4	2	The quarry tile base has delaminated from the CMU partitions.	Remove quarry tile and grout. Remove paint from CMU at base location. Thick-set new quarry tile base to the CMU partitions. Grout with epoxy grout.	106	LF	\$ 8.00	\$ 848						\$ 1,145	\$ 1,233	\$ 1,295	\$ 1,465	\$ 1,876
3.0	Electrical System																					
3.1	Service Entrance Load Center, South	Storage		PJ-E-1	4	3	The panel appears in poor condition	Plan on replacing panel in 2028.	1	EA					\$ 800.00	\$ 800		\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
3.1	Sub Panel, South	Storage		PJ-E-2	7	3	The panel appears in good condition	Plan on replacing with main panel above in 2028.	1	EA					\$ 800.00	\$ 800		\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
3.2	Lighting	Entries		PJ-E-3	4	4	Old fixture relamped with LED lamp	Replace with LED fixture	4	EA					\$ 150.00	\$ 600		\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327
3.4	Lighting	Men, Women, Storage and Chase		PJ-E-3	4	4	T-8 fluorescent in restrooms and incandescent socket with retrofit LED lamps	Retrofit fluorescent fixtures with LED components	6	EA					\$ 100.00	\$ 600		\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327
3.5	Lighting	Pavilion		PJ-E-4	4	4	Old fixtures with HID lamps	Replace with LED fixture	2	EA					\$ 460.00	\$ 920		\$ 1,242	\$ 1,337	\$ 1,405	\$ 1,590	\$ 2,035
3.6	Service Entrance Load Center, North	Chase/Electrical		PJ-E-5	7	3	The panel appears in good condition	Plan on replacing panel in 2038.	1	EA					\$ 800.00	\$ 800		\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770

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Jaycee Park

Building Information				Deficiency Priorities				Deficiency Categories			
Address: 1755 East Long Lake Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance			
Building Area - Building 1: 695 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance			
Building Area - Building 2: 306 SF				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal			
Building Area - Pavilion: 1,240 SF				Priority 4: Recommended				Category 4: Energy and Sustainability			
No. of Floors: 1				Priority 5: Appearance				Category 5: Security			
Year Built: ?				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other			
Evaluation Date: February 2018				Priority 7: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only			

*Lower score equals higher priority

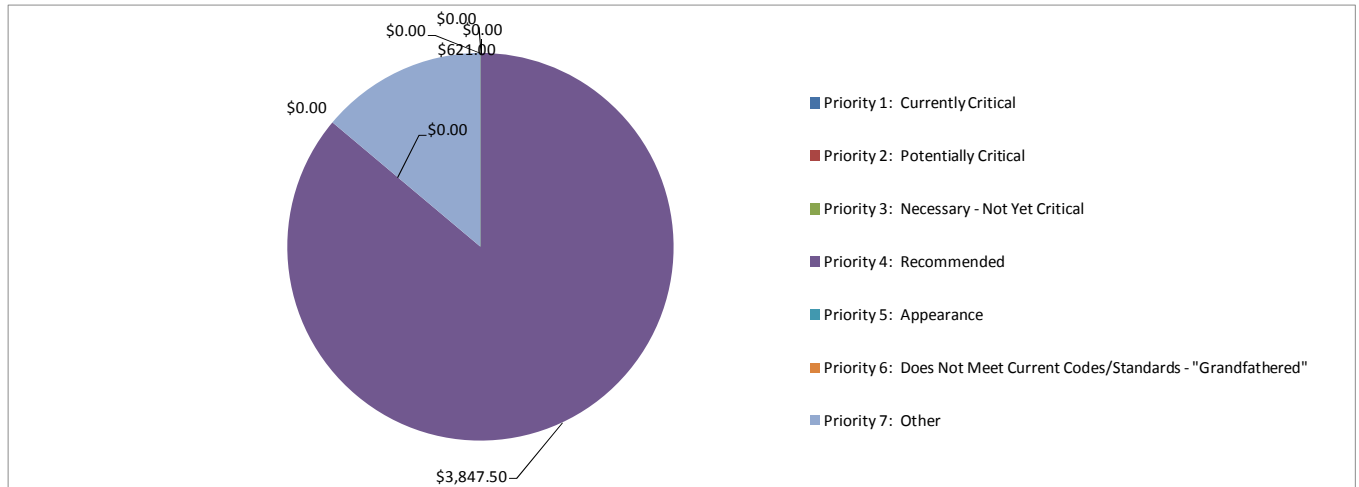
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
3.7	Lighting	Entries		PJ-E-6	4	4	Old incandescent fixture relamped with LED	Replace with LED fixture	1	EA					\$ 150.00	\$ 150	\$ 25	\$ 203	\$ 218	\$ 229	\$ 259	\$ 332
3.8	Lighting	Men, Women and Chase/Electrical		PJ-E-6	4	4	T-8 fluorescent in restrooms and incandescent socket with retrofit LED lamp	Retrofit fluorescent fixtures with LED components	2	EA					\$ 100.00	\$ 200		\$ 270	\$ 291	\$ 305	\$ 346	\$ 442
4.0	Mechanical System																					
4.1	Electric Unit Heater	Building 1 Plumbing Chase		PJ-M-1	2	3	The electric unit heater is in poor condition and approaching the end of its useful life.	Replace with like and kind.	1	EA		\$ -	\$ 1,500.00	\$ 1,500		\$ -			\$ 2,181	\$ 2,291	\$ 2,592	\$ 3,318
4.2	Electric Finned Tube Radiation	Building 2 Plumbing Chase		PJ-M-2	2	3	The electric finned tube radiation is in poor condition and approaching the end of its useful life.	Replace with like and kind.	1	EA		\$ -	\$ 1,000.00	\$ 1,000		\$ -			\$ 1,454	\$ 1,527	\$ 1,728	\$ 2,212
5.0	Plumbing System																					
5.1	Domestic Water Heater	Building 1 Plumbing Chase		PJ-P-1	2	3	The 15 gallon electric domestic water heater appears to be in fair condition.	The water heater should be replaced in 5 years.	1	EA			\$ 3,400.00	\$ 3,400					\$ 5,193	\$ 5,876	\$ 7,521	
5.2	Domestic Water Heater	Building 2 Plumbing Chase		PJ-P-2	4	4	The electric Instantaneous domestic water heater appears to be in good condition.	The water heater should be replaced in 10 years.	1	EA			\$ 2,300.00	\$ 2,300						\$ 3,975	\$ 5,088	
5.4	Plumbing Fixtures	Building 1 and 2			1	1	Plumbing fixtures (porcelain, flush valves, faucets, mixing valves, fixture carriers) are in poor condition and are at the end of their useful lives.	Replace plumbing fixtures immediately.	1	LS			\$ 61,950.00	\$ 61,950				\$ 83,633	\$ 90,063	\$ 94,622	\$ 107,057	\$ 137,042
												\$ 25,708	\$ 70,150		\$ 4,870	\$ 25	\$ 112,493	\$ 124,777	\$ 141,175	\$ 174,070	\$ 222,824	

6.0	Site																				
6.1	Play Structures	Playground			7	3	The play structures are in good condition.	Plan on replacing play structures in 2038.	2	EA	\$ 40,000.00	\$ 80,000									\$ 176,970
6.2	Artificial Turf	Playground Equipment			4	3	The artificial turf is in good condition.	Plan on replacing the artificial turf in 2028.	1,472	SF	\$ 5.00	\$ 7,360								\$ 12,719	\$ 16,282
6.3	Asphalt Pavement	Parking Lots and Drive	PJ-127		4	3	The asphalt pavement in the parking lot has cracked in a few locations, but does flow to the drains and is in good condition overall.	Plan on removing both layers of asphalt, recompacting the drainage course, adding a 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	120,220	SF	\$ 4.00	\$ 480,880									\$ 1,063,771
6.4	Swings	Playground			7	3	The swing seats and chains are in good condition.	Plan on replacing in 2028.	1	LS	\$ 2,400.00	\$ 2,400								\$ 4,148	\$ 5,309
6.5	Picnic Tables	Park Grounds	PJ-047 PJ-092		4	3	The picnic tables are made of wood and are weathering without protection (i.e., paint).	Plan on replacing them in 2023 with steel tables coated with thermoplastic.	5	EA	\$ 2,100.00	\$ 10,500							\$ 16,038	\$ 18,145	\$ 23,228
6.6	Bench	Park Grounds	PJ-049		2	3	The bench is made of wood and is weathering without protection (i.e., paint) and is damaged.	Replace with a steel bench coated with thermoplastic.	1	EA	\$ 1,800.00	\$ 1,800					\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982
6.7	Picnic Tables	Pavilion			4	1	The picnic tables have wood tops and benches that have recently been refinished.	Plan on refinishing all wood surfaces with an oil-modified polyurethane in 2021.	35	EA	\$ 600.00	\$ 21,000						\$ 30,530	\$ 32,075	\$ 36,290	\$ 46,455
6.8	Asphalt Pavement	Pavilion, Building 1			4	3	The asphalt pavement in the parking lot has cracked in several locations, but does flow to the drains and is in good condition overall.	Plan on removing both layers of asphalt, recompacting the drainage course, adding a 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	2,782	SF	\$ 4.00	\$ 11,128									\$ 24,616
												\$ 615,068	\$ -	\$ -	\$ -	\$ 2,430	\$ 33,147	\$ 50,863	\$ 74,413	\$ 1,360,613	

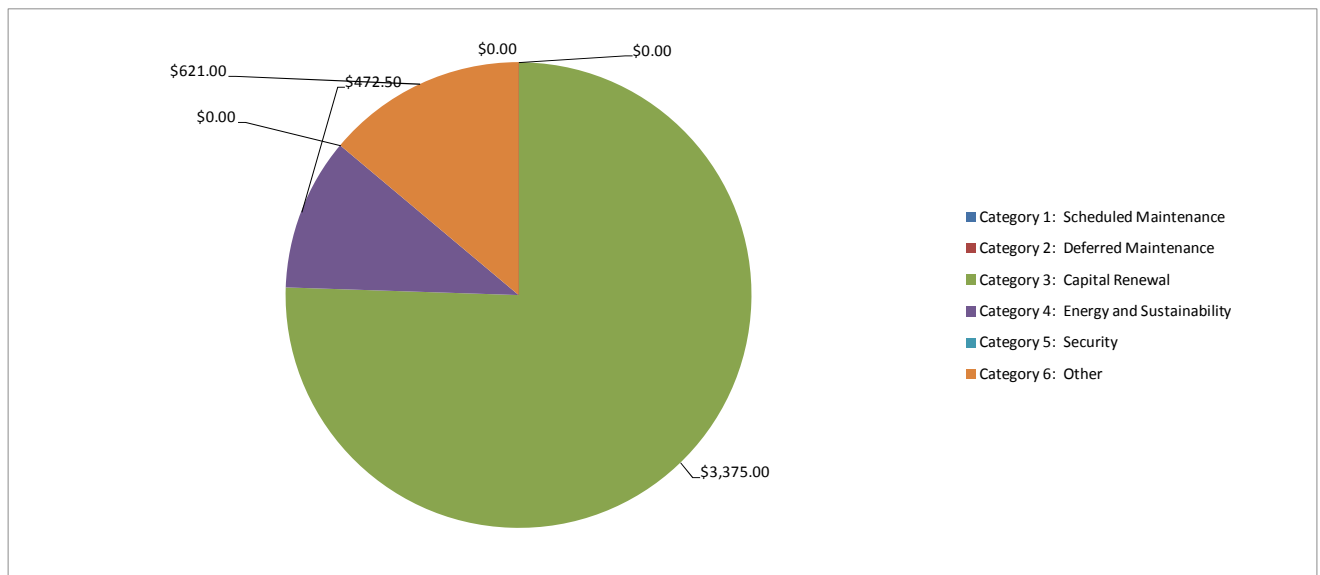


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



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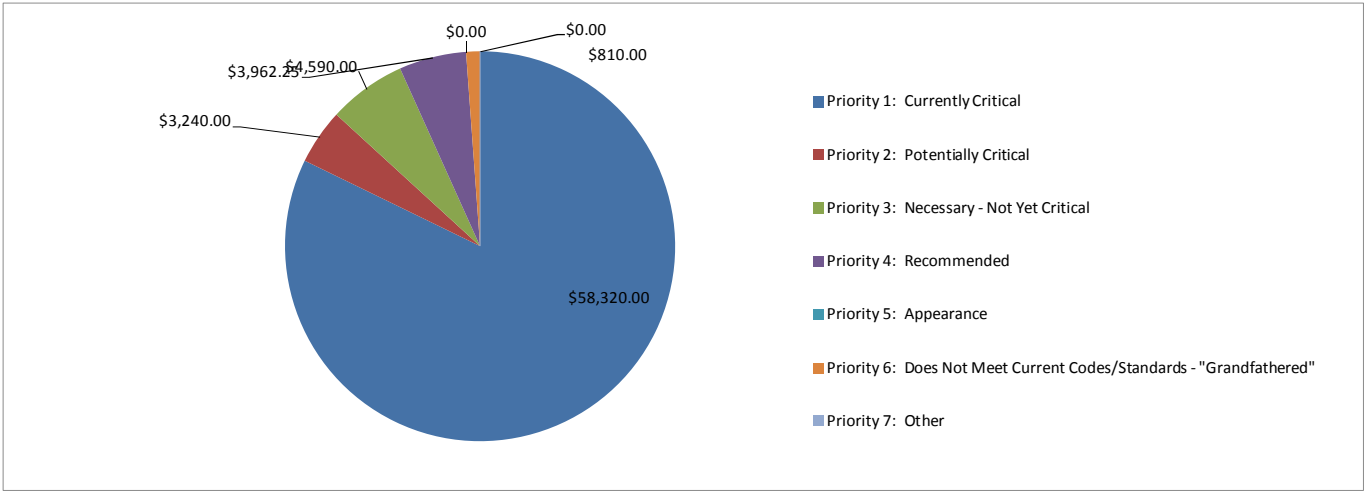
Milverton Park

Building Information		Deficiency Priorities		Deficiency Categories	
Address: 2384 East Maple Road		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area - Building: 180 SF		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
Building Area - Pavilion: 680 SF		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
No. of Floors: N/A		Priority 4: Recommended		Category 4: Energy and Sustainability	
Year Built: ?		Priority 5: Appearance		Category 5: Security	
Evaluation Date: January 2018		Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"		Category 6: Other	
		Priority 7: Other			

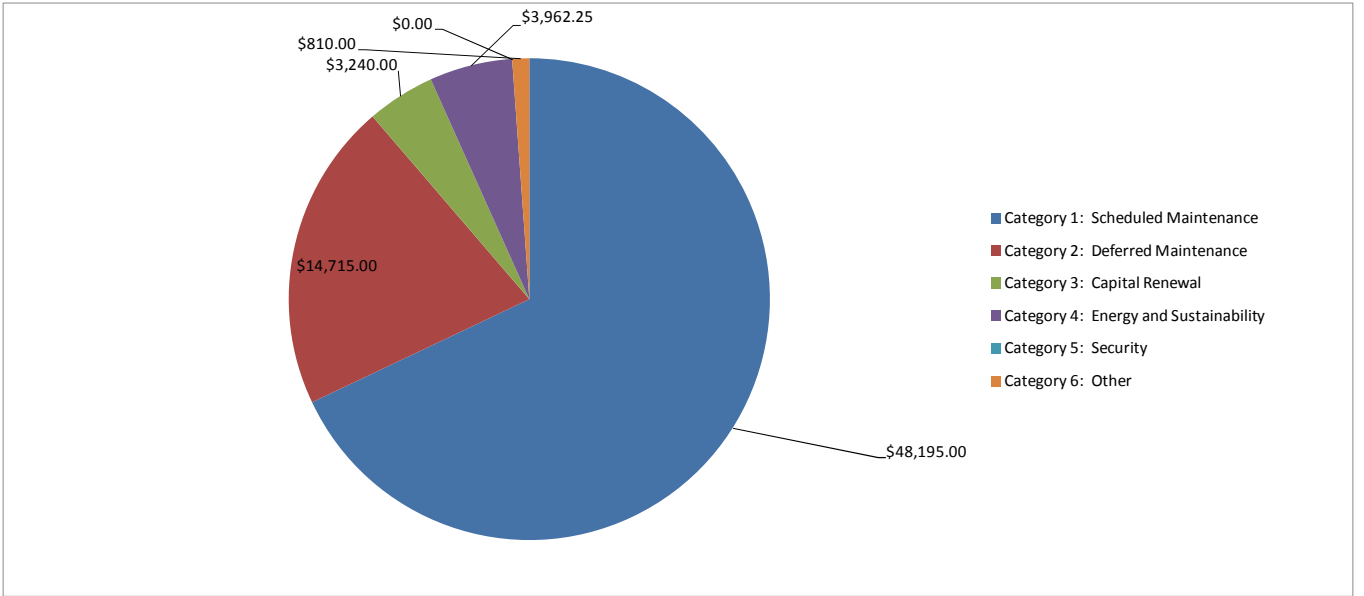


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Raintree Park

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 3775 John R. Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area - Toilet Building: 700 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
Building Area - Pavilion: 1,280 SF				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
No. of Floors: 1				Priority 4: Recommended				Category 4: Energy and Sustainability														
Year Built: ?				Priority 5: Appearance				Category 5: Security														
Evaluation Date: January 2018				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				*Lower score equals higher priority														
Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Garage Door	Storage	PR-022 PR-023		2	3	The garage door and tracks are in poor condition and the door is difficult to operate and close completely. The locking hardware is not original to the design of the manufactured garage door.	Replace the garage door, tracks and hardware with an exterior grade/vandal resistant garage door system.	1	LS	\$ 2,400.00	\$ 2,400						\$ 3,240	\$ 3,489	\$ 3,666	\$ 4,147	\$ 5,309
1.2	Asphalt Shingles	Pavilion, Toilet Building			4	3	The asphalt shingles are in good condition.	Plan on replacing the asphalt shingles, underlayment and flashings in 2028.	2,544	SF	\$ 4.00	\$ 10,176								\$ 17,585	\$ 22,511	
2.0	Building Interior																					
2.1	Paint	Pavilion			5	1	The paint on the wood members is in fair condition.	Plan on painting in 2023.	1	LS	\$ 6,000.00	\$ 6,000								\$ 9,165	\$ 10,369	\$ 13,273
2.2	Electric Hand Dryers	Men and Women			4	3	The electric hand dryers are functional and in fair condition.	Plan on replacing electric hand dryers in 2023.	2	EA	\$ 800.00	\$ 1,600								\$ 2,444	\$ 2,765	\$ 3,539
2.3	Door Hardware	Men and Women			4	3	The door hardware is in fair condition.	Plan on replacing door hardware in 2023.	2	EA	\$ 1,200.00	\$ 2,400								\$ 3,666	\$ 4,147	\$ 5,309
2.4	Non-Insulated Lavatory Piping	Men and Women			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	4	EA	\$ 150.00	\$ 600						\$ 810	\$ 872	\$ 916	\$ 1,037	\$ 1,327
3.0	Electrical System																					
3.1	Service Entrance Panelboard	Chase/Electrical		PR-E-1	4	3	The panel appears in good condition	Plan on replacing panel in 2038.	1	EA					\$ 1,200.00	\$ 1,200					\$ 2,655	
3.2	Lighting	Restroom Entrance			4	4	Old fixtures with HID lamp	Replace with LED fixture	2	EA					\$ 460.00	\$ 920		\$ 1,242	\$ 1,337	\$ 1,405	\$ 1,590	\$ 2,035
3.3	Lighting	Men, Women and Chase/Electrical and Chase		PR-E-3	4	4	Incandescent socket with retrofit LED lamp	Replace with industrial LED fixture	3	EA					\$ 365.00	\$ 1,095	\$ 25	\$ 1,478	\$ 1,592	\$ 1,673	\$ 1,892	\$ 2,422
3.4	Lighting	Pavilion		PR-E-4	4	4	Old fixture with HID lamp	Replace with LED fixture	2	EA					\$ 460.00	\$ 920		\$ 1,242	\$ 1,337	\$ 1,405	\$ 1,590	\$ 2,035
4.0	Mechanical System																					
4.1	Blower Coil - Electric Heat	Mechanical Room		PR-M-1	1	2	The electric blower coil is in poor condition and is at the end of its useful life.	Replace with like and kind	1	EA			\$ 7,500.00	\$ 7,500			\$ 350	\$ 10,125	\$ 10,904	\$ 11,456	\$ 12,961	\$ 16,591
5.0	Plumbing System																					
5.1	Domestic Water Heater	Mechanical Room		PR-P-1	3	2	The 19 gallon electric domestic water heater appears to be in poor condition because of corrosion at the bottom of the storage tank.	Replace with like and kind. Any replacement should be put on a concrete housekeeping pad to reduce contact with standing water.	1	EA			\$ 3,400.00	\$ 3,400				\$ 4,590	\$ 4,943	\$ 5,193	\$ 5,876	\$ 7,521
5.2	Plumbing Fixtures	Toilet Rooms			1	1	Plumbing fixtures (porcelain, flush valves, faucets, mixing valves, fixture carriers) are in poor condition and are at the end of their useful lives.	Replace all fixtures with modern, code compliant fixtures.	1	LS			\$ 35,700.00	\$ 35,700				\$ 48,195	\$ 51,901	\$ 54,528	\$ 61,694	\$ 78,973
											\$ 23,176		\$ 46,600		\$ 4,135		\$ 375	\$ 70,922	\$ 76,376	\$ 95,516	\$ 125,653	\$ 163,501
6.0	Site																					
6.1	Asphalt Pavement	Parking Lots and Drive	PR-073		4	3	The asphalt pavement in the parking lot has cracked in a few locations, but does flow to the drains and is in good condition overall.	Plan on removing both layers of asphalt, recompacting the drainage course, adding a 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2038.	66,674	SF	\$ 4.00	\$ 266,696										\$ 589,967
6.2	Concrete Slab	Toilet Building	PR-072		3	2	The concrete slab at the storage room entrance has cracked.	Route cracks and fill with patching mortar.	1	LS	\$ 1,000.00	\$ 1,000						\$ 1,350	\$ 1,454	\$ 1,527	\$ 1,728	\$ 2,212
6.3	Artificial Turf	Playground Equipment			4	3	The artificial turf is in good condition.	Plan on replacing the artificial turf in 2028.	1,500	SF	\$ 5.00	\$ 7,500									\$ 12,961	\$ 16,592

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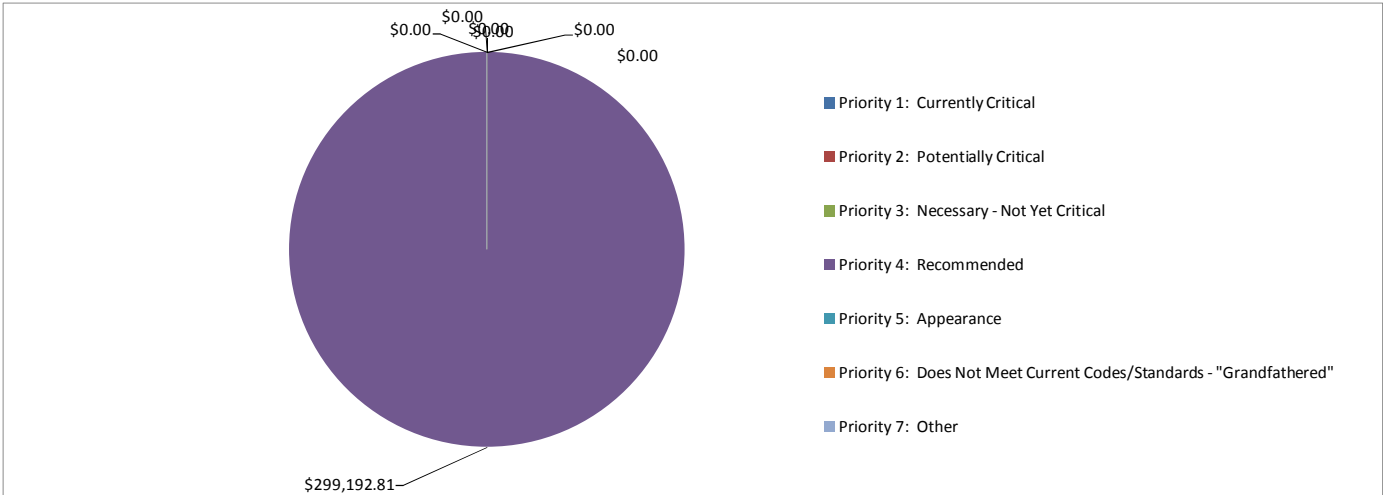
Raintree Park

Building Information Address: 3775 John R. Road Building Area - Toilet Building: 700 SF Building Area - Pavilion: 1,280 SF No. of Floors: 1 Year Built: ? Evaluation Date: January 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only															
*Lower score equals higher priority																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
6.4	Play Structure	Playground			7	3	The play structure is in good condition.	Plan on replacing play structure in 2038.	1	LS	\$ 40,000.00	\$ 40,000										\$ 88,486	
6.5	Play Structure	Playground			7	3	The play structure is in good condition.	Plan on replacing play structure in 2038.	1	LS	\$ 20,000.00	\$ 20,000										\$ 44,242	
6.6	Swings	Playground			7	3	The swing seats and chains are in good condition.	Plan on replacing swing seats and chains in 2028.	1	LS	\$ 2,400.00	\$ 2,400									\$ 4,148	\$ 5,309	
6.7	Picnic Tables	Pavilion	PR-074		4	1	The picnic tables have wood tops and benches that are showing signs of wear.	Refinish all wood surfaces with an oil-modified polyurethane.	41	EA	\$ 600.00	\$ 24,600						\$ 33,210	\$ 35,764	\$ 37,574	\$ 42,512	\$ 54,418	
												\$ 362,196		\$ -		\$ -	\$ -	\$ -	\$ 34,560	\$ 37,217	\$ 39,101	\$ 61,349	\$ 801,227

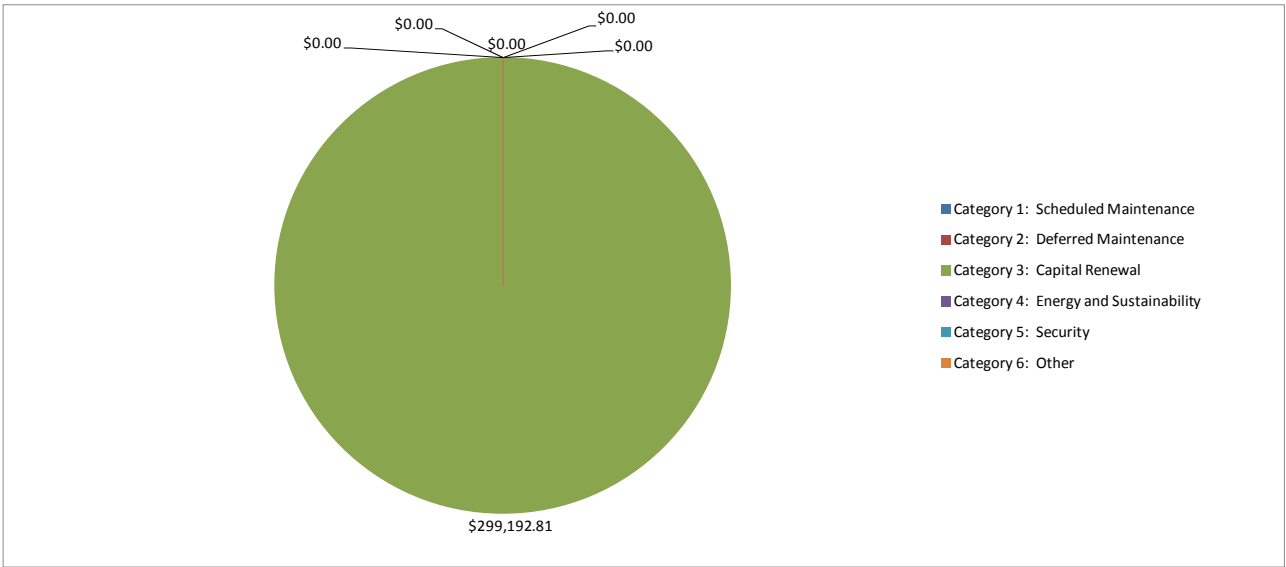


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



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3500 John R Park

Building Information Address: 3500 John R. Road Building Area: 1,680 SF No. of Floors: 1 Year Built: ? Evaluation Date: January 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only													
								*Lower score equals higher priority													

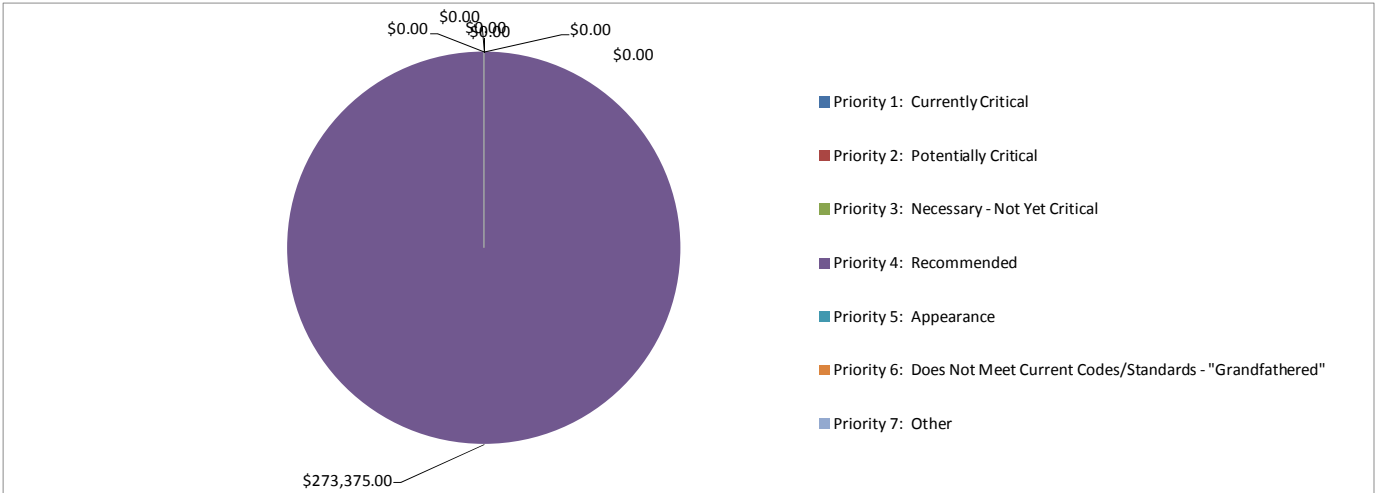
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Remove Storage Building	Park	PJR-012 PJR-013 PJR-015 PJR-024 PJR-026 PJR-028 PJR-029 PJR-030 PJR-031 PJR-032 PJR-035 PJR-037 PJR-039 PJR-040 PJR-044		4	3	The interior finishes are damaged and unusable for their intended purpose. The lighting and electrical service are outdated and insufficient. The garage doors and man doors do not close and seal their openings. The exterior wood sheets have deteriorated at the bottom and have holes, permitting wildlife to enter the building. The building is separated from the drive and sits at a lower elevation; requiring a metal grate ramp at the doors.	Remove building.	20,370	CF	\$ 0.39	\$ 7,944						\$ 10,725	\$ 11,549	\$ 12,134	\$ 13,729	\$ 17,574
1.2	Remove Concrete Floor Slab	Park			4	3	The size, location and elevation of the concrete floor slab will restrict any new building structure.	Remove concrete floor slab.	1,680	SF	\$ 5.00	\$ 8,400						\$ 11,340	\$ 12,212	\$ 12,830	\$ 14,516	\$ 18,582
1.3	Remove Concrete Foundation Wall	Park			4	3	The size, location and elevation of the concrete foundation wall will restrict any new building structure.	Remove concrete foundation wall.	176	LF	\$ 30.00	\$ 5,280						\$ 7,128	\$ 7,676	\$ 8,065	\$ 9,124	\$ 11,680
1.4	New Storage Building	Park			4	3	Remove storage building due to its condition.	Add new pre-manufactured storage building consisting of non-insulated metal siding and roof, two garage doors, one standard door, high bay LED lighting, exterior building LED lighting and building signage.	2000	SF	\$ 100.00	\$ 200,000						\$ 270,000	\$ 290,760	\$ 305,480	\$ 345,623	\$ 442,426
2.0	Building Interior																					
	No comments.																					
3.0	Electrical System																					
	No comments.																					
4.0	Mechanical System																					
	No comments.																					
5.0	Plumbing System																					
	No comments.																					
											\$ 221,624		\$ -		\$ -		\$ -	\$ 299,193	\$ 322,198	\$ 338,509	\$ 382,992	\$ 490,262

6.0 Site																						
6.1	Bleacher	West End of Park	PJR-043 PJR-044		3	2	The bottom step is damaged. The handrail is missing.	Repair the bottom step and replace the missing handrail.	1	LS	\$ 1,200.00	\$ 1,200						\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655
6.2	Bleacher	South End of Park	PJR-045 PJR-046		3	2	The bottom bleacher seat is not level and damaged.	Replace bottom bleacher seat and support.	1	LS	\$ 1,800.00	\$ 1,800						\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982
6.3	Soccer Goal Equipment	Park	PJR-050 PJR-051		4	3	The six soccer goal posts are corroded and undersized for regulation play.	Replace with four, 8 feet by 24 feet soccer goals consisting of all-aluminum construction with white polymer coating. The posts, crossbar and back bottom bar will each be 3 inch round and heavy gauge. The nets will be 3mm, white and have straps, anchors and clips necessary for securing to the goal frame.	4	EA	\$ 2,000.00	\$ 8,000						\$ 10,800	\$ 11,630	\$ 12,219	\$ 13,825	\$ 17,697
6.4	Site Lighting	Parking Lot	PJR-009	PJR-E-1	4	4	Wood Pole with Edison streetlight.	Replace with new pole and LED fixture.	1	EA					\$ 5,000.00	\$ 5,000		\$ 6,750	\$ 7,269	\$ 7,637	\$ 8,641	\$ 11,061
											\$ 11,000	\$ -		\$ 5,000		\$ -	\$ 21,600	\$ 23,261	\$ 24,438	\$ 27,650	\$ 35,394	

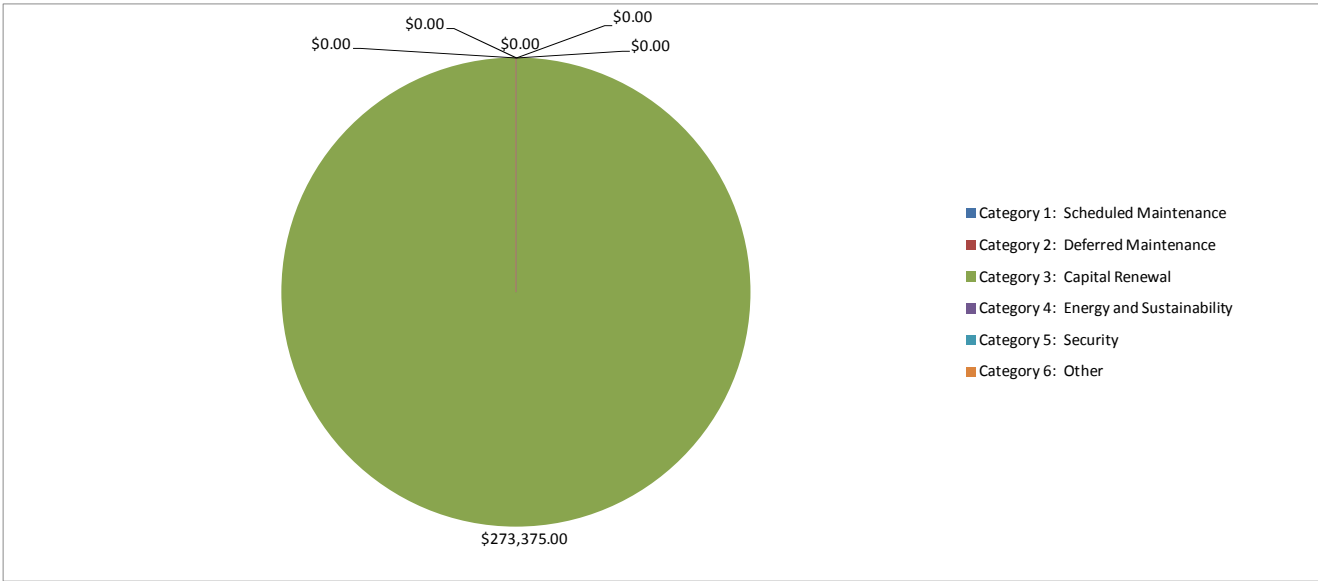


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



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Stone House Park

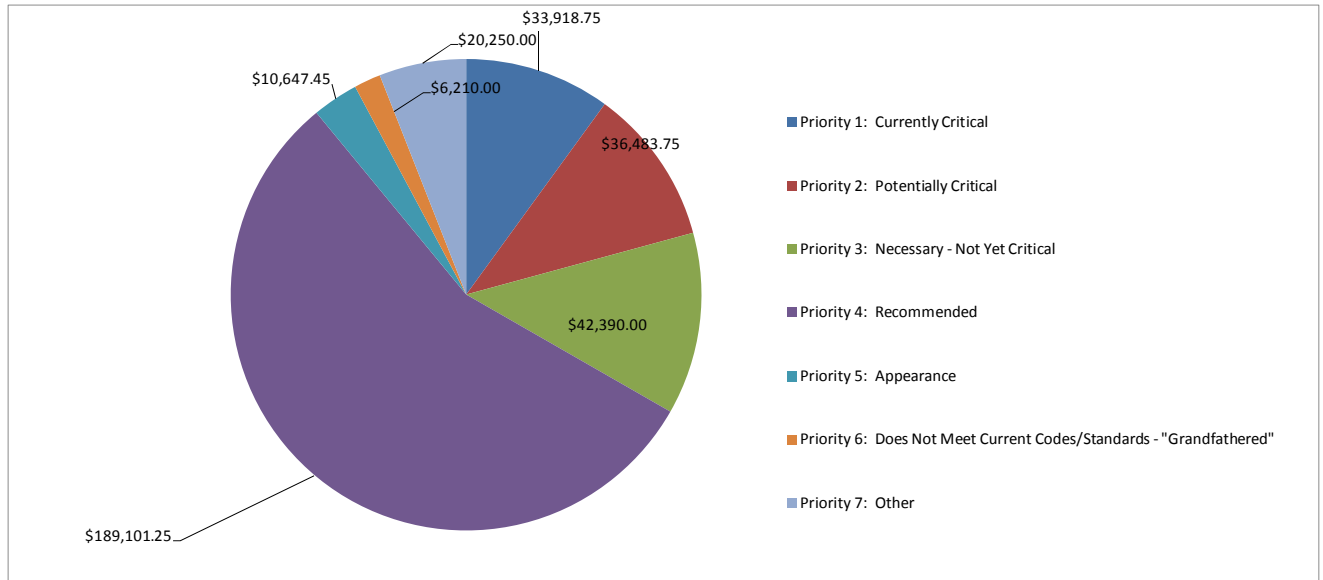
Building Information	Deficiency Priorities	Deficiency Categories
Address: 3995 West South Boulevard	Priority 1: Currently Critical	Category 1: Scheduled Maintenance
Building Area: 900 SF	Priority 2: Potentially Critical	Category 2: Deferred Maintenance
No. of Floors: 1	Priority 3: Necessary - Not Yet Critical	Category 3: Capital Renewal
Year Built: 1920	Priority 4: Recommended	Category 4: Energy and Sustainability
Evaluation Date: April 2018	Priority 5: Appearance	Category 5: Security
	Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"	Category 6: Other
	Priority 7: Other	

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Renovation	House	PSH-028 PSH-078		4	3	The condition of the house is inhabitable. There are no indoor toilets. The electrical and mechanical systems could not be located during the site review and may be under the house (inaccessible). There are large holes to the outside from the attic; permitting wildlife into the house and potentially weathering the wood structure. None of the cabinets or appliances are functional. Finishes have been damaged throughout. The fire place and chimney are not code compliant. There is no driveway from the road.	Replace roof structure, chimney and roofing system. Replace all interior finishes, doors and windows. Replace carpet. Add resilient flooring and base in kitchen. Replace cabinets and appliances. Add bathroom and utility room into existing structure. Remove paint from exterior stone. Tuckpoint cracked mortar joints. Add driveway and curb cut at Adams Road.	900	SF	\$ 225.00	\$ 202,500						\$ 273,375	\$ 294,395	\$ 309,299	\$ 349,943	\$ 447,957
2.0	Building Interior																					
	No comments.																					
3.0	Electrical System																					
	No comments.																					
4.0	Mechanical System																					
	No comments.																					
5.0	Plumbing System																					
	No comments.																					
												\$ 202,500		\$ -		\$ -	\$ -	\$ 273,375	\$ 294,395	\$ 309,299	\$ 349,943	\$ 447,957

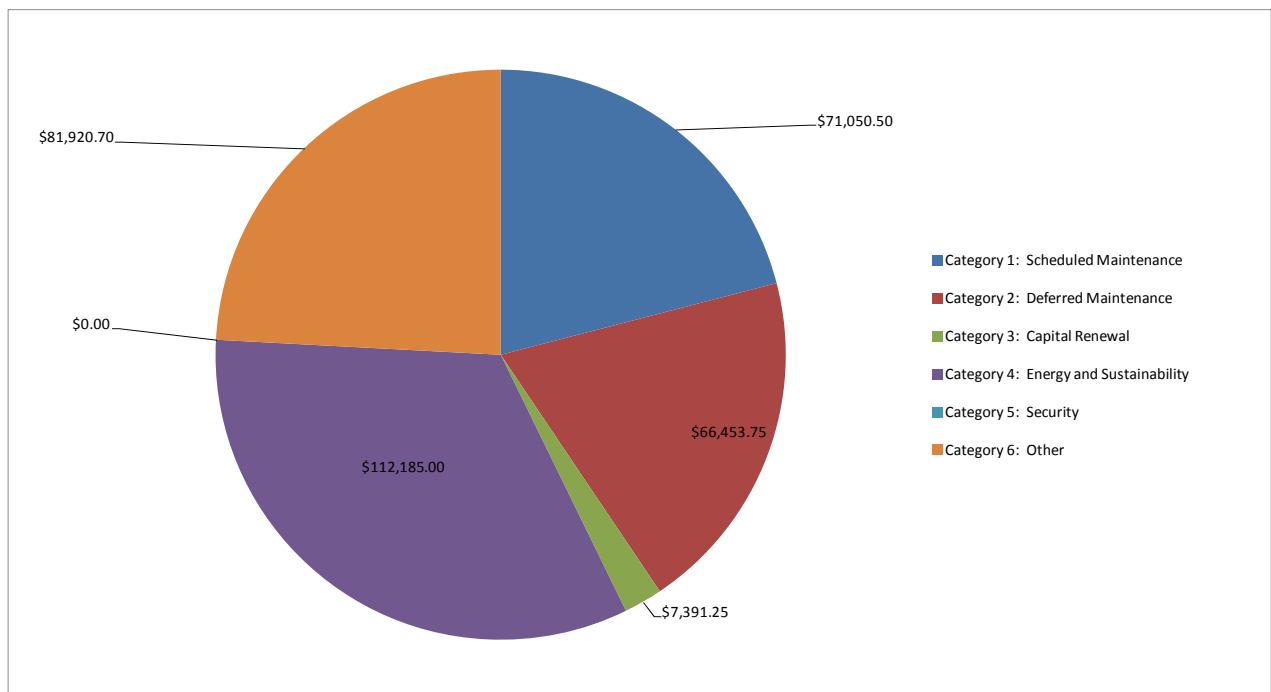
6.0	Site																					
6.1	Demolition	Outhouse	PSH-088 PSH-090		1	3	The condition of the outhouse is poor and is a life safety risk.	Remove stone structure, foundation and wood framed roof.	1	LS	\$ 1,000.00	\$ 1,000						\$ 1,350	\$ 1,454	\$ 1,527	\$ 1,728	\$ 2,212
6.2	Demolition	Well	PSH-082 PSH-084		1	3	The condition of the well is poor and is a life safety risk.	Remove stone structure, foundation and wood framed roof. Fill hole with fill dirt and top with a blend of 50% top soil and 50% peat moss. Seed.	1	LS	\$ 500.00	\$ 500						\$ 675	\$ 727	\$ 764	\$ 864	\$ 1,106
												\$ 1,500		\$ -		\$ -	\$ -	\$ 2,025	\$ 2,181	\$ 2,291	\$ 2,592	\$ 3,318

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
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Sylvan Glen Pro Shop/Restaurant

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 5727 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 4,800 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 3				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: ?				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
								*Lower score equals higher priority														
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.3	Windows	Retail, Office 1, Men's Locker, Golf Cart Storage	SGPS-242 SGPS-243		4	4	The existing wood double-hung windows have damaged non-thermally broken frames and non-insulating glass.	Replace with aluminum windows with thermally broken frames and one inch tinted insulating glass units. Seal the window frame with exterior grade silicone sealant. Include window treatments at each window.	198	SF	\$ 80.00	\$ 15,840						\$ 21,384	\$ 23,028	\$ 24,194	\$ 27,373	\$ 35,040
1.4	Vinyl Siding	Pro Shop Exterior	SGPS-350 SGPS-353		4	2	The vinyl siding has been damaged due to golf balls and utility modifications.	Replace damaged sections with vinyl siding.	1	LS	\$ 6,400.00	\$ 6,400						\$ 8,640	\$ 9,304	\$ 9,775	\$ 11,060	\$ 14,158
1.5	Vinyl Siding	Pro Shop and Restaurant Exterior	SGPS-357 SGPS-370		5	1	The vinyl siding has been stained by organic matter.	Power wash all vinyl siding surfaces with a commercial grade solution.	4,605	SF	\$ 1.00	\$ 4,605						\$ 6,217	\$ 6,695	\$ 7,034	\$ 7,958	\$ 10,187
1.6	CMU Paint	Golf Cart Storage Exterior Wall	SGPS-360 SGPS-361		4	2	The paint has delaminated from the CMU retaining wall and exterior wall from weather and organic material growing on the walls. Additionally, several joints are failing and cracks have formed in the CMU and concrete caps.	Remove all paint from CMU and concrete caps. Tuck point all failing mortar joints and cracks in CMU. Seal cracks on the top of the concrete caps with an exterior grade silicone sealant. Coat the CMU with block filler and two coats of exterior low-luster acrylic paint. Do not paint the concrete caps.	1	LS	\$ 4,200.00	\$ 4,200						\$ 5,670	\$ 6,106	\$ 6,415	\$ 7,258	\$ 9,291
1.8	Awnings	Office 1 and Retail Windows	SGPS-367 SGPS-368		5	6	The fabric has been damaged by organic material and will no longer be required if the windows are replaced with new units incorporating tinted glass.	Remove awnings and patch holes at removed fasteners.	6	EA	\$ 50.00	\$ 300						\$ 405	\$ 436	\$ 458	\$ 518	\$ 664
1.9	Wood Trim	Exterior	SGPS-381 SGPS-384		3	2	The wood trim at various locations including the exterior wood stair from the Banquet Hall has deteriorated due to weather.	Replace all damaged wood trim with preservative-treated wood. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer. At wood in acceptable condition, remove paint and apply finish as previously indicated.	1	LS	\$ 8,000.00	\$ 8,000						\$ 10,800	\$ 11,630	\$ 12,219	\$ 13,825	\$ 17,697
1.11	Asphalt Shingles	Roof Over Shop and Break Area			2	3	The asphalt shingles were installed in 2003 and are in good condition.	Plan on replacing the asphalt shingles, underlayment and flashings in 2028.	11,083	SF	\$ 4.00	\$ 44,332									\$ 76,611	\$ 98,069
1.19	Wood Trim and Siding	On-Course Toilet North On-Course Toilet South	SGPS-619 SGPS-681		3	2	The paint over the wood trim, siding, built-in benches and ceilings has deteriorated due to weather.	Replace all damaged wood trim with preservative-treated wood. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer. At wood in acceptable condition, remove paint and apply finish as previously indicated.	2	EA	\$ 4,800.00	\$ 9,600						\$ 12,960	\$ 13,957	\$ 14,663	\$ 16,590	\$ 21,236
1.20	Door	On-Course Toilet North On-Course Toilet South	SGPS-620 SGPS-690		4	6	The toilet room doors are residential screen doors and hardware. The chase doors are wood panels. The screen doors are secured over the winter by installing a wood cover with bolts.	Replace the frame with an aluminum frame. Replace the door with a fiberglass reinforced polyester (FRP) door.	6	EA	\$ 3,000.00	\$ 18,000						\$ 24,300	\$ 26,168	\$ 27,493	\$ 31,106	\$ 39,818
1.21	Asphalt Shingles	Roof Over On-Course Toilet Rooms	SGPS-681		2	3	The asphalt shingles were installed in 2003 and are in good condition, but have organic material collecting under them.	Plan on replacing the asphalt shingles, underlayment and flashings in 2023.	754	SF	\$ 4.00	\$ 3,016								\$ 4,607	\$ 5,212	\$ 6,672
1.22	Elevator Load Testing	Elevator			4	1	Recommended safety testing from the elevator service contractor.	To verify the integrity of the in-ground hydraulic elevator piston seals, a full load needs to be applied to the car for a pre-determined amount of time. A certified elevator technician will inspect the seals around the piston for any leaks.	1	LS	\$ 1,400.00	\$ 1,400						\$ 1,890	\$ 2,035	\$ 2,138	\$ 2,419	\$ 3,097

Note: Project Cost includes 35% mark-ups and fees
Annual Maintenance includes labor and material only

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Sylvan Glen Pro Shop/Restaurant

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 5727 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 4,800 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 3				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: ?				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other																		
Note: Project Cost includes 35% mark-ups and fees																						
Annual Maintenance includes labor and material only																						
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.23	Soft Starter	Elevator			4	3	The existing motor starter controls the electrical voltage and current from your building power source to the elevator. The existing motor starter is obsolete and parts to repair may not be available, which can lead to extended downtime and unplanned costs to return the elevator to service.	A soft starter will add phase, over-voltage and under-voltage protection to major elevator components. This protection helps prevent the motor from burnout during phase loss and enhances motor life. It will also provide potential energy savings by changing the amount of energy used by the motor according to load on the motor, while keeping the motor speed the same.	1	LS	\$ 3,600.00	\$ 3,600						\$ 4,860	\$ 5,234	\$ 5,499	\$ 6,221	\$ 7,964
1.24	Elevator Power Unit and Pump	Elevator			4	1	The existing elevator power unit and pump have exceeded their expected serviceable life.	Replace elevator power unit and pump.	1	LS	\$ 21,500.00	\$ 21,500						\$ 29,025	\$ 31,257	\$ 32,839	\$ 37,154	\$ 47,561
1.25	Elevator Modernization	Elevator			4	3	The existing car finishes, power unit, pump, motor, controls and safety features should be replaced in 2038.	Replace all hydraulic elevator serviceable components and car finishes.	1	LS	\$ 130,000.00	\$ 130,000										\$ 287,577
2.0	Building Interior																					
2.1	Carpet	Dining, Elevator, File Storage, Storage 6, Women's Locker, Corridor 1, Corridor 2, Retail, Office 1, Office 2, Men's Locker, Banquet Hall	SGPS-244 SGPS-254		5	3	The condition of carpet ranges from good to poor.	Plan on replacing the carpet with carpet tiles in 2023.	5151	SF	\$ 5.50	\$ 28,331								\$ 43,272	\$ 48,958	\$ 62,671
2.2	Flooring	Men's 3, Women's 3, Women's Shower	SGPS-267		5	6	The resilient flooring has failed around plumbing fixtures.	Replace the resilient flooring and wood sub-flooring with preservative-treated plywood and high-performance soft-surface flooring.	426	SF	\$ 7.00	\$ 2,982						\$ 4,026	\$ 4,335	\$ 4,555	\$ 5,153	\$ 6,597
2.3	Third Grab Bar	Men's 3, Women's 3, Restroom 2, Women's 1, Men's 1, Women's 2, Men's 2			6	6	The current Michigan Building Code 2015 requires a third/vertical grab bar in barrier-free toilet stalls.	Add third/vertical grab bar.	7	EA	\$ 400.00	\$ 2,800						\$ 3,780	\$ 4,071	\$ 4,277	\$ 4,839	\$ 6,194
2.4	Non-Insulated Lavatory Piping	Men's 3, Women's 3, Restroom 2, Women's 1, Men's 1, Women's 2, Men's 2			6	6	The exposed piping under lavatory countertops is exposed and can burn the legs of those in wheelchairs (code violation).	Insulate piping.	12	EA	\$ 150.00	\$ 1,800						\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982
2.5	Exterior Door and Frame	Storage	SGPS-175		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace the frame with an aluminum frame. Replace the door with a fiberglass reinforced polyester (FRP) door.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
2.6	Elevator Pit	Elevator			2	6	There is water in the elevator pit (code violation).	Prior to correction, the elevator pit and its equipment must be inspected, under the code required service agreement, by a licensed elevator inspector. They must be provided pit access and be present during the entire correction process. Remove all standing water and oil from the pit's concrete surfaces. Route all cracks and defective construction joints and fill with a cementitious packing mortar compatible with a crystalline waterproofing system. Apply an 1/8 inch thick slurry coat of a crystalline waterproofing system over all concrete surfaces.	1	EA	\$ 6,000.00	\$ 6,000						\$ 8,100	\$ 8,723	\$ 9,164	\$ 10,369	\$ 13,273
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Pro Shop			1	1	No Emergency Egress Lighting observed.	Emergency Battery units should be installed.	8	EA					\$ 535.00	\$ 4,280		\$ 5,778	\$ 6,222	\$ 6,537	\$ 7,396	\$ 9,468
3.2	Exit Signs	Pro Shop			1	1	Locker and Shower rooms have no or inoperative exit signs	Exit signs with battery back-up should be installed	7	EA					\$ 355.00	\$ 2,485		\$ 3,355	\$ 3,613	\$ 3,796	\$ 4,294	\$ 5,497

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April 2018

Sylvan Glen Pro Shop/Restaurant

Building Information				Deficiency Priorities				Deficiency Categories													
Address: 5727 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance													
Building Area: 4,800 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance													
No. of Floors: 3				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal													
Year Built: ?				Priority 4: Recommended				Category 4: Energy and Sustainability													
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security													
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other													
				Priority 7: Other																	
								Note: Project Cost includes 35% mark-ups and fees													
								Annual Maintenance includes labor and material only													

City of Troy
Facility Condition Assessment
April 2018

Sylvan Glen Pro Shop/Restaurant

Building Information Address: 5727 Rochester Road Building Area: 4,800 SF No. of Floors: 3 Year Built: ? Evaluation Date: February 2018				Deficiency Priorities Priority 1: Currently Critical Priority 2: Potentially Critical Priority 3: Necessary - Not Yet Critical Priority 4: Recommended Priority 5: Appearance Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered" Priority 7: Other				Deficiency Categories Category 1: Scheduled Maintenance Category 2: Deferred Maintenance Category 3: Capital Renewal Category 4: Energy and Sustainability Category 5: Security Category 6: Other				Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only									
								*Lower score equals higher priority													

No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectoral		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.13	Boiler - Pro Shop	Boiler Room		SGPS-M-13	3	3	The 200 MBH boiler is in poor condition.	Remove the boiler and replace with a more appropriate HVAC system with less maintenance and improved energy efficiency; possibly variable refrigerant flow system.	1	LS			\$ 39,000.00	\$ 39,000			\$ 450			\$ 59,568	\$ 67,396	\$ 86,273
4.14	Air Conditioner	Pro Shop West		SGPS-M-14	3	3	The wall mounted air conditioning unit is in good condition.	Remove the unit and replace with a more appropriate HVAC system.	1	LS			\$ 3,000.00	\$ 3,000							\$ 5,184	\$ 6,636
4.15	Outdoor Condensing Unit (AC-7)	West Grade		SGPS-M-15	1	1	The 5 ton outdoor condensing unit is in poor condition.	Remove the unit and replace with a more appropriate HVAC system.	1	LS			\$ 5,400.00	\$ 5,400			\$ 200		\$ 7,851	\$ 8,248	\$ 9,332	\$ 11,946
4.16	Air Conditioner	Pro Shop Office		SGPS-M-16	2	2	The wall mounted air conditioning unit is in good condition.	Remove the unit and replace with a more appropriate HVAC system.	1	LS			\$ 3,000.00	\$ 3,000							\$ 5,184	\$ 6,636
4.17	Outdoor Condensing Unit (AC-1)	West Grade		SGPS-M-17	1	1	The outdoor condensing unit is in poor condition.	Remove the unit and replace with a more appropriate HVAC system.	1	LS			\$ 2,000.00	\$ 2,000			\$ 200		\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
4.18	Electric Unit Heater	Pro Shop Office		SGPS-M-18	2	2	The wall mounted air conditioning unit is in good condition.	Remove the unit and replace with a more appropriate HVAC system.	1	LS			\$ 5,700.00	\$ 5,700							\$ 9,850	\$ 12,609
4.19	Natural Gas Unit Heater	Cart Garage			2	2	The heater is in poor condition, but functioning properly.	Replace the unit heater with a like kind in the next 5 years.	1	EA		\$ -	\$ 1,300.00	\$ 1,300						\$ 1,986	\$ 2,247	\$ 2,876
4.20	Make-up Air Handling Unit	East Grade		SGPS-M-19	3	3	The air handling unit is in fair condition. Exposure to the elements will decrease its useful life.	Replace the unit with a like kind in the next 5 years.	1	LS		\$ -	\$ 9,000.00	\$ 9,000			\$ 300			\$ 13,746	\$ 15,553	\$ 19,909
4.21	Kitchen Exhaust Fans	Kitchen Roof			2	2	The rooftop exhaust fans are in poor condition, laden with grease, dirt and corrosion.	Replace the rooftop exhaust fans with a like kind in the next 5 years.	1	LS		\$ -	\$ 5,600.00	\$ 5,600			\$ 300			\$ 8,553	\$ 9,677	\$ 12,387
5.0	Plumbing System																					
5.1	Restaurant Commercial Domestic Water Heater	Basement		SGPS-P-1 SPGS-P-2	5	5	The electric domestic water heater is in good condition. It looks new and well maintained. The associated piping is copper and is in good condition.	The water heater should be replaced with a like kind in the next 20 years.	2	EA			\$ 14,500.00	\$ 29,000								\$ 64,151
52	Restaurant Domestic Water and Sanitary Piping	Toilet Rooms/Kitchen			1	1	The domestic water and sanitary piping is in fair condition.	Piping should be replaced when new plumbing fixtures are installed.	1	LS			\$ 6,300.00	\$ 6,300							\$ 10,888	\$ 13,937
5.3	Pro Shop Domestic Water Heater	Boiler Room		SGPS-P-3	4	3	The domestic water heater appears to be in fair condition.	The water heater should be replaced with a like kind in the next 5 years.	1	LS			\$ 3,400.00	\$ 3,400						\$ 5,193	\$ 5,876	\$ 7,521
5.4	Pro Shop Domestic Water and Sanitary Piping	Toilet Rooms/Break Room/Laundry			1	1	The domestic water and sanitary piping is in poor condition.	Piping should be replaced when new plumbing fixtures are installed.	1	LS			\$ 4,200.00	\$ 4,200		\$ -	\$ 5,670	\$ 6,106	\$ 6,415	\$ 7,258	\$ 9,291	
5.5	Pro Shop Plumbing Fixtures	Toilet Rooms/Break Room/Laundry			1	1	Plumbing fixtures (porcelain, flush valves, faucets, mixing valves, fixture carriers) are in poor condition and are at the end of their useful lives.	Replace the plumbing fixtures immediately.	1	LS			\$ 8,100.00	\$ 8,100		\$ -	\$ 10,935	\$ 11,776	\$ 12,372	\$ 13,998	\$ 17,918	
												\$ 315,706	\$ 169,400	\$ 128,785	\$ 5,647	\$ 339,001	\$ 375,825	\$ 580,349	\$ 773,660	\$ 1,342,079		

6.0	Site																				
6.1	Asphalt Pavement	Parking Lots	SGPS-405 SGPS-727		4	3	The asphalt pavement in the parking lots has cracked in several locations, but is in fair condition overall.	Plan to remove both layers of asphalt and recompact drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping in 2023.	151,000	SF	\$ 4.00	\$ 604,000							\$ 922,551	\$ 1,043,781	\$ 1,336,128
6.2	Control Joints	Concrete Pavement at Restaurant Patio	SGPS-379		3	6	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Seal joints with an exterior grade silicone sealant.	288	LF	\$ 2.00	\$ 576					\$ 778	\$ 837	\$ 880	\$ 995	\$ 1,274
6.3	Concrete Pavement	Gold Cart Storage Exterior Wall	SGPS-363		2	3	The top surface of the concrete pavement has cracked and will spall within 10 years.	Plan on replacing the concrete pavement in 2028 with 8 inch thick concrete on a 6 inch compacted gravel base.	351	SF	\$ 50.00	\$ 17,550								\$ 30,329	\$ 38,823

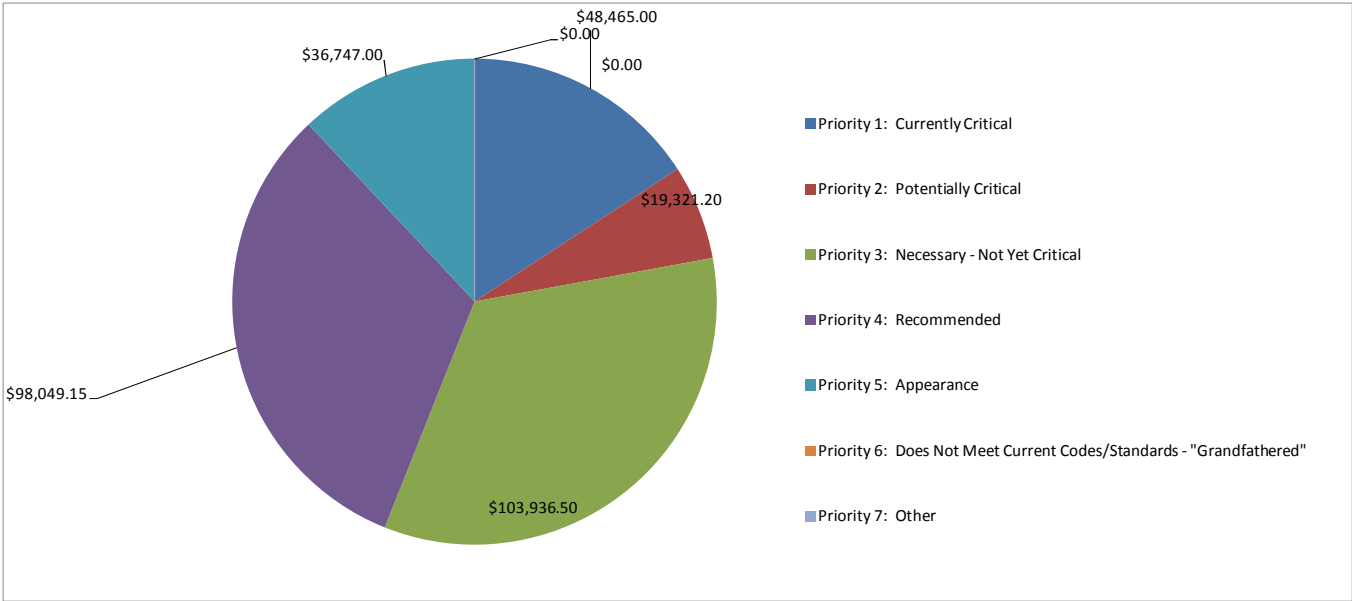
City of Troy
Facility Condition Assessment
April 2018

Sylvan Glen Pro Shop/Restaurant

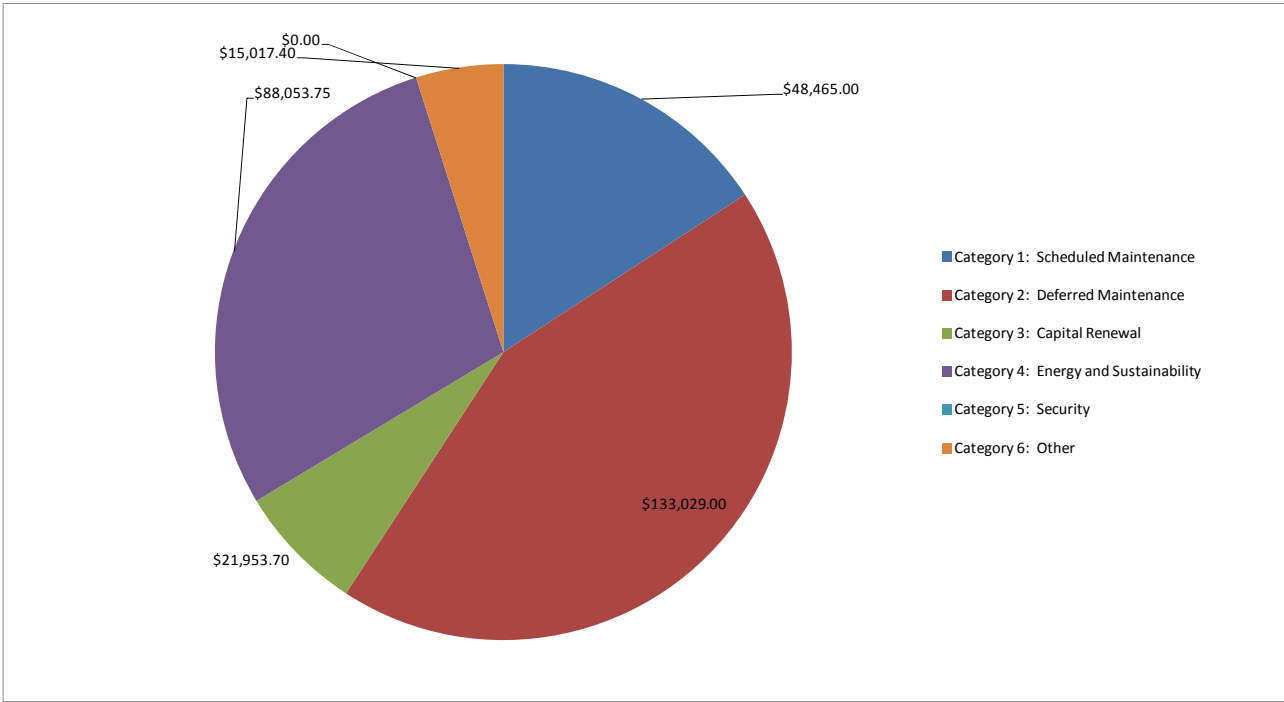
Building Information				Deficiency Priorities				Deficiency Categories															
Address: 5727 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 4,800 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 3				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: ?				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
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Note: Project Cost includes 35% mark-ups and fees																							
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
6.4	Privacy Fencing	Refuse Areas	SGPS-398 SGPS-402		3	2	The wood privacy fencing and the gates have been damaged and the paint has delaminated from the wood.	Replace all damaged wood boards with preservative-treated wood. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer. At wood in acceptable condition, remove paint and apply finish as previously indicated. Replace gate hardware	1	LS	\$ 2,800.00	\$ 2,800						\$ 3,780	\$ 4,071	\$ 4,277	\$ 4,839	\$ 6,194	
6.5	Bridge	Golf Course	SGPS-589 SGPS-715		6	3	There are three concrete deck bridges over rivers on the golf course with damaged, non-code compliant guardrails.	Replace the Unistrut guardrails with stainless steel guardrails secured through the concrete deck.	150	LF	\$ 200.00	\$ 30,000						\$ 40,500	\$ 43,614	\$ 45,822	\$ 51,843	\$ 66,364	
6.6	Bridge	Golf Course	SGPS-670		4	3	There are three concrete deck bridges over rivers on the golf course that are too narrow for golf cart traffic.	Maintain these three bridges, but with guardrail improvements indicated above. Build three new 8 feet wide by 30 feet long bridges, with concrete foundations, decks and stainless steel guardrails, adjacent to the existing bridges. Install a concrete bollard at either side of the remaining bridges to create pedestrian foot traffic bridges only.	3	EA	\$ 60,000.00	\$ 180,000						\$ 243,000	\$ 261,684	\$ 274,932	\$ 311,061	\$ 398,184	
6.7	Bridge	Golf Course	SGPS-595		4	1	There are five pre-manufactured wood deck bridges over rivers on the golf course with weathered steel guardrails and supports.	The weathered (i.e. corrosion) appearance is part of a protective, oxidation layer purposely designed into the steel guardrails and supports. Annual inspections, by a structural engineer, are recommended by the bridge manufacturer, Contech Engineered Solutions.	10	EA	\$ 1,200.00	\$ 12,000						\$ 16,200	\$ 17,446	\$ 18,329	\$ 20,737	\$ 26,546	
6.8	Bridge	Golf Course	SGPS-664		4	3	There are five pre-manufactured bridges over rivers on the golf course with wood decks that, over time, will weather to an unsafe load capacity.	Plan to remove all wood decks and replace with preservative-treated wood decking and stainless steel fasteners in 2028.	5	EA	\$ 6,000.00	\$ 30,000								\$ 51,843	\$ 66,364		
6.9	Bench	Golf Course	SGPS-599		4	1	The benches on the golf course are made out of heavy timber and coated with an exterior grade paint.	The condition of the benches is acceptable, but they should be recoated with an adhesive promoting primer and two coats of an exterior low-luster acrylic enamel in 2021.	21	EA	\$ 400.00	\$ 8,400							\$ 12,212	\$ 12,830	\$ 14,516	\$ 18,582	
6.10	Planter Wall	Golf Course	SGPS-601		3	2	The planter wall blocks have dislodged at the corners.	Rebuild the dislodged blocks and install drainage weeps at the base of the wall every other block.	1	LS	\$ 4,200.00	\$ 4,200						\$ 5,670	\$ 6,106	\$ 6,415	\$ 7,258	\$ 9,291	
6.11	Brick Pavers	Golf Course, On-Course Toilets	SGPS-605		2	2	The brick pavers have settled at the drinking fountains and bench, and buckled at the on-course toilets preventing the chase door from opening completely.	Salvage and clean brick pavers. Re-compact sub-grade and add filler where needed. Replace edging with concrete and reset brick pavers with a slope to one side.	795	SF	\$ 10.00	\$ 7,950						\$ 10,733	\$ 11,558	\$ 12,143	\$ 13,739	\$ 17,586	
6.12	Site Lighting	Parking Lot			4	3			1	EA						\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	
												\$ 897,476		\$ -		\$ -	\$ -	\$ -	\$ 320,660	\$ 357,528	\$ 1,298,178	\$ 1,550,942	\$ 1,985,336

DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Sylvan Glen Main Building

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 5705 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 2,500 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: ?				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security														
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No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Garage Door Jambs and Head	Pole Barn, Shop	SGMB-158 SGMB-164		4	2	The exterior wood garage door jambs and head have weathered and been damaged.	Replace the wood with preservative-treated wood. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer. Replace garage door resilient seals.	3	EA	\$ 2,400.00	\$ 7,200						\$ 9,720	\$ 10,467	\$ 10,997	\$ 12,442	\$ 15,927
1.2	Windows	Shop	SGMB-168		4	4	The existing 4 feet by 4 feet window frames are non-thermally broken and have non-insulating glass.	Replace windows with thermally broken, aluminum storefront framing with one inch insulating glass units. Seal the window frame with exterior grade silicone sealant. Replace the metal screens with stainless steel mesh.	7	EA	\$ 1,340.00	\$ 9,380						\$ 12,663	\$ 13,637	\$ 14,327	\$ 16,210	\$ 20,750
1.3	Windows	Office, Storage, Break Room	SGMB-100 SGMB-177		4	4	The existing 3 feet by 4 feet window frames are non-thermally broken and have non-insulating glass.	Replace windows with thermally broken, aluminum storefront framing with one inch insulating glass units. Seal the window frame with exterior grade silicone sealant. Replace the metal screens with stainless steel mesh.	6	EA	\$ 1,080.00	\$ 6,480						\$ 8,748	\$ 9,421	\$ 9,898	\$ 11,198	\$ 14,335
1.4	Wood Trim	Exterior	SGMB-166 SGMB-189		3	2	The wood trim at the roof fascias and soffits has deteriorated due to weather. Additionally, gaps have formed between the boards; allowing insects access into the building. These areas have been filled with foam sealant.	Replace all wood trim with preservative-treated wood. Allow to weather for one year then coat with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer. Add aluminum soffit vents.	367	LF	\$ 40.00	\$ 14,680						\$ 19,818	\$ 21,342	\$ 22,422	\$ 25,369	\$ 32,474
1.5	Wood Siding	Exterior	SGMB-169 SGMB-174		3	2	The wood siding has deteriorated due to weather. Additionally, gaps have formed at the ends of boards; allowing insects access into the building. These areas have been filled with foam sealant.	Remove all wood siding, insulation, substrate and air barrier. Replace with batt insulation, preservative-treated plywood, building wrap and vinyl siding.	956	SF	\$ 60.00	\$ 57,360						\$ 77,436	\$ 83,390	\$ 87,612	\$ 99,125	\$ 126,888
1.6	Asphalt Shingles	Roof Over Shop and Break Area	SGMB-162		2	3	The asphalt shingles are in poor condition as evidenced by numerous roof leaks.	Replace the asphalt shingles, underlayment and flashings.	2,828	SF	\$ 4.00	\$ 11,312						\$ 15,271	\$ 16,445	\$ 17,278	\$ 19,548	\$ 25,024
2.0	Building Interior																					
2.1	Flooring	Laundry, Women's, Men's, Office, Break Room, Storage	SGMB-071 SGMB-072		5	6	The vinyl composition tile (VCT) flooring sheet flooring are in very poor condition due to the foot traffic and moisture collected on the floors. The exposed plywood sub-flooring will eventually deteriorate due to having an unprotected surface.	Replace the VCT with a resilient sheet flooring system with welded seams and an integral base.	840	SF	\$ 6.00	\$ 5,040						\$ 6,804	\$ 7,327	\$ 7,698	\$ 8,710	\$ 11,149
2.2	Ceiling	Laundry, Women's, Men's, Office, Break Room, Storage	SGMB-075 SGMB-081		5	6	The ceiling tile system has been water damaged and fallen down in several locations.	Replace the ceiling tile system, including substrate, with an acoustical lay-in ceiling system.	840	SF	\$ 7.00	\$ 5,880						\$ 7,938	\$ 8,548	\$ 8,981	\$ 10,161	\$ 13,007
2.3	Wall Paneling	Women's, Men's	SGMB-077 SGMB-079		5	2	The wood wall paneling has been damaged due to water.	Replace the wood wall paneling with gypsum board. Tape, mud and sand joints. Coat with an epoxy primer and two coats of a waterborne semi-gloss epoxy.	2	EA	\$ 3,200.00	\$ 6,400						\$ 8,640	\$ 9,304	\$ 9,775	\$ 11,060	\$ 14,158
2.4	Lockers	Storage	SGMB-121 SGMB-124		4	6	The inside bottom metal panel and each locker is corroded.	Remove corrosion and secure an 18 gauge stainless steel plate to the bottom of each locker.	17	EA	\$ 12.00	\$ 204						\$ 275	\$ 297	\$ 312	\$ 353	\$ 451
2.5	Ceiling	Shop	SGMB-140		5	2	The ceiling tile system consists of unfinished gypsum board secured to the underside of the wood beams. It has been water damaged in various locations.	Replace the entire ceiling with moisture-resistant gypsum board. Tape, mud and sand joints. Coat with an epoxy primer and two coats of a waterborne semi-gloss epoxy.	1,650	SF	\$ 6.00	\$ 9,900						\$ 13,365	\$ 14,393	\$ 15,121	\$ 17,108	\$ 21,900

Note: Project Cost includes 35% mark-ups and fees
Annual Maintenance includes labor and material only

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City of Troy
Facility Condition Assessment
April 2018

Sylvan Glen Main Building

Building Information		Deficiency Priorities		Deficiency Categories	
Address: 5705 Rochester Road		Priority 1: Currently Critical		Category 1: Scheduled Maintenance	
Building Area: 2,500 SF		Priority 2: Potentially Critical		Category 2: Deferred Maintenance	
No. of Floors: 1		Priority 3: Necessary - Not Yet Critical		Category 3: Capital Renewal	
Year Built: ?		Priority 4: Recommended		Category 4: Energy and Sustainability	
Evaluation Date: February 2018		Priority 5: Appearance		Category 5: Security	
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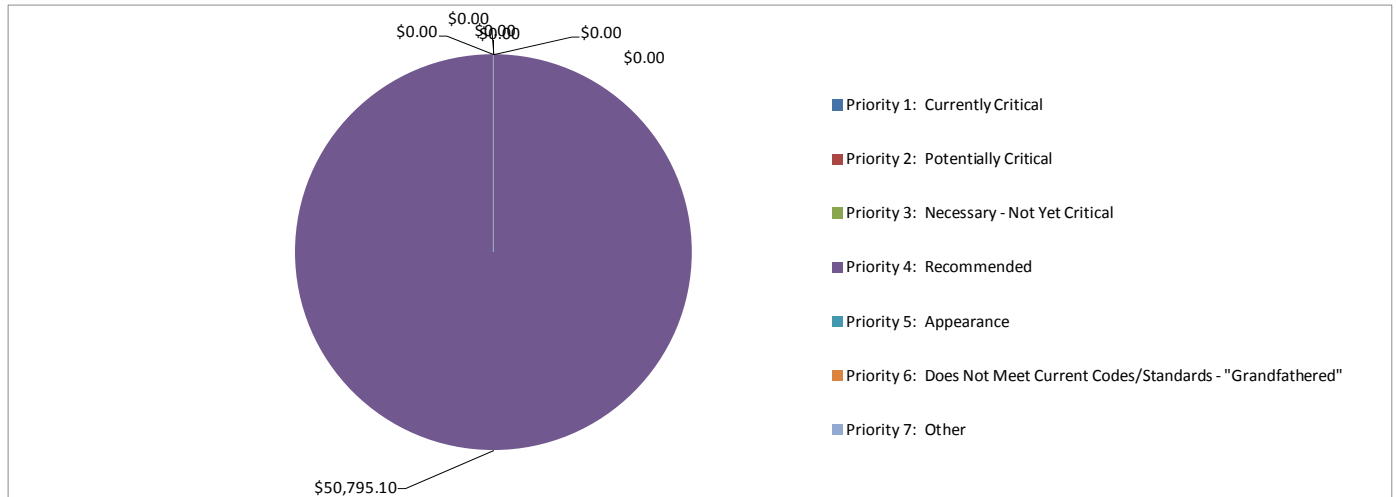
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
2.6	Flooring	Shop, Pole Barn	SGMB-136 SGMB-154		5	3	The epoxy floor system has been damaged.	The damage has been restricted to a few areas, but the system will prematurely wear in these areas and gradually in other areas of heavy use. Plan to replace the epoxy floor system with a traffic coating system in 2028.	3,381	SF	\$ 5.00	\$ 16,905									\$ 29,214	\$ 37,397
2.7	Exterior Door and Frame	Storage	SGMB-175		2	2	The bottoms of the hollow metal door and frame are corroded.	Replace the frame with an aluminum frame. Replace the door with a fiberglass reinforced polyester (FRP) door.	1	EA	\$ 3,000.00	\$ 3,000						\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636
3.0	Electrical System																					
3.1	Emergency Egress Lighting	Entire Building			1	1	Additional fixtures with emergency back-up are required to comply with the current code.	Add emergency battery packs to select fixtures.	8	EA					\$ 350.00	\$ 2,800		\$ 3,780	\$ 4,071	\$ 4,277	\$ 4,839	\$ 6,194
3.2	Service Entrance Disconnect and Panelboard	East End of Shop		SGMB-E-1	3	3	The disconnect and panelboard are old and near the end of their life cycle	Replace the disconnect and panelboard.	1	EA					\$ 4,950.00	\$ 4,950		\$ 6,683	\$ 7,196	\$ 7,561	\$ 8,554	\$ 10,950
3.3	Panelboards	Storage 3 and Garage		SGMB-E-2 SGMB-E-4 SGMB-E-5	2	2	The equipment is old, and near the end of its life cycle. The panel in the office is obsolete.	Replace the panelboards in the next 5 years.	3	EA					\$ 3,700.00	\$ 11,100				\$ 16,954	\$ 19,182	\$ 24,554
3.4	Lighting Control System	Entire Building			4	4	Lights are manually controlled.	Install occupancy sensors to automatically shut off lighting in unoccupied spaces.	25	EA					\$ 285.00	\$ 7,125		\$ 9,619	\$ 10,358	\$ 10,883	\$ 12,313	\$ 15,761
3.6	Interior Building Lighting	Entire Building			4	4	Fixtures contain T-8 fluorescent lamps.	Replace fixtures, particularly those in the shop, with LED fixtures.	8,250	SF					\$ 5.00	\$ 41,250	\$ 165	\$ 55,688	\$ 59,969	\$ 63,005	\$ 71,285	\$ 91,250
3.7	Exterior Building Lighting	South Side of Pole Barn and East Side of Shop			4	4	Wall packs with yellowed lenses and out of date lamps	Replace fixtures with LED fixtures.	2	EA					\$ 495.00	\$ 990		\$ 1,337	\$ 1,439	\$ 1,512	\$ 1,711	\$ 2,190
4.0	Mechanical System																					
4.1	Furnace	Back Room		SGMB-M-1	1	1	The furnace is in poor condition and associated ductwork is in poor and failing condition.	Replace the furnace and provide new overhead ductwork immediately with a like kind.	1	LS			\$ 5,400.00	\$ 5,400			\$ 350	\$ 7,290	\$ 7,851	\$ 8,248	\$ 9,332	\$ 11,946
4.2	Outdoor Condensing Unit (Furnace F-1)	Exterior Grade North		SGMB-M-2	1	1	The 2 ton outdoor condensing unit is in poor condition.	Replace the outdoor condensing unit immediately with a like kind.	1	LS			\$ 2,000.00	\$ 2,000			\$ 200	\$ 2,700	\$ 2,908	\$ 3,055	\$ 3,456	\$ 4,424
4.3	Air Handling Unit - Pole Barn	Exterior Grade South		SGMB-M-3	5	4	The air handling unit is in good condition and is functional. Only the sheet metal screws on the casing show any signs of corrosion. The associated overhead ductwork and diffusers are in very good condition.	Replace the unit at the end of its useful life with a like kind in the next 10 years.	1	LS			\$ 9,000.00	\$ 9,000			\$ 1,000				\$ 15,553	\$ 19,910
4.4	Natural Gas Unit Heater	Shop		SGMB-M-4	4	4	The 125 MBH electric unit heater is in good condition and functioning properly.	Replace the unit heater with a like kind in the next 10 years.	1	EA			\$ 1,300.00	\$ 1,300							\$ 2,247	\$ 2,876
5.0	Plumbing System																					
5.1	Domestic Water Heater	Toilet Room		SGMB-P-1	4	3	The electric domestic water heater appears to be in fair condition.	The 12 gallon water heater should be replaced with a like kind in the next 5 years.	1	LS			\$ 3,400.00	\$ 3,400						\$ 5,193	\$ 5,876	\$ 7,521
5.2	Domestic Water and Sanitary Piping	Toilet Rooms/Break Room/Laundry			1	1	The domestic water and sanitary piping is in poor condition.	Domestic water and sanitary piping should be replaced when new plumbing fixtures are installed.	1	LS			\$ 4,200.00	\$ 4,200				\$ 5,670	\$ 6,106	\$ 6,415	\$ 7,258	\$ 9,291
5.3	Plumbing Fixtures	Toilet Rooms/Break Room/Laundry			1	1	Plumbing fixtures (porcelain, flush valves, faucets, mixing valves, fixture carriers) are in poor condition and are at the end of their useful life.	Replace plumbing fixtures immediately with like fixtures.	1	LS			\$ 21,500.00	\$ 21,500				\$ 29,025	\$ 31,257	\$ 32,839	\$ 37,154	\$ 47,561
											\$ 153,741		\$ 46,800		\$ 68,215		\$ 1,715	\$ 306,519	\$ 330,087	\$ 368,945	\$ 464,442	\$ 594,525

6.0 Site																						
6.1	Concrete Pavement	Fuel Tank	SGMB-199 SGMB-200		2	3	The top surface of the concrete pavement has cracked and will spall within 10 years.	Plan on replacing the concrete pavement in 2028 with 8-inch thick concrete on a 6-inch compacted gravel base.	158	SF	\$ 50.00	\$ 7,900								\$ 13,652	\$ 17,475	
											\$ 7,900		\$ -		\$ -		\$ -	\$ -	\$ -	\$ 13,652	\$ 17,475	

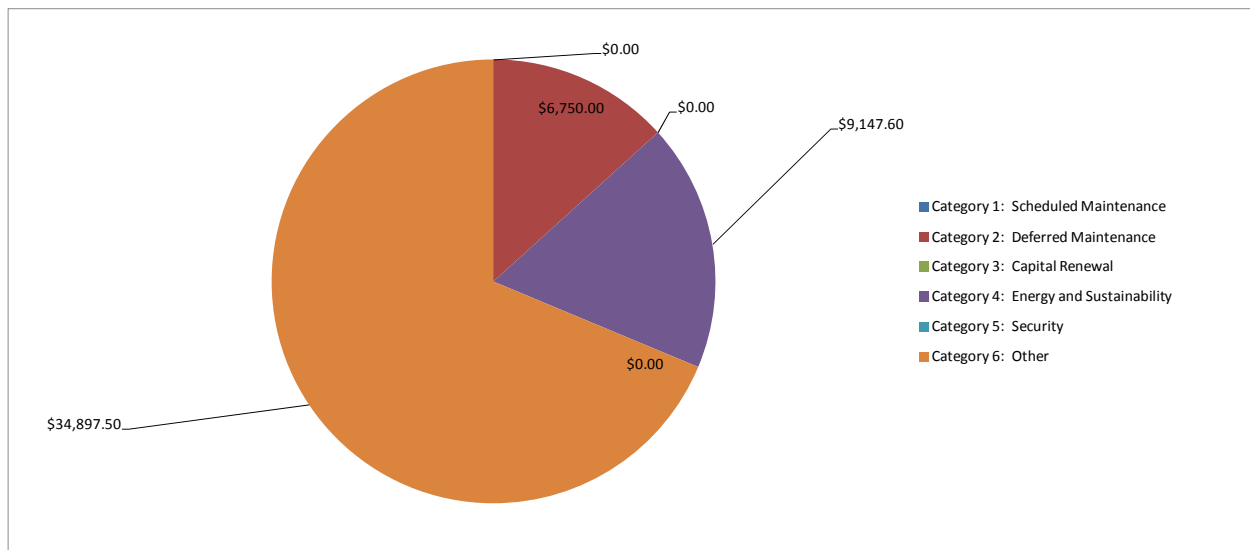


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

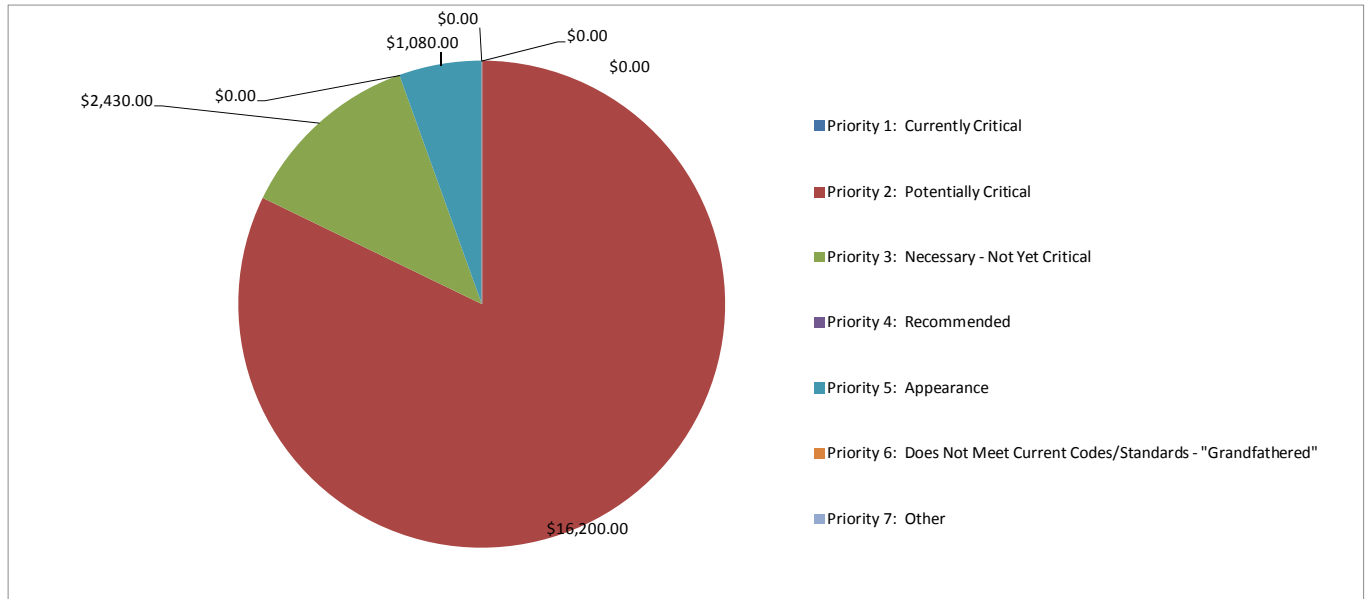
Sylvan Glen Storage Barn

Building Information				Deficiency Priorities				Deficiency Categories															
Address: 5707 Rochester Road				Priority 1: Currently Critical				Category 1: Scheduled Maintenance															
Building Area: 7,200 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance															
No. of Floors: 1				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal															
Year Built: 2001				Priority 4: Recommended				Category 4: Energy and Sustainability															
Evaluation Date: February 2018				Priority 5: Appearance				Category 5: Security															
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other															
				Priority 7: Other																			
*Lower score equals higher priority																							
Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only																							
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost	
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal							
1.0	Building Exterior																						
1.1	Exterior Metal Siding	Northwest Corner	SGSB-036		4	2	The exterior metal siding has been damaged and has created a location for rodent infiltration.	Replace the damaged sections of metal siding.	1	LS	\$ 2,200.00	\$ 2,200						\$ 2,970	\$ 3,198	\$ 3,360	\$ 3,802	\$ 4,867	
1.2	Wood Sills	Bottom of Exterior Metal Siding	SGSB-036		4	2	The exterior wood sills are exposed to the elements and top soil; accelerating the wood's deterioration.	Regrade top soil to below the wood sills, clean and prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	1	LS	\$ 2,800.00	\$ 2,800						\$ 3,780	\$ 4,071	\$ 4,277	\$ 4,839	\$ 6,194	
2.0	Building Interior																						
2.1	Wood Structure	Maintenance Vehicle Storage Shed	SGSB-040		4	6	The unfinished surfaces of the wood structure and roof are unprotected from moisture in the unconditioned space. Additionally, a finish will provide better light reflectance in the space.	Paint the wood structure with a waterborne acrylic dry fall paint system.	7300	SF	\$ 2.00	\$ 14,600						\$ 19,710	\$ 21,226	\$ 22,300	\$ 25,230	\$ 32,297	
2.2	Plywood Partitions and Wood Framing	Maintenance Vehicle Storage Shed and High Voltage Battery Storage	SGSB-039		4	6	The plywood partitions and wood wall framing are unprotected from moisture in the unconditioned space. Additionally, a finish will provide better light reflectance in the space.	Prime with an exterior wood primer for acrylic enamel. Apply two finish coats of exterior low-luster acrylic enamel over primer.	5000	SF	\$ 2.25	\$ 11,250						\$ 15,188	\$ 16,355	\$ 17,183	\$ 19,441	\$ 24,886	
3.0	Electrical System																						
3.1	Service Entrance Panelboard	Southeast Corner		SGSB-E-1	7	6	Panelboard is from 2001.	Replace the panelboard in 33 years.	1	EA					\$ 4,950.00	\$ 4,950							
3.2	Lighting Control System	Panelboard			4	4	HID lights are manually controlled from the panel.	Install occupancy sensors to automatically shut off lighting in unoccupied spaces.	4	EA					\$ 389.00	\$ 1,556		\$ 2,101	\$ 2,262	\$ 2,377	\$ 2,689	\$ 3,442	
3.3	Interior Building Lighting	Entire Building		SGSB-E-2	4	4	Lighting consists of low bay HID fixtures with slow warm-up, high maintenance and energy use.	Replace with LED fixtures.	6	EA					\$ 870.00	\$ 5,220	\$ 60	\$ 7,047	\$ 7,589	\$ 7,973	\$ 9,021	\$ 11,547	
4.0	Mechanical System																						
	No comments.																						
5.0	Plumbing System																						
5.1	Emergency Shower and Eye Wash	Barn		SGSB-P-1	4	4	The emergency eye wash and shower combination appear to be in fair condition.	The fixture should be replaced with a like kind in 2028.	1	LS			\$ 1,200.00	\$ 1,200							\$ 2,074	\$ 2,655	
5.2	Rain Water Harvester	Barn		SGSB-P-2	4	4	The ESD Waste 2 water system appears to be in fair condition. At the time of the assessment it was partially dismantled for winterization. The system has components inside the barn as well as a vessel outside the barn.	The rain water harvesting system should be replaced with a like kind in 2028.	1	LS			\$ 6,500.00	\$ 6,500							\$ 11,233	\$ 14,379	
5.3	Air Compressor	Barn		SGSB-P-3	3	4	The air compressor is in good condition.	Replace the air compressor in 2028.	1	LS			\$ 2,800.00	\$ 2,800							\$ 4,839	\$ 6,194	
												\$ 30,850	\$ 10,500			\$ 11,726	\$ 60	\$ 50,795	\$ 54,701	\$ 57,470	\$ 83,168	\$ 106,461	
6.0	Site																						
	No comments.																						
												\$ -	\$ -			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

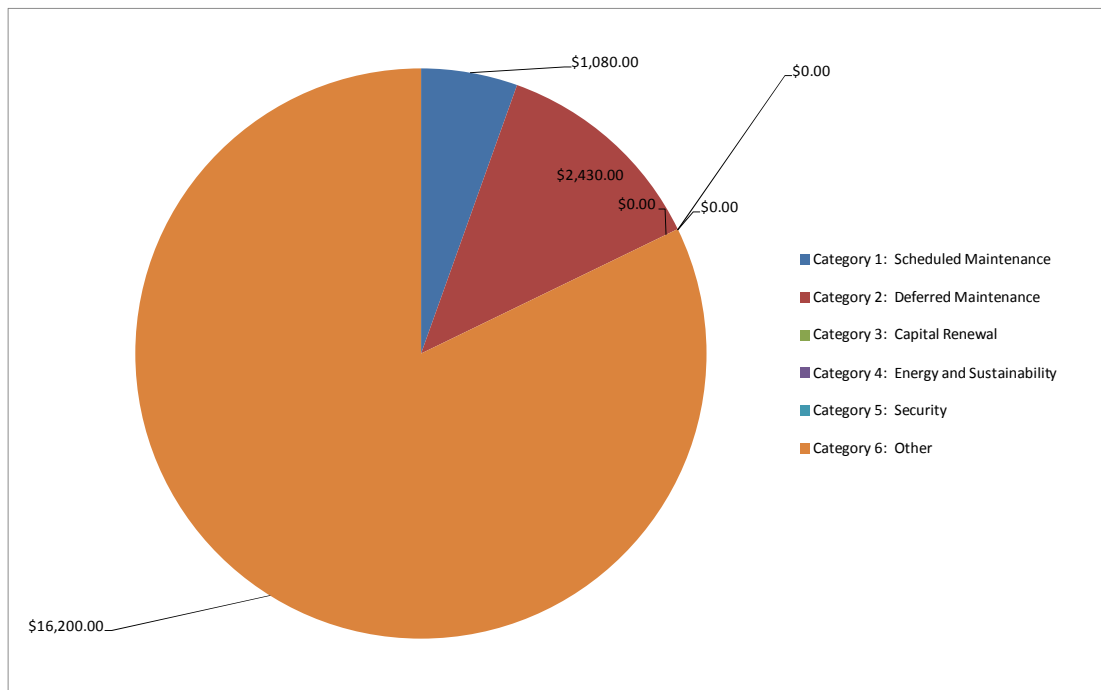


DEFICIENCY COSTS

2018 Deficiency Priority



2018 Deficiency Category



City of Troy
Facility Condition Assessment
April 2018

Transit Center

Building Information				Deficiency Priorities				Deficiency Categories														
Address: 1201 Doyle Drive				Priority 1: Currently Critical				Category 1: Scheduled Maintenance														
Building Area: 5,725 SF				Priority 2: Potentially Critical				Category 2: Deferred Maintenance														
No. of Floors: 2				Priority 3: Necessary - Not Yet Critical				Category 3: Capital Renewal														
Year Built: 2013				Priority 4: Recommended				Category 4: Energy and Sustainability														
Evaluation Date: March 2018				Priority 5: Appearance				Category 5: Security														
				Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"				Category 6: Other														
				Priority 7: Other				*Lower score equals higher priority														
Note: Project Cost includes 35% mark-ups and fees Annual Maintenance includes labor and material only																						
No.	Item/Description	Location	Photo No.	Equipment No.	Deficiency Priority	Deficiency Category	Notes	Action	Qty.	Unit	Architectural		Mechanical		Electrical		Annual Maintenance	2018 Project Cost	2021 Project Cost	2023 Project Cost	2028 Project Cost	2038 Project Cost
											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
1.0	Building Exterior																					
1.1	Brick	North Elevation	TC-098		5	1	Efflorescence covers a large section of the exterior brick wall near the main entrance.	Clean brick with a non-acidic cleaning agent.	1	LS	\$ 800.00	\$ 800						\$ 1,080	\$ 1,163	\$ 1,222	\$ 1,382	\$ 1,770
1.2	Roofing System	Roof			4	3	The roofing system is an EPDM single-ply roofing system.	Warranty expires on October 17, 2028. Replace with same after warranty.	4,600	SF	\$ 14.00	\$ 64,400								\$ 111,291	\$ 142,462	
2.0	Building Interior																					
2.1	Walk-off Mat	West Stair, Vestibule	TC-068 TC-069		4	3	The walk-off mat is in good condition, but will be expensive to replace when worn.	Plan to replace walk-off mat with walk-off carpet tiles in 2028.	333	SF	\$ 5.50	\$ 1,832		\$ -		\$ -				\$ 3,165	\$ 4,051	
2.2	Concrete Pavement	East Stair	TC-081		3	2	The concrete slab has cracked in several locations.	Remove loose concrete fragments and route the cracks open and fill with patching mortar.	1	LS	\$ 1,800.00	\$ 1,800		\$ -		\$ -		\$ 2,430	\$ 2,617	\$ 2,749	\$ 3,111	\$ 3,982
2.3	Elevator Pit	West Elevator East Elevator	TC-149		2	6	There is water in the elevator pit (code violation).	Prior to correction, the elevator pit and its equipment must be inspected, under the code required service agreement, by a licensed elevator inspector. They must be provided pit access and be present during the entire correction process. Remove all standing water and oil from the pit's concrete surfaces. Route all cracks and defective construction joints and fill with a cementitious packing mortar compatible with a crystalline waterproofing system. Apply an 1/8 inch thick slurry coat of a crystalline waterproofing system over all concrete surfaces.	2	EA	\$ 6,000.00	\$ 12,000					\$ 16,200	\$ 17,446	\$ 18,329	\$ 20,737	\$ 26,546	
3.0	Electrical System																					
3.1	Service Entrance Switchboard (2013)	Mechanical/Electrical		TC-E-1	4	3	Equipment is 5 years old and in excellent condition.	Plan on replacing in 2063.	1	EA					\$ 5,800.00	\$ 5,800						
3.2	Transformer	Mechanical/Electrical		TC-E-2	4	3	The transformer is 5 years old in excellent condition.	Plan on replacing in 2063.	1	EA					\$ 3,750.00	\$ 3,750						
3.3	Panelboard LP-A	Mechanical/Electrical		TC-E-3	4	3	Equipment is 5 years old and in excellent condition.	Plan on replacing in 2063.	1	EA					\$ 5,550.00	\$ 5,550						
3.4	Transformer	Mechanical/Electrical		TC-E-4	4	3	The transformer is 5 years old in excellent condition.	Plan on replacing in 2063.	1	EA					\$ 3,750.00	\$ 3,750						
3.5	Panelboard LP-C	Mechanical/Electrical		TC-E-5	4	3	Equipment is 5 years old and in excellent condition.	Plan on replacing in 2063.	1	EA					\$ 5,550.00	\$ 5,550						
3.6	Distribution Panel DP-B	West Elevator Equipment		TC-E-6	4	3	Equipment is 5 years old and in excellent condition.	Plan on replacing in 2063.	1	EA					\$ 6,050.00	\$ 6,050						
3.7	Transformer	Mechanical/Electrical		TC-E-7	4	3	The transformer is 5 years old in excellent condition.	Plan on replacing in 2063.	1	EA					\$ 3,750.00	\$ 3,750						
3.8	Panelboard LP-B	Mechanical/Electrical		TC-E-8	4	3	Equipment is 5 years old and in excellent condition.	Plan on replacing in 2063.	1	EA					\$ 5,550.00	\$ 5,550						
3.9	Fire Alarm	Mechanical/Electrical		TC-E-9	4	5	Equipment is 5 years old and provides complete coverage.	Install system software updates and replace the batteries in 2023.	1	LS					\$ 500.00	\$ 500			\$ 764	\$ 864	\$ 1,106	
3.10	Lighting	Restrooms, Storage and Entries			4	4	New fluorescent fixtures.	Plan on replacing in 2038.	5,725	SF					\$ 5.00	\$ 28,625	\$ 115					\$ 63,322
4.0	Mechanical System																					
4.1	Split System Air Conditioner	IT Room		TC-M-1	4	4	The indoor wall mounted 1 ton split system air conditioner is in good condition.	Replace the split system with like kind in 2038.	1	EA			\$ 2,500.00	\$ 2,500							\$ 5,530	
4.2	Condensing Unit	Outdoors		TC-M-2	4	4	The outdoor 1 ton split system condensing unit is in good condition.	Replace the condensing unit with like kind in 2038.	1	EA			\$ 2,500.00	\$ 2,500			\$ 200				\$ 5,530	
4.3	Furnace	Mechanical/Electrical		TC-M-3	4	4	The 60 MBH gas fired furnace with DX cooling coil is in fair condition.	Replace the furnace with like kind in 2038.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350				\$ 8,406	
4.4	Condensing Unit	Outdoors		TC-M-4	4	4	The 5 ton condensing unit is in good condition.	Replace the condensing unit with like kind in 2038.	1	EA			\$ 6,000.00	\$ 6,000			\$ 200				\$ 13,273	
4.5	Furnace	Bridge		TC-M-5	4	4	The 110 MBH gas fired suspended furnace is in good condition.	Replace the furnace with like kind in 2038.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350				\$ 8,406	

City of Troy
Facility Condition Assessment
April 2018

Transit Center

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No. of Floors: 2	Priority 3: Necessary - Not Yet Critical	Category 3: Capital Renewal
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	Priority 6: Does Not Meet Current Codes/Standards - "Grandfathered"	Category 6: Other
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											Unit Cost	Subtotal	Unit Cost	Subtotal	Unit Cost	Subtotal						
4.6	Furnace	Bridge		TC-M-6	4	4	The 110 MBH gas fired suspended furnace is in good condition.	Replace the furnace with like kind in 2038.	1	EA			\$ 3,800.00	\$ 3,800			\$ 350					\$ 8,406
4.7	Cabinet Unit Heaters	Stairwells and Vestibules			4	4	The ~48 MBH electric suspended cabinet unit heaters are in fair condition.	Replace the cabinet unit heaters with like kind in 2038.	4	EA			\$ 3,000.00	\$ 12,000			\$ 800					\$ 26,545
4.8	Exhaust Fans	Throughout			4	4	There are both roof mounted and sidewall propeller exhaust fans. The exhaust fans are in fair condition.	Replace the exhaust fans with like kind in 2038.	5	EA			\$ 2,500.00	\$ 12,500			\$ 750					\$ 27,651
4.9	Controls	Throughout			4	4	Existing Andover system is in good/fair condition.	Update hardware and software on regular intervals of not more than five years.	6,000	SF			\$ 5.00	\$ 30,000							\$ 51,843	\$ 66,364
5.0	Plumbing System																					
5.1	Water Heater	Mechanical/Electrical		TC-P-1	4	4	The 30 gallon electric water heater is in good condition.	Replace the water heater with like kind in 2028.	1	EA			\$ 3,400.00	\$ 3,400							\$ 5,875	\$ 7,521
5.2	Plumbing Fixtures	Throughout			4	4	The plumbing fixtures are in good condition.	Replace the fixtures in 2038.	1	LS			\$ 29,700.00	\$ 29,700								\$ 65,700
												\$ 80,832	\$ 110,000		\$ 68,875		\$ 3,115	\$ 19,710	\$ 21,226	\$ 23,064	\$ 198,269	\$ 486,572

6.0	Site																					
6.1	Asphalt Pavement	Parking Lot	TC-119		4	3	The asphalt pavement in the parking lot has cracked in several locations, but does drain and is in good condition overall.	Plan on replacing the asphalt parking lot in 2028. Remove both layers of asphalt and recompact the drainage course and add 2-1/2 inch thick bituminous binder course, 1 inch thick bituminous wear course and striping.	43,000	SF	\$ 4.00	\$ 172,000									\$ 297,236	\$ 380,487
6.2	Control Joints	Concrete Pavement	TC-113 TC-116		3	2	The control joints cut/formed in the concrete sidewalks and curbs are not sealed. This will lead to premature deterioration of the surrounding concrete because of water infiltration.	Remove sealant at all failed control joints. Seal all joints with an exterior grade silicone sealant.	1,500	LF	\$ 2.00	\$ 3,000					\$ 4,050	\$ 4,361	\$ 4,582	\$ 5,184	\$ 6,636	
6.3	Concrete Pavement	Sidewalk at Main Entrance	TC-112		3	2	The concrete pavement slab at the main entrance has cracked in several locations.	Remove loose concrete fragments and route the cracks open and fill with patching mortar.	1	LS	\$ 1,200.00	\$ 1,200					\$ 1,620	\$ 1,745	\$ 1,833	\$ 2,074	\$ 2,655	
6.4	Bollards	Main Entrance	TC-114 TC-115		5	6	The paint has delaminated from the bollard posts.	Contact the manufacturer and have replaced under their warranty.														
6.5	Site Lighting	Plaza and Platform		TC-E-10	4	4	Recent steel poles with LED fixtures.	Plan on replacing in 2038.	17	EA					\$ 1,200.00	\$ 20,400					\$ 45,128	
												\$ 176,200	\$ -		\$ 20,400		\$ -	\$ 5,670	\$ 6,106	\$ 6,415	\$ 304,494	\$ 434,906