

CITY OF REDMOND
FACILITY CONDITION ASSESSMENT
15 MARCH 2014

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TABLE OF CONTENTS

I.	EXECUTIVE SUMMARY	3
II.	SUMMARY REPORTS - OBSERVED DEFICIENCIES	10
III.	SUMMARY REPORTS - PREDICTED RENEWALS	16
IV.	FACILITY REPORTS	20
V.	APPENDIX	452

I. EXECUTIVE SUMMARY

1.1 Introduction

The City of Redmond commissioned MENG Analysis to conduct facility condition assessments (FCAs) of fourteen (14) sites including twenty-six (26) buildings. This report includes the results of that assessment. This report and its supporting data is intended as a tool for the City to make important facility preservation decisions and determine requirements for effective major maintenance planning.

The purpose of this 2013 FCA is to assist City staff in planning and working with City Council to budget for short term correction of observed deficiencies (ODs), long term major maintenance (predicted renewals or "PRs") and city-wide capital facility master plans. In addition to observed deficiencies and predicted renewals, this study also identified facility improvement opportunities (OPS) that go beyond basic maintenance and repair. These include items such as energy conservation upgrades and features.

The city will also be provided a working copy of the MENG Analysis Microsoft Access-based FCA Database populated with all the data from the facility inventory, field surveys, and cost models.

The approved FCA scope of work includes:

- Preparation – Project scoping and prioritization; facility inventory and condition research.
- Field Surveys – Facility Condition Assessments.
- Database - preparation and data analysis.
- Draft and Final FCA Reports – Summary and Detail Reports.

The following list of 14 Sites and 26 Facilities were included in the City of Redmond 2013 FCA.

Site	Facility
Fire Station 11 Site	Fire Station 11 Building
Fire Station 11 Site	Old Medic One Building
Fire Station 12 Site	Fire Station 12 Building
Fire Station 13 Site	Fire Station 13 Building
Fire Station 14 Site	Fire Station 14 Building
Fire Station 16 Site	Fire Station 16 Building
Fire Station 16 Site	Fire Station 16 Shop Building
Fire Station 17 Site	Fire Station 17 Building
Fire Station 18 Site	Fire Station 18 Building
Hartman Park Site	Hartman Park Swimming Pool Building
Maintenance Operations	Central Stores Warehouse Building 5 Building
Maintenance Operations	Decant Facility Building 11 Building
Maintenance Operations	Maintenance Operations Center Building 1 Building
Maintenance Operations	Parks Operations Center Building 8 Building
Maintenance Operations	Street Department Modular Building 3 Building
Municipal Campus Site	City Hall Building
Municipal Campus Site	Municipal Campus Parking Garage Building
Municipal Campus Site	Police Garage North Building
Municipal Campus Site	Police Garage South
Municipal Campus Site	Public Safety Building
Municipal Campus Site	Senior Center Building
Old Fire House Teen Center	Old Fire House Teen Center Building
Old Redmond School House	Old Redmond School House Community Center Building
Sammamish River Business	Sammamish River Business Park Building 1
Sammamish River Business	Sammamish River Business Park Building 2
Trinity Building Site	Trinity Building

1.2 General Findings

The surveyed sites and buildings are moderately well maintained by a dedicated maintenance staff.

- Variety of usual (city hall, fire stations, and maintenance & operations center), and unusual (parking garage, leased school community center, and lightly used commercial office) facilities.
- Mix of well maintained (city hall), and less well maintained (pool, SRBP), but mostly moderately maintained facilities.
- Several serious concerns including PSB exterior enclosure; pool structure and aging systems; teen center hose tower; and several others.
- Many roof issues exacerbated by overgrown landscaping (trees).
- Inconsistency in system types makes maintenance more complicated.
- Many mid-life buildings have MEP systems in need of renewal.
- A master plan is needed for the MOC site.
- A Park's master plan effort is currently underway, and should be informed by this FCA process.
- Maintenance of all fire stations was recently (2013) turned over from the fire department to the city's facilities maintenance department.
- Recently added facility maintenance staff, specifically new HVAC technician, are making rapid progress in addressing the backlog of HVAC related deficiencies.
- City Hall and Parking Garage were DBOM facilities, purchased from Wright Runstad (WR) summer of 2013; the City should carry on the proactive preventive maintenance program established by WR, including scheduled technology upgrades.

Of greatest need are: the Public Safety Building, with major HVAC and exterior envelope requirements; the Old Redmond School House, also with HVAC needs; The Hartman Park Swimming Pool; and the Sammamish River Business Park Buildings.

1.3. General Condition Scores

Summary qualitative assessment (sorted from best to worse condition scores) for the City of Redmond building facilities:

Facility	Condition Score
Fire Station 17 Building	1.3
City Hall Building	1.7
Fire Station 18 Building	1.9
Police Garage North Building	2.0
Police Garage South Building	2.0
Fire Station 14 Building	2.4
Fire Station 16 Shop Building	2.4
Fire Station 16 Building	2.5
Municipal Campus Parking Garage Building	2.6
Public Safety Building	2.7
Fire Station 12 Building	2.9
Decant Facility Building 11 Building	3.0
Senior Center Building	3.0
Parks Operations Center Building 8 Building	3.0
Hartman Park Swimming Pool Building	3.0
Old Redmond School House Community Center Building	3.0
Trinity Building	3.1
Street Department Modular Building 3 Building	3.1
Central Stores Warehouse Building 5 Building	3.1
Fire Station 13 Building	3.1
Fire Station 11 Building	3.1
Old Medic One Building	3.1
Maintenance Operations Center Building 1 Building	3.2
Old Fire House Teen Center Building	3.4
Sammamish River Business Park Building 2	3.5
Sammamish River Business Park Building 1	3.5

The condition assessment process rates each subsystem in a facility with a qualitative score of 1 through 5 where 1=excellent, 2=good, 3=fair, 4=poor, 5=unacceptable. Subsystem scores are weighted by the cost of that subsystem relative to the total replacement value of the facility; and weighted average scores are compiled for each of the City's facilities.

1.4. Facility Condition Index

A Facility Condition Index (FCI) is an industry standard used for benchmarking and evaluating a portfolio of facility assets over time. The FCI is the ratio between a facility's backlog of maintenance and repair (BMAR) and the current replacement value (CRV) of the facility. Please see Glossary of terms later in this report for further explanation of FCI.

Facility	FCI
Police Garage South Building	0.02
Fire Station 17 Building	0.02
Police Garage North Building	0.02
City Hall Building	0.05
Fire Station 18 Building	0.06
Municipal Campus Parking Garage Building	0.10
Fire Station 16 Shop Building	0.11
Fire Station 14 Building	0.12
Decant Facility Building 11 Building	0.13
Public Safety Building	0.14
Fire Station 16 Building	0.14
Senior Center Building	0.16
Parks Operations Center Building 8 Building	0.16
Old Redmond School House Community Center Building	0.17
Central Stores Warehouse Building 5 Building	0.17
Street Department Modular Building 3 Building	0.17
Fire Station 12 Building	0.18
Trinity Building	0.18
Old Medic One Building	0.18
Fire Station 13 Building	0.20
Maintenance Operations Center Building 1 Building	0.21
Fire Station 11 Building	0.21
Old Fire House Teen Center Building	0.22
Hartman Park Swimming Pool Building	0.23
Sammamish River Business Park Building 1	0.27
Sammamish River Business Park Building 2	0.27

1.5. Projected Cost Summary

Estimated costs are calculated for both short-term Observed Deficiencies (ODs) as well as for long-term Predicted Renewals (PRs). These costs summarized herein include typical construction markups as well as project development markups (design, management, etc.) and are calculated as 2013 present value costs.

- Current Observed Deficiencies (2013-2018) = \$21,400,000
 - o The Hartman Swimming Pool, the Public Safety Facility, the Old Redmond School House Community Center, and the Sammamish River Business Park represent over half of the total OD costs.
 - o Peak Cost Years:
 - 2016 = \$ 5,600,000
 - 2013 = \$ 4,800,000
 - 2015 = \$3,800,000
 - o Subsystem Deficiencies:
 - Controls and Instrumentation: \$2,200,000
 - Lighting and Branch Wiring: \$2,000,000
 - Cooling Generating Systems: \$1,800,000
 - HVAC Distribution Systems: \$1,500,000
- 20 year (2013-2032) Predicted Renewal = \$77,900,000
- Additionally, Opportunities are cost estimated individually in the Summary Reports - Observed Deficiencies section.
- Note 5-year Observed Deficiencies should not be added to 20 year Predicted Renewals.

1.6. Enhanced FCA Services

While enhanced FCA and special studies have been discussed, they are not part of the initial 2013 FCA scope of work; and therefore not included in this report. However some of the ODs and Ops recommend further investigation for some of the facilities and/or systems. The most important are as follows.

- Seismic evaluations for the Teen Center hose tower, Pool building, Trinity, and others.
- Weather envelope study for PSB, and several others.
- Energy audit, particularly for old and middle age buildings.
- IR inspection of electrical panels (scheduled to begin 10/28/13).
- IR survey of building thermal envelopes; in conjunction with energy audit.
- Preventive maintenance plan, including major equipment inventory and CMMS program of proactive maintenance.
- Survey all powered buildings at MOC.
- Prioritize ODs and PRs, and fully fund a robust proactive major maintenance program.

1.7 Conclusions

The condition assessments found that the City of Redmond has done a good job maintaining systems in facilities that were constructed several decades ago. This condition assessment highlights facilities and systems that are in need of immediate repair as well as those that will benefit from long term planned maintenance and renewal.

II. SUMMARY REPORTS – OBSERVED DEFICIENCIES

2.1 Observed Deficiencies Summary

The majority of the costs for repairing Observed Deficiencies (OD) for the six-year period of 2013-2018 are found at the Public Safety Facility, The Old Redmond School House Community Center, and the Hartman Swimming Pool. These three buildings represent approximately half of the total OD costs. System costs that warrant attention in order of priority are HVAC, Electrical, and Exterior Closure.

2.1.1 Observed Deficiency Costs by Facility

The following table summarizes the 2013–2018 OD costs at each City facility:

Facility	Cost (\$)
Facility	
Hartman Park Swimming Pool Building	3,028,600
Public Safety Building	3,000,791
Old Redmond School House Community Center Building	2,932,352
Sammamish River Business Park Building 2	1,843,342
Sammamish River Business Park Building 1	1,842,620
Senior Center Building	1,463,986
Maintenance Operations Center Building 1 Building	1,123,969
Fire Station 11 Building	800,682
Trinity Building	660,180
Fire Station 13 Building	546,475
Parks Operations Center Building 8 Building	503,498
Old Fire House Teen Center Building	501,968
Fire Station 12 Building	443,410
Fire Station 16 Building	335,206
Maintenance Operations Center Infrastructure	276,312
Municipal Campus Parking Garage Building	256,764
Fire Station 16 Shop Building	245,304
Fire Station 14 Building	209,920
Trinity Building Infrastructure	166,997
Old Medic One Building	146,146
City Hall Building	145,530
Street Department Modular Building 3 Building	133,725
Central Stores Warehouse Building 5 Building	129,543
Municipal Campus Infrastructure	125,511
Hartman Park Infrastructure	118,109
Sammamish River Business Park Infrastructure	107,771
Decant Facility Building 11 Building	85,658
Fire Station 17 Building	70,071
Fire Station 11 Infrastructure	68,694
Fire Station 18 Building	46,347
Fire Station 12 Infrastructure	24,376
Fire Station 13 Infrastructure	24,376
Old Fire House Teen Center Infrastructure	10,834
Police Garage North Building	9,360
Police Garage South Building	4,680
Grand Total	21,433,107

Exhibit A – Observed Deficiency Costs by Facility

2.1.1 Observed Deficiency Costs by System

The adjacent table summarizes OD costs by System. HVAC, Electrical, and Plumbing are the systems in greatest need of major maintenance.

The largest HVAC costs are for Cooling at the Old School House Community Center, and Controls at the Public Safety Building

The largest Electrical costs are for Lighting and Branch Wiring Systems at the Sammamish Business Park and the Parks Operation Center Building and the Service and Distribution at the Pool Building.

The largest Plumbing costs are for water distribution and fixtures at the Old School House Community Center.

System	Cost (\$)
HVAC	6,741,021
Electrical	3,118,370
Plumbing	2,385,951
Exterior Closure	1,885,365
Roofing	1,524,059
Fire Protection	1,395,562
Interior Finishes	1,351,820
Site Improvements	790,350
Interior Construction	711,609
Vertical Transportation	519,398
Superstructure	352,945
Foundations	249,171
Special Construction	160,010
Site Civil / Mechanical Utilities	85,019
Site Electrical utilities	47,611
Furnishings	43,480
Equipment	36,254
Staircases	35,112

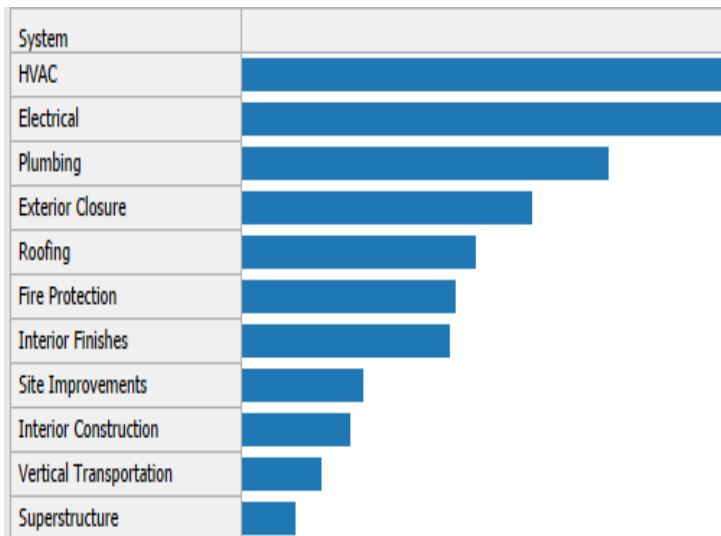


Exhibit B – Observed Deficiency Costs – by System

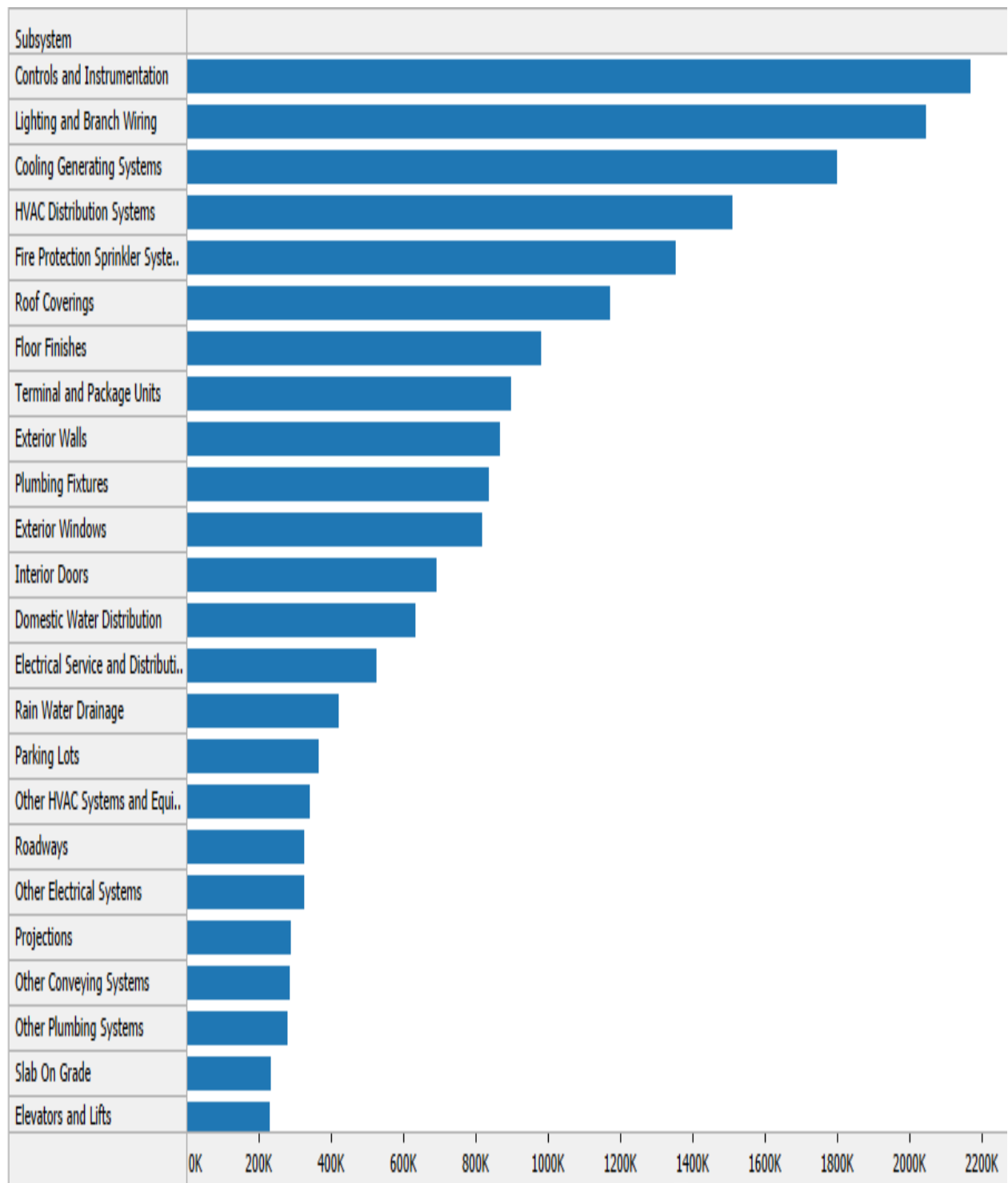


Exhibit C - Observed Deficiency Costs by Subsystem

2.1.2 Projected Annual Cost of Observed Deficiencies

2016 is projected as a peak year for addressing ODs with large costs for Controls at the Public Safety Building and Old School House; roofing at Hartman; and walls at the Senior Center.

Immediate projected needs for 2013 include HVAC systems at the Hartman Pool Complex and the Old School House.

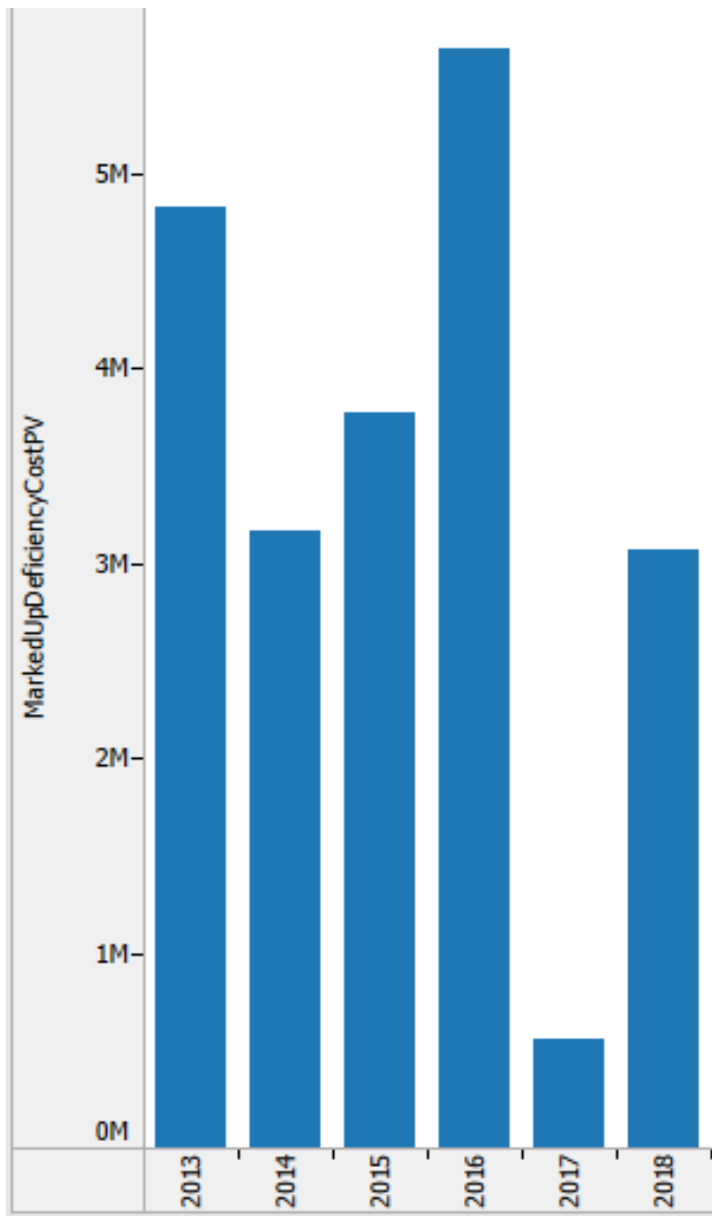


Exhibit D – Deficiency Costs – by Years

Department	Cost (\$)
Parks	7,095,361
Police	4,478,817
Administration / Other	4,321,538
Fire	2,961,007
Public Works	2,576,384

Exhibit E – Deficiency Repair Costs – by Department, All Facilities

III. SUMMARY REPORTS – PREDICTED RENEWALS

3.1 Predicted Renewals for Building Systems are based on 2013 dollars for a 20 year period ranging from 2013 to 2032.

3.2 20 Year Predicted Renewals (PRs)

The MENG Analysis Facility Condition Analysis (FCA) Database generates parametric cost estimates for the renewal or replacement of all facility subsystems as they reach the end of their predicted life cycle. For the City of Redmond, a twenty (20) year horizon was selected, which will support planning and budgeting for long-term major maintenance needs. Predicted Renewal costs are projected at \$78 million for this 2013-2032 twenty year period.

The Redmond Municipal Campus, with the Public Safety Facility; and the Old Redmond School House have the largest long term renewal costs, followed by the Fire Station 11 site.

Site	Cost (\$)
Municipal Campus Site	34,357,165
Old Redmond School House Community Center Site	8,660,476
Fire Station 11 Site	6,149,079
Maintenance Operations Center Site	5,897,695
Sammamish River Business Park Site	4,943,692
Hartman Park Site	3,648,569
Fire Station 16 Site	2,752,667
Fire Station 14 Site	2,368,903
Trinity Building Site	2,269,901
Old Fire House Teen Center Site	2,111,796
Fire Station 13 Site	1,913,919
Fire Station 12 Site	1,287,396
Fire Station 18 Site	1,045,215
Fire Station 17 Site	461,939
Grand Total	77,868,414

Exhibit F – 20 Year Predicted Renewals by Site. (includes infrastructure and buildings)

It is important to note that for planning and budgeting purposes, one should not add both the 2013-2018 OD and the 2013-2018 PRs. ODs are Observed Deficiencies from the FCA Survey Team, whereas the PRs from the same period are theoretical projections that factor the age of systems, their relative conditions and modeled costs of systems. PRs are useful to highlight systems that may not have been observable.

Facility	Costs (\$)
Public Safety Building	15,938,228
City Hall Building	10,496,676
Old Redmond School House Community Center Building	7,885,682
Fire Station 11 Building	5,505,974
Senior Center Building	3,847,195
Hartman Park Swimming Pool Building	2,406,942
Sammamish River Business Park Building 2	2,307,485
Sammamish River Business Park Building 1	2,211,770
Trinity Building	2,041,082
Old Fire House Teen Center Building	1,846,971
Fire Station 16 Building	1,666,019
Maintenance Operations Center Building 1 Building	1,463,733
Fire Station 14 Building	1,423,631
Fire Station 13 Building	1,309,856
Fire Station 12 Building	1,115,970
Municipal Campus Parking Garage Building	1,011,989
Parks Operations Center Building 8 Building	942,012
Fire Station 18 Building	882,322
Fire Station 16 Shop Building	637,433
Fire Station 17 Building	432,842
Decant Facility Building 11 Building	399,098
Central Stores Warehouse Building 5 Building	317,553
Street Department Modular Building 3 Building	293,918
Old Medic One Building	206,248
Police Garage North Building	7,776
Police Garage South Building	6,220

Exhibit G – Predicted Renewals (PR) – by facility (includes buildings only)

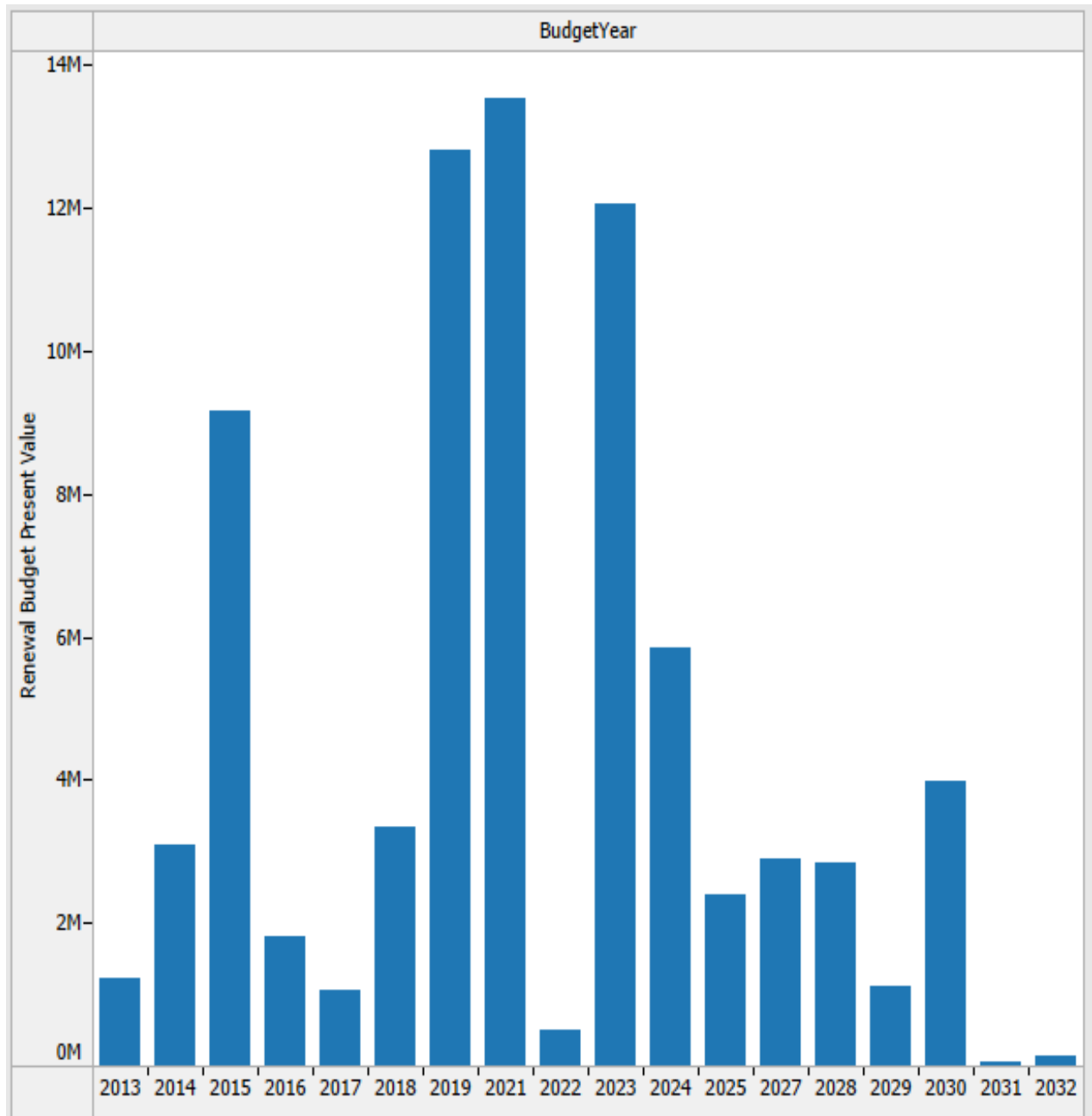


Exhibit H - Predicted Renewals by Year – 20 Years

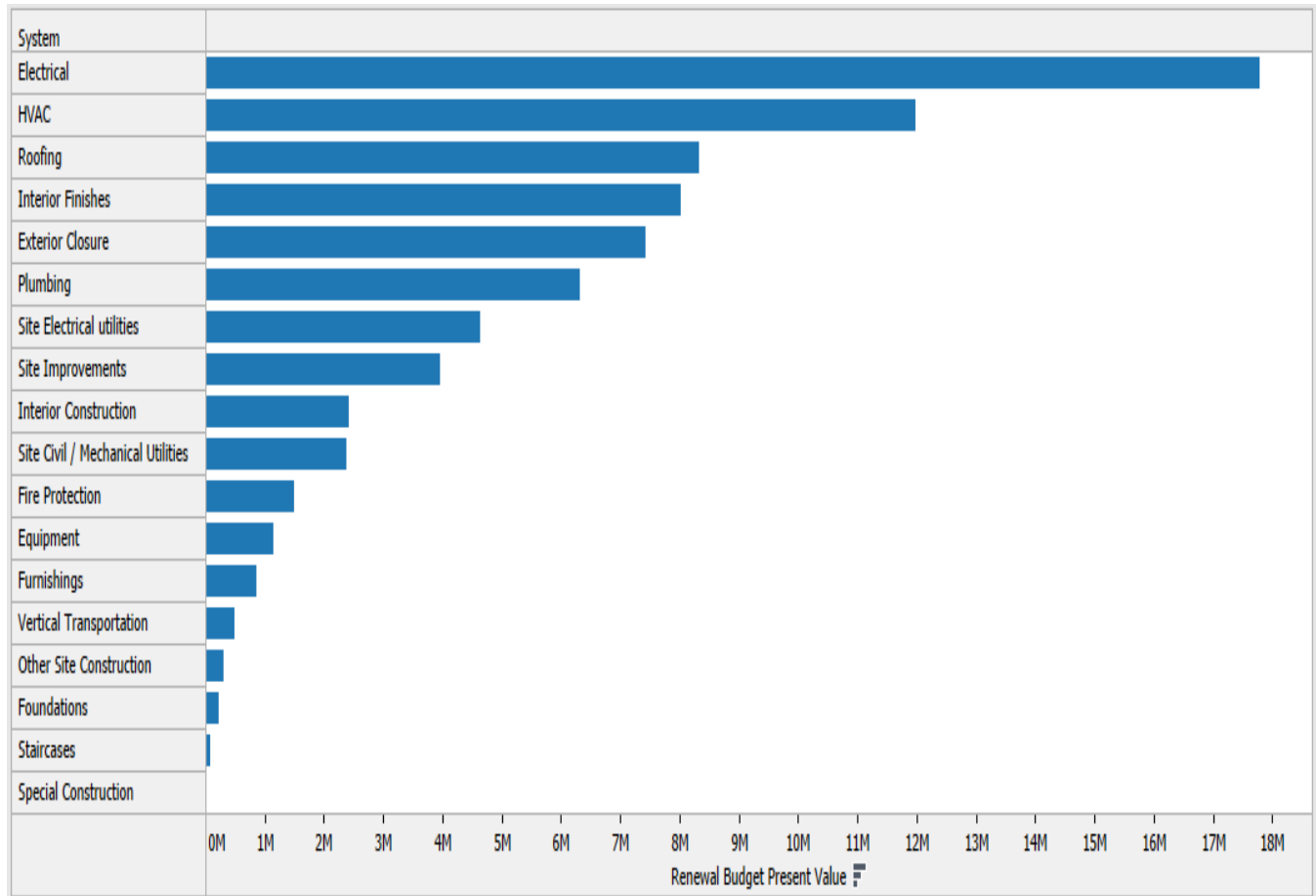


Exhibit I – Predicted Renewals by System

IV. FACILITY REPORTS

4.1 Facility Reports

Primary reports documenting current facility system conditions include:

- a) Facility Summary** – The overall facility condition, including facility condition index (FCI), systems and sub-systems condition scores and remaining useful life. Also includes qualitative assessments with system descriptions and condition comments from field surveys.
- b) Observed Deficiency Cost with Markups** – Break down of observed deficiencies by system per UNIFORMAT with markups. For repair costs planning purposes the following project mark-ups are used:

Contingency	30%
General Contractor Mark-ups (overhead & profit)	20%
Project Soft Costs	50%

Observed system deficiencies for each facility include a detailed itemization of facility system components that are in need of major maintenance or repair in order to maintain functionality. All building systems (e.g., exterior shell, mechanical systems, electrical systems, etc.) are evaluated and estimates presented for noted deficiencies.

- c) Detailed Assessment – Observed Deficiency Report** – Qualitative assessments and costs including condition score, remaining useful life and cost estimates of observed deficiencies.
- d) Facility Improvement Opportunity** – Includes detailed assessments and costs for system and facility upgrades that may improve the functional performance of the facility beyond basic maintenance and repair. Many opportunities are found in energy performance upgrades that are not required by code until the facilities are replaced or substantially modernized. Other opportunities include space utilization, occupant health/comfort and life/safety upgrades.

4.2 Facility Condition Assessment Database

The data supporting this FCA analysis is included in a relational database (Microsoft Access) and intended for ongoing use by the City's staff.

Facility Summary

City of Redmond

Fire Station 11 Site

Fire Station 11 Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 23,800
Year Of Original Construction 1981
Facility Use Type Fire Station
Construction Type Medium
of Floors 1
Energy Source Gas
Year Of Last Renovation 2000
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.1			
Facility Condition Index (FCI)	0.21			
Current Replacement Value (CRV)	\$11,345,000	Predicted Renewal Budget (6 yrs)	\$2,388,000	\$2,291,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$6,207,000	\$5,401,000
		Observed Deficiencies (6 yrs)	\$690,000	\$662,000
		Observed Deficiencies (ALL)	\$874,000	\$801,000
		Opportunity Total Project Cost	\$1,202,000	N/A

Facility Condition Summary

Architectural:

Single story building with two (2) separate mezzanines. Foundation is slab on grade. Below grade pits at hose tower and apparatus bay. Wood framed structure with exterior masonry veneer. Aluminum windows and some aluminum store front with hollow metal doors and frames. Steel stairs to mezzanine levels. Wood beam and truss roof structure, with single ply roofing. Concrete masonry unit tower with all steel stairs and grated landings. Interior partitions are wood frame with gypsum wall board. Finishes are mixture of paint and wall tile on walls; floors are mostly carpet in dorms and administration, sealed concrete at apparatus bay, ceramic tile restrooms, some rubber flooring and sheet goods and quarry tile at kitchen. Most interior doors are hollow metal frames and wood doors. Various built in casework, moveable storage, and gear storage throughout.

Electrical:

Building has a 600A, 208/120V system, served by Puget Sound Energy 150-kva padmount transformer, feeding outdoor automatic transfer switch, to the main panel in the building. The building also has a 300-kw 208/120V outdoor generator feeding the emergency side of the outdoor automatic transfer switch, backup power to the main panel. Interior lighting is mostly T8 fluorescent, with some incandescent fixtures in the dayroom and kitchen. Outdoor lighting are high intensity discharge (HID). All branch wiring are in conduits. Devices are 15A and 20A grounding type. Kitchen needs to have more outlets and circuits to handle multiple toasters at the same time. Apparatus bays need to have more outlets and circuits for vehicle charging. The building has a fire alarm system. The building has no security alarm system.

Mechanical:

Headquarters fire station in downtown Redmond includes administration, living, apparatus bays (4), apparatus bay west mezzanine (one bay), training addition to east with mezzanine, generator yard to southeast, and patio to west. HVAC in administration, living, and training are roof top gas pack units; the apparatus bay is gas-fired infrared heat with ceiling general exhaust plus vehicle engine exhaust. Plumbing is city water and sewer with copper pipe and cast iron drain, waste, and vent. Special system for apparatus bay. Fire sprinkled throughout.

Facility Summary

City of Redmond
Fire Station 11 Site
Fire Station 11 Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				4.0					
Foundations									
A1030	Slab On Grade	1981	1981	4	15	JB	09/03/13	Slab on grade. Office and dorm areas appear fine. Excessive cracking at apparatus bay with lifting in some places. Less than 1/2-inch recently repaired.	
B Shell				3.1					
Superstructure									
B1010	Floor Construction	1981	1981	2	88	JB	09/03/13	Wood framed structure at both mezzanine areas . Good condition.	
B1020	Roof Construction	1981	1981	2	56	JB	09/03/13	Wood framed roof structure throughout. Good condition.	
Exterior Closure									
B2010	Exterior Walls	1981	2000	4	10	JB	09/03/13	Wood framed walls with brick veneer. Most exterior walls are in good condition, except lintels at exterior window openings and offset walls. Front entrance masonry lintel was recently replaced. Lintel does not appear to be supported by exterior wall. Additional seismic review recommended.	
B2020	Exterior Windows	1981	2000	3	15	JB	09/03/13	Dual glazed aluminum windows. Good condition. No head flashing to offset drip. No roof overhang. Some moss growing at windows.	
B2030	Exterior Doors	1981	2000	4	20	JB	09/03/13	Hollow metal frames and steel doors. Some store front doors at administration. Electronic key pads at most locations. Generally in fair condition. Hardware is older but functioning. Weather strip to be replaced.	

Facility Summary

City of Redmond
Fire Station 11 Site
Fire Station 11 Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
B Shell			3.1			
Exterior Closure						
B2030 Exterior Doors						Sweeps are missing at store front doors.
Roofing						
B3010 Roof Coverings	1981	1981	2	15	JB 09/03/13	Single ply membrane roofing. Recently re-coated. Good condition. See mechanical sections for roof drain evaluation.
B3020 Roof Openings	1981	1981	4	12	JB 09/03/13	Roof access hatch. No handle extension at either hatch.
B3030 Projections	1981	2000	4	5	JB 09/03/13	Mechanical screen, metal; located on roof. Paint is worn and fading at metal equipment screen.
C Interiors			2.7			
Interior Construction						
C1010 Partitions	1981	2000	1	22	JB 09/03/13	Wood framed interior partition walls; gypsum wall board. Good condition.
C1020 Interior Doors	1981	2000	2	30	JB 09/03/13	Hollow metal frames, wood doors, some hollow metal doors at painted assemblies. Few doors with relites. Good condition. Some hardware is worn but functional. Some doors need touch up paint.
C1030 Fittings	1981	2000	4	3	JB 09/03/13	Counters at several locations including restrooms, kitchen, workspaces, dorm rooms, reception counter.

Facility Summary

City of Redmond
Fire Station 11 Site
Fire Station 11 Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Facility Components			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems									
C Interiors			2.7						
Interior Construction									
C1030	Fittings								
			Some areas are in good condition; laundry, radio counter. Some counters delaminating.						
Staircases									
C2010	Stair Construction								
			1981	2000	1	30	JB	09/03/13	Metal stairs at mezzanine (west). Metal stairs with concrete treads (east).
			Good condition.						
Interior Finishes									
C3010	Wall Finishes								
			1981	2000	3	9	JB	09/03/13	Gypsum wall board and paint at most interior walls. Ceramic tile wainscot at restrooms.
			Paint needs some touchup. Generally in good condition. Ceramic tile is in good condition.						
C3020	Floor Finishes								
			1981	2000	5	5	JB	09/03/13	Sealed concrete at apparatus bay. Dorm rooms/administration spaces are carpet. Weight room is rubber flooring. Wall base throughout. Quarry tile at kitchen and 1/3 break room. Ceramic tile at restrooms, locker room, and showers.
			Carpet is in poor condition; worn and stained in most places. Wall base is cracked and worn at main entrance lobby. Ceramic and quarry are in good condition.						
C3030	Ceiling Finishes								
			1981	2000	4	10	JB	09/03/13	Mixture of acoustic tile and gypsum wall board ceilings. Gypsum wall board hard lid in restrooms, dorm rooms, mechanical/electrical, storage rooms.
			Acoustic ceiling tile is worn and has several locations where stained. At older building areas, the tile feels brittle.						
D Services			3.2						

Facility Summary

City of Redmond
Fire Station 11 Site
Fire Station 11 Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				3.2					
Vertical Transportation									
D1010	Elevators and Lifts	2001	2001	5	0	DCS	09/03/13	Genesis 750-lb lift. Lift has been problematic since new and is currently inoperable.	
Plumbing									
D2010	Plumbing Fixtures	1981	2000	3	10	DCS	09/03/13	Porcelain water closets, urinals, and lavatories with stainless steel trim. Stainless steel sinks. Cooled drinking fountains. Fiberglass showers with tile floor. Stainless steel decontamination sinks. Porcelain with stainless steel rim janitor deep sink. All manual faucets and flush valves. Fixtures in fair condition in living areas and utility/shop spaces; good elsewhere (offices, training, etc.).	
D2020	Domestic Water Distribution	1981	1981	3	10	DCS	09/03/13	City water from 1.5-inch service via 1.5-inch and 1-inch pressure reducing valves with bypass; 90-psig inlet and 50-psig outlet. Copper distribution piping. Approximately four (4) gas-fired domestic hot water heaters including WH-2, 50-gallon, 42-mbh, dated 2007; west mezzanine WH-X A.O. Smith 100-gallong, 240-mbh, dated 2001 with 100-gallon supplemental storage tank and two (2) receive pumps; WH-3, A.O. Smith, 75-gallon, 75-mbh, dated 2000 with XT. System is in fair to good condition with few issues reported or observed. Some domestic hot water piping is uninsulated. WH-X system on mezzanine receive pump motors may be running hot.	
D2030	Sanitary Waste	1981	1981	3	10	DCS	09/03/13	Cast iron drain, waste, and vent (DW&V). Floor drains in men's and women's, floor drains in some utility areas. Catch basins in apparatus bay draining to an oil/water separator in apparatus bay west. Periodic waste drain backups at both flushing fixtures and shower floor drains. Frequent backups at apparatus bay catch basins. Recent environment regulation changes requiring	

Facility Summary

City of Redmond
Fire Station 11 Site
Fire Station 11 Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.2			
Plumbing						
D2030 Sanitary Waste						apparatus washing inside is placing excessive load on apparatus bay catch basins and oil/water separator.
D2040 Rain Water Drainage	1981	1981	3	10	DCS 09/03/13	Mostly interior roof drains and overflow roof drains with mostly insulated piping. Several roof drains with scupper overflows at 2000 addition areas. Several roof drains are missing drain bodies and companion overflow roof drains. Standing water in various locations. Trees overhang and/or close to roof making already marginal drainage
D2090 Other Plumbing Systems	1981	2000	3	7	DCS 09/03/13	Compressed air system in apparatus bay with 3-hp compressor and tank and distribution piping to hose reels. Extractor system. SCUBA charging station. Oxygen fill station with multiple full size bottles inside. Fuel island with gasoline and diesel underground storage tanks to south. Specialty plumbing systems are awkwardly located in apparatus bay; see other section(s) for opportunity to construct utility room for this equipment. Fuel island is reportedly scheduled for demolition in 2013.
HVAC						
D3010 Energy Supply	1981	2000	3	10	DCS 09/03/13	Natural gas from Puget Sound Energy via meter number 920737 with 425-cfh capacity. Painted black iron distribution pipe to gas-fired roof top units, apparatus bay infrared heaters, kitchen appliances, and domestic hot water heaters. Gas piping in unusually rusty for its age. Clean and protect to extend life. (Less than \$2,000.)
D3030 Cooling Generating Systems	1981	1981	5	0	DCS 09/03/13	No dedicated cooling for several communications/computer/radio rooms. Several communications/computer/radio rooms are warm/hot; opportunity to install dedicated

Facility Summary

City of Redmond
Fire Station 11 Site
Fire Station 11 Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.2			
HVAC						
D3030 Cooling Generating Systems						cooling.
D3040 HVAC Distribution Systems	1981	2000	3	10	DCS 09/03/13	Apparatus bay ventilation is by two (2) roof inlet hoods and one (1) general exhaust fan. General exhaust fans serve office and living areas, men's, women's, and miscellaneous. Apparatus bay ventilation does not meet current standards.
D3050 Terminal and Package Units	1981	2000	4	3	DCS 09/03/13	Apparatus bay overhead gas-fired, low-intensity, vented radiant heaters. Office, living, and training area roof top unit gas-pack units. Apparatus bay radiant heaters are near end of life. Roof top units are marginally designed, installed, and maintained resulting in discomfort throughout.
D3060 Controls and Instrumentation	1981	2000	4	2	DCS 09/03/13	DDC Metasys N30, 1998 technology, installed during 2000 renovation. Comfort complaints throughout all areas and spaces, but especially in office and living areas. Unbalanced air flows. Little or no outside air to many or most spaces.
D3090 Other HVAC Systems and Equipment	1981	2000	3	5	DCS 09/03/13	Nederman vehicle engine exhaust system for apparatus bay; one (1) per bay/door. Kitchen grease hood. Nederman system is older and ready for renewal. Kitchen hood is missing fire suppression system (see "Other Fire Protection Specialties" section below).
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1981	1981	3	10	DCS 09/03/13	Wet pipe fire sprinkler system throughout. City water service entry at 6-inch with 4-inch reduced pressure backflow prevention, yard post indicator

Facility Summary

City of Redmond
Fire Station 11 Site
Fire Station 11 Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.2			
Fire Protection						
D4010 Fire Protection Sprinkler Systems						valve and fire department connection. 100-psig service entry pressure. No issues reported or observed. Consider future dry pipe for apparatus bay, hose tower, and other semi-heated spaces.
D4030 Fire Protection Specialties	1981	2000	3	10	DCS 09/03/13	Fire extinguishers in cabinets and automatic external defibrillators (AED) in racks. Inspections current.
D4090 Other Fire Protection Systems	1981	1981	5	0	DCS 09/03/13	No fire suppression for kitchen hood. Install hood fire suppression.
Electrical						
D5010 Electrical Service and Distribution	1981	1981	3	7	RA 09/03/13	Building system, 600A 208/120V with main panel in building, fed by Puget Sound Energy transformer via an outdoor transfer switch, with backup generator. Main panel is Square-D, QMR fusible board with 600A main breaker, transfer switch; Cutter-Hammer, outdoor. Main panel has a 600A single breaker disconnect fed from the generator through an automatic transfer switch, age over 30 years old. Opportunity for a service equipment upgrade.
D5020 Lighting and Branch Wiring	1981	2000	3	17	RA 09/03/13	Lighting is all fluorescent T8 lamps in good condition in the office and dormitory wing; probably been upgraded in 2000. All branch wiring is in conduits with 15A and 20A devices. Lighting has no occupancy controls. Roof electrical disconnects are in fair, working condition with minor rusting on housing. In the apparatus bays, all lighting fixtures and all wiring devices are working, but age is over 30 years; recommend upgrade opportunity with added occupancy sensors. Circuits are tripping in apparatus bay for vehicle charging and in

Facility Summary

City of Redmond
Fire Station 11 Site
Fire Station 11 Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				3.2					
Electrical									
D5020	Lighting and Branch Wiring							kitchen counter outlets.	
D5030	Low Voltage Communication Security and Fire Alarm		1981	2000	2	12	RA	09/03/13	Building has a fire alarm system with control panel in fire alarm and sprinkler room, and a fire alarm annunciator in the hallway off the day room. Fire alarm system is Silent Knight #5280 in good working condition. Building has no security alarm system. Building has voice/data, Cat-5 wiring system and devices system; in good working condition. Building has sound paging system; in good working condition.
D5090	Other Electrical Systems		1981	2001	2	8	RA	09/03/13	Building electrical system has an outdoor generator with diesel base tank. Generator is manufactured by Generac, 300-kw, 208/120V, 2000 series, 2001. Generator is in good condition.
E Equipment and Furnishings				3.8					
Equipment									
E1010	Commercial Equipment		1981	1981	2	10	JB	09/03/13	Laundry, kitchen equipment, copiers, and computers. Good condition.
E1030	Vehicular Equipment		1981	2000	2	10	JB	09/03/13	Neiderman system. Functioning. Needs miscellaneous small parts, and ongoing maintenance.
Furnishings									
E2010	Fixed Furnishings		1981	2000	4	12	JB	09/03/13	Window treatments (blinds). Casework cabinets. Blinds are in good condition. Some wear and

Facility Summary

City of Redmond	
Fire Station 11 Site	8450 161st Avenue NE
Fire Station 11 Building	Redmond, WA 98052

Facility Components	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems						
E Equipment and Furnishings			3.8			

Furnishings

E2010	Fixed Furnishings								tear/delamination at casework.
E2020	Moveable Furnishings (Capital Funded Only)								
		1981	1981	1	17	JB	09/03/13	Good condition.	

Facility Summary

City of Redmond

Fire Station 11 Site

Fire Station 11 Infrastructure

8450 161st Avenue NE
Redmond, WA 98052

Facility Condition Summary

The fire station headquarters and the old Medic One building are on a rectangular lot. There is a concrete drive apron for the four (4) truck bays off of NE 85th Street. There are asphalt parking lots on the west and east sides of the fire station building, with two (2) access drives from 161st Avenue NE. At the southeast corner of the site is the old Medic One building. A fuel island is also onsite, but is no longer used and is scheduled to be removed. The site has mature trees throughout and is served by City of Redmond utilities. At the northwest corner of the site is a small plaza with a memorial bench and sculpture.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2010 Roadways	1981	1981	3	8	MK 09/03/13	Access roads include the asphalt lane on the south side of the site between 161st Avenue NE & the OMOB, including the fuel island. Roadways also includes the concrete apron at the front of the apparatus bays. Extruded concrete curbs. □ Concrete pavement is in fair to good condition, with some cracks throughout. Cracking is likely due to lack of expansion joints in original pavement, and displacement is not occurring. Some alligating present of asphalt access lane.
G2020 Parking Lots	1981	1981	3	4	MK 09/03/13	Parking lots on east and west sides of fire station building. Two (2) ADA accessible stalls at front of building. Extruded concrete curbs and concrete curb stops. Approximately one-third of the parking lots have newer pavement repairs. Recommend ongoing repairs.
G2030 Pedestrian Paving	1981	1981	2	8	MK 09/03/13	Concrete walks around perimeter of the fire station. Brick area at front entry. Concrete and brick walk along the east edge of the site. Brick plaza areas at northwest corner of site. □ Generally in good condition.
G2040 Site Development						

Facility Summary

City of Redmond

Fire Station 11 Site

Fire Station 11 Infrastructure

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2040 Site Development	1981	2004	2	20	MK 09/03/13	At the northwest corner of the site is a circular small plaza with a memorial bench and sculpture. Flag pole at front entry. □ Good condition.
G2050 Landscaping	1981	1981	3	8	MK 09/03/13	Mature trees and landscaping throughout the site. Irrigation system present. □ Landscaping is generally in good condition. Trees are overhanging building and some along the front of building are getting too large. Issues with leaves clogging roof and providing access for rats. Complaints about dripping from maples on cars in rear (east) parking lot. Likely this is 'honeydew' from aphids on maple trees.
Site Civil / Mechanical Utilities						
G3010 Water Supply	1981	1981	3	13	MK 09/03/13	Domestic water service (1-1/2") and fire sprinkler supply lines to fire station from City of Redmond system. Water service to OMOB also from City system. □ No known issues.
G3020 Sanitary Sewer	1981	1981	3	18	MK 09/03/13	Sanitary sewer service to buildings from the City of Redmond system. No known issues,
G3030 Storm Sewer	1981	1981	3	13	MK 09/03/13	Catch basin and pipe system in parking lots. Trench drain at perimeter of fuel island and at edge of drive apron at apparatus bays. Fire station building roof drains appear to be interior to the building. Exterior roof downspouts at OMOB connect to underground system. Storm drains likely connect into City of Redmond system. □ Trench drain at drive apron appears to be full of sediment and needs maintenance.

Facility Summary

City of Redmond

Fire Station 11 Site

Fire Station 11 Infrastructure

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Civil / Mechanical Utilities						
G3030 Storm Sewer						
G3060 Fuel Distribution	1981	1981	3	8	MK 09/03/13	Fuel Island at south side of site is no longer in service. Small propane tank at OMOB for the emergency generator. ☐
						☐ No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	1981	1981	3	8	MK 09/03/13	Underground electric service to both buildings. 150-kva transformer at Fire Station, and emergency generator with base tank. Small emergency generator at OMOB (propane). ☐
						No known issues.
G4020 Site Lighting	1981	1981	3	8	MK 09/03/13	Pole lights throughout the site. Bollard lights at the plaza at the northwest corner of the site. ☐
						See also building electrical sections ☐
G4030 Site Communications and Security	1981	1981	3	7	MK 09/03/13	Underground telephone to the buildings. (See also building electrical sections.) ☐
						No known issues.

Facility Summary

City of Redmond
Fire Station 11 Site
Old Medic One Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 1,916
Year Of Original Construction 1985
Facility Use Type Maintenance
Construction Type Light
of Floors 1
Energy Source Electric
Year Of Last Renovation 2001
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.1			
Facility Condition Index (FCI)	0.18			
Current Replacement Value (CRV)	\$566,000	Predicted Renewal Budget (6 yrs)	\$34,000	\$32,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$236,000	\$202,000
		Observed Deficiencies (6 yrs)	\$153,000	\$146,000
		Observed Deficiencies (ALL)	\$153,000	\$146,000
		Opportunity Total Project Cost	\$492,000	N/A

Facility Condition Summary

Architectural:

The main part of the building is a modular on a concrete foundation, the apparatus bay stick built on a slab foundation. The building is old and could use maintenance and repair. Opportunity for renewed office space, see Opportunity section. The Old Medic One Building is a well worn but solid building whose life can be extended through a small investment and regular maintenance.

Electrical:

Building electrical service is 120/208V system, underground power from Puget Sound Energy padmount transformer. Indoor main panel with 200A main breaker subfeeding a transfer switch load center outside and a panel in the apparatus bay. Building interior lighting is mostly fluorescent throughout, original fixtures, T8 lamps, with minor quantities of incandescent fixtures in toilet and storage closet. Outside lights are a mix of newer high intensity discharge (HID) wall packs and a couple of compact fluorescent wall packs. Branch wiring and devices are original building system, 28 years old. Building has no lighting automatic controls, fire alarm system and monitoring, or battery backup lights for egress.

Mechanical:

The Old Medic One Building consists of original 1985 modular building (1,176 sf) set on concrete foundation with crawl space, newer 2001 single apparatus bay (640 sf), small (100 sf) interconnecting hallway between modular and apparatus bay structures, and covered entry (approximately 50 sf). The Old Medic One Building is located on the southeast corner of the Fire Station 11 site. The original modular building was first purchased by Shoreline Fire District in 1985, later moved to Evergreen Hospital, finally moved to the Fire Station 11 site in 2001.

HVAC in the original modular is forced air all electric heat pumps; the apparatus bay includes one (1) electric unit heater and one (1) sidewall exhaust fan.

Plumbing is city water and sewer with electric domestic hot water heater. No fire sprinkler.

While originally used for Medic One, the Old Medic One Building is now used for Emergency Preparedness and Emergency Medical Services (EMS) storage. The Old Medic One Building is commonly called the "Rat Shack" due to a past heavy rat infestation.

Facility Summary

City of Redmond
Fire Station 11 Site
Old Medic One Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Facility Components			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems									
A Substructure					3.0				
Foundations									
A1010	Standard Foundations		1985	2001	3	76	RD	09/03/13	Concrete foundation under modular. Slab at apparatus bay. Most all foundation vents are filled with bark. Remove bark and clean. (Less than \$2,000.)
A1030	Slab On Grade		2001	2001	3	76	RD	09/03/13	Slab on grade in apparatus bay. No deficiencies observed.
B Shell					3.0				
Superstructure									
B1010	Floor Construction		1985	1985	3	23	RD	09/03/13	Wood frame floor. There is some deflection but floor is acceptable.
B1020	Roof Construction		1985	2001	3	22	RD	09/03/13	Wood frame on modular and site built porch soffit/roof deck is rotting. Porch rail is rotting. Remove roof and deck at front porch. Replace deck and roof to provide dry condition. Replace porch rail.
Exterior Closure									
B2010	Exterior Walls		1985	2001	3	33	RD	09/03/13	T-111 siding. Needs cleaning, minor repair, and paint.
B2020	Exterior Windows		1985	1985	3	18	RD	09/03/13	Double glazed. Metal frame. No deficiencies observed.
B2030	Exterior Doors		1985	2001	3	23	RD	09/03/13	Hollow metal doors. Doors need maintenance and paint. (Less than

Facility Summary

City of Redmond
Fire Station 11 Site
Old Medic One Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				3.0					
Exterior Closure									
B2030	Exterior Doors							\$2,000.)	
Roofing									
B3010	Roof Coverings		1985	2001	3	28	RD	09/03/13	Metal roof low slope ceiling. Shows past leaks. Roof insulation. Fill end voids to stop blown in water penetration (less than \$2,000). Recommend further investigation of roof leaks. Insulation is placed on top of ceiling tile. Verify that light fixtures are "tented over" or are rated for insulation.
B3020	Roof Openings		1981	2001	3	28	RD	09/03/13	Very limited openings for vents. No deficiencies observed or reported.
B3030	Projections		1985	2001	3	18	RD	09/03/13	Front porch covered in "Roof Construction" section above. See "Roof Construction" section above.
C Interiors				3.0					
Interior Construction									
C1010	Partitions		1985	2001	3	13	RD	09/03/13	Wood frame with gypsum wall board or hard board. No deficiencies observed. Worn but functional.
C1020	Interior Doors		1985	2001	3	13	RD	09/03/13	Wood doors. Worn but functional.
C1030	Fittings		1985	2001	3	18	RD	09/03/13	Whiteboard. No deficiencies noted.

Facility Summary

City of Redmond
Fire Station 11 Site
Old Medic One Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				3.0					
Interior Construction									
C1030	Fittings								
Staircases									
C2010	Stair Construction								
	1985	2001	3	23	RD	09/03/13	Wood stair at entry and to apparatus bay.		
	No deficiencies observed.								
C2020	Stair Finishes								
	1985	2001	3	3	RD	09/03/13	Painted wood.		
	No deficiencies observed.								
Interior Finishes									
C3010	Wall Finishes								
	1985	2001	3	10	RD	09/03/13	Painted gypsum wall board. Painted textured hard board.		
	Clean and repaint with normal maintenance.								
C3020	Floor Finishes								
	1985	2001	3	12	RD	09/03/13	Carpet and sheet vinyl.		
	Dated but functional.								
C3030	Ceiling Finishes								
	1985	2001	3	8	RD	09/03/13	Suspended acoustical tile and painted gypsum wall board.		
	Replace broken and stained tile. (Less than \$2,000.)								
D Services				3.3					
Vertical Transportation									
D1090	Other Conveying Systems								
	1985	2001	5	0	DCS	09/03/13	No roof access.		
	Provide roof access.								
Plumbing									

Facility Summary

City of Redmond
Fire Station 11 Site
Old Medic One Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services				3.3			
Plumbing							
D2010	Plumbing Fixtures	1985	1985	4	5	DCS 09/03/13	One (1) bathroom with water closet, lavatory, and shower. One (1) kitchen sink, one (1) deep sink at apparatus bay, one (1) laundry hookup in apparatus bay. All dated and worn but functional.
D2020	Domestic Water Distribution	1985	2001	3	10	DCS 09/03/13	City water; copper piping; electric A.O. Smith domestic hot water heater, 50-gallons. Aged but functional. Domestic hot water heat is not installed per current code. Some or all domestic hot water piping is not insulated (less than \$2,000.)
D2030	Sanitary Waste	1985	2001	3	10	DCS 09/03/13	City sewer; drain, waste, and vent (DW&V) of unknown materials, but ABS is suspected. No issues reported or observed. Fixtures drain and flush well.
D2040	Rain Water Drainage	1985	2001	4	3	DCS 09/03/13	Gutter and downspout from metal roof to site storm drain system. Gutter and downspouts are dirty and damaged. Downspouts connecting to storm are semi-open and full of debris.
HVAC							
D3010	Energy Supply	1985	2001	3	10	DCS 09/03/13	Currently all electric with original modular building. Split direct expansion (DX) heat pump, and apparatus bay electric unit heater. Opportunity to upgrade to gas heat.
D3030	Cooling Generating Systems	1985	2005	3	10	DCS 09/03/13	One (1) split direct expansion (DX) condensing unit serving original building forced air handling unit. Condensing unit is in good condition, but is

Facility Summary

City of Redmond
Fire Station 11 Site
Old Medic One Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.3			
HVAC						
D3030 Cooling Generating Systems						surrounded by excessively deep landscape bark. Condensing unit should be regularly cleaned.
D3040 HVAC Distribution Systems	1985	2001	4	3	DCS 09/03/13	Forced air split direct expansion (DX) heat pump with crammed space supply air duct, floor diffusers, and one (1) return air grill near inside unit. System is not installed per codes and standards. No outside air. Little or no return air path. Double return air filters. Unit not serviced for over one year. Some floor diffusers are blocked or damaged. Dirty duct. Comfort marginal. Kitchen and bathroom exhaust is marginal. Laundry dry exhaust duct is missing (dryer exhaust is direct to apparatus bay). Exhaust issues are less than \$2,000 to correct.
D3050 Terminal and Package Units	2001	2001	4	5	DCS 09/03/13	Approximately 5-kw electric resistance unit heater in apparatus bay with front outside air intake louver and rear sidewall exhaust fan. Unit heater is heavily worn and damaged. Outside air intake louver is open with no motor operated damper. Exhaust duct has mid-level intake only (not high/low). System should be reconfigured to meet code.
D3060 Controls and Instrumentation	1985	2001	3	7	DCS 09/03/13	Programmable thermostat for heat pump system. Manual thermostat for apparatus bay unit heater. Heat pump thermostat is OK but would be better located near return air grill by inside unit closet. Apparatus bay controls are aging but functional.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1985	1985	5	0	DCS 09/03/13	No fire sprinkler installed. Install fire sprinkler.

Facility Summary

City of Redmond
Fire Station 11 Site
Old Medic One Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services				3.3			
Fire Protection							
D4030	Fire Protection Specialties	1985	2001	3	17	DCS 09/03/13	Fire extinguishers. Inspections are current.
Electrical							
D5010	Electrical Service and Distribution	1985	1985	3	12	RA 09/03/13	Building has a 200A 120/280V system served by Puget Sound Energy transformer. In working condition. All electrical equipment are over 28 years old, an opportunity for upgrade. Building main panel, located in main entrance conference room area, is a WestingHouse Challenger panel, 200A main breaker panel. This panel subfeeds an outdoor load center panel located on outside of the building, backed up by the generator transfer switch.
D5020	Lighting and Branch Wiring	1985	1985	3	5	RA 09/03/13	Interior lighting is all fluorescent T8 lamps with minor incandescent fixtures in toilets and closet. Outdoor lighting has high intensity discharge (HID) and compact fluorescent wall packs. There are no occupancy lighting controls. Branch wiring in conduits, 15A grounding receptacles; no major deficiency, minor broken devices. Lighting is 28 years old, an opportunity for upgrade. Electrical devices and wiring are 28 years old, an opportunity for upgrade.
D5030	Low Voltage Communication Security and Fire Alarm	1985	2001	3	13	RA 09/03/13	Building has no fire alarm system or security alarm system. Building has voice/data Cat-5 wiring system. Opportunity for adding a fire alarm system.
D5090	Other Electrical Systems	1985	2001	2	8	RA 09/03/13	Building power is backed up by an outdoor propane generator located at the backside of the building supplying power to outside lights, kitchen lights, and garage lights. Generator manufacturer is Generac by EC power, 120/208V, 1-phase, 3-wire, 7-kw;

Facility Summary

City of Redmond
Fire Station 11 Site
Old Medic One Building

8450 161st Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				3.3					
Electrical									
D5090	Other Electrical Systems							appears to be 10 years old, in good condition. System has only one (1) transfer switch.	
E Equipment and Furnishings				4.0					
Equipment									
E1010	Commercial Equipment								
		1985	2001	3	3	RD	09/03/13	Residential washer, dryer, and kitchen equipment.	
								No deficiencies observed or reported.	
E1030	Vehicular Equipment								
		1985	2001	3	13	RD	09/03/13	Vehicle exhaust removal system.	
								No deficiencies observed or reported.	
Furnishings									
E2010	Fixed Furnishings								
		1985	2001	4	2	RD	09/03/13	Built in kitchen cabinets dated, worn, and should be replaced.	
								Replace kitchen cabinets.	
E2020	Moveable Furnishings (Capital Funded Only)								
		1985	2001	3	18	RD	09/03/13	Miscellaneous chairs and tables.	
								Worn but functional.	

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Fire Station 11 Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Fire Station 11 Building	Exterior Closure	\$21,600	\$6,480	\$5,616	\$16,848	\$50,544	\$49,269
	Interior Construction	\$2,700	\$810	\$702	\$2,106	\$6,318	\$5,965
	Interior Finishes	\$43,000	\$12,900	\$11,180	\$33,540	\$100,620	\$94,978
	Vertical Transportation	\$15,000	\$4,500	\$3,900	\$11,700	\$35,100	\$35,100
	Plumbing	\$23,000	\$6,900	\$5,980	\$17,940	\$53,820	\$51,159
	HVAC	\$138,900	\$41,670	\$36,114	\$108,342	\$325,026	\$311,583
	Fire Protection	\$3,000	\$900	\$780	\$2,340	\$7,020	\$7,020
	Electrical	\$31,000	\$9,300	\$8,060	\$24,180	\$72,540	\$72,540
	Facility Total	\$278,200	\$83,460	\$72,332	\$216,996	\$650,988	\$627,614
Fire Station 11 Infrastructure	Site Improvements	\$28,000	\$8,400	\$7,280	\$21,840	\$65,520	\$60,669
	Facility Total	\$28,000	\$8,400	\$7,280	\$21,840	\$65,520	\$60,669
Old Medic One Building	Superstructure	\$8,000	\$2,400	\$2,080	\$6,240	\$18,720	\$18,364
	Exterior Closure	\$4,625	\$1,388	\$1,203	\$3,608	\$10,823	\$10,216
	Roofing	\$2,500	\$750	\$650	\$1,950	\$5,850	\$5,630
	Interior Finishes	\$2,813	\$844	\$731	\$2,194	\$6,581	\$6,332
	Vertical Transportation	\$2,000	\$600	\$520	\$1,560	\$4,680	\$4,680
	Plumbing	\$21,000	\$6,300	\$5,460	\$16,380	\$49,140	\$44,886
	HVAC	\$10,500	\$3,150	\$2,730	\$8,190	\$24,570	\$23,487
	Fire Protection	\$9,101	\$2,730	\$2,366	\$7,099	\$21,296	\$21,296
	Furnishings	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$11,258
	Facility Total	\$65,539	\$19,662	\$17,040	\$51,120	\$153,360	\$146,149
	Site Total	\$371,739	\$111,522	\$96,652	\$289,956	\$869,868	\$834,432

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 11 Site

Total Observed Deficiency Repair Direct Cost : \$371,739

Total Observed Deficiency Repair Direct Cost (Present Value): \$356,595

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 11 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$21,600
System: Exterior Closure			Total System Deficiency Repair Cost (Present Value):					\$21,055
Exterior Walls								
Soffits	5	0	Plaster soffit at east door at administration area (adjacent to hose tower) underside finish shows signs of water damage. Unknown if water source has been eliminated.	Investigate water source, possibly from roof. Remove affected materials, replace with new plaster. Repair leak and paint to match existing.	1	\$8,000.00	ls	\$8,000
		2013						
Exterior Doors								
Rolling Doors	4	5	Missing seal at top of steel roll-up doors.	Replace missing door seal at top of each door.	8	\$250.00	ea	\$2,000
		2013						
Hollow Metal Doors and Frames	5	0	Weather seals are worn and cracked.	Replace foam seal with rubber seal. Six (6) locations.	1	\$2,000.00	ls	\$2,000
		2013						
Door Opener	4	2	As reported by staff, automatic door openers frequently break and are in need of repairs.	Remove and replace existing automatic chain drive door openers with heavy duty chain operated openers.	12	\$800.00	ea	\$9,600
		2013						

Note: Cost estimates shown are direct construction costs.

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Page 1 of 7

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 11 Site

Total Observed Deficiency Repair Direct Cost : \$371,739
Total Observed Deficiency Repair Direct Cost (Present Value): \$356,595

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility:	Fire Station 11 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$2,700
System:	Interior Construction					Total System Deficiency Repair Cost (Present Value):			\$2,549
Fittings									
Countertops		4	3	Countertops show delamination at several locations.	Replace plastic laminate countertop with new plastic laminate counter top.	60	\$45.00	lf	\$2,700
			2013						
Facility:	Fire Station 11 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$43,000
System:	Interior Finishes					Total System Deficiency Repair Cost (Present Value):			\$40,589
Floor Finishes									
Carpet		5	3	Carpeting is worn and soiled in most areas.	Replace carpet with new carpet and wall base.	8,600	\$5.00	sf	\$43,000
			2013						
Facility:	Fire Station 11 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$15,000
System:	Vertical Transportation					Total System Deficiency Repair Cost (Present Value):			\$15,000
Elevators and Lifts									
Lift		5	0	Inoperable lift.	Troubleshoot and repair or replace lift.	1	\$15,000.00	ea	\$15,000
			2013	Genesis 750-lb lift.					
Facility:	Fire Station 11 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$23,000
System:	Plumbing					Total System Deficiency Repair Cost (Present Value):			\$21,863
Sanitary Waste									
Drain, Waste, and Vent		4	5	Increasing backups.	Clean, test, inspect drain, waste, and vent (DW&V) system including side sewer to point of connection at street. Repair or replace as needed.	1	\$5,000.00	ls	\$5,000
			2013						

Rain Water Drainage

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 11 Site

Total Observed Deficiency Repair Direct Cost : \$371,739

Total Observed Deficiency Repair Direct Cost (Present Value): \$356,595

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
		Survey Year						
Roof Drains	4	2	Several roof drain bodies missing. Several companion overflow roof drains missing. Some roof drain piping insulation missing.	Install approximately six (6) roof drain assemblies including six (6) overflow roof drains, and insulate approximately six (6) 50-foot runs of roof drain piping at each location.	6	\$3,000.00	ea	\$18,000
		2013						
Facility: Fire Station 11 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$138,900
System: HVAC					Total System Deficiency Repair Cost (Present Value):			\$133,155
Terminal and Package Units								
Roof Top Units	4	2	Some rooftop unit furnace heat exchangers showing signs of impending failure (excessive corrosion). Most rooftop units have not been serviced for well over one year. Few or no units have economizer.	Schedule replacement of seven (7) rooftop units. One (1) 1.5-ton, one (1) 2.5-ton, and five (5) 3-ton units.	7	\$5,000.00	ea	\$35,000
		2013						
Controls and Instrumentation								
DDC	4	2	Out of date DDC with extensive comfort complaints throughout Fire Station 11 occupied areas.	Replace with functional, modern system in conjunction with rooftop unit replacement.	23,800	\$3.00	sf	\$71,400
		2013						
Other HVAC Systems and Equipment								
Vehicle Engine Exhaust	4	3	Existing Nederman system is at end of life.	Refurbish or replace Nederman system.	6	\$5,000.00	ea	\$30,000
		2013						
Kitchen Hood	4	1	Kitchen hood is missing fire suppression.	Install hood fire suppression.	1	\$2,500.00	ls	\$2,500
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 3 of 7

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 11 Site

Total Observed Deficiency Repair Direct Cost : \$371,739

Total Observed Deficiency Repair Direct Cost (Present Value): \$356,595

Material		Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 11 Building							Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$3,000
System: Fire Protection							Total System Deficiency Repair Cost (Present Value):		\$3,000
Other Fire Protection Systems									
Kitchen Hood	5	0 2013	No kitchen hood fire suppression.	Install kitchen hood fire suppression.	1	\$3,000.00	ea	\$3,000	
Facility: Fire Station 11 Building							Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$31,000
System: Electrical							Total System Deficiency Repair Cost (Present Value):		\$31,000
Lighting and Branch Wiring									
Branch Wiring	5	0 2013	Electrical circuits are tripping in the Apparatus Bays, overhead drop cord circuits feeding vehicle charging power; insufficient outlets.	Add eight (8) overhead power reel with retractable drop cord, 30A, 120v; eight (8) dedicated circuits.	8	\$3,500.00	ea	\$28,000	
Branch Wiring	5	0 2013	Electrical circuits are tripping in the kitchen, at the counter; insufficient outlets.	Add three (3) outlets and circuits over counter in the kitchen.	1	\$3,000.00	ls	\$3,000	
Facility: Fire Station 11 Infrastructure							Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$28,000
System: Site Improvements							Total System Deficiency Repair Cost (Present Value):		\$25,927
Parking Lots									
Asphalt Parking Lots	3	4 2013	Asphalt parking lots on east and west sides of fire station have cracking pavement with alligating and wear.	Replace pavement on approximately 1/3 of remaining parking lot areas. Remove and replace existing asphalt with full depth section.	700	\$40.00	sy	\$28,000	

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Print Date: 03/10/14

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Page 4 of 7

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 11 Site

Total Observed Deficiency Repair Direct Cost : \$371,739

Total Observed Deficiency Repair Direct Cost (Present Value): \$356,595

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Old Medic One Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$8,000
System: Superstructure			Total System Deficiency Repair Cost (Present Value):					\$7,848
Roof Construction								
Deck and Rail	4	1	Roof deck/soffit is rotting and needs to be replaced.	Remove metal roof deck and inspect framing, repair, re-deck, and install water tight roof.	100	\$80.00	sf	\$8,000
		2013	Wood deck/soffit. Wood deck rail.					
Facility: Old Medic One Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$4,625
System: Exterior Closure			Total System Deficiency Repair Cost (Present Value):					\$4,366
Exterior Walls								
Plywood Siding	4	3	T-111 plywood siding is exposed to weather.	Clean and paint, scrape, clean, and paint siding.	1,850	\$2.50	sf	\$4,625
		2013						
Facility: Old Medic One Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,500
System: Roofing			Total System Deficiency Repair Cost (Present Value):					\$2,406
Roof Coverings								
Metal Roof	4	2	Extensive water spotting on ceiling tile. No apparent leaks in roof.	Investigate reason for water damage, locate source, and repair.	1	\$2,500.00	ls	\$2,500
		2013						
Facility: Old Medic One Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,813
System: Interior Finishes			Total System Deficiency Repair Cost (Present Value):					\$2,706
Ceiling Finishes								
Acoustical Ceiling Tile	4	2	Extensive staining from water. Some broken tile.	Replace tile.	1,250	\$2.25	sf	\$2,813
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 5 of 7

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 11 Site

Total Observed Deficiency Repair Direct Cost : \$371,739

Total Observed Deficiency Repair Direct Cost (Present Value): \$356,595

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Old Medic One Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,000
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):					\$2,000
Other Conveying Systems								
Roof Access	5	0	No roof access.	Provide permanent outside ladder to roof.	1	\$2,000.00	ea	\$2,000
		2013						
Facility: Old Medic One Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$21,000
System: Plumbing			Total System Deficiency Repair Cost (Present Value):					\$19,182
Plumbing Fixtures								
Plumbing Fixtures	4	5	Water closet, lavatory, shower, sink, deep sink, and wall box are all aged and worn; approaching end of life.	Replace plumbing fixtures.	6	\$3,000.00	ea	\$18,000
		2013						
Rain Water Drainage								
Gutter and Downspouts	4	3	Gutters and downspouts are damaged, dirty, and connection to storm are semi-open and full of debris.	Trim landscaping (trees) away from building. Clean and repair gutters and downspouts. Clean and test storm connections. Install downspout to storm caps to keep out debris.	1	\$3,000.00	ls	\$3,000
		2013						
Facility: Old Medic One Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$10,500
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$10,037
Cooling Generating Systems								
Communications Room Cooling	5	0	No cooling for communications room.	Install 1-ton ductless split cooling system for communications room.	1	\$3,500.00	ls	\$3,500
		2013						
HVAC Distribution Systems								

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 6 of 7

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 11 Site

Total Observed Deficiency Repair Direct Cost :

\$371,739

Total Observed Deficiency Repair Direct Cost (Present Value):

\$356,595

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost	
Heat Pump System	4	3	Heat pump system does not meet codes or standards with no outside air, restricted return air path, blocked diffusers, and other issues.	Renew systems to meet current code minimum requirements.	1	\$5,000.00	ls	\$5,000	
		2013							
Terminal and Package Units									
Apparatus Bay HVAC	4	5	Unit heater nearing end of life. Outside air intake missing motor operated damper. Exhaust not high/low.	Replace unit heater. Install outside air motor operated damper. Reconfigure exhaust intake for high/low intakes.	1	\$2,000.00	ls	\$2,000	
		2013							
Facility: Old Medic One Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):						\$9,101
System: Fire Protection			Total System Deficiency Repair Cost (Present Value):						\$9,101
Fire Protection Sprinkler Systems									
Fire Sprinkler System	5	0	No fire sprinkler installed.	Install non-metallic fire sprinkler system.	1,916	\$4.75	sf	\$9,101	
		2013							
Facility: Old Medic One Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):						\$5,000
System: Furnishings			Total System Deficiency Repair Cost (Present Value):						\$4,811
Fixed Furnishings									
Kitchen Cabinets	4	2	Worn and damaged wood cabinets.	Replace cabinets.	20	\$250.00	lf	\$5,000	
		2013							

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 7 of 7

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 11 Site

Total Site Opportunity Cost: \$723,868

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Fire Station 11 Building System: Exterior Closure Total Cost: \$6,760						
B2020	Exterior Windows	Exterior aluminum windows, recessed 0.5-inch from face of masonry. No roof overhang present. No protection of glazing unit from weather at wall surface above.	Install drip edge flashing at window head.	26.00	\$260.00	ea \$6,760
Facility: Fire Station 11 Building System: Roofing Total Cost: \$12,285						
B3010	Roof Coverings	Apparatus bay insulation.	Install roof insulation at underside of high bay area at apparatus area.	5,460.00	\$2.25	sf \$12,285
Facility: Fire Station 11 Building System: Interior Construction Total Cost: \$4,060						
C1030	Fittings	Metal shelving units, some tall cabinets are not anchored to wall with earthquake straps.	Install earthquake straps at all free standing tall shelving units and tall cabinets.	1.00	\$2,500.00	ls \$2,500
		Interior walls throughout facility show heavy wear and damage at wall corners.	Provide 3x3 stainless steel corner guards at each outside wall corner.	60.00	\$26.00	lf \$1,560
Facility: Fire Station 11 Building System: Interior Finishes Total Cost: \$2,600						
C3010	Wall Finishes	0.5-inch by 0.5-inch plastic, clear, corner guards installed in various locations.	Remove existing plastic corner guards. Provide 2x2 heavy duty, screwed in corner guards at all corridor corners throughout.	1.00	\$2,600.00	ls \$2,600
Facility: Fire Station 11 Building System: Plumbing Total Cost: \$50,000						
D2030	Sanitary Waste	Apparatus now washed inside overloading apparatus bay catch basins, drains, piping, and oil/water separator.	Replace with trench drains in conjunction with A-Series slab on grade replacement.	300.00	\$50.00	ft \$15,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 1 of 4

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 11 Site

Total Site Opportunity Cost: \$723,868

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
D2040 Rain Water Drainage	With large roof area and regular apparatus washer, opportunity to wash vehicles with harvested rain water.	Install 10,000-gallon rain water harvesting to supply apparatus bay wash water and flushing water systems.	1.00	\$35,000.00	Is	\$35,000
Facility: Fire Station 11 Building System: HVAC Total Cost: \$274,850						
D3030 Cooling Generating Systems	Mission critical communications/radio/radio room equipment rooms are cooled only by general HVAC system. The most critical of these spaces should be cooled by dedicated equipment.	Install ductless split direct expansion (DX) cooling in mission critical equipment rooms. Approximately 1-ton each.	3.00	\$3,000.00	ea	\$9,000
D3040 HVAC Distribution Systems	Apparatus bay ventilation does not meet current codes and standards.	Provide distributed make-up air and high-low exhaust per code to improve indoor health and safety.	1.00	\$10,000.00	Is	\$10,000
D3050 Terminal and Package Units	Existing office, living, and training areas HVAC roof top unit systems provide poor comfort and waste energy. Opportunity to upgrade to variable refrigerant flow (VRF) and heat recovery ventilator (HRV) technology to greatly improve thermal comfort, indoor air quality, and energy efficiency.	Replace HVAC roof top unit system with variable refrigerant flow (VRF) and heat recovery ventilator (HRV) system.	23,800.00	\$10.00	sf	\$238,000
D3060 Controls and Instrumentation	Energy inefficient with simultaneous heating and cooling, unbalanced air flow, and unclear sequences.	Conduct retro-commissioning (Cx) and re-TAB (test, adjust, and balance) and/or energy audit. Seek Puget Sound Energy rebates for improvements.	23,800.00	\$0.75	sf	\$17,850
Facility: Fire Station 11 Building System: Electrical Total Cost: \$157,100						
D5010 Electrical Service and Distribution	Electrical service and distribution, branch panels, and transfer switch are over 30 years old. Recommend opportunity for upgrade.	Upgrade electrical service and transfer switch to larger capacity. Replace all branch panels.	23,800.00	\$4.50	sf	\$107,100

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Page 2 of 4

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 11 Site

Total Site Opportunity Cost: \$723,868

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
D5020 Lighting and Branch Wiring	Apparatus bay lighting, controls, and devices are over 30 years old. Recommend opportunity for upgrade.	Upgrade lighting to fluorescent T5HO high bay with occupancy control in high ceiling. Low ceiling with fluorescent T75. Replace all wiring and receptacles.	1.00	\$50,000.00	Is	\$50,000
Facility: Fire Station 11 Building System: Furnishings Total Cost: \$6,000						
E2010 Fixed Furnishings	Building gear is currently stored by means of hooks and small benched.	Remove and provide bunker gear storage cabinets, sized for fire fighting equipment, at apparatus bay.	15.00	\$400.00	ea	\$6,000
Facility: Old Medic One Building System: Exterior Closure Total Cost: \$134,120						
B2010 Exterior Walls	The condition of the building is such that with limited maintenance it could easily deteriorate to the point that it needs to be demolished. On the other hand, a reasonable investment now could extend the life of the building another 20 years.	Remove and rebuild front porch. Repair roof and insure no leaks. Repair and repaint exterior. Reinstall roof and foundation vent screens. Remove below grade wood, clear foundation vents. Remove ceiling tile, paint, and straighten grid, install new ceiling tile. Replace all doors and trim. Repair and paint interior. Install new kitchen. Replace all flooring and install HVAC and electrical upgrades noted elsewhere in this report.	1,916.00	\$70.00	sf	\$134,120
Facility: Old Medic One Building System: HVAC Total Cost: \$15,000						
D3010 Energy Supply	Currently all electric heat. With natural gas available at street, upgrade to gas-furnace heat for original building and infrared gas heat for apparatus bay to increase comfort and reduce energy costs.	Install gas service when HVAC system is renewed.	1.00	\$5,000.00	Is	\$5,000
D3040 HVAC Distribution Systems						

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Page 3 of 4

Opportunity Summary By Subsystem

City of Redmond
Site: Fire Station 11 Site

Total Site Opportunity Cost: \$723,868

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
	Original building HVAC system does not meet code standards and delivers poor comfort and poor indoor air quality.	Upgrade to hybrid system with high efficiency gas furnace heat with split direct expansion (DX) heat pump with weather heat and DX cool.	1.00	\$10,000.00	ls	\$10,000
Facility:	Old Medic One Building					
System:	Electrical	Total Cost: \$61,093				
D5010	Electrical Service and Distribution	Opportunity of replacing existing 200A 120/208V service and distribution and transfer switch (outdoor equipment); original building equipment, 28 years old.	1.00	\$25,000.00	ls	\$25,000
D5020	Lighting and Branch Wiring	Electrical branch wiring and devices are 28 years old.	1,916.00	\$7.00	sf	\$13,412
		Lighting system is 28 years old and has no lighting occupancy sensors.	1,916.00	\$7.00	sf	\$13,412
D5030	Low Voltage Communication Security and Fire Alarm	Building has no fire alarm system.	1,916.00	\$2.75	sf	\$5,269
D5090	Other Electrical Systems	Building has no emergency battery backup light.	8.00	\$500.00	ea	\$4,000

Facility Summary

City of Redmond

Fire Station 12 Site

Fire Station 12 Building

4211 148th Avenue NE
Redmond, WA 98007

Facility Code

Facility Size - Gross S.F. 7,050
Year Of Original Construction 1980
Facility Use Type Fire Station
Construction Type Medium
of Floors 1
Energy Source Gas
Year Of Last Renovation 1999
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	2.9			
Facility Condition Index (FCI)	0.18			
Current Replacement Value (CRV)	\$3,489,000	Predicted Renewal Budget (6 yrs)	\$675,000	\$645,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$1,221,000	\$1,095,000
		Observed Deficiencies (6 yrs)	\$472,000	\$443,000
		Observed Deficiencies (ALL)	\$472,000	\$443,000
		Opportunity Total Project Cost	\$446,000	N/A

Facility Condition Summary

Architectural:

Single story building with mezzanine. Foundation is footing stem wall with slab on grade. Exterior is a mix of load bearing masonry with some frames walls with metal siding at the east. Roof is wood construction with beams. Hose tower is uninsulated masonry. Apparatus bay is uninsulated. Roof is composite sheet with two (2) skylights. Interior walls are combination masonry and wood/steel frames. Stud walls are gypsum wall board with some ceramic tile in restrooms. Ceilings are a mix of quarry tile, sealed concrete, ceramic, carpet, and sheet flooring. Built-in casework of counters and tall storage. Kitchen has standard appliances and laundry has residential appliances.

Electrical:

Building electrical service is 600A, 120/240V, 1-phase, 3-wire served by Puget Sound Energy underground service, with current transformer and meter on outside wall of building. Building has a 35-kw 120/240V, 1-phase, 3-wire outdoor generator. Generator feeds underground to the transfer switch inside building apparatus bay. Interior lighting is mostly T8 fluorescent with some T12, and some incandescent fixtures in toilet room and shower. Outdoor lighting are old high intensity discharge (HID) type and compact fluorescent type. All branch wiring are in conduits. Devices are 15A and 20A grounding type. Circuits are tripping in the apparatus bay. Lack of power for vehicle charging. Building has a fire alarm system. Building has no security alarm system.

Mechanical:

Original Fire Station 12 (2,200 sf) was demolished and rebuilt in 1980, then partially renovated in 1999. Fire Station 12 building includes a 2.5-bay apparatus bay, hose tower, open administration and dayroom, kitchen and dining, and dorm area with men's and women's bathrooms. Fire Station 12 is located in Bellevue city limits.

HVAC is two (2) roof top unit gas-packs for station house, and forced air gas-fired furnace with under floor distribution for apparatus bay. Plumbing is city water and sewer; copper piping; cast iron drain, waste, and vent (DW&V); and gas fired domestic hot water heater. Fire sprinkled throughout.

Facility Summary

City of Redmond
Fire Station 12 Site
Fire Station 12 Building

4211 148th Avenue NE
Redmond, WA 98007

Facility Components

Facility Components									
Systems			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
A Substructure					2.5				
Foundations									
A1010	Standard Foundations		1980	1980	2	55	JB	09/04/13	Stem footing. Good condition.
A1030	Slab On Grade		1980	1999	3	20	JB	09/04/13	Slab on grade throughout. Apparatus bay slab on grade is cracking. Appears only saw cut joints, but no control joints. Cracks are level and show no signs of lift.
B Shell					2.7				
Superstructure									
B1010	Floor Construction		1980	1980	3	55	JB	09/04/13	Mezzanine floor is wood structure. Far excessively loaded with storage, some staining from stored materials and tools. Recommend replace wood floor decking and cover with sheet goods (vinyl flooring).
B1020	Roof Construction		1980	1980	2	55	JB	09/04/13	Wood framed roof structure. Good condition.
Exterior Closure									
B2010	Exterior Walls		1980	1999	2	27	JB	09/04/13	Mostly load bearing masonry, east wall is stud framed with metal siding. Good condition.
B2020	Exterior Windows		1980	1999	2	12	JB	09/04/13	Aluminum dual glazed windows. Good condition.
B2030	Exterior Doors		1980	1999	4	5	JB	09/04/13	Hollow metal doors and frames. Overhead sectional doors at apparatus bay. Storefront door

Facility Summary

City of Redmond
Fire Station 12 Site
Fire Station 12 Building

4211 148th Avenue NE
Redmond, WA 98007

Facility Components

Facility Components									
Systems			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
B Shell					2.7				
Exterior Closure									
B2030	Exterior Doors							and window unit at main entrance and patio. Door hardware includes keypad lock set. Hollow metal frames show rust at north side. Apparatus bay doors need paint and edge seals are failing. Apparatus bay hollow metal doors lever exit handles, should be panic hardware.	
Roofing									
B3010	Roof Coverings		1980	1999	4	4	JB	09/04/13	Composite sheet roofing, glue down. Roofing is aged and is in need of replacement.
B3020	Roof Openings		1980	1999	4	0	JB	09/04/13	Two (2) single glazed skylights unit over men's room has additional translucent panel at ceiling. Skylights allow heat loss and should be replaced.
B3030	Projections		1980	1999	2	36	JB	09/04/13	Steel canopy at east entrance, standing seam roofing. Good condition, needs cleaning on roofing.
C Interiors					3.2				
Interior Construction									
C1010	Partitions		1980	1999	2	36	JB	09/04/13	Interior partitions are a mixture of load bearing masonry and stud framed walls. Interior windows are hollow metal frame at apparatus bay and wood frame sliding glass at entrance lobby. Good condition.
C1020	Interior Doors		1980	1999	4	5	JB	09/04/13	Interior doors are mix of hollow metal doors and frames and wood doors with hollow metal frames. Wood frames at dorm rooms. Older hardware.

Facility Summary

City of Redmond
Fire Station 12 Site
Fire Station 12 Building

4211 148th Avenue NE
Redmond, WA 98007

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
C Interiors				3.2			
Interior Construction							
C1020	Interior Doors						Missing hollow metal door at apparatus bay storage room; not code compliant. Several door frames show rust or need paint. Doors need paint touchup. Hardware is not working or sticks on several doors.
C1030	Fittings	1980	1999	3	8	JB 09/04/13	Restroom countertops. Day room marker boards. Room signs. Countertops are in fair condition. Marker boards surface is wearing. Recommend new signs.
Staircases							
C2010	Stair Construction	1980	1980	2	55	JB 09/04/13	Steel stairs at hose tower, grated landing and risers. Good condition. No finish on stairs.
Interior Finishes							
C3010	Wall Finishes	1980	1999	4	5	JB 09/04/13	Gypsum wall board and paint in dorm rooms and administration, kitchen, and corridors. Gypsum wall board/paint/ceramic tile at apparatus bay restroom and men's room. Fiber reinforced plastic at women's restrooms. Gypsum wall board/paint at weight room. Restroom areas are in good condition. Corridors have worn paint, various dents, and dings. Heavy wear at weight room.
C3020	Floor Finishes	1980	1999	4	4	JB 09/04/13	Various floor finishes: sealed concrete in apparatus bay; carpet in dorms, administration, and corridors; quarry tile at men's restroom and kitchen; sheet vinyl at women's restroom. Carpet is worn at all traffic areas. Tile is good; sheet vinyl is good. Recommend rubber flooring at weight room.
C3030	Ceiling Finishes						

Facility Summary

City of Redmond
Fire Station 12 Site
Fire Station 12 Building

4211 148th Avenue NE
Redmond, WA 98007

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				3.2					
Interior Finishes									
C3030	Ceiling Finishes	1980	1999	4	3	JB	09/04/13	Acoustic ceiling tile in corridor, kitchen, day room, office, and weight room. Exposed ceiling in apparatus bay. Gypsum wall board hard lid in storage room, restrooms, and dorm rooms. Acoustic ceiling tile is worn and old, brittle and stained in several locations. Storage room at south side of apparatus bay has no hard lid or ceiling; not code compliant for fire rating.	
D Services				3.1					
Vertical Transportation									
D1090	Other Conveying Systems	1980	1980	5	0	DCS	09/04/13	Short access ladder and small door to low roof; no ladder to high roof. Install short permanent ladder to high roof to facilitate maintenance. (Less than \$2,000.)	
Plumbing									
D2010	Plumbing Fixtures	1980	1999	3	21	DCS	09/04/13	Porcelain water closets, urinals, lavatories, and stainless steel sinks. Tile showers. Stainless steel decontamination sink. Laundry wall box. No custodial closet or mop sink. In fair to good condition. Opportunity for custodial sink.	
D2020	Domestic Water Distribution	1980	1980	3	10	DCS	09/04/13	City water. Copper piping. Gas-fired A.O. Smith 1999, 75-gallon, 120-mbh domestic hot water heater. Hose bibs outside. In fair condition. Domestic hot water heater approaching end of life.	
D2030	Sanitary Waste	1980	1980	3	10	DCS	09/04/13	City sewer with cast iron drain, waste, and vent (DW&V). Catch basins in each apparatus bay with drain to oil/water separator (in side apparatus bay at southeast corner). Apparatus bay heat from underground supply air ducts to	

Facility Summary

City of Redmond
Fire Station 12 Site
Fire Station 12 Building

4211 148th Avenue NE
Redmond, WA 98007

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.1			
Plumbing						
D2030 Sanitary Waste						catch basin sides. No debris screens in catch basins. New regulations require apparatus washing inside apparatus bay.
D2040 Rain Water Drainage	1980	1999	3	26	DCS 09/04/13	All internal roof drains and overflow roof drains, except at west entry canopy which has gutter and downspouts to storm. Low roof has three (3) sets of roof drains and overflow roof drains; high roof has two (2) sets. Roof drains and overflow roof drains are in good condition at roof levels. Overflow roof drain day lighting is inconsistent; verify all meet code requirements (less than \$2,000). West canopy downspout connection to storm at grade is undersized (less than \$2,000).
D2090 Other Plumbing Systems	1980	1999	3	10	DCS 09/04/13	Oil/water separator for apparatus bay. Oxygen fill station for medical response. SCUBA bottle storage only (refilled at Fire Station 11). No compressed air system. Confirm oxygen storage meets code requirements (less than \$2,000). Opportunity to install compressed air system.
HVAC						
D3010 Energy Supply	1980	1999	3	26	DCS 09/04/13	Natural gas from Puget Sound Energy via meter number 1163338 rated at 425-cfh. No seismic valve at gas service entry. Small gas leak at patio barbeque connection. Tone alarm gas shut off system reportedly not connection to kitchen over barbeque (less than \$2,000).
D3030 Cooling Generating Systems	1980	1999	5	0	DCS 09/04/13	Communications equipment in laundry/mechanical room. With little ventilation, no cooling, and unfiltered air, communications equipment is in poor

Facility Summary

City of Redmond
Fire Station 12 Site
Fire Station 12 Building

4211 148th Avenue NE
Redmond, WA 98007

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.1			
HVAC						
D3030 Cooling Generating Systems						location.
D3040 HVAC Distribution Systems	1980	1999	4	3	DCS 09/04/13	Apparatus bay is 100% outside air with outside air intake for low roof area to gas-fired forced air furnace to underground supply air duct to each bay's catch basin. No relief or exhaust observed. Two (2) ceiling fans. Regulation requirements inside apparatus washing now introduce moisture into apparatus bay. See "Sanitary Waste" section above for plumbing perspective and deficiency.
D3050 Terminal and Package Units	1980	1999	4	3	DCS 09/04/13	Roof top units A and B serve station house. Units are 4-ton gas-packs with power exhaust economizer. Roof top units are approaching end of life. Roof top units need service; filters are filthy, and intake screens are corroded and failing.
D3060 Controls and Instrumentation	1980	1999	3	5	DCS 09/04/13	Programmable and manual thermostats. Mix of older and newer controls. Replace older controls (less than \$2,000). Opportunity to upgrade to DDC (\$10,000+).
D3090 Other HVAC Systems and Equipment	1980	1999	3	5	DCS 09/04/13	Three (3) separate Nederman vehicle engine exhaust systems. Aged and in need of renewal.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1980	1999	3	26	DCS 09/04/13	Wet pipe throughout. Inspect and test current.
D4020 Stand-Pipe and Hose Systems	1980	1999	3	16	DCS 09/04/13	Fire extinguishers.

Facility Summary

City of Redmond
Fire Station 12 Site
Fire Station 12 Building

4211 148th Avenue NE
Redmond, WA 98007

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.1			
Fire Protection						
D4020 Stand-Pipe and Hose Systems						Inspections current.
Electrical						
D5010 Electrical Service and Distribution	1976	1999	2	18	RA 09/04/13	Building electrical system is 600A, 120/240V, 1-phase, 3-wire with main wire way feeding main panel and transfer switch breaker. Service fed underground from Puget Sound Energy transformer. Main panel and branch panels are GE equipment, NLAB series; working well.
D5020 Lighting and Branch Wiring	1976	1999	3	16	RA 09/04/13	Lighting is all fluorescent T8 lamps; in the office and dorm areas lighting is in good condition. Lighting is old in the apparatus bay and storage mezzanine. No occupancy lighting controls. Branch wiring and devices are 15A and 20A grounding type, in good condition in the office and dorms, older condition in the apparatus bays. Circuits are tripping for vehicle charging. Opportunity for lighting upgrade in apparatus bay and mezzanine. Opportunity for electrical branch wiring upgrade in apparatus bay and mezzanine. Exterior lighting fixtures are old and in poor condition.
D5030 Low Voltage Communication Security and Fire Alarm	1976	1999	2	11	RA 09/04/13	Building has a fire alarm system with main panel located in communications room. Notifier AFP-200 fire alarm control panel. Devices consist of smoke detectors, horn strobes, and pull stations. Voice/data intermediate distribution frame (IDF) located in communications room, Cat-5 wiring and devices. Fire alarm system and voice/data system are both in good condition.
D5090 Other Electrical Systems	1976	1999	2	10	RA 09/04/13	Building has an outdoor generator with diesel base tank. Generator feeds the transfer switch inside building. Generator supplies standby

Facility Summary

City of Redmond
Fire Station 12 Site
Fire Station 12 Building

4211 148th Avenue NE
Redmond, WA 98007

Facility Components

Facility Components											
Systems		Original System Date		Last Major System Renew.		Cond. Scores		Subsystem Remain. Useful Life - Yrs		Surveyor/ Survey Date	Comments
D Services						3.1					
Electrical											
D5090	Other Electrical Systems										
											power to building power/lighting load. Building also has battery pack emergency wall lights.
											Generator manufactured by Generac, 35-kw, 120/240V. Automatic transfer switch (ATS) manufactured by Generac. Generator and ATS are in good condition.
E Equipment and Furnishings						3.0					
Equipment											
E1010	Commercial Equipment										
		1980	1999	3	10	JB	09/04/13	Laundry equipment.			
		Fair condition.									
E1090	Other Equipment										
		1980	1999	2	15	JB	09/04/13	Weight room equipment.			
		Good condition.									
Furnishings											
E2010	Fixed Furnishings										
		1980	1999	3	9	JB	09/04/13	Window blinds. Casework.			
		Window blinds are bent in some locations, pull strings need maintenance. Casework has signs of wear and tear; in fair condition.									
E2020	Moveable Furnishings (Capital Funded Only)										
		1980	1999	3	16	JB	09/04/13	Office and station house furniture. Apparatus bay storage racks. Miscellaneous.			
		Fair condition.									

Facility Summary

City of Redmond

Fire Station 12 Site

Fire Station 12 Infrastructure

4211 148th Avenue NE
Redmond, WA 98007

Facility Condition Summary

Fire Station 12 and associated pavement covers nearly the entire half acre site. There is a concrete drive apron for the three (3) truck bays off of 148th Avenue NE. There is an asphalt access drive along the south side of the building that extends around to the paved area at the rear of the building, allowing circular access through the back into the apparatus bays. There are some parking areas along the asphalt access drive. The site has mature landscaping with screening shrubs along the rear lot. The site is served by City of Redmond utilities.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2010 Roadways	1980	1980	3	4	MK 09/03/13	Approximately half of site pavement is concrete, and half asphalt. Concrete pavement drive apron at front of building and at rear of apparatus bays. Asphalt access drive and parking stalls along south side of building. □ Concrete pavement is in fair to good condition, with some cracks throughout. Cracking is likely due to lack of expansion joints in original pavement, and displacement is not occurring. Some alligating and cracking of asphalt pavement.
G2030 Pedestrian Paving	1980	1980	3	8	MK 09/03/13	Concrete walk at front entry. Concrete patio at south side of building. □ Fair condition.
G2040 Site Development	1980	1980	4		MK 09/03/13	Fire station sign at front of building is missing. Supports are still in place. □ Station signage needed (less than \$2,000).
G2050 Landscaping	1980	1980	3	7	MK 09/03/13	Mature landscaping and grass. Irrigation system unknown. □ Landscaping is generally in good condition. Trees are overhanging building at the front and north sides of the building and should be limbed up. (Less than \$2,000.)

Facility Summary

City of Redmond

Fire Station 12 Site

Fire Station 12 Infrastructure

4211 148th Avenue NE
Redmond, WA 98007

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2050 Landscaping						
Site Civil / Mechanical Utilities						
G3010 Water Supply	1980	1980	3	12	MK 09/03/13	Domestic water service and fire sprinkler supply lines to fire station from City of Redmond system. ☐ No known issues.
G3020 Sanitary Sewer	1980	1980	3	17	MK 09/03/13	Sanitary Sewer service to buildings from the City of Redmond system. ☐ No known issues.
G3030 Storm Sewer	1980	1980	3	12	MK 09/03/13	Catch basin and pipe system in pavement areas. Drive apron sheet flows toward 148th Avenue NE; no trench drain. Fire Station building roof drains appear to be interior to the building. Storm drains likely connect into City of Redmond system. ☐ No known issues.
G3060 Fuel Distribution	1980	1980	3	7	MK 09/03/13	Natural gas meter at northeast corner of the building. ☐ No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	1980	1980	3	7	MK 09/03/13	Underground electric service to building. Emergency generator with base tank at rear of building. ☐ No known issues.
G4020 Site Lighting	1980	1980	3	7	MK 09/03/13	Wall lights on building exterior. ☐ Staff reports lighting not an issue.

Facility Summary

City of Redmond
Fire Station 12 Site
Fire Station 12 Infrastructure

4211 148th Avenue NE
Redmond, WA 98007

Facility Components	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems						

G Sitework

Site Electrical utilities						
G4020 Site Lighting						
G4030 Site Communications and Security						
	1980	1980	3	7	MK 09/03/13	Underground telephone to the buildings. "Hy-Security" brand access gate along south access drive. See also building electrical sections. □ □ No known issues.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Fire Station 12 Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Fire Station 12 Building	Superstructure	\$79,425	\$23,828	\$20,651	\$61,952	\$185,855	\$174,985
	Exterior Closure	\$12,600	\$3,780	\$3,276	\$9,828	\$29,484	\$26,779
	Roofing	\$4,000	\$1,200	\$1,040	\$3,120	\$9,360	\$9,360
	Interior Construction	\$30,000	\$9,000	\$7,800	\$23,400	\$70,200	\$63,765
	Interior Finishes	\$23,000	\$6,900	\$5,980	\$17,940	\$53,820	\$49,985
	Plumbing	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$10,628
	HVAC	\$26,500	\$7,950	\$6,890	\$20,670	\$62,010	\$58,767
	Electrical	\$21,000	\$6,300	\$5,460	\$16,380	\$49,140	\$49,140
	Facility Total	\$201,525	\$60,458	\$52,397	\$157,190	\$471,569	\$443,409
Fire Station 12 Infrastructure	Site Improvements	\$11,250	\$3,375	\$2,925	\$8,775	\$26,325	\$24,376
	Facility Total	\$11,250	\$3,375	\$2,925	\$8,775	\$26,325	\$24,376
	Site Total	\$212,775	\$63,833	\$55,322	\$165,965	\$497,894	\$467,785

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 12 Site

Total Observed Deficiency Repair Direct Cost : \$212,775

Total Observed Deficiency Repair Direct Cost (Present Value): \$199,908

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 12 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$79,425
System: Superstructure			Total System Deficiency Repair Cost (Present Value):					\$74,780
Floor Construction								
Wood Framed Floor Construction	4	5 2013	Mezzanine is wood framed beams, joists, and wood deck. Wood deck is stained with fluids, oil, and other fluids.	Remove plywood decking. Replace with wood deck and vinyl flooring. Relocate heavy storage items.	600	\$9.00	sf	\$5,400
Roof Construction								
Composite Roofing	4	3 2013	Roof material is aged and worn on both upper and lower roof. Temporary leak repair recently done at south edge. Composite sheet roofing, glue down.	Re-roof entire roof. Recommend complete tear off to generate opportunity to increase insulation.	7,050	\$10.50	sf	\$74,025
Facility: Fire Station 12 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$12,600
System: Exterior Closure			Total System Deficiency Repair Cost (Present Value):					\$11,444
Exterior Doors								
Hollow Metal Doors and Frames	4	5 2013	Rust on several doors and frames. Exit hardware is lever type.	Sand and prime doors and frames. Paint. Replace exit hardware with panic bars. Reset hinges.	3	\$1,700.00	ea	\$5,100
Sectional Overhead Doors	4	5 2013	Apparatus bay doors paint is worn and fading. Edge seals are cracked and coming off.	Remove old seals, replace with new. Prime and paint all doors.	5	\$1,500.00	ea	\$7,500

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 1 of 4

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 12 Site

Total Observed Deficiency Repair Direct Cost : \$212,775

Total Observed Deficiency Repair Direct Cost (Present Value): \$199,908

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 12 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$4,000
System: Roofing			Total System Deficiency Repair Cost (Present Value):					\$4,000
Roof Openings								
Skylights	4	0 2013	Skylights are single glazed and allow heat loss.	Remove and replace skylights with translucent panel skylights.	2	\$2,000.00	ea	\$4,000
Facility: Fire Station 12 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$30,000
System: Interior Construction			Total System Deficiency Repair Cost (Present Value):					\$27,250
Interior Doors								
Doors	4	5 2013	Hardware is sticking and not functioning. Some hollow metal frames show rust. Door paint is worn and chipped. Interior hollow metal frames, wood frames, hollow metal doors, and wood doors. Older door hardware.	Sand, prep, primer, and paint hollow metal doors and frames. Replace outdated non-functioning hardware with new code compliant hardware. Approximately 20 doors.	20	\$1,500.00	ea	\$30,000
Facility: Fire Station 12 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$23,000
System: Interior Finishes			Total System Deficiency Repair Cost (Present Value):					\$21,361
Wall Finishes								
Gypsum Wall Board and Paint	4	5 2013	Gypsum wall board and paint at administration areas, weight room, corridor, and kitchen are worn, dented, damaged in several locations.	Patch, repair, and repaint gypsum wall board at dorms, corridor, day room, and weight room.	1,000	\$3.50	sf	\$3,500
Floor Finishes								
Carpet	4	4 2013	Carpet is worn in all traffic areas.	Replace old carpet with new in all areas except rubber flooring should go in weight room.	2,500	\$5.00	sf	\$12,500

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 2 of 4

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 12 Site

Total Observed Deficiency Repair Direct Cost : \$212,775

Total Observed Deficiency Repair Direct Cost (Present Value): \$199,908

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Ceiling Finishes									
Ceiling Finishes		4	3	Acoustic ceiling tile is stained, old, and brittle. Missing gypsum wall board ceiling at apparatus bay storage.	Remove and replace acoustic ceiling tiles in administration space with new. Install cleanable acoustical ceiling tile in kitchen. Install finished, painted gypsum wall board at storage room.	1	\$7,000.00	ls	\$7,000
			2013						
Facility: Fire Station 12 Building							Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$5,000
System: Plumbing							Total System Deficiency Repair Cost (Present Value):		\$4,542
Domestic Water Distribution									
Domestic Hot Water Heater		4	5	Domestic hot water heater is approaching end of life.	Replace domestic hot water heater.	1	\$5,000.00	ea	\$5,000
			2013						
Facility: Fire Station 12 Building							Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$26,500
System: HVAC							Total System Deficiency Repair Cost (Present Value):		\$25,114
Cooling Generating Systems									
Communications Cooling		5	0	Communications equipment is in warm/hot, humid space with poor indoor air quality.	Relocate communications equipment to dedicated communications closet with appropriate cooling; nominally 1/2-ton ductless split.	1	\$7,500.00	ls	\$7,500
			2013						
HVAC Distribution Systems									
Apparatus Bay HVAC		4	3	No general exhaust in apparatus bay.	Install high/low exhaust system per code.	1	\$10,000.00	ls	\$10,000
			2013						
Other HVAC Systems and Equipment									

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 12 Site

Total Observed Deficiency Repair Direct Cost : \$212,775

Total Observed Deficiency Repair Direct Cost (Present Value): \$199,908

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Engine Exhaust	3	5 2013	Aged engine exhaust.	Renew engine exhaust.	3	\$3,000.00	ea	\$9,000
Facility: Fire Station 12 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$21,000
System: Electrical					Total System Deficiency Repair Cost (Present Value):			\$21,000
Lighting and Branch Wiring								
Branch Wiring	5	0 2013	Insufficient outlets and circuits for vehicle charging power in apparatus bay. Circuits are tripping.	Add six (6) overhead power reels with receptacles drop cords, 30A, 120v, six (6) dedicated circuits. Connect to generator power panel.	6	\$3,500.00	ea	\$21,000
Facility: Fire Station 12 Infrastructure					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$11,250
System: Site Improvements					Total System Deficiency Repair Cost (Present Value):			\$10,417
Roadways								
Roadways	3	4 2013	Asphalt parking lots on east and west sides of fire station have pavement cracking, alligating, and wear in some places.	Remove and replace existing asphalt where deteriorated with full depth section, suitable for fire truck loading.	250	\$45.00	sy	\$11,250

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 4 of 4

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 12 Site

Total Site Opportunity Cost: **\$190,400**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Fire Station 12 Building System: Interior Construction						
Total Cost: \$4,000						
C1030	Fittings					
	Interior walls throughout facility show heavy wear and damage at wall corners.	Provide 3x3 stainless steel corner guards at each outside wall corner.	1.00	\$2,000.00	ls	\$2,000
	Metal shelving units, some tall cabinets are not anchored to wall with earthquake straps.	Install earthquake straps at all free standing tall shelving units and tall cabinets.	1.00	\$2,000.00	ls	\$2,000
Facility: Fire Station 12 Building System: Plumbing						
Total Cost: \$60,000						
D2010	Plumbing Fixtures					
	No custodial closet, deep sink, or mop sink. Currently decontamination sink is used for housekeeping introducing unsanitary conditions.	Install separate janitor closet with deep sink or mop sink.	1.00	\$10,000.00	ls	\$10,000
D2030	Sanitary Waste					
	New regulations requiring apparatus washing inside apparatus bay significantly increases load on catch basins and oil/water separator. Additional underground supply air evaporates wash water adding humidity to apparatus bay slowing bunker gear drying and increasing winter condensation on uninsulated surface.	Separate catch basins and HVAC system. Increase oil/water separator capacity as needed. Provide catch basin or new trench drain screen/pre-filter.	5.00	\$5,000.00	ea	\$25,000
D2040	Rain Water Drainage					
	Apparatus washed on site. Interior roof drain system. Opportunity to collect roof drains for wash water and/or flushing water.	Install rain water harvesting system, 5,000-gallons.	1.00	\$20,000.00	ls	\$20,000
D2090	Other Plumbing Systems					
	Compressed air is helpful in ensuring apparatus tires are at proper pressure.	Install permanent compressed air system with hose reels similar to Fire Station 11.	1.00	\$5,000.00	ls	\$5,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 1 of 2

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 12 Site

Total Site Opportunity Cost: \$190,400

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Fire Station 12 Building						
System: HVAC	Total Cost: \$76,400					
D3040 HVAC Distribution Systems	Apparatus bay HVAC is inappropriate for use. Upgrade to overhead gas-fired infrared heat and demand controlled ventilation general high/low exhaust.	Install infrared heat and high/low exhaust.	1.00	\$20,000.00	ls	\$20,000
D3050 Terminal and Package Units	Roof top units deliver poor comfort and marginal indoor air quality.	Replace with variable refrigerant flow (VRF) and heat recovery ventilator (HRV) technology.	7,050.00	\$5.00	sf	\$35,250
D3060 Controls and Instrumentation	No DDC controls.	Install DDC controls.	7,050.00	\$3.00	sf	\$21,150
Facility: Fire Station 12 Building						
System: Electrical	Total Cost: \$50,000					
D5020 Lighting and Branch Wiring	Apparatus bay lighting, controls, and electrical devices are old and dirty.	Upgrade lighting to T5HO fluorescent high bay, and T5 fluorescent lights in mezzanine. Add occupancy sensors. Replace all wiring, devices, and receptacles.	1.00	\$50,000.00	ls	\$50,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 2 of 2

Facility Summary

City of Redmond

Fire Station 13 Site

Fire Station 13 Building

8701 208th Avenue NE
Redmond, WA 98053

Facility Code

Facility Size - Gross S.F. 6,500
Year Of Original Construction 1973
Facility Use Type Fire Station
Construction Type Medium
of Floors 1
Energy Source Gas
Year Of Last Renovation 2009
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.1			
Facility Condition Index (FCI)	0.20			
Current Replacement Value (CRV)	\$3,217,000	Predicted Renewal Budget (6 yrs)	\$749,000	\$718,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$1,436,000	\$1,285,000
		Observed Deficiencies (6 yrs)	\$548,000	\$524,000
		Observed Deficiencies (ALL)	\$574,000	\$546,000
		Opportunity Total Project Cost	\$495,000	N/A

Facility Condition Summary

Architectural:

Single story building with partial height mezzanine accessed by ceiling telescoping ladder. Original building apparatus bay and day room/administration, and kitchen; dorm rooms were added in 1993. Exterior is load bearing masonry with north wall stud wall framed. Standard foundations and slab on grade. Aluminum windows and hollow metal doors and frames on exterior. Apparatus bay includes pass-through configuration and four (4) aluminum sectional doors. Interior is 2x framing with gypsum wall board and newer finishes. Restrooms have ceramic wall tile, and quarry tile on floors. Built in showers. Laundry room is combination laundry and decontamination. Kitchen has residential appliances.

Electrical:

Building electrical service is 400A, 120/240v, 1-phase, 3-wire served by Puget Sound Energy underground service with current transformer and meter on outside wall at rear of building. Building has a 25-kw 120/240V, 1-phase, 3-wire outdoor diesel generator. Generator feeds underground to the transfer switch inside building apparatus bay. Interior lighting is mostly T8 fluorescent. Outdoor lighting are old, high intensity discharge (HID) type; insufficient exterior lighting. All branch wiring are in conduits. Devices are 15A and 20A grounding type. Circuits are tripping in apparatus bay. Lack of power for vehicle charging. Building has a fire alarm system. Building has data/voice Cat-5 wiring and devices. Building has no security alarm system.

Mechanical:

Fire Station 13 was built in 1973 as an un-manned fire station. The 1993 addition added a dorm wing with exercise room. The 2009 partial renovation of station house was to remediate heavy rat infestation.

HVAC is two (2) roof top unit gas-packs for station house, and two (2) Reznor gas-fired unit heaters for apparatus bay.

Plumbing is city water and on-site septic system. Storm to on-site wet land.

Wet pipe fire sprinkled throughout.

Facility Summary

City of Redmond
Fire Station 13 Site
Fire Station 13 Building

8701 208th Avenue NE
Redmond, WA 98053

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
Systems									
A Substructure				2.0					
Foundations									
A1010	Standard Foundations	1973	1973	2	48	JB	09/04/13	Standard footings. Stem wall footings. Good condition.	
A1030	Slab On Grade	1973	1973	2	48	JB	09/04/13	Slab on grade at apparatus bay and building. Good condition.	
B Shell				3.1					
Superstructure									
B1010	Floor Construction	1973	1973	2	48	JB	09/04/13	Mezzanine floor is wood construction. Good condition.	
B1020	Roof Construction	1973	1973	3	48	JB	09/04/13	All wood beams, wood T&G (tongue and groove) planks at apparatus bay. Wood joists at addition. Some signs of previous water penetration, but structure is sound; fair condition.	
Exterior Closure									
B2010	Exterior Walls	1973	1993	3	20	JB	09/04/13	Masonry walls with stud framed north side. Upper wall wood framed above masonry with metal siding. Front has drivet system. Masonry is in good condition. Siding is good. Drivet has some cracking and exposed corner metal. Soffit at roof at administration area; verify all soffit vents are in place.	
B2020	Exterior Windows	1973	1993	2	25	JB	09/04/13	Aluminum sliding/operable windows with screens. Good condition.	
B2030	Exterior Doors								

Facility Summary

City of Redmond
Fire Station 13 Site
Fire Station 13 Building

8701 208th Avenue NE
Redmond, WA 98053

Facility Components

Facility Components									
Systems			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
B Shell					3.1				
Exterior Closure									
B2030	Exterior Doors		1973	1993	4	10	JB	09/04/13	Hollow metal doors and frames. Aluminum sectional rollup doors at apparatus bay. Older hardware. Overall, doors are below fair. Hollow metal doors have rust on some hinges. No rain drip edge at flush exterior walls. Sectional doors have no weather seals or insulation.
Roofing									
B3010	Roof Coverings		1993	2009	4	2	JB	09/04/13	2009 reroof consisted of single layer, partial adhered membrane roof. Membrane is loose laid and wearing. Roof deck has elevation differences and angled edges; some places are up to 3/4-inch difference. Deck is not smooth or flush. Some tears already showing at edges.
B3020	Roof Openings		1993	1993	2	20	JB	09/04/13	Flashing, trim. Good condition.
B3030	Projections		1973	1973	2	10	JB	09/04/13	Front entry canopy, metal roof, metal siding, soffit. Good condition.
C Interiors					2.6				
Interior Construction									
C1010	Partitions		1973	2009	1	15	JB	09/04/13	Wood framed partitions. Good condition.
C1020	Interior Doors		1973	2009	4	10	JB	09/04/13	Mix of hollow metal frames and wood doors, wood frames and wood doors. Various hardware, levers, and some knobs. No panic bars at some

Facility Summary

City of Redmond
Fire Station 13 Site
Fire Station 13 Building

8701 208th Avenue NE
Redmond, WA 98053

Facility Components

Facility Components											
Systems		Original System Date		Last Major System Renew.		Cond. Scores		Subsystem Remain. Useful Life - Yrs		Surveyor/ Survey Date	Comments
C Interiors										2.6	
Interior Construction											
C1020	Interior Doors		exit doors. Wood doors have various dents, scratches, hollow metal frames, paint chipped; some door hardware is not code compliant.								
C1030	Fittings		1973	1973	3	26	JB	09/04/13	Marker boards, lockers, storage shelving, built in cabinets. Good condition.		
Interior Finishes											
C3010	Wall Finishes		1973	2009	4	7	JB	09/04/13	Gypsum wall board, paint, wall tile in restrooms; showers have ceramic tile enclosures. Paint wearing in several locations, corridors, weight training room where weights are stored.		
C3020	Floor Finishes		1973	2009	4	4	JB	09/04/13	Carpet in most administration and dorm room areas, sealed concrete in apparatus bay; quarry tile in men/women shower, restrooms; sheet vinyl at laundry. Carpet is worn and stained throughout; recommend replacement. Vinyl flooring in laundry is worn and some pulling apart; needs replacement.		
C3030	Ceiling Finishes		2009	2009	1	29	JB	09/04/13	Acoustic tile in most administration areas, gypsum wall board painted ceilings in restrooms, dorm rooms, storage rooms, and kitchen. Good condition.		
D Services										3.5	
Vertical Transportation											
D1090	Other Conveying Systems		1973	1993	4	3	DCS	09/04/13	Pull down stair to mezzanine. No roof access.		

Facility Summary

City of Redmond
Fire Station 13 Site
Fire Station 13 Building

8701 208th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.5			
Vertical Transportation						
D1090 Other Conveying Systems						Provide fixed access to mezzanine. Provide permanent roof access to low and high roofs.
Plumbing						
D2010 Plumbing Fixtures	1973	1993	3	15	DCS 09/04/13	Porcelain water closets, urinals, lavatories. Tile showers. Stainless steel deep sinks in decontamination/laundry room. Stainless steel sinks in kitchen. Janitor mop sink in apparatus bay alcove. Water closets are tank type. All are in fair to good condition. Kitchen sink disposal due to septic system. Marginal at best decontamination at laundry room.
D2020 Domestic Water Distribution	1973	1973	3	10	DCS 09/04/13	City water with unknown backflow prevention and meter size. Water taste, color, and pressure is good. Copper distribution pipe observed in some locations. Two (2) gas-fired 1995 domestic hot water heaters with XTs; 74-gallon, 75-mbh each. Hose bibs outside. Domestic hot water heaters are near end of life and are currently functional. Domestic hot water piping observed is not insulated. Flow to fixtures is good. No reported or observed leaks.
D2030 Sanitary Waste	1973	1973	3	10	DCS 09/04/13	On-site septic system (See G-series). Cast iron drain, waste, and vent (DW&V). Floor drains in men's and women's and utility areas/rooms. Catch basins in apparatus bay. Catch basins original included heat and vent supply air, same as Fire Station 12, but has been abandoned with supply air duct in catch basins capped off. Oil/water separator center north in apparatus bay. New regulations now require apparatus washing inside placing more load on apparatus bay catch basins and oil/water separator system. On-site septic system reportedly overloaded during heavy rain and lift pump controller makes excessive noise.

Facility Summary

City of Redmond
Fire Station 13 Site
Fire Station 13 Building

8701 208th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.5			
Plumbing						
D2030 Sanitary Waste						
D2040 Rain Water Drainage	1973	1993	4	20	DCS 09/04/13	Flat roof roof drains and overflow roof drains at middle and south (high) roofs. Scuppers, scupper boxes, and downspouts at north addition roof. Overflow roof drain points of discharge inconsistent in size and location; some discharge directly onto wall structure. Rear entry canopy gutter downspouts reduces to much smaller storm connection. North addition scupper boxes are missing overflows.
D2090 Other Plumbing Systems	1973	1993	4	5	DCS 09/04/13	Portable compressed air system. Opportunity to install permanent compressed air system.
HVAC						
D3010 Energy Supply	1973	1993	3	20	DCS 09/04/13	Natural gas from Puget Sound Energy via meter number 953557 with 1,000-cfh capacity, with no seismic valve; supplying two (2) roof top unit gas-packs, two (2) apparatus bay unit heaters, and two (2) domestic hot water heaters. Black iron distribution pipe. Exposed distribution pipe on roof is corroding (less than \$2,000). Opportunity to extend gas to kitchen range.
D3030 Cooling Generating Systems	1993	1993	4	3	DCS 09/04/13	One (1) high roof condensing unit, 1-ton serving split direct expansion (DX) evaporation in training room. No cooling for communications equipment on apparatus bay mezzanine. Training room system is approaching end of life with unconfirmed operability. Opportunity to develop a cooled communications room for communications equipment.
D3040 HVAC Distribution Systems	1973	1993	5	0	DCS 09/04/13	Original under floor (through catch basins) was

Facility Summary

City of Redmond
Fire Station 13 Site
Fire Station 13 Building

8701 208th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.5			
HVAC						
D3040 HVAC Distribution Systems						abandoned in place possibly during the 1993 renovation. No general exhaust or ventilation system for the apparatus bay as required by applicable codes and standards.
D3050 Terminal and Package Units	1973	1993	4	5	DCS 09/04/13	Station house roof top unit gas-packs, one (1) Payne 2.5-ton and one (1) Payne 3-ton R-22 refrigerant unit; both 1993. Two (2) gas-fired Reznor unit heaters in apparatus bay. Several electric wall heaters. 1993 roof top units are at end of life and need immediate service for continued use while their replacement is planned. Apparatus bay unit heaters are in fair condition with approximately 10 years of life remaining. Wall heaters are also in fair condition with 10 years remaining. Opportunity to replace station house roof top units with high performance system.
D3060 Controls and Instrumentation	1973	1993	3	5	DCS 09/04/13	Mix of older manual and newer programmable thermostats and on/off controls. Opportunity to upgrade to DDC controls.
D3090 Other HVAC Systems and Equipment	1973	1993	4	5	DCS 09/04/13	Nederman engine exhaust system. System is aged and in need of renewal.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1993	1993	3	20	DCS 09/04/13	Four-inch fire sprinkler service to riser closet at southeast corner riser closet with electric resistance heat. Water pressure is 115-psig at riser. Wet pipe throughout; exposed pipe in apparatus bay may be subject to freezing when doors are open during winter months.

Facility Summary

City of Redmond
Fire Station 13 Site
Fire Station 13 Building

8701 208th Avenue NE
Redmond, WA 98053

Facility Components

Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services				3.5			
Fire Protection							
D4030	Fire Protection Specialties	1973	1993	3	10	DCS 09/04/13	Fire extinguishers throughout. Inspection current.
Electrical							
D5010	Electrical Service and Distribution	1973	1994	3	21	RA 09/04/13	Building electrical system is 400A, 120/280V 1-phase 3-wire; main breaker main panel is in hallway next to dining. Main panel is a GE A-Series panel with branch panel-E; in good condition. Branch panel-B is off the kitchen wall; old Federal Pacific panel, outdated.
D5020	Lighting and Branch Wiring	1973	1994	3	11	RA 09/04/13	Interior lighting is mostly T8 fluorescent; fixtures are in good condition in the office and dormitory wings. Apparatus bays and mezzanine lighting are the older lighting fixtures. There are no occupancy lighting controls. Opportunity for lighting upgrade in apparatus bays and mezzanine. Branch circuits are tripping in the apparatus bays. Insufficient exterior lighting. Insufficient outlets in the mezzanine for communications equipment.
D5030	Low Voltage Communication Security and Fire Alarm	1994	1994	3	6	RA 09/04/13	The building has a fire alarm system. Building has no security alarm system. The building has data/voice Cat-5 wiring and devices. Fire alarm control panel is located in the hallway; manufacturer is Thorn Autocall 7788. In working condition. Opportunity for upgrade.
D5090	Other Electrical Systems	1994	1994	3	5	RA 09/04/13	The building has a 25-kw, 120/240V, 1-phase, 3-wire outdoor diesel generator. Generator supplies emergency power to equipment and lighting via a branch Panel-E. Building has no battery backup emergency egress lights. Generac outdoor generator, feeds underground to the transfer switch located in apparatus bay,

Facility Summary

City of Redmond
Fire Station 13 Site
Fire Station 13 Building

8701 208th Avenue NE
Redmond, WA 98053

Facility Components

Facility Components									
Systems								Surveyor/ Survey Date	Comments
		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs				
D Services				3.5					
Electrical									
D5090	Other Electrical Systems								
									feeds Panel-E. Opportunity to add battery pack emergency egress lights.
E Equipment and Furnishings				2.9					
Equipment									
E1010	Commercial Equipment								
		2009	2009	2	21	JB	09/04/13	Laundry equipment, office equipment, residential kitchen appliances.	
								Good condition.	
Furnishings									
E2010	Fixed Furnishings								
		1993	1993	3	10	JB	09/04/13	Casework in kitchen, laundry.	
								Several chips at kitchen and laundry; approximately \$500 repairs.	
E2020	Moveable Furnishings (Capital Funded Only)								
		2009	2009	3	26	JB	09/04/13	Station house furniture. Apparatus bay storage racks and miscellaneous equipment.	
								Good condition.	

Facility Summary

City of Redmond

Fire Station 13 Site

Fire Station 13 Infrastructure

8701 208th Avenue NE
Redmond, WA 98053

Facility Condition Summary

Fire Station 13 is located on 208th Avenue NE in a rural area. There is a concrete drive apron for the two (2) truck bays at the front of the building. There is an asphalt access drive along the south side of the building that extends around to a paved area at the rear of the building, allowing circular access through the back into the apparatus bays. There are some parking areas along the asphalt access drive. About one third of the site is wetlands and vegetated buffer. There is a grass lawn surrounding the building. The site has a septic system, and storm water likely is discharged onsite. Water service is by City of Redmond utilities.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2010 Roadways	1972	1972	2	8	MK 09/03/13	Approximately 1/4 of site pavement is concrete, and 3/4 asphalt. Concrete pavement drive apron at front of building and an area of concrete at the back of the building. Asphalt access drive and parking stalls along south side of building. Asphalt does not appear to be original. ☐ Concrete pavement is in fair to good condition, with some cracks throughout. Cracking is likely due to lack of expansion joints in original pavement, and displacement is not occurring. Asphalt pavement is generally in good condition.
G2030 Pedestrian Paving	1972	1972	3	10	MK 09/03/13	Concrete walk at front entry. Concrete patio at northwest corner of building. ☐ Fair condition.
G2050 Landscaping	1972	1972	3	8	MK 09/03/13	Landscaping and grass. Irrigation system unknown. Vegetated buffer of native plants along wetland edge. ☐ Lawn areas are in fair condition. Trees and shrubs are in good condition. No known issues.
Site Civil / Mechanical Utilities						
G3010 Water Supply	1972	1972	3	4	MK 09/03/13	Domestic water service and fire hydrant supply lines to fire station from City of Redmond

Facility Summary

City of Redmond

Fire Station 13 Site

Fire Station 13 Infrastructure

8701 208th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Civil / Mechanical Utilities						
G3010 Water Supply						system. ☐ ☐ No known issues.
G3020 Sanitary Sewer	1972	1972	3	9	MK 09/03/13	Building appears to be on septic system. An Orenco Systems control panel located at northeast corner of building with septic tank alarm and sand filter alarm. Three (3) manholes close together are septic system access and pump. The other manhole access appears to be sand filter system pump and is likely associated with the storm drain system. ☐ ☐ Reports of repeated alarms when it rains. This is more likely the sand filter system, rather than the septic. However the operation of both systems should be reviewed. All four (4) round access lids should be bolted down.
G3030 Storm Sewer	1972	1972	3	12	MK 09/03/13	Catch basin and pipe system in the front pavement areas. The pavement at the rear of the building sheet flows toward the wetland. Fire Station building downspout lines connect to an underground system, likely discharging onsite. See also "Sanitary Sewer" section above. ☐ ☐ No known issues.
G3060 Fuel Distribution	1972	1972	3	10	MK 09/03/13	Natural gas meter at west side of the building. Likely not original. ☐ ☐ No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	1972	1972	3	8	MK 09/03/13	Underground electric service to building. Emergency generator with base tank at rear of building. ☐ ☐ No known issues.
G4020 Site Lighting						

Facility Summary

City of Redmond

Fire Station 13 Site

Fire Station 13 Infrastructure

8701 208th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Electrical utilities						
G4020 Site Lighting	1972	1972	3	7	MK 09/03/13	Pole lights around building exterior □ No known issues. See also building electrical sections.
Other Site Construction						
G9090 Other Site Systems	1972	1972	3	10	MK 09/03/13	Concrete flow test vault at rear of building, approximately 12-feet by 25-feet. □ Used for flow tests of fire pumps. No known issues.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Fire Station 13 Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Fire Station 13 Building	Exterior Closure	\$20,250	\$6,075	\$5,265	\$15,795	\$47,385	\$43,363
	Roofing	\$68,250	\$20,475	\$17,745	\$53,235	\$159,705	\$153,680
	Interior Finishes	\$17,500	\$5,250	\$4,550	\$13,650	\$40,950	\$37,730
	Vertical Transportation	\$5,400	\$1,620	\$1,404	\$4,212	\$12,636	\$12,636
	Plumbing	\$13,000	\$3,900	\$3,380	\$10,140	\$30,420	\$28,263
	HVAC	\$32,800	\$9,840	\$8,528	\$25,584	\$76,752	\$73,069
	Electrical	\$77,000	\$23,100	\$20,020	\$60,060	\$180,180	\$175,233
	Facility Total	\$234,200	\$70,260	\$60,892	\$182,676	\$548,028	\$523,973
Fire Station 13 Infrastructure	Site Improvements	\$11,250	\$3,375	\$2,925	\$8,775	\$26,325	\$24,376
	Facility Total	\$11,250	\$3,375	\$2,925	\$8,775	\$26,325	\$24,376
	Site Total	\$245,450	\$73,635	\$63,817	\$191,451	\$574,353	\$548,349

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 13 Site

Total Observed Deficiency Repair Direct Cost : \$245,450

Total Observed Deficiency Repair Direct Cost (Present Value): \$234,337

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost	
Facility: Fire Station 13 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$20,250
System: Exterior Closure					Total System Deficiency Repair Cost (Present Value):				\$18,531
Exterior Doors									
Drip Edge	4	3	Exterior door and window openings are flush with walls. No metal drip edge included.	Recommend installing drip edge at window and door head to divert water from top of doors and windows.	11	\$350.00	ea	\$3,850	
		2013							
Hollow Metal Doors	4	5	Hollow metal doors and frames have fading paint. No drip edge at south side flush doors. Panic hardware is not code compliant. Some hinges are rusting.	Primer and paint doors. Replace rusted hinges with new hinges. Install drip edge above doors at flush masonry locations.	1	\$8,000.00	ls	\$8,000	
		2013							
Aluminum Sectional Doors	4	5	Aluminum sections overhead doors at apparatus bay have no insulation or edge seals.	Add insulation blanket to interior side of doors at each section. Remove and provide new dual glazed or solar glazing at window sections. Install new edge seals.	4	\$2,100.00	ea	\$8,400	
		2013							
Facility: Fire Station 13 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$68,250
System: Roofing					Total System Deficiency Repair Cost (Present Value):				\$65,675
Roof Coverings									
Membrane Roofing	4	2	Single ply membrane roofing is showing wear and will continue to wear heavily where deck joints are not level and smooth.	Remove membrane, level deck, and reapply fully adhered membrane, preferably three-ply system.	6,500	\$10.50	sf	\$68,250	
		2013							

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 13 Site

Total Observed Deficiency Repair Direct Cost : \$245,450

Total Observed Deficiency Repair Direct Cost (Present Value): \$234,337

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 13 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$17,500
System: Interior Finishes			Total System Deficiency Repair Cost (Present Value):					\$16,124
Wall Finishes								
Wall Finishes	4	5	Paint at several locations (i.e. weight training and corridors) is wearing. Chips in wall gypsum wall board.	Patch and repair gypsum wall board gouges and wall dings. Paint.	1	\$4,500.00	ls	\$4,500
		2013						
Floor Finishes								
Floor Finishes	4	4	Carpeting is worn and stained in most areas. Sheet vinyl in laundry area is worn; seam is failing.	Remove carpet and replace with new carpet. Remove vinyl flooring and replace with commercial grade vinyl flooring.	1	\$13,000.00	ls	\$13,000
		2013						
Facility: Fire Station 13 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$5,400
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):					\$5,400
Other Conveying Systems								
Access	5	0	Mezzanine pull-down access ladder blocks hallway, is bent and sticking, and provides awkward inconvenient mezzanine access. No access to roofs.	Provide permanent fixed access to mezzanine, low roof, and high roof.	3	\$1,800.00	ea	\$5,400
		2013						
Facility: Fire Station 13 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$13,000
System: Plumbing			Total System Deficiency Repair Cost (Present Value):					\$12,078
Domestic Water Distribution								
Domestic Hot Water Heater	4	5	Domestic hot water heaters are approaching end of life.	Replace domestic hot water heaters.	2	\$4,000.00	ea	\$8,000
		2013						
Rain Water Drainage								

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 2 of 5

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 13 Site

Total Observed Deficiency Repair Direct Cost : \$245,450

Total Observed Deficiency Repair Direct Cost (Present Value): \$234,337

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Roof Drains	4	2 2013	Inconsistent and non-code compliant overflow roof drains with point of discharge too high, too low, too small, or direct onto wall or various locations. North scupper boxes missing overflow roof drain openings.	Reconfigure roof drain, overflow roof drain, and downspouts to meet code and good practice.	10	\$500.00	ea	\$5,000
Facility: Fire Station 13 Building System: HVAC Total System Deficiency Repair Cost (Undiscounted/Unescalated): Total System Deficiency Repair Cost (Present Value): \$32,800 \$31,226								
Cooling Generating Systems								
Ductless Split	4	3 2013	Ductless split is approaching end of life; installed in 1995.	Replace ductless split.	1	\$5,000.00	ea	\$5,000
HVAC Distribution Systems								
Apparatus Bay Ventilation	5	0 2013	No ventilation system for apparatus bay.	Install code minimum high/low exhaust system with associated outside air inlet and/or tempered make-up air system.	2,600	\$3.00	sf	\$7,800
Terminal and Package Units								
Roof Top Units	4	2 2013	Rooftop units are at end of life and need immediate service for continued use while replacement is planned.	Service immediately and schedule replacement.	2	\$5,000.00	ea	\$10,000
Other HVAC Systems and Equipment								
Engine Exhaust	4	5 2013	Nederman engine exhaust is aging and needs refurbishment or replacement.	Refurbish engine exhaust.	2	\$5,000.00	ea	\$10,000

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 3 of 5

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 13 Site

Total Observed Deficiency Repair Direct Cost : \$245,450

Total Observed Deficiency Repair Direct Cost (Present Value): \$234,337

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility: Fire Station 13 Building							Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$77,000
System: Electrical							Total System Deficiency Repair Cost (Present Value):		\$74,886
Electrical Service and Distribution									
Electrical Panel	4	2	Existing panel-B 120/240, 200A, old branch panel at kitchen and day room area; obsolete. Existing panel-E, 120/240, 200A, circuits maxed out.	Provide new branch panel for Panel-B, and connect existing circuits. Provide new branch panel for Panel-E of 64 circuits, reconnect existing circuits , match 42 circuits, plus 17 new 20A/1 circuits and five (5) 30A/IP circuits.	1	\$16,000.00	ls	\$16,000	
		2013							
Lighting and Branch Wiring									
Mezzanine Branch Wiring	4	2	Insufficient outlets for communications equipment in mezzanine.	Add two (2) dedicated circuits and two (2) double-duplex. Connect to generator power wall.	2	\$2,500.00	ea	\$5,000	
		2013							
Exterior Lighting	4	2	Building exterior wall lights: two (2) pole lights and eleven existing soffit lights are old. Insufficient exterior wall lights over parking and driveways.	Provide new exterior light emitting diode (LED) lighting and controls for parking and driveways, around perimeter wall. Allow two (10) LED wall lights.	1	\$35,000.00	ls	\$35,000	
		2013							
Apparatus Bay Branch Wiring	5	0	Insufficient outlets and circuits for vehicle charging power in apparatus bay; circuits are tripping.	Add six (6) overhead power reels with receptacle drop cords, 30A, 120v, and six (6) dedicated circuits.	6	\$3,500.00	ea	\$21,000	
		2013							

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 4 of 5

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond
Site: Fire Station 13 Site

Total Observed Deficiency Repair Direct Cost : \$245,450
Total Observed Deficiency Repair Direct Cost (Present Value): \$234,337

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility:	Fire Station 13 Infrastructure				Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$11,250
System:	Site Improvements				Total System Deficiency Repair Cost (Present Value):				\$10,417
Roadways									
Roadways	3	4	2013	Asphalt parking lots on east and west side of fire station have pavement cracking, alligating, and wear in some places.	Remove and replace existing asphalt where deteriorated with full depth section, suitable for fire truck loading.	250	\$45.00	sy	\$11,250

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 13 Site

Total Site Opportunity Cost: \$216,415

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Fire Station 13 Building System: Interior Construction						
Total Cost: \$3,040						
C1030	Fittings					
	Metal shelving units and some tall cabinets are not anchored to wall with earthquake straps.	Install earthquake straps at all free standing tall shelving units and tall cabinets.	1.00	\$2,000.00	ea	\$2,000
	Interior walls throughout facility show heavy wear and damage at wall corners.	Provide 2x2 stainless steel corner guards at each outside wall corner.	40.00	\$26.00	lf	\$1,040
Facility: Fire Station 13 Building System: Plumbing						
Total Cost: \$82,000						
D2010	Plumbing Fixtures					
	High efficiency plumbing fixtures can sharply reduce load on septic system.	Install high efficiency (water conserving) plumbing fixtures and appliances.	10.00	\$500.00	ea	\$5,000
	Limited decontamination in laundry room. Decontamination is increasing importance for Fire Department operations.	Add separate decontamination space per codes and standards.	100.00	\$350.00	sf	\$35,000
D2030	Sanitary Waste					
	Apparatus wash inside places additional load on catch basins and oil/water separator. Oil/water separator is in an awkward location and is difficult to service. Unknown condition of capped off under floor supply air system.	Upgrade to trench type apparatus bay drain system with pre-filter/screen in trench.	4.00	\$4,000.00	ea	\$16,000
D2040	Rain Water Drainage					
	With possible storm water impact on septic system and/or wetland, opportunity for rain water harvesting system to intentionally direct some roof drain flow to flushing water; also reducing city water use.	Install 5,000-gallon rain water harvesting system.	1.00	\$20,000.00	ls	\$20,000
D2090	Other Plumbing Systems					
	Upgrade from temporary to permanent compressed air system.	Install air compressor, distribution, two (2) hose reels, and four (4) quick disconnect drops.	6.00	\$1,000.00	ea	\$6,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 1 of 3

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 13 Site

Total Site Opportunity Cost: \$216,415

Subsystem		Opportunity	Action	Qty	Unit Cost	Unit	Cost	
Facility:	Fire Station 13 Building							
System:	HVAC		Total Cost: \$63,500					
D3030	Cooling Generating Systems		Communications equipment is located on warm/hot, unventilated, apparatus bay mezzanine adjacent to gas-fired unit heater and hole in wall to perimeter soffit.	Relocate communications equipment to proper communications room with ductless split direct expansion (DX) cooling.	50.00	\$100.00	sf	\$5,000
D3050	Terminal and Package Units		Existing two-zone roof top unit system provides marginal comfort, indoor air quality, and energy efficiency.	Replace current system with variable refrigerant flow (VRF) and heat recovery ventilator (HRV) technology.	3,900.00	\$10.00	sf	\$39,000
D3060	Controls and Instrumentation		Current stand alone controls can be upgraded to DDC controls to improve comfort, indoor air quality, and reduce energy use, and provide for remote monitoring and/or control.	Install new DDC system.	6,500.00	\$3.00	sf	\$19,500
Facility:	Fire Station 13 Building							
System:	Electrical		Total Cost: \$62,875					
D5020	Lighting and Branch Wiring		Apparatus bay lighting and switches are old and dirty.	Upgrade lighting to T5HO fluorescent high bay and T8 fluorescent lights in mezzanine with wire guards. Add occupancy sensors.	1.00	\$36,000.00	ls	\$36,000
D5030	Low Voltage Communication Security and Fire Alarm		Existing fire alarm system and devices are outdated.	Upgrade to new addressable fire alarm system.	6,500.00	\$2.75	sf	\$17,875
D5090	Other Electrical Systems		Building has no battery backup emergency egress lights.	Provide battery backup emergency lights at interior and exterior egress.	18.00	\$500.00	ea	\$9,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 2 of 3

Opportunity Summary By Subsystem

City of Redmond
Site: Fire Station 13 Site

Total Site Opportunity Cost: \$216,415

Subsystem		Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility:	Fire Station 13 Infrastructure						
System:	Site Civil / Mechanical Utilities		Total Cost: \$5,000				
G3020	Sanitary Sewer		Reports of repeated alarms from the pumped systems. There is a sand filter system and a septic tank system on site, both of which have a pumped discharge. Recommend review of the operation of both systems. Switching within the control panel is heard within the living quarters. Recommend investigate this report and consider moving the control panel to a free-standing post away from the building. Recommend that all four (4) manhole access lids be bolted down.	Research record documents and investigate operation of sand filter and septic tank systems.	1.00	\$5,000.00	Is \$5,000

Facility Summary

City of Redmond

Fire Station 14 Site

Fire Station 14 Building

5021 264th Avenue NE
Redmond, WA 98053

Facility Code

Facility Size - Gross S.F. 9,490
Year Of Original Construction 1991
Facility Use Type Fire Station
Construction Type Medium
of Floors 1
Energy Source Gas
Year Of Last Renovation 2009
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	2.4			
Facility Condition Index (FCI)	0.12			
Current Replacement Value (CRV)	\$4,696,000	Predicted Renewal Budget (6 yrs)	\$468,000	\$440,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$1,642,000	\$1,397,000
		Observed Deficiencies (6 yrs)	\$221,000	\$210,000
		Observed Deficiencies (ALL)	\$221,000	\$210,000
		Opportunity Total Project Cost	\$539,000	N/A

Facility Condition Summary

Architectural:

Single story wood framed structure on standard foundation and slab on grade. Roof is wood framed sloped roof with composite shingle. Building is situated with three (3) bay apparatus area and shop to south, and office and living to the north. Apparatus bay has cast in place concrete walls to 48-inches and wood framed walls above. Exterior finish is recent painted cement board siding. Exterior windows are aluminum dual glazed. Main entrance door is wood frame and wood door; other exterior doors are hollow metal doors and frames. Exterior louvers at shop and attic vent louvers on gable ends. Front entry canopy and patio canopy are fully enclosed wood structures with steel columns on concrete footings. Interior partitions are wood framed, gypsum wall board with paint and wall tile in restrooms. Interior finishes include gypsum wall board ceilings and acoustical ceiling tile and carpet in most spaces. Other floors are sheet goods in restroom and kitchen. Various tall cabinets and furniture.

Electrical:

Building electrical service, 600A, 208/120V, 4-wire, served by Tanner Electric PUD, underground service, with current transformer and meter on outside wall of building. Building has a 40-kw indoor gas generator. Generator feeds underground to transfer switch inside building electrical room. Interior lighting is mostly fluorescent with T12 lamps and some incandescent recess down lights. Outdoor lighting are high intensity discharge (HID) type. All branch wiring are in conduits. Devices are 15A and 20A grounding type. Red cover plates are used for emergency power devices. Circuits are tripping in apparatus bay. Lack of 30A outlets for vehicle power charging. Need more outlets in mezzanine SCUBA repair room. Building has a fire alarm system. Building has a security alarm system which has been abandoned and is not used.

Mechanical:

Fire Station 14 was purpose built in 1991 with most exterior skin replaced in 2009 due to extensive water damage related to the original EIFS system and poor roofing and related issues. It appears some water damaged system behind the skin including thermal envelope insulation and apparatus bay exhaust duct were removed for the remedial skin work, but not replaced. Fire Station 14 includes 2.5 bay (two are drive through) apparatus bay, small shop, SCUBA repair shop on mezzanine, two (2) small mechanical mezzanines, administration, living (dorm, men's and women's, kitchen, day room, etc.), training, and public room areas.

HVAC is five (5) zone forced air gas furnaces with split Dx cooling for station house, overhead gas infrared in apparatus bay with both general and vehicle engine exhaust, and gas fired unit heaters for both shop and SCUBA mezzanine shop. Packaged terminal air conditioners (PTAC) have been added to service uncomfortable dorm rooms.

Plumbing is city water and on-site septic sewer with gas domestic hot water heat. Fire sprinkler is wet pipe throughout.

Facility Summary

City of Redmond
Fire Station 14 Site
Fire Station 14 Building

5021 264th Avenue NE
Redmond, WA 98053

Facility Components

Facility Components			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems									
A Substructure			1.5						
Foundations									
A1010	Standard Foundations		1991	1991	1	66	JB	09/04/13	Standard stem wall and continuous footings. Good condition. Recommend joint sealant between footing and site paving.
A1030	Slab On Grade		1991	1991	2	66	JB	09/04/13	Slab on grade. Some cracks at apparatus bay.
B Shell			1.8						
Superstructure									
B1010	Floor Construction		1991	1991	2	66	JB	09/04/13	Wood framed mezzanine floors. Good condition.
B1020	Roof Construction		1991	1991	1	66	JB	09/04/13	Pre-engineered roof truss system throughout. Good condition.
Exterior Closure									
B2010	Exterior Walls		1991	2009	2	56	JB	09/04/13	Wood framed walls, cast in place 48-inch walls at apparatus bay. Cement board, painted exterior finish. Wood trim. Cement board soffits. Metal flashing. Good condition, recently redone exterior siding and paint.
B2020	Exterior Windows		2009	2009	1	41	JB	09/04/13	Aluminum operable windows with screens. Good condition.
B2030	Exterior Doors								

Facility Summary

City of Redmond
Fire Station 14 Site
Fire Station 14 Building

5021 264th Avenue NE
Redmond, WA 98053

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				1.8					
Exterior Closure									
B2030	Exterior Doors	1991	1991	3	28	JB	09/04/13	Aluminum sectional, insulated apparatus bay doors. Main entrance door is wood door and frame. Remaining are hollow metal doors and frames with operable hardware and keypad entry. Some chips at frames and interior of door scratches that need touch up paint, fair overall.	
Roofing									
B3010	Roof Coverings	2009	2009	2	21	JB	09/04/13	Recently replaced roof, composite shingle roof. Good condition, some roof insulation disturbed/moved away from roof at fitness area. Recommend additional investigation.	
B3020	Roof Openings	2009	2009	2	36	JB	09/04/13	Flashing, vents, gutters. Good condition.	
B3030	Projections	1991	2009	1	28	JB	09/04/13	Entrance and patio canopy, wood framed, cement board soffit, vented. Good condition.	
C Interiors				2.8					
Interior Construction									
C1010	Partitions	1991	1991	2	28	JB	09/04/13	Wood framed interior partitions. Good condition.	
C1020	Interior Doors	1991	2009	4	10	JB	09/04/13	Hollow metal frames, wood doors, some non-compliant hardware, some door knobs. Multiple chips in wood doors. Frames have several chips and worn areas.	

Facility Summary

City of Redmond
Fire Station 14 Site
Fire Station 14 Building

5021 264th Avenue NE
Redmond, WA 98053

Facility Components

Facility Components									
Systems			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
C Interiors					2.8				
Interior Construction									
C1030	Fittings		1991	1991	2	10	JB	09/04/13	Marker boards, shelving, restroom counters. Good condition.
Staircases									
C2010	Stair Construction		1991	1991	1	66	JB	09/04/13	Steel stairs and landing to mezzanine. Good condition.
Interior Finishes									
C3010	Wall Finishes		1991	2009	4	5	JB	09/04/13	Gypsum wall board and paint in most areas, ceramic tile wainscot in restrooms. Painted gypsum wall board in apparatus bay at east/west walls. Wall paint marks and damage, typically at lower wall areas.
C3020	Floor Finishes		1991	2009	4	5	JB	09/04/13	Sealed concrete. Mostly carpet in living/administration areas. Laundry sheet vinyl. Mezzanine painted wood. Restrooms sheet vinyl. Carpet in weight room. Carpets in weight room, office, and corridor are in poor condition and are stained and wearing.
C3030	Ceiling Finishes		1991	2009	2	29	JB	09/04/13	Painted hard lid in storage, kitchen, and restrooms. Acoustical tile in office and corridors are in good condition. Tile is cracked at acoustical ceiling tile in north-south corridor.
D Services					3.0				
Plumbing									
D2010	Plumbing Fixtures		1991	1991	3	13	DCS	09/04/13	Porcelain water closets, urinals, and lavatories.

Facility Summary

City of Redmond
Fire Station 14 Site
Fire Station 14 Building

5021 264th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
Plumbing						
D2010 Plumbing Fixtures						Tile showers. Stainless steel sinks. Non-metallic janitor sink. No decontamination stations (other than deep sink in laundry room). Laundry wall box. Fair to good condition with heavier wear in kitchen and men's rooms.
D2020 Domestic Water Distribution	1991	1991	3	18	DCS 09/04/13	Two-inch city water service with relatively low pressure at 50-psig, but good taste and color. Copper piping. Newer 2009 A.O. Smith gas-fired domestic hot water heater, 99-gallons, 250-mbh with expansion tank at northwest mechanical mezzanine. Low site water pressure is marginal at some fixtures, but functional. Visible domestic hot water piping is not insulated; maybe surrounding domestic hot water heater due to recent replacement. (Less than \$2,000.) Hose bibs outside.
D2030 Sanitary Waste	1991	1991	3	14	DCS 09/04/13	On-site septic (see G-Series). Cast iron drain, waste, and vent (DW&V). Floor drains in men's and women's and utility rooms. Short narrow trench drains in apparatus bays; oil/water separator location is unclear. New regulations require apparatus washing inside, placing additional load on apparatus trench drains and apparatus bay oil/water separator. Code minimum plumbing fixtures place unneeded load on septic system.
D2040 Rain Water Drainage	1991	1991	2	24	DCS 09/04/13	Most gutter and downspout with several internal roof drains and overflow roof drain sets for small flat roof area(s). Double downspouts in most downspout locations. Storm to on-site detention pond (see G-series). Double downspout system is impressive with shared clean-outs at most downspouts to storm connection locations. Opportunity for rain water harvesting.

Facility Summary

City of Redmond
Fire Station 14 Site
Fire Station 14 Building

5021 264th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
Plumbing						
D2040 Rain Water Drainage						
D2090 Other Plumbing Systems						
	1991	1991	3	9	DCS 09/04/13	Shop compressed air system. Shop SCUBA fill station. SCUBA fill areas in shop may be unsanitary. Consider improved housekeeping practices or relocating SCUBA fill station. Compressed air system distribution appears limited. Consider hose reels at apparatus bay station to facilitate apparatus service.
HVAC						
D3010 Energy Supply						
	1991	1991	3	19	DCS 09/04/13	Natural gas from Puget Sound Energy via meter number 528159 with 1,000-cfh capacity. Black iron pipe distribution to furnaces, domestic hot water heater, apparatus bay infrared heater, shop unit heaters, and kitchen and barbeque. No seismic valve at service entry (less than \$2,000). Opportunity for energy efficient grant from Puget Sound Energy to install high-efficiency equipment for renewal done under "HVAC Distribution System" section below.
D3030 Cooling Generating Systems						
	1991	1991	4	2	DCS 09/04/13	Five (5) condensing units to west outside at grade. Carrier with R-22 refrigerant. Condensing units 1, 2, 3, and 4 are 3-ton; Condensing unit 5 is 2-ton. Several packaged terminal air conditioners (PTAC) were retrofitted in 2009 at the most uncomfortable dorm rooms. Condensing units are nearing end of life. Opportunity for dedicated cooling for communications room. Several evaporative coils downstream of furnaces have fouled condensate drains, clean all. (Less than \$2,000.)
D3040 HVAC Distribution Systems						
	1991	1991	4	2	DCS 09/04/13	Five (5) forced air gas furnace system with split direct expansion (DX) cooling serving five (5) station house zones. Apparatus bay general exhaust system with low exhaust inlet and high outside air entry via gravity dampers.

Facility Summary

City of Redmond
Fire Station 14 Site
Fire Station 14 Building

5021 264th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
HVAC						
D3040 HVAC Distribution Systems						Gas furnaces are approaching end of life. Half of the apparatus bay general exhaust system was removed for the 2009 building skin replacement, but has not been restored. Dorm room comfort is so bad that individual remote operated dampers were installed in each dorm room; when that didn't work, several packaged terminal air conditioners (PTAC) were added to the most uncomfortable dorm rooms. Equipment has not been serviced since April 2012 (over one year). Stand by generator room (shop) engine cooling vehicle air path partially blocked by paint storage wood enclosure/shelving.
D3050 Terminal and Package Units	1991	1991	3	9	DCS 09/04/13	Apparatus bay overhead gas infrared vented to roof and shop gas fired unit heaters. In fair to good condition.
D3060 Controls and Instrumentation	1991	1991	3	4	DCS 09/04/13	Mix of original and newer programmable and manual thermostats and on/off controls. Older thermostats should be replaced soon (less than \$2,000.) Opportunity for DDC controls.
D3090 Other HVAC Systems and Equipment	1991	1991	3	6	DCS 09/04/13	Nederman Apparatus bay vehicle engine exhaust. Aging, but functional.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1991	1991	3	18	DCS 09/04/13	City service for street post indicator valve (PIV) and fire department connection (FDC); 8-inch service entry at south shop, reducing to 6-inch reduced pressure backflow prevention and 6-inch wet pipe main, and 3-inch dry pipe system. Pressure at 50 psig. While city water station pressure is low (50 psig), reportedly fire flow is acceptable.

Facility Summary

City of Redmond
Fire Station 14 Site
Fire Station 14 Building

5021 264th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
Fire Protection						
D4030 Fire Protection Specialties	1991	1991	3	9	DCS 09/04/13	Fire extinguishers throughout. Inspections current.
Electrical						
D5010 Electrical Service and Distribution	1991	1991	2	18	RA 09/04/13	Building electrical system is 600A, 208/120V, 3-phase, 4-wire, and main panel located inside building electrical room. Main panel, main lugs only, with four branch breaker, feed to four (4) separate panels. Main panel is Cutler Hammer, type PH panel, installed in 1991. Opportunity to replace one (1) branch Panel-E to provide additional circuits. Panel-E is 42-circuit panel, only has a couple spare circuits left.
D5020 Lighting and Branch Wiring	1991	1991	3	8	RA 09/04/13	Interior lighting is mostly fluorescent T12 lamps and some incandescent fixtures; on-off controls by manual switches. There are no occupancy lighting controls. Outside lighting is high intensity discharge (HID) type, pole lights in parking lot, wall lights on building, recess lights in soffit; fair working condition. All branch wiring and devices are good overall with some minor broken outlets. Insufficient outlets in apparatus bay for vehicle charging. Insufficient outlets in mezzanine, SCUBA repair room. Opportunity to upgrade building interior lights to T8 lamps with occupancy controls.
D5030 Low Voltage Communication Security and Fire Alarm	1991	1991	3	3	RA 09/04/13	Building has a fire alarm system, consisting of smoke detectors, pull stations, and horn strobes. Building has an old security alarm system; equipment and devices are abandoned and not used. Fire alarm system equipment is Pyrotronic CP-400 control panel, 1991. Components are over 20 years old, in working condition. Opportunity for upgrade. Building has a voice/data system, Cat-6 wiring and devices, IDF (intermediate distribution frame) in electrical room.

Facility Summary

City of Redmond
Fire Station 14 Site
Fire Station 14 Building

5021 264th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
Electrical						
D5030 Low Voltage Communication Security and Fire Alarm						
D5090 Other Electrical Systems	1991	1991	3	10	RA 09/04/13	Building has an indoor natural gas-fueled generator; generator feeds underground to the transfer switch in the electrical room. Generator supplies stand-by power to power and lighting load. Building has no battery backup emergency lights. Generator is by Generac and is 40-kw, 208/120V, 3-phase, 4-wire, and is over 20 years of age; provide testing for engine overhaul. Opportunity to install battery backup emergency lights.
E Equipment and Furnishings			2.2			
Equipment						
E1010 Commercial Equipment	1991	1991	4	1	JB 09/04/13	Residential appliances. Near end of life; recommend replacement.
Furnishings						
E2010 Fixed Furnishings	1991	1991	2	10	JB 09/04/13	Casework at laundry. Kitchen cabinets. Very minor cracks.
E2020 Moveable Furnishings (Capital Funded Only)	1991	1991	3	10	JB 09/04/13	Station house furniture. Apparatus bay storage racks and miscellaneous equipment. Fair condition.

Facility Summary

City of Redmond

Fire Station 14 Site

Fire Station 14 Infrastructure

5021 264th Avenue NE
Redmond, WA 98053

Facility Condition Summary

Fire Station 14 is in a rural area and has an on-site septic system and a large open storm water detention pond. Water service is provided from the public water system in NE 50th Street. Concrete access drives and asphalt parking areas are in good condition.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2010 Roadways	1991	1991	3	8	MK 09/04/13	Concrete drive aprons at front and back of the apparatus bays, and an adjacent asphalt driveway with nine (9) parking stalls. Extruded concrete curbs. Asphalt appears to have been seal coated more recently. □ Concrete pavement could use joint filler in the gaps between panels (less than \$2,000). Otherwise concrete is in good condition, asphalt is in fair condition.
G2020 Parking Lots	1991	1991	3	8	MK 09/04/13	Asphalt parking lot on the north side of station provides parking for 15 vehicles, including one (1) ADA stall. Extruded concrete curbs. Asphalt appears to have been seal coated more recently. □ ADA stall lacks pavement markings and a sign (less than \$2,000).
G2030 Pedestrian Paving	1991	1991	3	8	MK 09/04/13	Concrete walkways at the perimeter of the building. Concrete patio area at rear of the building. □ A section of the concrete walk at the northeast corner of the station is uplifted approximately 1.5-inch due to tree roots. Recommend concrete be ground down to reduce tripping hazard. Concrete walks could use joint filler where they abut the curb. Total is less than \$2,000. Otherwise in fair condition.
G2040 Site Development	1991	1991	2	8	MK 09/04/13	Flagpole. □

Facility Summary

City of Redmond
Fire Station 14 Site
Fire Station 14 Infrastructure

5021 264th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2040 Site Development						☐ Good condition.
G2050 Landscaping	1991	1991	3	18	MK 09/04/13	Much of the area around the station is grass and ornamental plantings. West of the station is a large wooded area with a fenced-in storm water pond. Pond is generally covered in grass. Irrigation system present. ☐ Fair condition.
Site Civil / Mechanical Utilities						
G3010 Water Supply	1991	1991	3	23	MK 09/04/13	Domestic water supply (1-1/2") and fire sprinkler service provided from public system in NE 50th Street. ☐ No known issues.
G3020 Sanitary Sewer	1991	1991	3	28	MK 09/04/13	Onsite septic system with septic tank, pump, and large mound is located just northwest of the building. Zurn brand oil/water separator (600 gal) is located on the south side of the shop driveway. This is likely connected to the floor drains in the apparatus bay. ☐ No known issues. Details of the septic system configuration and operation are unknown, but it appears to be a pumped system. No alarm system for the septic tank was observed. It is critical that the septic tank be properly maintained and pumped out on a regular basis. Oil/water separator is in need of cleaning (less than \$2,000).
G3030 Storm Sewer	1991	1991	3	23	MK 09/04/13	Catch basins throughout the paved areas. Building downspouts connect to an underground pipe system. It appears site storm water is routed to a open detention pond located west of the building. Pond is approximately 220-feet by 50-feet and is fenced. ☐ No known issues.

Facility Summary

City of Redmond

Fire Station 14 Site

Fire Station 14 Infrastructure

5021 264th Avenue NE
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Civil / Mechanical Utilities						
G3030 Storm Sewer						
G3060 Fuel Distribution	1991	1991	3	18	MK 09/04/13	Natural gas meter at the front of the building. Natural gas fueled barbeque grill on patio. ☐ No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	1991	1991	3	18	MK 09/04/13	Underground electric service to the site. One 75- kva transformer along NE 50th Street. Emergency generator is located inside the shop. ☐ No known issues.
G4020 Site Lighting	1991	1991	3	8	MK 09/04/13	Pole lights are located throughout the site. ☐ No known issues.
Other Site Construction						
G9090 Other Site Systems	1991	1991	2	8	MK 09/04/13	Just west of the station building, at the center of the site, is a cell phone tower and associated equipment. ☐ Evidently this area is leased to cell companies. It is likely more recent than 1991.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Fire Station 14 Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Fire Station 14 Building	Interior Construction	\$10,000	\$3,000	\$2,600	\$7,800	\$23,400	\$21,254
	Interior Finishes	\$25,600	\$7,680	\$6,656	\$19,968	\$59,904	\$54,412
	HVAC	\$33,000	\$9,900	\$8,580	\$25,740	\$77,220	\$74,571
	Electrical	\$20,600	\$6,180	\$5,356	\$16,068	\$48,204	\$47,287
	Equipment	\$5,400	\$1,620	\$1,404	\$4,212	\$12,636	\$12,395
	Facility Total	\$94,600	\$28,380	\$24,596	\$73,788	\$221,364	\$209,919
	Site Total	\$94,600	\$28,380	\$24,596	\$73,788	\$221,364	\$209,919

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond
Site: Fire Station 14 Site

Total Observed Deficiency Repair Direct Cost :	\$94,600
Total Observed Deficiency Repair Direct Cost (Present Value):	\$89,709

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
		Survey Year						
Facility: Fire Station 14 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$10,000
System: Interior Construction			Total System Deficiency Repair Cost (Present Value):					\$9,083
Interior Doors								
Interior Doors	4	5	Paint and finish is worn on hollow metal frames and wood doors have several chips. Hardware is not code compliant.	Sand, primer, and paint frames. Repair wood doors. Remove older non-compliant hardware and replace with new hardware.	1	\$10,000.00	ls	\$10,000
		2013						
Facility: Fire Station 14 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$25,600
System: Interior Finishes			Total System Deficiency Repair Cost (Present Value):					\$23,253
Wall Finishes								
Paint	4	5	Interior paint shows marks and wall nicks in several locations.	Patch and repair as necessary. Paint walls.	1	\$5,600.00	ls	\$5,600
		2013						
Floor Finishes								
Carpet	4	5	Carpet stained and worn.	Remove carpet and replace with new. Provide rubber flooring at fitness areas.	4,000	\$5.00	sf	\$20,000
		2013						
Facility: Fire Station 14 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$33,000
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$31,868
Cooling Generating Systems								
Condensing Units	4	2	Condensing units are aged, rusted, and nearing end of life.	Replace condensing units.	5	\$3,000.00	ea	\$15,000
		2013						
HVAC Distribution Systems								

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 14 Site

Total Observed Deficiency Repair Direct Cost : \$94,600

Total Observed Deficiency Repair Direct Cost (Present Value): \$89,709

								Direct Construction Cost	
Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit		
Furnaces	4	2	Gas furnaces are approaching end of life.	Replace gas furnaces. Consider upgrade to high efficiency condensing type.	5	\$3,000.00	ea	\$15,000	
		2013							
Apparatus Bay Exhaust	5	0	Half of the apparatus bay exhaust system was demolished and not replaced during the 2009 skin replacement.	Re-install the missing half of the apparatus bay general exhaust system.	1	\$3,000.00	ls	\$3,000	
		2013							
Facility: Fire Station 14 Building								Total System Deficiency Repair Cost (Undiscounted/Unescalated):	\$20,600
System: Electrical								Total System Deficiency Repair Cost (Present Value):	\$20,208
Lighting and Branch Wiring									
Branch Wiring	5	0	Insufficient outlets and circuits in mezzanine SCUBA room.	Provide eight (8) outlets, two (2) outlets per circuit.	8	\$700.00	ea	\$5,600	
		2013							
Branch Wiring	5	0	Insufficient outlets and circuits in apparatus bay for vehicle charging power. Circuits are tripping.	Add two (2) overhead power reels with receptacles and drop cords, 30A, 120v, two (2) dedicated circuits. Connect to generator power panel.	2	\$4,000.00	ea	\$8,000	
		2013							
Other Electrical Systems									
Emergency Generator	4	3	Existing natural gas fueled emergency generator is 40-kw, 208/120v, 3-phase, 4w, 22 years old and past expected life.	Provide generator engine test, overhaul.	1	\$7,000.00	ls	\$7,000	
		2013							

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond
Site: Fire Station 14 Site

Total Observed Deficiency Repair Direct Cost : \$94,600
Total Observed Deficiency Repair Direct Cost (Present Value): \$89,709

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility:	Fire Station 14 Building				Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$5,400
System:	Equipment				Total System Deficiency Repair Cost (Present Value):				\$5,297
Commercial Equipment									
Residential Appliances		5	1 2013	Refrigerators at end of useful life.	Replace refrigerators.	3	\$1,800.00	ea	\$5,400

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 14 Site

Total Site Opportunity Cost: \$230,225

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Fire Station 14 Building System: Interior Construction						
Total Cost: \$5,500						
C1030	Fittings					
	Interior walls throughout facility show heavy wear and damage at wall corners.	Provide 2x2 stainless steel corner guards at each outside wall corner.	1.00	\$3,000.00	ls	\$3,000
	Metal shelving units, some tall cabinets are not anchored to the wall with earthquake straps.	Install earthquake straps at free standing tall shelving units and tall cabinets.	1.00	\$2,500.00	ls	\$2,500
Facility: Fire Station 14 Building System: Interior Finishes						
Total Cost: \$2,100						
C3010	Wall Finishes					
	Apparatus bay wall finish is painted gypsum wall board on east and west walls.	Install steel plate at bottom of wall to 4-inches above finish floor to protect finish and partition.	600.00	\$3.50	sf	\$2,100
Facility: Fire Station 14 Building System: Plumbing						
Total Cost: \$36,000						
D2030	Sanitary Waste					
	Regulations requiring apparatus washing inside apparatus bay place additional load on apparatus bay trench drains and oil/water separator. Additional moisture in apparatus bay may damage gypsum wall board finish and other structural and finish materials over time.	Double apparatus bay trench drain length, add trench drain pre-filters/screens, and upgrade oil/water separator as needed to accommodate inside apparatus work.	5.00	\$1,000.00	ea	\$5,000
	Code minimum (standard efficiency) plumbing fixtures place un-needed load on septic system; upgrade to high efficiency to reduce load.	Retrofit high efficiency fixtures and appliances.	12.00	\$500.00	ea	\$6,000
D2040	Rain Water Drainage					
	Rain water harvesting to apparatus bay wash and flushing water system would reduce storm load on detention pond and reduce city water cost; may allow for higher pressure to facilitate apparatus and apron wash.	Install 10,000-gallon rain water harvesting system.	1.00	\$25,000.00	ls	\$25,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 1 of 3

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 14 Site

Total Site Opportunity Cost: \$230,225

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Fire Station 14 Building System: HVAC						
Total Cost: \$74,000						
D3030	Cooling Generating Systems	Communications room is currently cooled by general HVAC; room is warm/hot, shortening equipment life and/or performance. Upgrade to dedicated ductless split Dx cooling.	1.00	\$5,000.00	ls	\$5,000
D3040	HVAC Distribution Systems	Current forced air furnace with split direct expansion (DX) station house system provides marginal at best comfort, has no economizer and is near end of life. Upgrade to _ comfortable and energy efficient variable refrigerant flow (VRF) and heat recovery ventilator (HRV) technology.	5.00	\$10,000.00	ea	\$50,000
D3060	Controls and Instrumentation	No DDC controls.	9,500.00	\$2.00	sf	\$19,000
Facility: Fire Station 14 Building System: Electrical						
Total Cost: \$112,625						
D5010	Electrical Service and Distribution	Opportunity to replace existing emergency panel-E to provide additional circuits. Existing circuit capacity is at maximum.	1.00	\$8,000.00	ls	\$8,000
D5020	Lighting and Branch Wiring	Opportunity to upgrade existing T12 lamp fixtures to T8 lamps, and to add occupancy sensors for lighting controls.	9,500.00	\$7.00	sf	\$66,500
D5030	Low Voltage Communication Security and Fire Alarm	Opportunity to replace existing fire alarm system. Existing control panel (Pyrotronics CP-400) and devices are over 20 years old.	9,500.00	\$2.75	sf	\$26,125
D5090	Other Electrical Systems					

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

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Page 2 of 3

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 14 Site

Total Site Opportunity Cost: \$230,225

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
	Opportunity to add battery backup emergency lights at interior and exterior egress.	Provide battery backup emergency lights.	24.00	\$500.00	ea	\$12,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 9,852
Year Of Original Construction 1996
Facility Use Type Fire Station
Construction Type Medium
of Floors 1
Energy Source Gas
Year Of Last Renovation 2006
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	2.5			
Facility Condition Index (FCI)	0.14			
Current Replacement Value (CRV)	\$4,875,000	Predicted Renewal Budget (6 yrs)	\$414,000	\$396,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$1,868,000	\$1,634,000
		Observed Deficiencies (6 yrs)	\$338,000	\$322,000
		Observed Deficiencies (ALL)	\$354,000	\$335,000
		Opportunity Total Project Cost	\$551,000	N/A

Facility Condition Summary

Architectural:

Single story, wood framed administration and apparatus bay; concrete masonry unit (CMU) hose tower. Metal siding exterior and composite torch down roofing. Wood roof truss structure. Two (2) metal aprons, north contains storage and south side includes some storage and mechanical area. Main entrance has open atrium extending past roof line with clerestory. Steel entrance canopy to exterior. Interior includes lobby area, offices, large conference/training room, day room, laundry, kitchen, several dorm rooms, and fitness area. Both day room and fitness area are open vaulted ceilings. Interior finishes include painted gypsum wall board, ceramic tile in restrooms, and carpet in most areas. Building also includes separate public restroom at lobby and medium office used as a workspace by police.

Electrical:

Building electrical service is 400A, 208/120V, 3-phase, 4-wire, served by Puget Sound Energy underground service from a 150-kva padmount transformer, at north side of building, with current transformer and meter on outside wall of building. This Puget Sound Energy transformer also feeds the Maintenance Shop Building. Building has an indoor diesel generator with base tank inside the building generator room. Generator feeds power to main panel via transfer switch in generator room. Interior lighting is all fluorescent fixtures with T8 and T12 lamps at different areas. Exterior lighting is all high intensity discharge (HID) consisting on small wall packs, recess soffit lights, surface mount Canopy lights, and pole lights in parking. All branch wiring are in conduits. Devices are 15A and 20A grounding type outlets; all building original systems. Building has a fire alarm system. Building has no security alarm system and no card access system.

Mechanical:

The Fire Station 16 site includes Fire Station 16 to west, Fire department vehicle maintenance shop to east, and small training area with roof props to southeast. Fire Station 16 includes 2.5-bay apparatus bay, hose tower, fire department office area, police area, and living area with dorms, day room, exercise room, and kitchen and dining room.

HVAC includes four (4) roof top gas-packs for station house, gas-fired infrared heat for apparatus bay, apparatus bay general exhaust, apparatus bay engine exhaust system, and miscellaneous exhaust fans and unit heaters.

Plumbing is city water and sewer with copper pipe and gas-fired tankless domestic hot water heaters. Fire sprinkled throughout.

Facility Summary

City of Redmond
Fire Station 16 Site
Fire Station 16 Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				1.5					
Foundations									
A1010	Standard Foundations	1996	2006	1	71	JB	09/05/13	Continuous concrete footings and stem walls. Good.	
A1030	Slab On Grade	1996	1996	2	71	JB	09/05/13	Concrete slab on grade. Good condition.	
B Shell				1.8					
Superstructure									
B1010	Floor Construction	1996	1996	1	71	JB	09/05/13	Mezzanine floor, wood construction. Good condition.	
B1020	Roof Construction	1996	1996	1	71	JB	09/05/13	Wood truss system. Good condition.	
Exterior Closure									
B2010	Exterior Walls	1996	2006	1	53	JB	09/05/13	Wood frame with some cast in place concrete at low walls apparatus bay. Exterior vertical and horizontal siding. Replaced siding in 2006. Few dents but in generally good condition.	
B2020	Exterior Windows	1996	1996	2	28	JB	09/05/13	Aluminum dual glazed windows. Good condition.	
B2030	Exterior Doors	1996	1996	3	10	JB	09/05/13	Storefront main entry, hollow metal doors and frames with keypads. Sectional apparatus bay doors. Storefront entrance, no panic hardware. Hollow metal doors and frames are missing some	

Facility Summary

City of Redmond
Fire Station 16 Site
Fire Station 16 Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				1.8					
Exterior Closure									
B2030	Exterior Doors							weather striping, several chips and dents. Apparatus doors have dents, scrape marks where door center is hitting header. Weather seals need replacing.	
Roofing									
B3010	Roof Coverings		1996	2006	3	10	JB	09/05/13	Composite torch down roofing, metal flashings, soffits. Sloped roof aprons have standing seam metal roofing. Roof is only seven years old. Several trees matured and in contact with metal flashings; need tree trimming. Check flashing screens where loose.
B3030	Projections		1996	1996	2	33	JB	09/05/13	Steel canopy at entrance. Good condition. Touch up paint on steel outrigger from roof.
C Interiors				2.9					
Interior Construction									
C1010	Partitions		1996	1996	2	33	JB	09/05/13	Painted gypsum wall board on wood studs; assume acoustic batt between studs where privacy is needed (i.e. at dorm rooms). Good.
C1020	Interior Doors		1996	1996	3	23	JB	09/05/13	Hollow metal door frames and wood doors. Touchup paint on interior doors and frames. Fair condition.
C1030	Fittings		1996	1996	3	13	JB	09/05/13	Station house staff lockers, office area white boards, and miscellaneous. Fair condition.

Facility Summary

City of Redmond
Fire Station 16 Site
Fire Station 16 Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				2.9					
Interior Construction									
C1030	Fittings								
Staircases									
C2010	Stair Construction								
		1996	1996	2	71	JB	09/05/13	Metal stairs at both mezzanine areas. Good condition.	
C2020	Stair Finishes								
		1996	1996	2	10	JB	09/05/13	Rubber treads at south stair. Good condition.	
Interior Finishes									
C3010	Wall Finishes								
		1996	1996	4	5	JB	09/05/13	Interior paint. Restrooms have ceramic tile. Paint needed in most areas.	
C3020	Floor Finishes								
		1996	1996	4	5	JB	09/05/13	Sealed concrete, ceramic tile, carpet. Sealed concrete and ceramic tile are in good condition. Carpet is in poor condition.	
C3030	Ceiling Finishes								
		1996	1996	3	10	JB	09/05/13	Mix of hard lid gypsum wall board and T-bar acoustic ceiling tile in station house. Exposed, but painted, ceiling structure in apparatus bay. Paint in fair condition. Acoustic ceiling tile in fair condition.	
D Services				3.2					
Vertical Transportation									
D1090	Other Conveying Systems								
		1996	1996	4	3	DCS	09/05/13	Roof access via mezzanine door to low roof. High roof access via temporary ladder. No permanent access to high roof.	

Facility Summary

City of Redmond
Fire Station 16 Site
Fire Station 16 Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.2			
Plumbing						
D2010 Plumbing Fixtures	1996	1996	3	18	DCS 09/05/13	Porcelain water closets, urinals, and lavatories in men's and women's. Stainless steel decontamination, kitchen, and other sinks. Janitor mop sink in janitor closet. Tiled showers with one-piece basins. Women's water closet is pulling away from the wall (less than \$2,000). Several fixtures chronically back-up; may require drain, waste, and vent (DW&V) line cleaning and/or pre-filter/screen (less than \$2,000).
D2020 Domestic Water Distribution	1996	1996	3	23	DCS 09/05/13	City water with 1.5-inch meter and 2-inch services line to reduced pressure backflow prevention in apparatus bay. Copper distribution piping. Two (2) Navien tankless gas-fired domestic hot water heaters. Outside perimeter hose bibs in water boxes. Tankless domestic hot water heaters have "constant issues."
D2030 Sanitary Waste	1996	1996	3	18	DCS 09/05/13	City sewer. Cast iron drain, waste, and vent (DW&V). Full size apparatus bay trench drains. Oil/water separator. Floor drains. See "Plumbing Fixtures" section above for fixture drain and waste backup issue. Fire Station 16 trench drains are a good example of what is needed at most other Redmond Fire Stations where apparatus washing is required to be performed inside.
D2040 Rain Water Drainage	1996	1996	3	18	DCS 09/05/13	Flat roof with scupper drains to scupper boxes and downspouts to site storm drain system; scupper box overflow holes. Trench drains at south station house patio door. Scupper overflow holes should be enlarged from approximately 1.5-inch diameter to 1.5-inch by 3-inch rectangle.
D2090 Other Plumbing Systems	1996	1996	3	8	DCS 09/05/13	Portable air compressor in small shop space off

Facility Summary

City of Redmond
Fire Station 16 Site
Fire Station 16 Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.2			
Plumbing						
D2090 Other Plumbing Systems						apparatus bay. Opportunity to install permanent apparatus bay compressed air system with hose reels at each end of apparatus bay.
HVAC						
D3010 Energy Supply	1996	1996	3	20	DCS 09/05/13	Natural gas from Puget Sound Energy via meter number 399376 rated at 1,000-cfh, serving four (4) roof top unit gas-packs, apparatus bay infrared heaters, served shop/utility space unit heaters, two (2) tankless domestic hot water heaters, and station house kitchen range and patio barbeque appliances. No seismic shutoff valve (less than \$2,000). Roof top unit gas piping is heavily rusted (less than \$2,000). Unusually large gas meter for modest station size.
D3030 Cooling Generating Systems	1996	1996	5	0	DCS 09/05/13	No dedicated cooling for data closet/room. Opportunity to provide ductless split direct expansion (DX) cooling for communications equipment space.
D3040 HVAC Distribution Systems	1996	1996	3	10	DCS 09/05/13	Apparatus bay general exhaust; high only. Exhaust fans for command station house area.
D3050 Terminal and Package Units	1996	1996	4	5	DCS 09/05/13	Four (4) roof top unit gas-packs serving station house. Overhead gas-fired infrared serving apparatus bay. Gas-fired unit heaters serving several smaller spaces. Some comfort and reliability issues reported in station house. Roof top units are aged poorly installed and marginally maintained. Overhead infrared and unit heaters appear to be in better condition.
D3060 Controls and Instrumentation						

Facility Summary

City of Redmond
Fire Station 16 Site
Fire Station 16 Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.2			
HVAC						
D3060 Controls and Instrumentation	1996	1996	3	5	DCS 09/05/13	Mix of old and newer local controls. Schedule replacement of local controls (less than \$2,000). Opportunity to upgrade to DDC.
D3090 Other HVAC Systems and Equipment	1996	1996	3	5	DCS 09/05/13	Nederman vehicle engine exhaust system. Aging but functional.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1996	1996	3	23	DCS 09/05/13	City fire flow with reduced pressure backflow prevention in vault to northeast. 6-inch reduced pressure backflow prevention dry pipe risers in apparatus bay. Inspection reportedly current.
D4030 Fire Protection Specialties	1996	1996	3	23	DCS 09/05/13	Fire extinguishers throughout. Inspections current.
Electrical						
D5010 Electrical Service and Distribution	1996	1996	3	23	RA 09/05/13	Building electrical system is 400A, 208/120V, 3-phase, 4-wire with main disconnect switch in generator room, feeds underground to main panel via transfer switch. Main panels are 400A, subfeed to two (2) branch panels with feed-through lugs. All three (3) panels are located in the electrical room, south of the building. Main panel and branch panels are Westinghouse Challenger series, original 1996 building system. Capacity limited to 400A, no flexibility for growth.
D5020 Lighting and Branch Wiring	1996	1996	3	13	RA 09/05/13	Interior lighting is T8 and T12 type fluorescent fixtures, 2x4 troffers in hallway, sleeping rooms, kitchen, day room; recess down lights in kitchen, dining, conference room; fluorescent industrial in apparatus bay. No occupancy lighting controls.

Facility Summary

City of Redmond
Fire Station 16 Site
Fire Station 16 Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.2			
Electrical						
D5020 Lighting and Branch Wiring						Exterior lighting are small wall packs at door and recess lights at front of apparatus bay doors; difficult to re-lamp. Branch wiring are in conduits; 15A and 20A grounding devices are used. All lighting fixtures are 1996 building system. Fixtures are dirty in apparatus bay and storage rooms. Hose tower has wall high intensity discharge (HID) lights in stairwell; lack of lighting controls. No lighting found in mezzanine mechanical room. Building branch wiring and devices are in fair condition, original 1996 system.
D5030 Low Voltage Communication Security and Fire Alarm	1996	1996	3	8	RA 09/05/13	Building has a fire alarm system. Main control panel is located in apparatus bay. Devices consist of horn strobes, smoke detectors, and pull stations. Building has no security alarm system. Building has no card access system. Building has data/voice Cat-6, Cat-5 system. Fire alarm control panel, Notifier System 500, limited small capacity panel, in fair working condition. Opportunity for building card access control system.
D5090 Other Electrical Systems	1996	1996	3	8	RA 09/05/13	Building has an indoor generator with diesel base tank in generator room. Generator provides backup power to building power and lighting through transfer switch to main electrical panel. Building has no battery backup emergency lights. Indoor generator, Generac generator, is 125-kw, 208/120V, 3-phase, 4-wire original 1996 building system. Transfer switch, indoor, is 400A, 208/120V, 3-phase, 4-wire by Generac. Generator and transfer switch are in fair working condition.
E Equipment and Furnishings			3.1			
Equipment						
E1010 Commercial Equipment						

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Building

6502 185th Avenue NE

Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
E Equipment and Furnishings				3.1					
Equipment									
E1010	Commercial Equipment	1996	1996	4	2	JB	09/05/13	Laundry, residential appliances. Kitchen refrigerators are old and at end of useful life.	
Furnishings									
E2010	Fixed Furnishings	1996	1996	3	10	JB	09/05/13	Window blinds. Casework. Window blinds are in fair condition; some have bends. Casework has some chips.	

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Infrastructure

6502 185th Avenue NE
Redmond, WA 98052

Facility Condition Summary

This site is surrounded by public roads on three (3) sides: 185th Avenue NE, NE 65th Street, and NE 65th Court. Both the Fire Station and Maintenance Facility have 2-1/2 apparatus bays that are pull-through. There is an asphalt paved lot between the two buildings for access to the Fire Station. There is a secured concrete paved yard at the rear of the Maintenance building that contains the pump test pit and emergency generator. The site is served by City of Redmond utilities.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2010 Roadways	1996	1996	3	13	MK 09/04/13	Concrete drive aprons at front & rear of Fire Station, and at front of Maintenance Facility. The rear yard of the Maintenance Facility is a majority concrete pavement with asphalt along one side. An asphalt access road with six (6) parking stalls including one (1) ADA stall extends along the south side of Station, providing access to the Maintenance yard. There is also an asphalt area between the two buildings with seven (7) additional parking stalls. Extruded concrete curbs. □ □ Asphalt and concrete pavements are in good to fair condition. Asphalt could be seal coated to extend the life; see Opportunities. Concrete curbs are chipped along the south access road and should be patched and repainted (less than \$2,000). ADA stall lacks pavement markings (less than \$2,000).
G2030 Pedestrian Paving	1996	1996	3	7	MK 09/04/13	Concrete walks along south access road and at Station entry. Concrete stairs, walks, landings, and dumpster pad in the area between the two buildings. Concrete patio for staff. □ □ Walks need joint filler in gaps between panels (less than \$2,000).
G2040 Site Development	1996	1996	3	13	MK 09/04/13	Fixed seating bench and flagpole near Station entry. □ □ Fair condition.

Facility Summary

City of Redmond
Fire Station 16 Site
Fire Station 16 Infrastructure

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2040 Site Development						
G2050 Landscaping	1996	1996	2	23	MK 09/04/13	A variety of landscaping throughout the site including lawn, shrubs, groundcover, and trees. Irrigation system. ☐ In good condition. Three (3) trees at the front entry and one (1) at the back patio of the Station should be limbed up and away from the building (less than \$2,000).
Site Civil / Mechanical Utilities						
G3010 Water Supply	1996	1996	3	28	MK 09/04/13	Domestic water (1-1/2" at Station), irrigation, and fire sprinkler supply to both buildings from the City of Redmond system. ☐ No known issues.
G3020 Sanitary Sewer	1996	1996	3	33	MK 09/04/13	Sanitary sewer service to both buildings from City of Redmond system. ☐ No known issues.
G3030 Storm Sewer	1996	1996	3	28	MK 09/04/13	Catch basins throughout paved areas of the site. Roof drains are connected to an underground pipe system. It appears there may be a large storm water detention and/or water quality tank on the west side of the site, based on access manholes in this area. ☐ Pre-survey report lists storm drain issue causing water at kitchen door. Assume this is the door that accesses the patio, with the small trench drain in front of it. It appears water from the adjacent downspout may cause flooding due to lack of capacity of the trench drain. Recommend downspout be rerouted overhead to discharge at building perimeter, rather than onto patio (less than \$2,000). Catch basin in rear yard of Maintenance Facility is subject to runoff containing oil and foam. Installation of an oil/water separator on the basin outlet pipe should be considered; see Opportunities. Note

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Infrastructure

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Civil / Mechanical Utilities						
G3030 Storm Sewer						that additional investigation would be required to determine if this condition is a true deficiency or require other remediation, and would depend upon the frequency, volume, and type of contaminants.
G3060 Fuel Distribution	1996	1996	3	23	MK 09/04/13	Natural gas meters at both buildings. Natural gas supply line to exterior barbeque on patio. Waste oil tank in rear yard of the Maintenance Facility. ☐ No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	1996	1996	3	23	MK 09/04/13	Underground electric service to the site. One 150-kva transformer at the east side of the Station building. Exterior emergency generator with base tank in the rear yard of the Maintenance Facility. ☐ No known issues.
G4020 Site Lighting	1996	1996	3	13	MK 09/04/13	Pole lighting throughout site. ☐ No known issues.
G4030 Site Communications and Security	1996	1996	3	5	MK 09/04/13	Security access gate at the rear lot of the Maintenance Facility. ☐ Gate appears to be newer than 17 years. No known issues.
Other Site Construction						
G9090 Other Site Systems	1996	1996	3	13	MK 09/04/13	Three wood roof training props are located at the southeast corner of the site. Underground pump test pit and associated above ground piping is located in rear yard of Maintenance Facility. Wood storage shed (8'x12') is located in rear yard of Maintenance Facility. Used for tires, equipment, etc.

Facility Summary

City of Redmond
Fire Station 16 Site
Fire Station 16 Infrastructure

6502 185th Avenue NE
Redmond, WA 98052

Facility Components	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems						

G Sitework

Other Site Construction
G9090 Other Site Systems

☐
No known issues.

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Shop Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 5,625
Year Of Original Construction 1996
Facility Use Type Maintenance Shop
Construction Type Medium
of Floors 1
Energy Source Gas
Year Of Last Renovation 2006
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	2.4			
Facility Condition Index (FCI)	0.11			
Current Replacement Value (CRV)	\$1,980,000	Predicted Renewal Budget (6 yrs)	\$169,000	\$158,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$742,000	\$625,000
		Observed Deficiencies (6 yrs)	\$197,000	\$187,000
		Observed Deficiencies (ALL)	\$267,000	\$245,000
		Opportunity Total Project Cost	\$419,000	N/A

Facility Condition Summary

Architectural:

Single story wood framed building includes 2.5 apparatus bay vehicle maintenance shop with mezzanine area consisting of storage rooms, shop work areas, office, restroom and lunch room. Roof construction is a truss system with plywood deck with membrane roof above. No insulation at roof deck in apparatus bay. Exterior walls are wood frame with gypsum wall board interior and metal siding/metal panel exterior. Apparatus bay contains total of five (5) sectional aluminum overhead doors. Exterior hollow metal doors and aluminum windows. Interior walls wood frame and wood frame mezzanine floor. Restroom has tile but all other walls are painted gypsum wall board. Hard lid ceilings in rooms except acoustical ceiling tile in office. Interior doors are hollow metal frame and door. Flooring is concrete except restroom tile.

Electrical:

Building electrical service is 400A, 208/120V, 3-phase, 4-wire served by Puget Sound Energy underground service from a 150-kva transformer with current transformer and meter on outside wall of building. Building has an outdoor diesel generator with base tank at back of building. Generator feeds underground power to transfer switch in building. Interior lighting is T12 fluorescent fixtures. Exterior lighting is small high intensity discharge (HID) wall packs, recess lights, and pole lights. All branch wiring are in conduits. Devices are 15A and 20A grounding type; all old original system. Building has a fire alarm system. Building has no security alarm system and no card access control system.

Mechanical:

The Shop building is on the Fire Station 16 site. The shop includes 2.5-bay drive through high bay maintenance shop, low bay side shops to west, small office, small break room with kitchenette, one (1) bathroom with shower, shop fluids rooms, parts and tool room with mechanical (HVAC and Plumbing) equipment and air compressor, and partial storage mezzanine above the parts and tool room. HVAC is overhead gas infrared for shop with high/low general exhaust and vehicle engine exhaust, and forced air heat pump heating and cooling for office and break room areas. Plumbing is city water and sewer with copper pipe cast iron drain, waste, and vent (DW&V), and gas domestic hot water heater. Dry pipe fire sprinkled throughout.

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Shop Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				2.0					
Foundations									
A1010	Standard Foundations	1996	1996	2	71	JB	09/05/13	West side of building is concrete low stem wall, cast in place concrete 48-inch height at apparatus bay doors. East side cast in place concrete wall grade separation.	
								Good condition.	
A1030	Slab On Grade	1996	1996	2	71	JB	09/05/13	Slab on grade.	
								Good condition.	
B Shell				1.9					
Superstructure									
B1010	Floor Construction	1996	1996	2	71	JB	09/05/13	Mezzanine wood construction.	
								Good condition.	
B1020	Roof Construction	1996	1996	2	71	JB	09/05/13	Wood truss system.	
								Good condition.	
Exterior Closure									
B2010	Exterior Walls	1996	2006	1	53	JB	09/05/13	Wood frame walls. Mixture of metal panel and metal siding.	
								Good condition. All finishes replaced in 2006.	
B2020	Exterior Windows	2006	2006	3	18	JB	09/05/13	Aluminum dual glazed windows, lower walls and upper wall areas.	
								Southwest window at shop has seal coming out; needs to be repaired.	
B2030	Exterior Doors	1996	2006	4	25	JB	09/05/13	Hollow metal doors and frames; some keypad locks. Aluminum sectional doors. Hardware fair.	

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Shop Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems									
B Shell			1.9						
Exterior Closure									
B2030	Exterior Doors								
			Hollow metal doors are generally good, missing weather seals. Sectional doors have several dents and beat panels, scrape marks from vehicles, and edge seals are falling out.						
Roofing									
B3010	Roof Coverings								
			2006	2006	2	18	JB	09/05/13	Composite torch down. Good condition.
B3020	Roof Openings								
			1996	2006	2	33	JB	09/05/13	Flashings. Good condition.
B3030	Projections								
			1996	1996	1	33	JB	09/05/13	Metal canopies at apparatus bay doors on both sides of building. Good condition.
C Interiors			2.9						
Interior Construction									
C1010	Partitions								
			1996	2006	2	33	JB	09/05/13	Wood framed gypsum wall board partitions; assume acoustic batt insulation between studs where appropriate (i.e. between office and shop). Good.
C1020	Interior Doors								
			1996	2006	4	10	JB	09/05/13	Mixture of hollow metal frames and doors, and hollow metal frames and wood doors. Door hardware. Doors and frames have dents, scratches, mix of non-code compliant hardware.
C1030	Fittings								

Facility Summary

City of Redmond
Fire Station 16 Site
Fire Station 16 Shop Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				2.9					
Interior Construction									
C1030	Fittings	1996	2006	3	10	JB	09/05/13	Storage shelving. Restroom countertops. Marker boards. Fair condition. Mezzanine railing gate needs hardware latch; currently being held closed with vehicle seat belt.	
Staircases									
C2010	Stair Construction	1996	1996	3	71	JB	09/05/13	Wood stairs to mezzanine. Fair condition.	
C2020	Stair Finishes	1996	2006	3	5	JB	09/05/13	Rubber stair tread. Fair. Tires stored in mezzanine appear to be pulled down stairs, wearing tread faster than expected.	
Interior Finishes									
C3010	Wall Finishes	1996	2006	4	5	JB	09/05/13	Painted walls. Tile wainscot in restroom. Many marks on walls. Paint/gypsum wall board needs patch and paint. Holes in wall in office. Chair marks in lunchroom. Stair walls have heavy wear.	
C3020	Floor Finishes	1996	1996	3	17	JB	09/05/13	Sealed concrete. Tile at restroom. Fair condition.	
C3030	Ceiling Finishes	1996	1996	3	26	JB	09/05/13	Acoustic tile in office. Gypsum wall board painted in storage and restrooms. Fair condition.	
D Services				3.0					

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Shop Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services				3.0			
Vertical Transportation							
D1090	Other Conveying Systems						
		1996	1996	3	15	DCS 09/05/13	One (1) 2-ton monorail hoist running overhead from mezzanine to drive through bays. No roof access. Crane is in fair condition. No roof access.
Plumbing							
D2010	Plumbing Fixtures						
		1996	1996	3	18	DCS 09/05/13	One (1) unisex sex bathroom with water closet, lavatory, and shower. One (1) kitchenette in break room. Moderately worn but functional.
D2020	Domestic Water Distribution						
		1996	1996	3	23	DCS 09/05/13	City water. Copper piping. Original 1997 domestic hot water heater, 89-gallon, 154-mbh, gas-fired with circulation pump. Hose bibs with hose on racks in shop. Hose bibs in boxes outside. In fair to good condition. Opportunity for water hose reels in shop.
D2030	Sanitary Waste						
		1996	1996	3	18	DCS 09/05/13	Cast iron drain, waste, and vent (DW&V) and trench drains at shop bay entries. Oil/water separator inside shop. No issues reported, and plumbing fixtures and trench drains flush and drain well. However, there are no floor drains in the parts/tool room where standing water collects from air compressor blow down.
D2040	Rain Water Drainage						
		1996	1996	3	23	DCS 09/05/13	Flat roof with scupper boxes at parapet. Scupper boxes have small overflow holes. Scupper box overflow holes are too small; approximately 1.5-inch diameter. Enlarge to approximately 1.5-inch high by 3-inch wide (less than \$2,000).
D2090	Other Plumbing Systems						

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Shop Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services				3.0			
Plumbing							
D2090	Other Plumbing Systems	1996	1996	3	8	DCS 09/05/13	Air compressor (160-psig, 20-hp) and receiving unit auto-drain. Refrigerated air dryer (RAD), copper distribution piping, and drops throughout shop. Six (6) fluids pumping and distribution system with hose reels including: 10W40, 5W30, SynTrans, grease, waste oil, and water. Waste oil storage is outside in approximately 250-gallon double contained tank with pneumatic high level alarm "whistle." Compressed air system in fair to good condition. Shop fluids system is in fair to good condition. Waste oil tank is marginal. Battery room containment is poor; install more robust battery containment (less than \$2,000) and evaluate battery room ventilation (less than \$2,000).
HVAC							
D3010	Energy Supply	1996	1996	3	23	DCS 09/05/13	Natural gas from Puget Sound Energy via meter number 399835 with 425-chf capacity. Gas loads include high bay shop infrared heaters and domestic hot water heaters. No seismic shut-off valve (less than \$2,000). Opportunity for gas heat in low bay shops and office/break room.
D3030	Cooling Generating Systems	1996	1996	4	5	DCS 09/05/13	One (1) 2.5-ton R-22 condensing unit serving the office/break room area air handling unit. Condensing unit is approaching end of life, but currently functional.
D3040	HVAC Distribution Systems	1996	1996	3	18	DCS 09/05/13	Split direct expansion (DX) heat pump serving offices and break room areas. General high/low exhaust serving shop with outside air from interlocked shop overhead (ceiling/roof) hood with motor operated damper. See "Energy Supply" section and "Cooling Generating Systems" section above for office system observed deficiencies and opportunities. While good high/low general exhaust is installed,

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Shop Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
HVAC						
D3040 HVAC Distribution Systems						the low exhaust intakes are being blocked by shop equipment and materials. Welding exhaust is missing. See "Other Plumbing Systems" section for observed deficiencies at shop fluids room. Ceiling fans may assist in improving shop comfort and reduce energy cost.
D3050 Terminal and Package Units	1996	1996	3	10	DCS 09/05/13	High bay shop overhead Reverberay gas-fired vented (to roof) low intensity infrared heaters. Low bay electric resistance overhead infrared heat. Electric resistance wall heaters in several smaller spaces. Despite age, infrared heaters are in fair to good condition. See "HVAC Distribution Systems" section for ceiling fan opportunity.
D3060 Controls and Instrumentation	1996	1996	4	5	DCS 09/05/13	Stand alone controls. Aging stand alone controls. Opportunity for DDC.
D3090 Other HVAC Systems and Equipment	1996	1996	5	0	DCS 09/05/13	No welding hood and exhaust. Install welding hood.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1996	1996	3	23	DCS 09/05/13	City 6-inch fire service with post indicator valve (PIV) and fire department connection (FDC) on-site. 4-inch all dry-pipe risers and distribution main. Water at 70+ psig; air at 45 psig. Inspections are current.
D4030 Fire Protection Specialties	1996	1996	3	13	DCS 09/05/13	Fire extinguishers. Inspections are current.
Electrical						

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Shop Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
Electrical						
D5010 Electrical Service and Distribution						
	1996	1996	3	23	RA 09/05/13	Building electrical system is 400A, 208/120V, 3-phase, 4-wire with main disconnect switch inside building; feeds main panel via transfer switch. Electrical meter on outside wall. Main panel is 400A, sub feed to two (2) branch panels with feed through lugs. All three (3) panels are located adjacent to each other. Main panel and branch panels are Westinghouse Challenger series, original 1996 building system. Capacity is limited to 400A, no flexibility for growth.
D5020 Lighting and Branch Wiring						
	1996	1996	3	13	RA 09/05/13	Interior lighting is T12 fluorescent with troffers in offices, open industrial in apparatus bay and storage rooms. No occupancy lighting controls. Branch wiring are in conduits, with 15A and 20A devices. Exterior lighting are small wall packs and recess lights at front of apparatus bay; difficult for re-lamping. All lighting fixtures are 1996 building system. Fixtures are dirty in the apparatus bay, building wall lights. Opportunity for upgrade. Devices and receptacles are also found dirty. In apparatus bay additional outlets are needed.
D5030 Low Voltage Communication Security and Fire Alarm						
	1996	1996	2	8	RA 09/05/13	Building has a fire alarm system. Main panel is located in fire sprinkler room. Devices consist of horn strobes and pull stations. Building has no security alarm system. Building has data/voice Cat-5 system. Building has no card access control system. Fire alarm control panel is Silent Knight #SK-5208; in good working condition. Opportunity for building card access system.
D5090 Other Electrical Systems						
	1996	1996	3	8	RA 09/05/13	Building has an outdoor generator with diesel base tank, located at back of building. Generator feeds underground to transfer switch inside building, next to main service disconnect switch, at storage room near building entrance. Generator supplies standby power to power

Facility Summary

City of Redmond

Fire Station 16 Site

Fire Station 16 Shop Building

6502 185th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
Electrical						
D5090 Other Electrical Systems						equipment and lighting load. Outdoor generator manufactured by Generac, 125-kw, 208/120V, 3-phase, 4-wire. Oil leak was mentioned in pre-survey; issue not founded. Indoor automatic transfer switch (ATS) is 400A, 208/120V, 3-phase, 4-wire. Generator and transfer switch are in working condition. Building has no battery backup emergency lights.
E Equipment and Furnishings			2.6			
Equipment						
E1030 Vehicular Equipment	1996	1996	2	10	JB 09/05/13	Vehicle lifts. Tire machines. Good condition.
E1090 Other Equipment	1996	1996	2	10	JB 09/05/13	Shop equipment, welding, various cutters, electrical cord reels. Good condition.
Furnishings						
E2010 Fixed Furnishings	1996	1996	3	12	JB 09/05/13	Casework in lunchroom. Fair condition.
E2020 Moveable Furnishings (Capital Funded Only)	1996	1996	3	10	JB 09/05/13	Furniture in office and lunch room. Storage racks in parts/tool room, other miscellaneous. Fair condition.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Fire Station 16 Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Fire Station 16 Building	Interior Finishes	\$33,704	\$10,111	\$8,763	\$26,289	\$78,867	\$72,804
	Vertical Transportation	\$6,500	\$1,950	\$1,690	\$5,070	\$15,210	\$14,358
	Plumbing	\$10,000	\$3,000	\$2,600	\$7,800	\$23,400	\$22,087
	HVAC	\$46,500	\$13,950	\$12,090	\$36,270	\$108,810	\$103,997
	Electrical	\$42,500	\$12,750	\$11,050	\$33,150	\$99,450	\$96,581
	Equipment	\$5,400	\$1,620	\$1,404	\$4,212	\$12,636	\$12,159
	Facility Total	\$144,604	\$43,381	\$37,597	\$112,791	\$338,373	\$321,986
Fire Station 16 Shop Building	Exterior Closure	\$3,900	\$1,170	\$1,014	\$3,042	\$9,126	\$8,614
	Interior Finishes	\$18,000	\$5,400	\$4,680	\$14,040	\$42,120	\$38,259
	Vertical Transportation	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$11,700
	Plumbing	\$14,750	\$4,425	\$3,835	\$11,505	\$34,515	\$33,432
	HVAC	\$17,000	\$5,100	\$4,420	\$13,260	\$39,780	\$37,964
	Electrical	\$25,500	\$7,650	\$6,630	\$19,890	\$59,670	\$57,419
	Facility Total	\$84,150	\$25,245	\$21,879	\$65,637	\$196,911	\$187,387
Site Total		\$228,754	\$68,626	\$59,476	\$178,428	\$535,284	\$509,374

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 16 Site

Total Observed Deficiency Repair Direct Cost : \$228,754

Total Observed Deficiency Repair Direct Cost (Present Value): \$217,681

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 16 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$33,704
System: Interior Finishes			Total System Deficiency Repair Cost (Present Value):					\$31,113
Wall Finishes								
Paint	4	5 2013	Paint has marks and wear throughout.	Patch and repair; repaint walls.	9,852	\$2.00	sf	\$19,704
Floor Finishes								
Carpet	4	3 2013	Carpeting is soiled and worn.	Remove and replace all carpeting.	3,500	\$4.00	sf	\$14,000
Facility: Fire Station 16 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$6,500
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):					\$6,136
Other Conveying Systems								
Roof Access	4	3 2013	No permanent access to high roof for equipment maintenance.	Install permanent high roof access ladder, about 8-feet high. Ladders to smaller roof(s) as needed.	1	\$6,500.00	ea	\$6,500
Facility: Fire Station 16 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$10,000
System: Plumbing			Total System Deficiency Repair Cost (Present Value):					\$9,439
Domestic Water Distribution								
Domestic Hot Water Heaters	4	3 2013	Navien tankless gas-fired domestic hot water heaters reportedly have "constant issues", despite what at first glance appears to be reasonable installation.	Replace with commercial grade, name brand domestic hot water heaters.	2	\$5,000.00	ea	\$10,000

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 16 Site

Total Observed Deficiency Repair Direct Cost : \$228,754

Total Observed Deficiency Repair Direct Cost (Present Value): \$217,681

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 16 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$46,500
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$44,443
HVAC Distribution Systems								
HVAC	4	3 2013	No HVAC service to some mezzanine, shop, and utility/storage spaces.	Provide HVAC service to all spaces per code.	3	\$2,500.00	ea	\$7,500
Terminal and Package Units								
Roof Top Units	4	2 2013	All four (4) rooftop units are approaching end of life, with poor original installation.	Schedule replacement of rooftop units including redesign to most current code.	4	\$7,500.00	ea	\$30,000
Other HVAC Systems and Equipment								
Engine Exhaust	4	3 2013	Aging Nederman engine exhaust system.	Refurbish engine exhaust system.	3	\$3,000.00	ea	\$9,000
Facility: Fire Station 16 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$42,500
System: Electrical			Total System Deficiency Repair Cost (Present Value):					\$41,274
Lighting and Branch Wiring								
Exterior Lighting	4	2 2013	Exterior building lights are insufficient. Difficult to re-lamp soffit lights. Leaking flag pole lights. Poor canopy lights.	Provide new light emitting diode (LED) lighting and time switches control. Replace and add exterior wall lights (14). Replace two (2) flag pole lights. Replace recess soffit lights with wall mounted fixtures on vertical face of soffit above apparatus door (6). Replace three (3) canopy lights with low profile shallow LED fixtures.	25	\$700.00	ea	\$17,500

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 16 Site

Total Observed Deficiency Repair Direct Cost : \$228,754

Total Observed Deficiency Repair Direct Cost (Present Value): \$217,681

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Lighting and Branch Wiring	5	0	Hose tower has insufficient lighting and electrical outlets.	Remove high intensity discharge (HID) wall lights. Provide six (6) vapor tight 1x4 light emitting diode (LED) fixtures, two (2) battery emergency lights, three (3) occupancy sensors, and two (2) ground fault interrupter (GFI) outlets at ground level in work area.	1	\$10,000.00	ea	\$10,000
		2013						
Branch Wiring	4	2	Insufficient electrical outlets in apparatus bay.	Provide additional ground fault interrupter (GFI) outlets at bay door, inside building. Add overhead cable reel/drop cords in bay. Six (6) GFI, four (4) reel drops, and ten (10) circuits.	1	\$15,000.00	ea	\$15,000
		2013						
Facility: Fire Station 16 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$5,400
System: Equipment					Total System Deficiency Repair Cost (Present Value):			\$5,196
Commercial Equipment								
Refrigerators	4	2	Refrigerators are old and near end of life.	Remove and replace refrigerators with new appliances.	3	\$1,800.00	ea	\$5,400
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond
Site: Fire Station 16 Site

Total Observed Deficiency Repair Direct Cost : \$228,754
Total Observed Deficiency Repair Direct Cost (Present Value): \$217,681

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 16 Shop Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$3,900
System: Exterior Closure					Total System Deficiency Repair Cost (Present Value):			\$3,681
Exterior Doors								
Exterior Doors	4	3	Some hollow metal exterior doors are missing weather seals. Aluminum sectional doors seals are worn and falling out. Panels are damaged and need repair.	Provide hollow metal door seals or replace where worn. Remove existing sectional door seals and replace with new. Straighten bent and damaged panels; replace as needed.	1	\$3,900.00	ls	\$3,900
		2013						
Facility: Fire Station 16 Shop Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$18,000
System: Interior Finishes					Total System Deficiency Repair Cost (Present Value):			\$16,350
Wall Finishes								
Painted Walls	4	5	Wall paint is worn and damaged.	Repaint and patch walls where necessary.	6,000	\$3.00	sf	\$18,000
		2013						
Facility: Fire Station 16 Shop Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$5,000
System: Vertical Transportation					Total System Deficiency Repair Cost (Present Value):			\$5,000
Other Conveying Systems								
Roof Access	5	0	No roof access to maintain roof and rooftop equipment.	Provide permanent ladder to roof from mezzanine via roof heaters.	1	\$5,000.00	ls	\$5,000
		2013						

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 16 Site

Total Observed Deficiency Repair Direct Cost : \$228,754

Total Observed Deficiency Repair Direct Cost (Present Value): \$217,681

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 16 Shop Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$14,750
System: Plumbing			Total System Deficiency Repair Cost (Present Value):					\$14,287
Sanitary Waste								
Floor Drains	5	0	No floor drains in parts/tool room. Air compressor receives blow down drain on to floor resulting in standing water, rusting and corroding wetted metallic racks and equipment feet.	Add floor drains to parts/tool room.	2	\$2,500.00	ea	\$5,000
		2013						
Other Plumbing Systems								
Waste Oil Tank	4	3	Waste oil tank is rusted and corroded with standing water on oil-canned top.	Schedule replacement including protective canopy.	1	\$7,500.00	ls	\$7,500
		2013						
Shop Fluids Room	4	1	Shop fluids room is under-ventilated with small exhaust and unclear make-up air. Strong odor with risk of fire/explosion.	Provide code minimum ventilation for shop fluids room.	150	\$15.00	sf	\$2,250
		2013						
Facility: Fire Station 16 Shop Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$17,000
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$16,224
Cooling Generating Systems								
Condensing Unit	4	5	Condensing unit is approaching end of life.	Replace condensing unit.	1	\$4,000.00	ea	\$4,000
		2013						
HVAC Distribution Systems								
Shop Exhaust	4	2	Low shop exhaust is blocked by excessive shop equipment, hoses, parts, and supplies.	Install storage container in yard outside to relocate equipment materials blocking general exhaust low on inlet paths.	120	\$50.00	sf	\$6,000
		2013						
Controls and Instrumentation								

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond
Site: Fire Station 16 Site

Total Observed Deficiency Repair Direct Cost : \$228,754
Total Observed Deficiency Repair Direct Cost (Present Value): \$217,681

								Direct Construction Cost
Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	
		Survey Year						
Controls	4	5 2013	Stand alone controls are aging.	Replace controls.	1	\$2,000.00	ls	\$2,000
Other HVAC Systems and Equipment								
Welding Exhaust	5	0 2013	No welding exhaust system.	Install welding exhaust system.	1	\$5,000.00	ls	\$5,000
Facility: Fire Station 16 Shop Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$25,500
System: Electrical					Total System Deficiency Repair Cost (Present Value):			\$24,538
Lighting and Branch Wiring								
Branch Wiring	4	2 2013	Insufficient electrical outlets in apparatus bay.	Provide additional ground fault interrupter (GFI) outlets at bay door, inside building. Add overhead cable drop/reel cords in bay. Six (6) GFI, four (4) drops, ten (10) circuits.	1	\$15,000.00	ea	\$15,000
Lighting	4	2 2013	Exterior wall lights and apparatus bay door soffit lights are insufficient and difficult to re-lamp.	Replace exterior building lights with light emitting diode (LED) lights. Replace recess soffit lights with wall mounted lights on vertical face of the soffit at apparatus door front.	15	\$700.00	ea	\$10,500

Opportunity Summary By Subsystem

City of Redmond						
Site: Fire Station 16 Site		Total Site Opportunity Cost: \$427,261				

Subsystem		Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Fire Station 16 Building							
System: Interior Construction		Total Cost: \$3,748					
C1030	Fittings						
		Metal shelving units, some tall cabinets are not anchored to wall with earthquake straps.	Install earthquake straps at all free standing tall shelving units and tall cabinets.	1.00	\$2,500.00	ls	\$2,500
		Interior walls throughout facility show heavy wear and damage at wall corners.	Provide 2x2 stainless steel corner guards at each outside wall corner.	48.00	\$26.00	lf	\$1,248
Facility: Fire Station 16 Building							
System: Interior Finishes		Total Cost: \$12,750					
C3010	Wall Finishes						
		South wall of apparatus bay has exposed gypsum wall board. Fitness room has exposed gypsum wall board. Signs of walls used as backstops for equipment.	Provide fiber reinforced plastic (FRP) to 10-foot height at south wall of apparatus bay. Provide 4-foot height FRP at all fitness room walls.	1.00	\$6,000.00	ls	\$6,000
C3020	Floor Finishes						
		Carpet is currently used in fitness room.	Replace carpet with rubber flooring.	750.00	\$9.00	sf	\$6,750
Facility: Fire Station 16 Building							
System: Plumbing		Total Cost: \$7,500					
D2090	Other Plumbing Systems						
		Temporary/portable compressed air system can be upgraded to permanent system with compressor, refrigerated air dryer, drops in shops/utility room, and hose reels.	Install permanent compressed air distribution system.	1.00	\$7,500.00	ls	\$7,500
Facility: Fire Station 16 Building							
System: HVAC		Total Cost: \$84,556					
D3030	Cooling Generating Systems						
		Communications room cooling via general station house system. Opportunity to provide dedicated system.	Provide 1-ton ductless split Dx cooling systems for communications room/closet.	1.00	\$5,000.00	ls	\$5,000
D3050	Terminal and Package Units						

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 16 Site

Total Site Opportunity Cost: \$427,261

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
D3060 Controls and Instrumentation	Packaged roof top unit gas-packs provide marginal occupant comfort.	Upgrade to variable refrigerant flow (VRF) with heat recovery ventilator (HRV) similar to Fire Station 17.	5,000.00	\$10.00	sf	\$50,000
	No DDC controls.	Install DDC controls.	9,852.00	\$3.00	sf	\$29,556
Facility:	Fire Station 16 Building					
System:	Electrical	Total Cost: \$126,800				
D5020 Lighting and Branch Wiring						
	Opportunity to upgrade lighting and control in apparatus bay.	Provide new T5HO fluorescent fixtures with lens and occupancy controls in apparatus bay. T8 fixtures in adjacent rooms next to bay.	36.00	\$800.00	ea	\$28,800
	Opportunity to upgrade wiring circuits and devices in apparatus bays and adjacent work/storage rooms.	Provide new circuits, wiring, and ground fault interrupter (GFI) outlets.	40.00	\$400.00	ea	\$16,000
D5030 Low Voltage Communication Security and Fire Alarm						
	No security card access control system.	Provide card access control system with door controls.	1.00	\$70,000.00	ea	\$70,000
D5090 Other Electrical Systems						
	No emergency battery backup lights.	Provide emergency battery backup lights at interior and exterior egress.	30.00	\$400.00	ea	\$12,000
Facility:	Fire Station 16 Infrastructure					
System:	Site Improvements	Total Cost: \$4,800				
G2010 Roadways						
	The asphalt pavement is showing surface wear. Application of a seal coat and restriping would extend the life of the pavement.	Clean, seal coat, and restripe asphalt pavements.	800.00	\$6.00	sy	\$4,800
Facility:	Fire Station 16 Infrastructure					
System:	Site Civil / Mechanical Utilities	Total Cost: \$8,000				
G3030 Storm Sewer						
	Catch basin in rear yard of Maintenance Facility is subject to runoff containing oil and foam. Installation of an oil/water separator on the basin outlet pipe should be considered.	Install an oil/water separator on the outlet pipe from the catch basin.	1.00	\$8,000.00	ls	\$8,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 2 of 4

Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 16 Site

Total Site Opportunity Cost: \$427,261

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Fire Station 16 Shop Building						
System: Interior Construction	Total Cost: \$2,000					
C1020 Interior Doors						
	Metal shelving units, some tall cabinets are not anchored to wall with earthquake straps.	Install earthquake straps at all free standing tall shelving units and tall cabinets.	1.00	\$2,000.00	ls	\$2,000
Facility: Fire Station 16 Shop Building						
System: Interior Finishes	Total Cost: \$11,100					
C3010 Wall Finishes						
	Stairwells show heavy wear. Additional protection needed for heavy use. Wall damage at lunchroom and tool areas, both sides of apparatus bay.	Recommend installing plywood over wall covering up and down stairs (\$2,100). Recommend fiberglass reinforced panel installed to height of 10-feet above the floor in all work areas (\$10,000).	1.00	\$11,100.00	lf	\$11,100
Facility: Fire Station 16 Shop Building						
System: Plumbing	Total Cost: \$2,000					
D2020 Domestic Water Distribution						
	Shop water is from hose bibs and hoses on racks. Opportunity to install more convenient hose reels.	Install heavy duty water hose reels and hose at each end of the shop.	2.00	\$1,000.00	ea	\$2,000
Facility: Fire Station 16 Shop Building						
System: HVAC	Total Cost: \$32,875					
D3010 Energy Supply						
	Offices and low bay shop areas are currently electric heat. The natural gas meter has capacity to heat these spaces for added comfort and reduced heating energy cost.	Upgrade office forced air heat to hybrid systems by adding on gas furnace sections. Replace low bay shop overhead electric infrared heat with gas infrared heat.	2.00	\$5,000.00	ls	\$10,000
D3040 HVAC Distribution Systems						
	High bay shop infrared heaters heat rises to high ceiling. Shop can be hot on warm/hot days. Ceiling fans can improve both comfort and energy efficiency.	Install ceiling fans in high bay shop.	4.00	\$500.00	ea	\$2,000
	No HVAC service for parts/tool room.	Provide HVAC for parts/tool room, including unit heaters and ventilation.	200.00	\$20.00	sf	\$4,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 3 of 4

Opportunity Summary By Subsystem

City of Redmond						
Site: Fire Station 16 Site						
Total Site Opportunity Cost:						\$427,261

Subsystem		Opportunity	Action	Qty	Unit Cost	Unit	Cost
D3060	Controls and Instrumentation						
		Opportunity for upgrade to DDC controls to facilitate maintenance and improved energy efficiency.	Install DDC.	5,625.00	\$3.00	sf	\$16,875
Facility:	Fire Station 16 Shop Building						
System:	Electrical	Total Cost: \$131,132					
D5020	Lighting and Branch Wiring						
		Opportunity for wiring circuits and devices upgrade.	Provide new circuit wiring and devices. Use ground fault interrupter (GFI) in apparatus bays.	5,625.00	\$6.00	sf	\$33,750
		Opportunity for interior lighting upgrade.	Upgrade interior lighting with occupancy controls.	5,626.00	\$7.00	sf	\$39,382
D5030	Low Voltage Communication Security and Fire Alarm						
		No security card access control system.	Provide card access control system with door controls.	1.00	\$50,000.00	ea	\$50,000
		No emergency battery backup lights.	Provide emergency battery backup lights at interior and exterior egress.	20.00	\$400.00	ea	\$8,000

Facility Summary

City of Redmond
Fire Station 17 Site
Fire Station 17 Building

16917 NE 116th Street
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 19,397
Year Of Original Construction 2012
Facility Use Type Fire Station
Construction Type Medium
of Floors 2
Energy Source Gas
Year Of Last Renovation 2012
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	1.3			
Facility Condition Index (FCI)	0.02			
Current Replacement Value (CRV)	\$9,511,000	Predicted Renewal Budget (6 yrs)	\$126,000	\$114,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$538,000	\$425,000
		Observed Deficiencies (6 yrs)	\$71,000	\$70,000
		Observed Deficiencies (ALL)	\$71,000	\$70,000
		Opportunity Total Project Cost	\$71,000	N/A

Facility Condition Summary

Architectural:

Two-story fire station building. Facility contains 2.5-bay apparatus area, dorms, day room, kitchen, office, weight room, restrooms, storage, specialty areas in lower level. Upstairs has large unfinished space, storage, restrooms, and large multi-use space. Building is concrete masonry unit walls to 12-feet above finished floor and wood framed 2nd floor and wood framed floor and roof construction. Exterior wall finish includes cement board in several colors. Hose tower is concrete masonry unit with concrete pan steel stairs, landings, and catwalks. Roofing is stamping seam metal roof. Exterior doors are aluminum storefront hollow metal, and apparatus doors are three (3) steel bifold and two (2) aluminum sectional doors. Interior partitions are wood framed and painted gypsum wall board. Apparatus bay has fiber reinforced plastic to 10-foot height. Wall corners have 2x2 stainless steel corner guard. Most floor finishes are diamond grind concrete. Ceramic tile in restroom. Decontamination room has epoxy flooring. Building is 1-year old, all finishes are in good condition including built in casework and shelving.

Electrical:

Building electrical service is 800A, 208/120V, 3-phase 4-wire, served by Puget Sound Energy, underground service from outdoor padmount 150-kva transformer. Electrical meter is on outside building wall. Building has an outdoor generator, 151-kw, 208/120V, 3-phase, 4-wire, located in generator yard. Generator feeds underground power to main panel via the transfer switch located in the mezzanine electrical room. Interior lighting is all new T8 fluorescent troffers, linear fixtures, and compact fluorescent down lights and wall sconces. Outdoor lighting are high intensity discharge (HID) wall lights and pole lights in parking. All branch wiring are in conduits. All devices are 15A and 20A grounding type. Building has a fire alarm system, card access system, CCTV security camera system, and Cat-6 data/voice system. Building has no security alarm system.

Mechanical:

Fire Station 17 is Redmond's newest fire station and is only partly occupied; significant portions are warm shell only, not built-out, including about 10 dorm rooms on the first floor, and several larger rooms on the second floor. Fire Station 17 is reported designed and built for LEED Certification, but no plaque was observed in the lobby. Fire Station 17 includes an elaborately landscaped site three (3) apparatus bay with accessory small shop and storage rooms including bunker gear drying room; training hose tower, station house with office, day room, exercise room, kitchen, dorm rooms, and men's and women's bathrooms; police office area; and second floor area with large conference and training room, toilet room, and several warm shell spaces. The large second floor conference/training room serves as the city's backup end of life. A new pump house with well is also located on-site producing non-potable water for irrigation.

HVAC includes variable refrigerant flow (VRF) with heat recovery ventilator (HRV) for station house and gas infrared with gas make-up air unit for apparatus bays.

Plumbing is city water and sewer with two (2) gas-fired domestic hot water heaters. Fire sprinkled throughout.

Facility Summary

City of Redmond
Fire Station 17 Site
Fire Station 17 Building

16917 NE 116th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				1.0					
Foundations									
A1010	Standard Foundations	2012	2012	1	87	JB	09/05/13	Continuous concrete footings and stem walls. Good.	
A1030	Slab On Grade	2012	2012	1	87	JB	09/05/13	Slab on grade. Good condition.	
B Shell				1.1					
Superstructure									
B1010	Floor Construction	2012	2012	1	87	JB	09/05/13	Wood frame floor construction. Good condition.	
B1020	Roof Construction	2012	2012	1	87	JB	09/05/13	Wood framed.	
Exterior Closure									
B2010	Exterior Walls	2012	2012	1	59	JB	09/05/13	Mix of concrete masonry unit, wood frame, cement board with rain screen. Good condition.	
B2020	Exterior Windows	2012	2012	1	44	JB	09/05/13	Dual glazed aluminum. Good condition.	
B2030	Exterior Doors	2012	2012	2	48	JB	09/05/13	Hollow metal doors, store front entry, and day room to patio. Apparatus doors: south aluminum sectional; north doors steel bifold doors.	

Facility Summary

City of Redmond
Fire Station 17 Site
Fire Station 17 Building

16917 NE 116th Street
Redmond, WA 98052

Facility Components

Facility Components										
Systems		Original System Date		Last Major System Renew.		Cond. Scores	Subsystem Remain. Useful Life - Yrs		Surveyor/ Survey Date	Comments
B Shell										
1.1										
Exterior Closure										
B2030	Exterior Doors		Generally in good condition; except for hose tower door sills checked and cracked.							
Roofing										
B3010	Roof Coverings		2012	2012	1	24	JB	09/05/13	Standing seem metal roofing. Good condition.	
B3020	Roof Openings		2012	2012	1	39	JB	09/05/13	Framed roof curbs for mechanical equipment; fully flashed. Flashing poor at several curbs; actively leaking at condenser unit farm above southwest portion of apparatus bay.	
B3030	Projections		2012	2012	1	49	JB	09/05/13	Entrance canopy. Good condition.	
C Interiors										
1.0										
Interior Construction										
C1010	Partitions		2012	2012	1	49	JB	09/05/13	Stud wall framing. Good condition.	
C1020	Interior Doors		2012	2012	1	39	JB	09/05/13	Hollow metal frames with hollow metal frames, some with relites. Good condition.	
C1030	Fittings		2012	2012	1	29	JB	09/05/13	Marker boards, counters. Good condition.	

Facility Summary

City of Redmond
Fire Station 17 Site
Fire Station 17 Building

16917 NE 116th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				1.0					
Staircases									
C2010	Stair Construction	2012	2012	1	87	JB	09/05/13	Wood framed strips at administration building; steel at apparatus bay.	
								Good condition.	
C2020	Stair Finishes	2012	2012	1	15	JB	09/05/13	Rubber stair treads.	
								Good condition.	
Interior Finishes									
C3010	Wall Finishes	2012	2012	1	21	JB	09/05/13	Painted gypsum wall board, ceramic tile, fiberglass reinforced panel (FRP).	
								Good condition.	
C3020	Floor Finishes	2012	2012	1	23	JB	09/05/13	Sealed concrete, rubber flooring.	
								Good condition.	
C3030	Ceiling Finishes	2012	2012	1	32	JB	09/05/13	Acoustic tile. Painted gypsum wall board.	
								Good condition.	
D Services				1.5					
Vertical Transportation									
D1010	Elevators and Lifts	2012	2012	1	35	DCS	09/05/13	Two-stop Thyssen Krupp hydraulic elevator with fully finished cab.	
								New condition; working well. Unable to view elevator machine room (key not available), but appear to be cooled by ductless split direct expansion (DX) cooling system (based on condensing unit at roof above).	
D1090	Other Conveying Systems	2012	2012	5	0	DCS	09/05/13	Roof access via hose tower.	

Facility Summary

City of Redmond
Fire Station 17 Site
Fire Station 17 Building

16917 NE 116th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			1.5			
Vertical Transportation						
D1090 Other Conveying Systems						No pathway to high rooftop mechanical equipment. No access to low roof area to east.
Plumbing						
D2010 Plumbing Fixtures	2012	2012	1	33	DCS 09/05/13	Porcelain water closets, urinals, and lavatories with chrome trim. Stainless steel decontamination, kitchen, and other sinks. Showers in men's and women's and decontamination. Fixtures little used in near new condition.
D2020 Domestic Water Distribution	2012	2012	2	38	DCS 09/05/13	1/5-inch city water meter with 2.5-inch service to riser room at 45 psig. Two (2) gas-fired domestic hot water heaters, Rheem 160-mbh, 100-gallon, expansion tank, with receive pump. Hose bibs outside in wall boxes. Non-potable pump house with well, 1,000+ gallon storage tank and distribution pump. All in good to excellent condition except relatively low (45 psig) city water pressure and faulty non-potable water system and/or irrigation controls.
D2030 Sanitary Waste	2012	2012	2	33	DCS 09/05/13	City sewer. Cast iron drain, waste, and vent (DW&V). Apparatus bay trench drains. Floor drains in bathrooms, bunker gear drying, and other utility rooms. No issues reported or observed.
D2040 Rain Water Drainage	2012	2012	2	38	DCS 09/05/13	Gutter and downspout to storm. Gutter includes gutter screen. Gutter screens need cleaning, and must be cleaned regularly to remain effective and prevent damage to building structure and finishes. See "Domestic Water Distribution" section above for rain water harvesting opportunity.

Facility Summary

City of Redmond
Fire Station 17 Site
Fire Station 17 Building

16917 NE 116th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			1.5			
Plumbing						
D2090 Other Plumbing Systems	2012	2012	2	23	DCS 09/05/13	Portable air compressor in apparatus bay small shop. Opportunity for permanent compressed air system in apparatus bay.
HVAC						
D3010 Energy Supply	2012	2012	2	38	DCS 09/05/13	Natural gas from Puget Sound Energy via meter number (TBD) with capacity of (TBD) cfh. Gas loads include apparatus bay infrared heaters, apparatus bay and station house make-up air units, domestic hot water heaters, kitchen appliances, and patio barbeque. No seismic shutoff valve. (Less than \$2,000.)
D3030 Cooling Generating Systems	2012	2012	2	10	DCS 09/05/13	Four (4) roof top variable refrigerant flow (VRF) system condensing units in screened enclosure. Two (2) roof top ductless split condensing units not screened or enclosed. Ductless split condensing units appear to serve elevator machine room (but not observed) and communications room. Roof drainage issues at flashing in variable refrigerant flow (VRF) condensing unit enclosure (see "Roof Coverings"); otherwise no issues reported or observed.
D3040 HVAC Distribution Systems	2012	2012	2	33	DCS 09/05/13	State of the art variable refrigerant flow (VRF) with heat recovery ventilator (HRV) system serving station house, police, and large meeting room areas. Gas-fired make-up air units for apparatus bay and station house; unclear how station house HRV and make-up air unit subsystems interface (if at all). Apparatus bay exhaust system. Few issues reported or observed except controls (See "Controls and Instrumentation" section). Reportedly variable refrigerant flow (VRF) system condensing units are sized to early future load of warm-shell only spaces.

Facility Summary

City of Redmond
Fire Station 17 Site
Fire Station 17 Building

16917 NE 116th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			1.5			
HVAC						
D3040 HVAC Distribution Systems						
D3050 Terminal and Package Units	2012	2012	2	18	DCS 09/05/13	Four (4) overhead gas-fired, vented, Modine low-intensity infrared heaters for apparatus bay. 5-kw ceiling electric resistance unit heaters for warm-shell space, bunker gear drying, and other small spaces. Warm-shell space should be upgraded to variable refrigerant flow (VRF) when built out.
D3060 Controls and Instrumentation	2012	2012	3	18	DCS 09/05/13	Proprietary DDC for variable refrigerant flow (VRF) system. Unclear interface between variable refrigerant flow (VRF) and non-VRF systems. Reportedly City IT Department will not allow use of VRF system control software on-site, so City and/or Fire Department is currently unable to optimize performance and achieve good thermal comfort and/or indoor air quality.
D3090 Other HVAC Systems and Equipment	2012	2012	1	18	DCS 09/05/13	Nederman vehicle engine exhaust system. No issues reported or observed. With no fire apparatus on-site, system is like new.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	2012	2012	1	38	DCS 09/05/13	City water with 6-inch service to 4-inch riser in riser room with reduced pressure backflow prevention; fire department connection and post indicator valve in north yard. Riser supply pressure at 45 psig. While station pressure is somewhat low (45 psig), reportedly residual pressure is adequate (greater than 20 psig).
D4030 Fire Protection Specialties	2012	2012	1	28	DCS 09/05/13	Fire extinguishers in cabinet. Good to excellent condition.

Facility Summary

City of Redmond
Fire Station 17 Site
Fire Station 17 Building

16917 NE 116th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			1.5			
Fire Protection						
D4090 Other Fire Protection Systems	2012	2012	3	10	DCS 09/05/13	No fire suppression at small commercial hood oven kitchen range. Opportunity to install automatic chemical based fire suppression at kitchen range hood.
Electrical						
D5010 Electrical Service and Distribution	2012	2012	1	39	RA 09/05/13	Building electrical system is 800A, 208/120V, 3-phase, 4-wire, underground service from Puget Sound Energy 150-kva padmount transformer outdoor. Main panel and transfer switch are located in mezzanine electrical room. All main panel, distribution, branch panels, Square-D, I-Line, NQ series; all in new condition.
D5020 Lighting and Branch Wiring	2012	2012	1	29	RA 09/05/13	Interior lighting is all fluorescent; all in new condition. Exterior lighting is all high intensity discharge (HID) fixtures; all in new condition. Branch wiring, conduits, and devices are all in new condition. Minor deficiencies observed: One (1) outdoor ground light has water inside; check condition. One (1) fixture in bunker gear room has loose lens; check condition. One (1) occupancy wall type sensor, in dead corner, should change to ceiling mounted type occupancy sensor to control lights in bunker gear room.
D5030 Low Voltage Communication Security and Fire Alarm	2012	2012	1	19	RA 09/05/13	Building has an outdoor generator with diesel base tank, located in outdoor generator yard. Generator feeds underground to transfer switch in mezzanine electrical room. Generator supplies standby power to equipment and lighting load. Building has batter backup emergency lights in hallway, recess down lights. Generator, manufactured by Detroit Diesel, is 151-kw, 208/120V, 3-phase, 4-wire system with the GE Zenith ATS transfer switch in the mezzanine electrical room. All generator, transfer switch, and battery backup emergency

Facility Summary

City of Redmond
Fire Station 17 Site
Fire Station 17 Building

16917 NE 116th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			1.5			
Electrical						
D5030 Low Voltage Communication Security and Fire Alarm						lights are in new condition.
D5090 Other Electrical Systems	2012	2012	1	24	RA 09/05/13	Building has a fire alarm system, main panel is located in fire control room. Devices consist of smoke detectors, horn strobes, and pull stations. Fire alarm control panel is Silent Knight #9200U. Fire alarm is in new condition. Building has new data/voice Cat-6 wiring and devices system. Building has new CCTV camera system. Building has new card access control system.
E Equipment and Furnishings			1.0			
Equipment						
E1010 Commercial Equipment	2012	2012	1	24	JB 09/05/13	Laundry equipment. Good condition.
E1090 Other Equipment	2012	2012	1	24	JB 09/05/13	Gym equipment. Good condition.
Furnishings						
E2010 Fixed Furnishings	2012	2012	1	29	JB 09/05/13	Casework. Window coverings. Good condition.

Facility Summary

City of Redmond

Fire Station 17 Site

Fire Station 17 Infrastructure

16917 NE 116th Street
Redmond, WA 98052

Facility Condition Summary

This new fire station site has a three-bay concrete drive off of NE 116th Street, along with a front plaza and building entry area. An asphalt drive on the west side of the building provides access to a secured parking lot and the two (2) drive-through bays from the rear of the building. A small building contains a well and storage tank for the irrigation system. The parking lot appears to have a large storm water vault beneath it. The site is served by City of Redmond utilities.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2010 Roadways	2012	2012	1	29	MK 09/04/13	Concrete drive aprons at front and rear of apparatus bay. Asphalt access drive with parking stalls extends along the west side and rear of the building. One (1) ADA stall at front of building. Vertical concrete curbing. ☐ Pavement in excellent condition.
G2030 Pedestrian Paving	2012	2012	1	23	MK 09/04/13	Concrete-paver plaza at the front of the building. Concrete patio for staff use, and concrete entry walkways. Concrete sidewalks at rear of building. ☐ Excellent condition.
G2040 Site Development	2012	2012	1	29	MK 09/04/13	Fixed bike rack, flagpole, and masonry seating areas near front of the building. Excellent condition.
G2050 Landscaping	2012	2012	2	39	MK 09/04/13	New plantings and irrigation around the perimeter of the building and adjacent to pavement areas. Plants are immature at this time. Native vegetation, including large trees was retained along the south side of the lot and is in good condition. There is a concrete masonry unit (CMU) well house at the southeast side of the station that houses a well head, 1200-gallon storage tank and pumps for the irrigation system. ☐ Some issues with the irrigation pumps were

Facility Summary

City of Redmond

Fire Station 17 Site

Fire Station 17 Infrastructure

16917 NE 116th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2050 Landscaping						reported in the pre-survey. There has been recent work on the pumps. Some of the irrigation heads at the front of the building were leaking and should be adjusted. The ornamental maple at the front of the building is in poor condition.
Site Civil / Mechanical Utilities						
G3010 Water Supply	2012	2012	2	44	MK 09/04/13	Domestic water (1-1/2") and fire sprinkler supply from the City of Redmond system. Fire hydrants throughout the site. ☐ Good condition.
G3020 Sanitary Sewer	2012	2012	2	49	MK 09/04/13	Sanitary sewer service provided by City of Redmond system. Oil/water separator for truck bay drains is located in planter area at the front of the building. ☐ Good condition.
G3030 Storm Sewer	2012	2012	2	44	MK 09/04/13	Catch basins throughout paved areas of the site. Roof drains connect into underground pipe system. Appears to be a large storm water detention and/or water quality vault in the paved area at the rear of the site. Two large open grates provide access into the vault. ☐ Good condition.
G3060 Fuel Distribution	2012	2012	1	39	MK 09/04/13	Natural gas meter located on east side of the building. ☐ Good condition.
Site Electrical utilities						
G4010 Electrical Distribution	2012	2012	1	39	MK 09/04/13	Underground electric service to the site. One 300-kva transformer at the front of the building. No exterior emergency generator observed at site. ☐

Facility Summary

City of Redmond

Fire Station 17 Site

Fire Station 17 Infrastructure

16917 NE 116th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Electrical utilities						
G4010 Electrical Distribution						☐ Good condition.
G4020 Site Lighting	2012	2012	1	29	MK 09/04/13	Pole lights throughout the site. ☐ Excellent condition.
G4030 Site Communications and Security	2012	2012	2	19	MK 09/04/13	Underground telephone and cable to the site. "Hy-Security" brand security gate with photo switch. ☐ ☐ Good condition. Staff reported some issues with the security gate operation. Apparently the key pads were recently changed out and system is operating better.
Other Site Construction						
G9090 Other Site Systems	2012	2012	2	29	MK 09/04/13	There is an approximately 10-foot by 15-foot concrete masonry unit (CMU) block well house with metal roof on site that houses the irrigation well and pumps. ☐ ☐ See "Landscaping" section above.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Fire Station 17 Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Fire Station 17 Building	Exterior Closure	\$2,500	\$750	\$650	\$1,950	\$5,850	\$5,522
	Roofing	\$8,000	\$2,400	\$2,080	\$6,240	\$18,720	\$18,191
	Vertical Transportation	\$13,000	\$3,900	\$3,380	\$10,140	\$30,420	\$30,420
	Plumbing	\$2,000	\$600	\$520	\$1,560	\$4,680	\$4,680
	HVAC	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$11,258
	Facility Total	\$30,500	\$9,150	\$7,930	\$23,790	\$71,370	\$70,071
	Site Total	\$30,500	\$9,150	\$7,930	\$23,790	\$71,370	\$70,071

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 17 Site

Total Observed Deficiency Repair Direct Cost : \$30,500

Total Observed Deficiency Repair Direct Cost (Present Value): \$29,945

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 17 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,500
System: Exterior Closure			Total System Deficiency Repair Cost (Present Value):					\$2,360
Exterior Doors								
Hollow Metal Doors	4	3 2013	Wood sills at access doors on hose tower checked and cracked.	Seal wood trim. Install metal flashing over top of wood sill.	10	\$250.00	ea	\$2,500
Facility: Fire Station 17 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$8,000
System: Roofing			Total System Deficiency Repair Cost (Present Value):					\$7,774
Roof Coverings								
Gutters	4	2 2013	Metal gutter screens are bowed allowing materials to be trapped at upper scope adjacent to roof covering. Material shows signs of moss growth.	Remove gutter screens and replace with continuous sloping stainless steel screens.	1	\$6,000.00	ls	\$6,000
Roof Openings								
Flashing	5	0 2013	Poor flashing at several roof curbs; complex flashing at condenser unit farm above southwest portion of apparatus bay is actively leaking.	Inspect and correct all roof flashing with emphasis on condenser unit farm area.	1	\$2,000.00	ls	\$2,000
Facility: Fire Station 17 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$13,000
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):					\$13,000
Other Conveying Systems								
Roof Access Pathways	5	0 2013	No catwalk or pathway to rooftop mechanical equipment for maintenance.	Install pathway or catwalk.	1	\$10,000.00	ls	\$10,000

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 17 Site

Total Observed Deficiency Repair Direct Cost : **\$30,500**
Total Observed Deficiency Repair Direct Cost (Present Value): **\$29,945**

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Low Roof Access		5	0 2013	No access to low roof to east.	Install roof access to low roof.	1	\$3,000.00	ls	\$3,000
Facility: Fire Station 17 Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$2,000
System: Plumbing						Total System Deficiency Repair Cost (Present Value):			\$2,000
Domestic Water Distribution									
Non-Potable Water Pump House		5	0 2013	Well pump found running continuously in "hand" position (manual on).	Troubleshoot and repair non-potable water controls.	1	\$2,000.00	ls	\$2,000
Facility: Fire Station 17 Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$5,000
System: HVAC						Total System Deficiency Repair Cost (Present Value):			\$4,811
Controls and Instrumentation									
DDC		4	2 2013	Reportedly, City IT Department will not allow DDC user interface software and/or hardware on-site, hampering ability to optimize HVAC system performance.	Provide software and/or hardware to allow proper operation and maintenance of Fire Station 17 HVAC systems.	1	\$5,000.00	ls	\$5,000

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 2 of 2

City of Redmond	
Site: Fire Station 17 Site	Total Site Opportunity Cost: \$30,580

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 1 of 2

Opportunity Summary By Subsystem

City of Redmond
Site: Fire Station 17 Site

Total Site Opportunity Cost: \$30,580

Subsystem		Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility:	Fire Station 17 Infrastructure						
System:	Site Improvements		Total Cost: \$200				
G2010	Roadways						
		There is a large storm water grate in the rear access road with a "Weight Capacity" sign, however no weight value is posted. Because this area is used for fire truck access, gross vehicle weight may exceed the grate capacity. A weight value should be added to the sign. Although immediate cost is less than \$2,000, this work should be accomplished to reduce the chance of failure of the grating, which would cost more.	Add grate capacity to existing "Weight Capacity" sign.	1.00	\$200.00	ls	\$200

Facility Summary

City of Redmond

Fire Station 18 Site

Fire Station 18 Building

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Code

Facility Size - Gross S.F. 7,714
Year Of Original Construction 2002
Facility Use Type Fire Station
Construction Type Medium
of Floors 1
Energy Source Gas
Year Of Last Renovation 2002
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	1.9			
Facility Condition Index (FCI)	0.06			
Current Replacement Value (CRV)	\$3,817,000	Predicted Renewal Budget (6 yrs)	\$114,000	\$103,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$1,084,000	\$866,000
		Observed Deficiencies (6 yrs)	\$44,000	\$43,000
		Observed Deficiencies (ALL)	\$48,000	\$46,000
		Opportunity Total Project Cost	\$310,000	N/A

Facility Condition Summary

Architectural:

Single-story building with mezzanine, 2.5-bay apparatus fire station. Building is open bay area and administrative space consisting of crew dorms, day room/kitchen, fitness, shower, restrooms, and some office and laundry areas. Building also includes police department work area. Building construction is wood frame walls, including hose tower, sloped roof system with large sectional apparatus bay doors. Mezzanine area located over storage room contains additional storage and mechanical equipment. Exterior finish comprised of sloped composite shingle roofing and recently painted wood siding. Canopies are wood framed with steel column supports on concrete piers. Interiors consist of painted gypsum wall board, ceramic tile in restrooms, carpet in most other areas. Acoustic lay in ceiling tiles in doors, offices, and fitness with gypsum wall board hard lid in restrooms, laundry, and storage spaces.

Electrical:

Building electrical service is 600A, 208/120V, 3-phase, 4-wire, served by Puget Sound Energy, underground service from 45-kva padmount transformer. Current transformer, electrical meter, and main disconnect are located on outside building wall. Building has a 200-kw, 208/120V, 3-phase, 4-wire outdoor generator, feeds underground to building main panel through transfer switch. Transfer switch located inside building hallway closet. Interior building lighting is mostly T8 fluorescent; outdoor lighting has high intensity discharge (HID) wall lights, and pole parking lot lights. All branch wiring are installed in conduits. Devices are 15A and 20A grounding type. Building has a fire alarm system. Building has no security alarm system and no card access system.

Mechanical:

Fire Station 18 was formerly King County Fire Station 34. Fire Station 18 is located in and serves the newer Redmond Ridge neighborhood. While built in 2002, reportedly Fire Station 18 was not occupied until 2005. Fire Station 18 includes an apparatus bay with accessory small shops and storage area including a small storage mezzanine with mechanical room, hose tower, and station house with office, day room, exercise room, kitchen, men's and women's room, and dorm rooms.

HVAC is forced air gas furnaces with split direct expansion (DX) cooling for station house, and gas unit heaters in apparatus bay, with both general and engine exhaust.

Plumbing is city water and sewer with copper distribution piping, cast iron drain, waste, and vent (DW&V), and gas fired domestic hot water heater. Fire sprinkled throughout.

Facility Summary

City of Redmond
Fire Station 18 Site
Fire Station 18 Building

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				1.0					
Foundations									
A1010	Standard Foundations	2002	2002	1	77	JB	09/05/13	Concrete stem footing and stem wall. Good.	
A1030	Slab On Grade	2002	2002	1	77	JB	09/05/13	Concrete slab on grade. Good.	
B Shell				1.6					
Superstructure									
B1010	Floor Construction	2002	2002	1	77	JB	09/05/13	Wood floor construction mezzanine. Good condition.	
B1020	Roof Construction	2002	2002	1	77	JB	09/05/13	Wood truss structure. Good condition.	
Exterior Closure									
B2010	Exterior Walls	2002	2012	2	12	JB	09/05/13	Wood framed walls with wood siding. Some staples pulling out of wood siding. Recommend reattach with longer staples. Mostly good condition of exterior walls.	
B2020	Exterior Windows	2002	2002	1	34	JB	09/05/13	Vinyl windows, dual-glazed. Good condition.	
B2030	Exterior Doors	2002	2002	2	39	JB	09/05/13	Storefront, wood doors, hollow metal doors and frames, overhead apparatus bay doors. Good condition.	

Facility Summary

City of Redmond
Fire Station 18 Site
Fire Station 18 Building

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
B Shell			1.6			
Exterior Closure						
B2030 Exterior Doors						
Roofing						
B3010 Roof Coverings	2002	2002	2	14	JB 09/05/13	Composite shingle roofing. Metal gutters with downspouts, rain chains at front entrance (plastic). Roofing in good condition. Gutters fair. Rain chain failing.
B3020 Roof Openings	2002	2002	2	29	JB 09/05/13	Roof hatch. Venting. Good condition.
B3030 Projections	2002	2002	1	39	JB 09/05/13	Wood entrance canopy, wood framed soffit at patio. Good condition.
C Interiors			1.9			
Interior Construction						
C1010 Partitions	2002	2002	1	39	JB 09/05/13	Wood framed partitions. Good condition.
C1020 Interior Doors	2002	2002	3	29	JB 09/05/13	Hollow metal doors and frames. Some wood doors. Some doors need touch up paint.
C1030 Fittings	2002	2002	1	19	JB 09/05/13	Marker boards, railing at mezzanine, metal ladder at hose tower. Good condition.
Interior Finishes						

Facility Summary

City of Redmond
Fire Station 18 Site
Fire Station 18 Building

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				1.9					
Interior Finishes									
C3010	Wall Finishes	2002	2002	2	10	JB	09/05/13	Painted gypsum wall board, ceramic tile in restrooms. Medium density fiberboard (MDF) at apparatus bay east and west walls. Good. Interior walls need touch up paint. Recommend fiber reinforced plastic (FRP) at custodian room and fitness.	
C3020	Floor Finishes	2002	2002	3	10	JB	09/05/13	Sealed concrete at apparatus bay. Wood at mezzanine. Carpet at administration. Ceramic tile at restrooms and kitchen. Fair condition of carpet. Some wear, stains.	
C3030	Ceiling Finishes	2002	2002	2	22	JB	09/05/13	Open ceiling at apparatus bay. Acoustical tile in corridors, dorm rooms, fitness, and offices. Gypsum wall board hard lid in restrooms, storage, partial day room/kitchen. Good condition.	
D Services				2.4					
Vertical Transportation									
D1090	Other Conveying Systems	2002	2002	5	0	DCS	09/05/13	No roof access. Provide roof access.	
Plumbing									
D2010	Plumbing Fixtures	2002	2002	2	24	DCS	09/05/13	Porcelain water closets, urinals, and lavatories. Chrome trim with manual faucets and flush valves. One-piece fiberglass showers. Stainless steel decontamination and kitchen sinks. Water closet flush valve drops fitted with floor drain trap primer lines. Laundry wall box. Eye wash and safety shower with tempered water in apparatus bay decontamination area. All in good condition, except some water closets separating from wall (less then \$2,000).	

Facility Summary

City of Redmond
Fire Station 18 Site
Fire Station 18 Building

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.4			
Plumbing						
D2010 Plumbing Fixtures						
D2020 Domestic Water Distribution	2002	2002	2	29	DCS 09/05/13	City water via 1.5-inch meter with 2-inch service line to reduced pressure backflow prevention or mechanical mezzanine room. Reduced pressure backflow prevention test tag not found at reduced pressure backflow prevention (less than \$2,000). Mechanical mezzanine floor is unprotected wood. A.O. Smith 2002 domestic hot water gas-fired heaters, 74-gallons, 75-mbh with expansion tank and recirculation pump.
D2030 Sanitary Waste	2002	2002	2	24	DCS 09/05/13	City sewer. Cast iron drain, waste, and vent (DW&V). Full length but narrow trench drains in apparatus bay. Grated floor at EW and stainless steel in apparatus bay northwest corner. Miscellaneous floor drains. Oil/water separator for apparatus trench drains. Good condition. Fixtures all drain and flush well. Condensate drains from high efficiency gas furnaces are not neutralized causing acid etch damage to janitor sink below; retrofit acid neutralization (less than \$2,000) to solve this problem.
D2040 Rain Water Drainage	2002	2002	3	29	DCS 09/05/13	Gutters and downspouts at apparatus bay and rain chains at station house. Poor guttering system has caused significant damage to siding. Most or all undersized and plastic rain chains are failed.
D2090 Other Plumbing Systems	2002	2002	3	14	DCS 09/05/13	Air compressor in low bay shop. Opportunity for compressed air distribution system.
HVAC						
D3010 Energy Supply						

Facility Summary

City of Redmond
Fire Station 18 Site
Fire Station 18 Building

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.4			
HVAC						
D3010 Energy Supply	2002	2002	2	29	DCS 09/05/13	Natural gas from Puget Sound Energy via meter number 35540 with 1,000-cfh capacity, serving apparatus bay unit heaters, station house gas furnaces, domestic hot water heaters, kitchen range, and patio barbeque. Gas service is approximately double the size needed for Fire Station 18. No seismic valve (less than \$2,000).
D3030 Cooling Generating Systems	2002	2002	3	9	DCS 09/05/13	Two (2) condensing units to north; Carrier R-22. One (1) is approximately 2-ton; one (1) is approximately 1-ton. In fair condition. Consider upgrade to hybrid furnace and heat pump system when system is next renewed. Communications closet cooling from general space HVAC system; no ductless cooling.
D3040 HVAC Distribution Systems	2002	2002	3	24	DCS 09/05/13	Two (2) forced air high efficiency (condensing) gas furnaces with split direct expansion (DX) cooling (see "Cooling Generating Systems" section above) serving station house. Apparatus bay general exhaust with un-tempered make-up air louver. In fair to good condition, but additional maintenance attention is needed to keep furnace systems in optimal conditions. See "Sanitary Waste" section above for recommendation to install condensate neutralization system. Opportunity to install ceiling and/or ceiling fans to optimize heating performance. Confirm adequate outside air to both station house systems (less than \$2,000).
D3050 Terminal and Package Units	2002	2002	3	9	DCS 09/05/13	Three (3) gas-fired Reznor unit heaters in apparatus bay. Smaller Reznor in hose tower. No HVAC service to apparatus bay shop room.
D3060 Controls and Instrumentation						

Facility Summary

City of Redmond
Fire Station 18 Site
Fire Station 18 Building

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.4			
HVAC						
D3060 Controls and Instrumentation	2002	2002	3	9	DCS 09/05/13	Stand alone controls; mix of manual and automatic. Opportunity for DDC.
D3090 Other HVAC Systems and Equipment	2002	2002	3	13	DCS 09/05/13	Three (3) drop Nederman vehicle exhaust system. No issues reported or observed.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	2002	2002	3	29	DCS 09/05/13	City 6-inch service to rise room with 3-inch risers and wet pipe sprinkler main. fire department connection (FDC) line is 4-inch; ties in at riser. Station pressure is 65 psig. Inspections appear current.
D4030 Fire Protection Specialties	2002	2002	2	20	DCS 09/05/13	Fire extinguishers in stainless steel cabinets. Inspections are current.
Electrical						
D5010 Electrical Service and Distribution	2002	2002	2	28	RA 09/05/13	Building electrical system is 600A, 208/1200V, 3-phase, 4-wire. Main service fused disconnect on outside building wall. Main switch feeds main panel in hallway closet via the transfer switch located next to the main panel. Underground service from Puget Sound Energy, 45-kva padmount transformer. Main panel, main disconnect switch, and branch panels are all Square-D equipment; panels are the NQOD series. All equipment and panels are in good condition.
D5020 Lighting and Branch Wiring	2002	2002	2	18	RA 09/05/13	Interior lighting is all fluorescent fixtures, T8 lamps; in good condition. Building lighting are switched by manual wall switches. There are no

Facility Summary

City of Redmond
Fire Station 18 Site
Fire Station 18 Building

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.4			
Electrical						
D5020 Lighting and Branch Wiring						occupancy sensors for automatic on-off. Exterior lights are generally good, except for the front entry lights are the older high intensity discharge (HID) soffit lights; can be upgraded. Branch wiring and conduits are 15A and 20A devices, and are in good condition. Opportunity to add occupancy sensors for lighting control. Opportunity to upgrade front entry canopy lights. Gas store controls are not working.
D5030 Low Voltage Communication Security and Fire Alarm	2002	2002	2	13	RA 09/05/13	Building has a fire alarm system. Fire alarm control panel is located in the front lobby. Devices consist of smoke detectors, horn strobes, and pull stations. Building has data/voice Cat-5 wiring and devices system. Fire alarm system is Silent Knight #5808 control panel, in good working condition. Data/voice system is in good working condition. Building has no card access system.
D5090 Other Electrical Systems	2002	2002	2	10	RA 09/05/13	Building has an outdoor generator with diesel base tank. Generator feeds the transfer switch inside building. Generator provides standby power to power equipment and lighting load. Building has emergency battery backup lights. Generator is Detroit Diesel MTU200, 200-kw, 208/120V, 3-phase, 4-wire. Generac transfer switch. Generator and automatic transfer switch are in good condition.
E Equipment and Furnishings			2.0			
Equipment						
E1010 Commercial Equipment	2002	2005	2	17	JB 09/05/13	Residential appliances. Good condition.
E1090 Other Equipment						

Facility Summary

City of Redmond
Fire Station 18 Site
Fire Station 18 Building

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems								
E Equipment and Furnishings				2.0				
Equipment								
E1090	Other Equipment							
		2002	2005	2	17	JB	09/05/13	Extractor. Hose wash. Good condition.
Furnishings								
E2010	Fixed Furnishings							
		2002	2002	2	19	JB	09/05/13	Casework. Good condition.
E2020	Moveable Furnishings (Capital Funded Only)							
		2002	2002	3	10	JB	09/05/13	Station house furniture. Apparatus bay storage racks and miscellaneous equipment. Good condition.

Facility Summary

City of Redmond

Fire Station 18 Site

Fire Station 18 Infrastructure

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Condition Summary

This newer fire station has concrete drive aprons at the front and back of the building providing through access to 2-1/2 truck bays. An asphalt access drive with parking stalls extends around the east and north sides of the building. The building is served by public utilities. Note the station sign at the front is labeled "King County Fire District #34".

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/	Survey Date	Comments
G Sitework							
Site Improvements							
G2010 Roadways	2002	2002	2	19	MK	09/04/13	Concrete drive aprons at front and back of the apparatus bays. Asphalt access drive with 13 parking stalls, including one (1) ADA stall, extends around the east and north sides of the building. Extruded and vertical concrete curbs. ☐ Concrete pavement could use joint filler in the gaps between panels. Otherwise in good condition.
G2030 Pedestrian Paving	2002	2002	2	13	MK	09/04/13	Concrete entry walks and patio at the east side of the building. ☐ Concrete walks could use joint filler in gaps between panels. Otherwise in good condition.
G2040 Site Development	2002	2002	2	19	MK	09/04/13	Fixed bike rack and flagpole ☐ Good condition.
G2050 Landscaping	2002	2002	2	29	MK	09/04/13	Ornamental landscaping at building perimeter, and grass and natural areas beyond the building. At the back of the building is an open grass area where City of Redmond light poles are stockpiled. No irrigation system observed, except for in the planting strip along NE Alder Crest Drive. ☐ Plantings in good condition with large variety.

Facility Summary

City of Redmond

Fire Station 18 Site

Fire Station 18 Infrastructure

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Civil / Mechanical Utilities						
G3010 Water Supply	2002	2002	2	34	MK 09/04/13	Domestic water supply (1-1/2") and fire sprinkler service provided from public system in NE Alder Crest Drive. ☐ No known issues.
G3020 Sanitary Sewer	2002	2002	2	39	MK 09/04/13	Several sanitary sewer manholes at the front of the building. Appears that the building is served by a public sewer in the adjacent street. ☐ No known issues.
G3030 Storm Sewer	2002	2002	2	34	MK 09/04/13	Catch basins and trench drain throughout the paved areas. Building downspouts connect to an underground pipe system. An original site plan showed a detention pond to be located on the site property at the northwest corner. This pond is not present. There is a storm water pond on the adjacent property to the north, however, it is unknown whether the Fire Station site discharges to this facility. ☐ There are three (3) locations where plastic chains extend between the gutter and the storm pipe connection at the ground. However these chains are disconnected and it appears may not function properly. These should be reconnected or repaired to function properly. Otherwise no known issues.
G3060 Fuel Distribution	2002	2002	2	29	MK 09/04/13	Natural gas meter at the rear of the building. ☐ No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	2002	2002	2	29	MK 09/04/13	Underground electric service to the site. There is a 45-kva transformer at the northeast corner of the building. Emergency generator with base tank is located by the rear paved area. It is unclear whether the generator is operational, as a sign on it notes "Fueling only during natural disasters". ☐

Facility Summary

City of Redmond
Fire Station 18 Site
Fire Station 18 Infrastructure

22710 NE Aldercrest Drive
Redmond, WA 98053

Facility Components	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems						

G Sitework

Site Electrical utilities

G4010 Electrical Distribution

☐
No known issues.

G4020 Site Lighting

2002	2002	2	19	MK	09/04/13	Pole lighting throughout the site. ☐ No known issues.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Fire Station 18 Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Fire Station 18 Building	Roofing	\$3,200	\$960	\$832	\$2,496	\$7,488	\$7,345
	Vertical Transportation	\$3,000	\$900	\$780	\$2,340	\$7,020	\$7,020
	Plumbing	\$7,500	\$2,250	\$1,950	\$5,850	\$17,550	\$16,567
	Electrical	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$11,700
	Facility Total	\$18,700	\$5,610	\$4,862	\$14,586	\$43,758	\$42,632
	Site Total	\$18,700	\$5,610	\$4,862	\$14,586	\$43,758	\$42,632

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Fire Station 18 Site

Total Observed Deficiency Repair Direct Cost : \$18,700

Total Observed Deficiency Repair Direct Cost (Present Value): \$18,219

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Fire Station 18 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$3,200
System: Roofing					Total System Deficiency Repair Cost (Present Value):			\$3,139
Roof Coverings								
Rain Chains	5	1	Plastic rain chains at front building areas are broken and not attached.	Remove gutter opening and plastic chains. Provide larger openings and metal downspouts to splash blocks.	8	\$400.00	ea	\$3,200
		2013						
Facility: Fire Station 18 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$3,000
System: Vertical Transportation					Total System Deficiency Repair Cost (Present Value):			\$3,000
Other Conveying Systems								
Roof Access	5	0	No roof access.	Provide roof access.	1	\$3,000.00	ls	\$3,000
		2013						
Facility: Fire Station 18 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$7,500
System: Plumbing					Total System Deficiency Repair Cost (Present Value):			\$7,080
Domestic Water Distribution								
Domestic Hot Water Heating	4	3	Domestic hot water heaters/storage tank is undersized for station use; capacity exceeded during shift changes.	Double capacity at next renewal.	1	\$7,500.00	ls	\$7,500
		2013						
Facility: Fire Station 18 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$5,000
System: Electrical					Total System Deficiency Repair Cost (Present Value):			\$5,000
Lighting and Branch Wiring								
Branch Wiring	5	0	Gas range/stove cannot reset to normal operation after building station alarm shut off. Gas flow without ignition.	Provide new control for gas range/stove reset.	1	\$5,000.00	ls	\$5,000
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Opportunity Summary By Subsystem

City of Redmond

Site: Fire Station 18 Site

Total Site Opportunity Cost: **\$132,577**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Fire Station 18 Building System: Interior Construction Total Cost: \$3,560						
C1030	Fittings					
	Metal shelving units, some tall cabinets are not anchored to wall with earthquake straps.	Install earthquake straps at all free standing tall shelving units and tall cabinets.	1.00	\$2,000.00	ls	\$2,000
	Interior walls throughout facility show heavy wear and damage at wall corners.	Provide 2x2 stainless steel corner guards at each outside wall corner.	60.00	\$26.00	lf	\$1,560
Facility: Fire Station 18 Building System: Interior Finishes Total Cost: \$875						
C3010	Wall Finishes					
	Painted gypsum wall board at custodian room and fitness.	Recommend installing fiber reinforced plastic (FRP) at custodian and fitness rooms over existing gypsum wall board.	350.00	\$2.50	sf	\$875
Facility: Fire Station 18 Building System: Plumbing Total Cost: \$6,000						
D2020	Domestic Water Distribution					
	Mechanical mezzanine is exposed wood floor subject to water damage over time.	Install water tight floor; slope to floor drain.	150.00	\$20.00	sf	\$3,000
D2090	Other Plumbing Systems					
	Existing compressed air system is missing distribution.	Install copper distribution to apparatus bay including two (2) hose reels at each end of apparatus bay.	1.00	\$3,000.00	ls	\$3,000
Facility: Fire Station 18 Building System: HVAC Total Cost: \$47,142						
D3030	Cooling Generating Systems					
	Communications closet "cooling" is via station house general HVAC system unit heat (not cooling) in winter and conventional air conditioner in summer. Opportunity to install dedicated system.	Install 1/2-ton ductless split system to cool communications closet.	1.00	\$3,000.00	ls	\$3,000
D3040	HVAC Distribution Systems					

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 1 of 2

Opportunity Summary By Subsystem

City of Redmond						
Site: Fire Station 18 Site		Total Site Opportunity Cost: \$132,577				

Subsystem		Opportunity	Action	Qty	Unit Cost	Unit	Cost
D3050	Terminal and Package Units	Heat concentrates in apparatus bay ceiling plenum space. Ceiling fans may allow cost effective movement of the warm air down to the apparatus bay floor.	Install ceiling fans.	6.00	\$500.00	ea	\$3,000
		No ceiling in apparatus bay allows most unit heater heat to rise into open attic space with no benefit to occupant.	Install ceiling to optimize apparatus bay heating.	3,000.00	\$5.00	sf	\$15,000
		No HVAC service to apparatus bay shop room.	Install small unit heater or infrared heater and exhaust fan in shop.	1.00	\$3,000.00	ls	\$3,000
D3060	Controls and Instrumentation	No DDC.	Add DDC to next renewal.	7,714.00	\$3.00	sf	\$23,142
Facility:	Fire Station 18 Building						
System:	Electrical						
		Total Cost: \$75,000					
D5020	Lighting and Branch Wiring	Opportunity to replace existing recess high intensity discharge (HID) lights in front entry, canopy, fixtures have no lenses.	Provide light emitting diode (LED) outdoor lights at entry canopy, with lens, recess mount.	6.00	\$700.00	ea	\$4,200
		No interior automatic occupancy lighting controls.	Provide ceiling type occupancy sensors in large space and wall type occupancy sensors in smaller rooms for automatic lighting controls.	30.00	\$360.00	ea	\$10,800
D5030	Low Voltage Communication Security and Fire Alarm	No card access system.	Provide card access system with door controls.	1.00	\$60,000.00	ea	\$60,000

Facility Summary

City of Redmond
Hartman Park Site
Hartman Park Infrastructure

17535 NE 104th Street
Redmond, WA 98052

Facility Condition Summary

The pool building is located in a wooded area at the northeast corner of Hartman Park. The site includes the pool building, a small wood storage, two (2) parking lots, a playground, and pedestrian paths. The asphalt parking lots are small, with stalls intermingled between trees. One (1) is accessed off of NE 104th Street, and the other from 176th Avenue NE. The pool building is served by City of Redmond utilities.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2020 Parking Lots	1970	1970	4	3	MK 08/27/13	Asphalt parking lot accessed from NE 104th Street has parking for 15 vehicles including one (1) marked ADA. The 176th Avenue lot has parking for 28 vehicles including one (1) ADA. Both lots have stalls laid in between mature conifer trees. Lots are generally edged with extruded concrete curb. The NE 104th Street lot is in fair to good condition, and 176th Street lot is in poor to fair condition. In both lots, asphalt is worn with root upheaval, cracking, alligating, and general deterioration in places. Striping is faded. ADA markings and accessible routes are inadequate. Repairs to the asphalt pavement, concrete curb, and pavement markings should be made.
G2030 Pedestrian Paving	1970	1970	3	7	MK 08/27/13	There are two (2) exposed aggregate patios, one at the front of the building, and one at the southwest corner. Both have treated wood separating the concrete panels. There is a concrete sidewalk along the perimeter of about half of the west (104th Street) parking lot. There are 8-foot wide asphalt walkways south of the building accessing the parking lots, and around the playground area. There are several sections of gravel walkways throughout the site. Aggregate patios are dated and repaired but generally in good to fair condition. They are functional, though not highly attractive. Other walks are in good to fair condition. The asphalt walks should be repaired where roots have uplifted the pavement. Install joint filler in concrete walk joints where gaping. Repair cost

Facility Summary

City of Redmond
Hartman Park Site
Hartman Park Infrastructure

17535 NE 104th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2030 Pedestrian Paving						estimated to be less than \$2,000 threshold.
G2040 Site Development	2000	2000	3	17	MK 08/27/13	Playground with three (3) play structures in a wood chip bed. Fixed site benches and picnic tables near the playground. Metal bike rack at pool building entry. A second concrete bike rack is near the entry. Playground and site fixtures are in good condition. The concrete bike rack has no means for locking bikes. (Less than \$2,000 to correct.)
G2050 Landscaping	1970	1970	4	10	MK 08/27/13	Site is mostly wooded with mature conifer trees and native plant understory. Ground cover is bark or grass. There is limited landscaping near the front entry. Plants are in good condition. Some ornamental plantings are recommended near the front entry (less than \$2,000). Large trees drop excessive debris on roof; assess and trim/remove as needed.
Site Civil / Mechanical Utilities						
G3010 Water Supply	1970	1970	3	7	MK 08/27/13	Water service to building provided from City of Redmond system. No known issues.
G3020 Sanitary Sewer	1970	2010	3	7	MK 08/27/13	Sanitary sewer service to building provided from City of Redmond system. No known issues.
G3030 Storm Sewer	1970	1970	3	7	MK 08/27/13	Site storm water runoff is collected in an underground pipe and catch basin system. Roof drains generally connect to underground piping. Storm drains likely connect into City of Redmond system.

Facility Summary

City of Redmond
Hartman Park Site
Hartman Park Infrastructure

17535 NE 104th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Civil / Mechanical Utilities						
G3030 Storm Sewer						No known issues.
G3040 Heating Distribution	1970	1970	4	1	MK 08/27/13	Underground storage tank to east, north of boiler room. Underground storage tank appears abandoned in place. Investigate and decommission per applicable regulations if required. (Less than \$2,000 for investigation.) See building's HVAC section for removal.
G3060 Fuel Distribution	1970	1970	3	7	MK 08/27/13	Natural gas meter at southeast corner of building. No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	1970	1970	3	7	MK 08/27/13	Underground electric service to the building. No known issues.
G4020 Site Lighting	1970	2011	3	20	MK 08/27/13	Approximately 16 wall lights mounted on the exterior of the building. Recently upgraded. Pole lights throughout the site in two (2) parking lots and along pedestrian walkways. Pre-survey comments indicate the fixtures in the parking lot are old. Assume upgrade of pole lights is needed. Building wall pack light fixtures were replaced in 2011.
Other Site Construction						
G9090 Other Site Systems	2000	2000	4	10	MK 08/27/13	Approximately 8-foot by 10-foot wood storage shed on pier blocks at northeast corner of the building. Shed appears to be in good condition. Use unknown; condition inside unknown.

Facility Summary

City of Redmond

Hartman Park Site

Hartman Park Swimming Pool Building

17535 NE 104th Street
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 12,554
Year Of Original Construction 1970
Facility Use Type Natatorium
Construction Type Heavy
of Floors 1
Energy Source Gas
Year Of Last Renovation 1996
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.0			
Facility Condition Index (FCI)	0.23			
Current Replacement Value (CRV)	\$6,805,000	Predicted Renewal Budget (6 yrs)	\$1,383,000	\$1,340,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$2,687,000	\$2,361,000
		Observed Deficiencies (6 yrs)	\$3,177,000	\$3,029,000
		Observed Deficiencies (ALL)	\$3,177,000	\$3,029,000
		Opportunity Total Project Cost	\$2,066,000	N/A

Facility Condition Summary

Architectural:

The Redmond Pool is a Forward Thrust fixed pool that was turned over from King County to Redmond in 2010. It is a concrete frame and hollow brick structure with concrete (pre-cast) roof structure. There is a large skylight over the pool with wood decking. A lobby and men's and women's changing rooms serve the facility.

Electrical:

The building has a 400A service, 208/120V 4-wire underground from Puget Sound Energy power pole. Building lighting inside is an all fluorescent system with minor (two) incandescent wall cylinders at the lockers. Building outdoor lighting has one (1) old light by the back door of the mechanical room, the building perimeter has newer wall mounted high intensity discharge (HID) fixtures. Parking lighting is old; poles are square and round type with shoebox fixtures, HID type. All wiring are installed in conduits, except the low voltage wiring. All devices are 15A and 20A type grounding receptacles with switches. Building has no generator. Building has new fire alarm system and new security alarm system. Building has no data/voice wiring structures.

Mechanical:

Built in 1970 by King County, condemned and closed in the 2000s, then sold to the City of Redmond in 2010. Significant improvements were completed by King County in 1996 including new HVAC exhaust fans and return air duct, new light fixtures, and new roof and parapet cap; and by City of Redmond in 2010 including pool filters, sewer connection, and pool deck finishes. Small storage building (<100 sf) to north of mechanical room.

HVAC includes two (2) gas-fired hot water boilers serving pool heating, pool room heating, and domestic hot water heating. Pool room HVAC includes one (1) air handling unit (AHU) supplying underground supply air duct to perimeter floor diffusers, with high returns; two (2) lobby and locker room make-up air units (MAU) and eight (8) exhaust fans (EF).

Plumbing is city water and sewer with full locker room water closets, urinals, lavatories, and gang showers.

No fire sprinklers.

Facility Summary

City of Redmond
Hartman Park Site

Hartman Park Swimming Pool Building

17535 NE 104th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				2.4					
Foundations									
A1010	Standard Foundations	1970	1970	2	40	GA	08/29/13	Concrete stem walls. No signs of failure, but given slab on grade failure, especially at the east side, further investigation is recommended. One (1) horizontal crack observed. Uninsulated.	
A1020	Special Foundations	1970	1970	2	40	GA	08/29/13	Basement for this building is assumed to be the below grade mechanical space. It was reportedly abandoned and previously flooded, but no signs remaining (i.e. wall staining).	
A1030	Slab On Grade	1970	2010	4	10	GA	08/29/13	The interior slabs are exposed aggregate, reported fixed and sealed in 2010. There are signs of settling in several areas. Cracks and spalling present hazards to barefoot pool users. Washington Administration Code (WAC) requires decks to be "easily cleanable". The existing aggregate can be difficult to clean. Some ponding was seen on the pool decks.	
Basements									
A2020	Basement Walls	1970	1970	2	40	GA	08/29/13	See "Special Foundations" section for basement.	
B Shell				3.0					
Superstructure									
B1020	Roof Construction	1970	1970	2	40	GA	08/29/13	Roof is mostly concrete precast spans; signs of leakage at joints. Beams at skylight area show corrosion at underside. Wood decking at skylight over pool. The wood shows signs of water staining. This may be from condensation, not necessarily roof leaks, because the stains seem to be uniform all over the wood decking.	

Facility Summary

City of Redmond

Hartman Park Site

Hartman Park Swimming Pool Building

17535 NE 104th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
B Shell			3.0			
Superstructure						
B1020 Roof Construction						
Exterior Closure						
B2010 Exterior Walls						
	1970	1970	3	20	GA 08/29/13	Walls are hollow brick between concrete pilasters. Exterior shows some signs of staining from rust assumed to be interior rebar. Suggest future investigation (infrared imaging, ultrasonic, or destructive testing). One location has major damage with bricks broken. Natatorium is currently holding negative pressure, but that may not have always been the case. High humidity and positive pressure could have put moisture into walls. Only one location (at the patio) showed spalling.
B2020 Exterior Windows						
	1970	1970	4	5	GA 08/29/13	Storefront type window system. The windows show signs of condensation and some possible air seal breaks.
B2030 Exterior Doors						
	1970	1970	4	5	GA 08/29/13	Storefront doors. Several closers for the exterior doors are rusting. Reports of doors sticking.
Roofing						
B3010 Roof Coverings						
	1970	1996	5	0	GA 08/29/13	Torch down roof with minimal, if any, insulation. Metal mansard. One (1) leak observed under scupper at natatorium roof (above the staff room). Roof does not drain well over entry/locker room portion of the building; several bubbles observed under membrane. No overflow roof drains; lots of tree debris means constant maintenance. Scuppers are OK but downspouts are leaking; temporary PVC needs to be replaced. Much of the metal roof is dented and the paint is peeling off of the galvanized metal.
B3020 Roof Openings						

Facility Summary

City of Redmond

Hartman Park Site

Hartman Park Swimming Pool Building

17535 NE 104th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				3.0					
Roofing									
B3020	Roof Openings	1970	2010	4	5	GA	08/29/13	Two (2) long, thin skylights at locker rooms. Array of nine (9) pyramids sit within a wood deck area over the deep end of the pool. The skylights at the men's locker room have been replaced. The women's still have an old Kalwall type which should be replaced. The pyramids over the pool (natatorium skylights) seem to be in fair condition, but are not insulated.	
B3030	Projections	1970	1995	3	20	GA	08/29/13	Roof parapets are built-up with metal caps and counter flashing over the original mansard metal roofs. The brown color distinguishes the difference. Parapets are not very high.	
C Interiors				3.8					
Interior Construction									
C1010	Partitions	1970	1970	2	20	GA	08/29/13	The interior walls are hollow brick masonry. The interior walls are in good shape. They are not exposed to the elements.	
C1020	Interior Doors	1970	1970	4	5	GA	08/29/13	Most interior doors are wood. Reports of doors sticking. Most of the wood doors show wear and signs of rot at the base.	
C1030	Fittings	1970	1996	3	7	GA	08/29/13	Metal lockers in each changing room. Wall mounted mirrors in changing rooms. Lobby reception desk. Staff/lifeguard station. The lobby reception desk appears to be about 15 years old; dated but in good condition. Staff/lifeguard counter seems original. Locker room lockers and mirrors are relatively new and in good condition.	

Facility Summary

City of Redmond

Hartman Park Site

Hartman Park Swimming Pool Building

17535 NE 104th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs		Surveyor/ Survey Date	Comments	
C Interiors				3.8					
Staircases									
C2010	Stair Construction	1970	1970	3	20	GA	08/29/13	Metal stairs at mechanical room basement. Some signs of wear and deterioration, but overall in good condition.	
Interior Finishes									
C3010	Wall Finishes	1970	1970	3	20	GA	08/29/13	Tile over brick in changing rooms. Tile is dated, but in good condition.	
C3020	Floor Finishes	1970	2010	4	10	GA	08/29/13	Tile at changing rooms is dated, but not showing signs of structural failure. At some point, a grit was added to some sort of a sealer over the tile. The grit on the tile is not uniform and has darkened, making the floors look dirty.	
C3030	Ceiling Finishes	1970	1970	4	5	GA	08/29/13	Acoustical ceiling tile over the pool. Wood decking at pool skylights. Exposed concrete. The ceiling tiles are sagging and there are six (6) to eight (8) that are damaged/broken; repair and replace. The wood ceiling at the pool skylights are stained; clean and re-stain (less than \$2,000). Exposed concrete is not painted. Water stains are evident from roof leaks; clean and reseal (less than \$2,000).	
D Services				3.8					
Vertical Transportation									
D1090	Other Conveying Systems	1970	1970	3	6	DCS	08/29/13	Lifting eye in mechanical room for equipment services or replacement. Appears too small for larger equipment. Opportunity to add motorized chain fall if used regularly (less than \$2,000).	
Plumbing									

Facility Summary

City of Redmond

Hartman Park Site

Hartman Park Swimming Pool Building

17535 NE 104th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.8			
Plumbing						
D2010 Plumbing Fixtures	1970	1996	3	10	DCS 08/29/13	Porcelain water closets, urinals, and lavatories with chrome trim. Stainless steel gang showers. Drinking fountains and plumbed spittoon in pool room. Drinking fountain in lobby. No kitchenette. Fixtures are in fair condition; some trim is in poor condition. Several flushing fixtures are slow to flush (see "Sanitary Waste" section below).
D2020 Domestic Water Distribution	1970	1970	4	5	DCS 08/29/13	Three-inch city water service entry at basement mechanical room with backflow prevention, no pressure reducing valve, supplying: pool make-up, domestic cold water, and domestic hot water. Mix of copper and steel piping. Heavy corrosion at service entry; lighter corrosion elsewhere. Vented cylindrical 1,000-gallon domestic hot water storage tank heated by boiler hot water immersed heat exchanger; new in 2002 including domestic hot water circulation pump. Outside hose bibs OK.
D2030 Sanitary Waste	1970	1970	4	5	DCS 08/29/13	Cast iron drain, waste, and vent (DW&V), pool deck drains, and floor drains in locker room and other spaces. Some flushing fixtures are slow to drain. Some pool deck drains are slow or do not drain.
D2040 Rain Water Drainage	1970	1996	4	3	DCS 08/29/13	Mostly flat roof draining to perimeter scupper boxes with PVC downspouts to site storm drain. Lobby and locker room area flat roof to internal roof drains. Many scupper boxes are blocked by debris. PVC downspouts are temporary, leaking, and deteriorating. Rain water is ponding and spilling down the side of the building. No overflow roof drains for interior roof drains.
D2090 Other Plumbing Systems	1970	1996	4	5	DCS 08/29/13	Pool system includes: 1. Filter tank, approximately 1,000-gallons with two (2) diatomaceous earth filter banks and

Facility Summary

City of Redmond

Hartman Park Site

Hartman Park Swimming Pool Building

17535 NE 104th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.8			
Plumbing						
D2090 Other Plumbing Systems						heating heat exchanger tube bundle. 2. Main pool pump; 650-gpm at 70 feet-tdh, 20-hp. 3. Chlorine tablet based sterilization. 4. CO2-based pH control. 5. Piping, valves, and controls. See "Heat Generating Systems" section below for boilers. All are in poor to fair condition, except small portion of replaced piping and some newer pool water chemistry sub-systems. A full assessment of the pool mechanical system is recommended.
HVAC						
D3010 Energy Supply	1970	1996	2	25	DCS 08/29/13	Natural gas from Puget Sound Energy via rotary meter in wire cage enclosure; estimated capacity is 5,000-cfh. Coated black iron pipe to boilers and two (2) make-up air units serving locker rooms and lobby. Abandoned underground storage tank on east side, north of boiler room. Natural gas service and piping is in good condition. See B-series for opportunity to insulate the building to reduce energy use and increase occupant/user comfort. Abandoned underground storage tank should be decommissioned per code.
D3020 Heat Generating Systems	1970	2002	3	10	DCS 08/29/13	Two (2) Weil-McLain gas-fired hot water boilers, each with dedicated minimum flow circulation pumps. Boilers serve natatorium (pool room) space heating coil, pool water heat exchanger (in filter tank), and domestic hot water tank heat exchanger. Concrete lined stack. While boilers are only 10-years old, reported abandonment and boiler room flooding have shortened boiler life. See "Cooling Generating Systems" section below for heat recovery opportunity.
D3030 Cooling Generating Systems	1970	1996	3	7	DCS 08/29/13	Cooling is currently ventilation

Facility Summary

City of Redmond

Hartman Park Site

Hartman Park Swimming Pool Building

17535 NE 104th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.8			
HVAC						
D3030 Cooling Generating Systems						(economizer/cooling) only; humidity control is similarly ventilation only. Humidity control by ventilation only is marginal, resulting in condensation on interior surfaces. Opportunity to upgrade to modern direct expansion (DX)-based dehumidification system with heat recovery to both space and pool water.
D3040 HVAC Distribution Systems	1970	1996	4	3	DCS 08/29/13	Natatorium built-up air handling systems include: economizer, hot water heating coil, supply and return fans, underground metallic supply duct, and overhead return air duct. Underground duct on east side of natatorium has collapsed filling with fill and bedding material, resulting in failure of slab on grade and other structural and architectural elements above. Perimeter supply air risers are corroded and damaged. Air flow is unbalanced due to damage.
D3050 Terminal and Package Units	1970	1996	4	1	DCS 08/29/13	Two (2) make-up air units serving locker room and lobby; north (women's) is 192-mbh, south (men's and lobby) is 396-mbh and 3,520-cfm. The units are Weather Rite gas direct-fired and appear to be original (1970). Eight (8) exhaust fans replaced in 1996. Both make-up air units are past end of life. Exhaust fans are in fair condition.
D3060 Controls and Instrumentation	1970	1996	4	3	DCS 08/29/13	Mix of older and somewhat newer controls. Sequences unknown with poor performance and comfort. Replace with new controls.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1970	1970	5	0	DCS 08/29/13	No fire sprinkler. Install fire sprinkler.

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Hartman Park Site

Hartman Park Swimming Pool Building

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Facility Components

Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services				3.8			
Fire Protection							
D4030	Fire Protection Specialties	1970	1996	3	10	DCS 08/29/13	Fire extinguishers. Inspection tags are current.
Electrical							
D5010	Electrical Service and Distribution	1970	1970	4	4	RA 08/29/13	Building main panel is 400A, 208/120V, 4-wire, main breaker with a distribution in one section. Feeds couple panels adjacent to it and some panels in janitor room. Main panel is original building equipment, Federal Pacific FPE. All branch panels are original building equipment and are old and rusty. All equipment is over 40 years old.
D5020	Lighting and Branch Wiring	1970	1996	4	5	RA 08/29/13	Fluorescent vapor tight lights over the pool perimeter, surface mounted. Office and staff room have 1x4 2T fluorescent recessed lights, and vapor tight 1x4 2T lights in locker rooms. Branch wiring and devices are original with the building; old raceways and boxes. The devices are not all GFI (ground fault interrupter) around the pool. Interior lighting is in working, generally good, condition. Some fixtures are missing lenses or have broken lenses; some lamps/ballasts are not working. Minor maintenance required. All wiring devices and branch wiring are over 40 years old, past end of life. Circuits are tripping in office.
D5030	Low Voltage Communication Security and Fire Alarm	1970	2013	1	25	RA 08/29/13	Building fire alarm system is new. Fire alarm control panel is Silent Knight #5700 and is located in the front office. Building security alarm system is new. Security alarm panel is located in the janitor room with key pad at front lobby; DSC equipment. Fire alarm system is in good working condition. Security alarm system is in good working condition. Building has data/voice wiring structure and devices.

Facility Summary

City of Redmond

Hartman Park Site

Hartman Park Swimming Pool Building

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Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				3.8					
Electrical									
D5090	Other Electrical Systems	1970	1996	3	5	RA	08/29/13	Building has no generator. Building has emergency backup lights in lobby, lockers, and around the pools near doors. Emergency lights are in working condition.	
E Equipment and Furnishings				2.0					
Equipment									
E1010	Commercial Equipment	1995	1996	5	0	GA	08/29/13	There is a laundry dryer for staff towels in electrical room. It makes a lot of noise and is likely to break down. Laundry is past useful life. (Less than \$2,000.)	
E1020	Institutional Equipment	2010	2010	3	7	GA	08/29/13	There is a sound system that plays music in the natatorium. A small monitor on one wall. Score/timing equipment for swim meets. The sound system was observed in use. All equipment appears to be in good shape.	
E1090	Other Equipment	1970	1970	2	7	GA	08/29/13	There is some staff food service equipment (microwave and fridge) in electrical room (originally labeled as storage room). Pool athletic equipment is stored on the pool deck, including lines, play equipment, training equipment, and more. The staff do not have a proper location to prepare food. The pool equipment stored on the deck appears messy and intrudes on the code required deck clearances/widths.	
Furnishings									
E2010	Fixed Furnishings	1970	1970	5	0	GA	08/29/13	The walk-off mat at the entry should be replaced. The wood grandstand seating is broken. A section of the wood grandstands were struck in the open position and appears crooked.	

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Hartman Park Site

Hartman Park Swimming Pool Building

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Facility Components

Facility Components							
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
E Equipment and Furnishings				2.0			
Furnishings							
E2010	Fixed Furnishings						Replace with retractable grandstands.
E2020	Moveable Furnishings (Capital Funded Only)	1996	1996	3	7	GA 08/29/13	Chairs in lobby. Aged but functional.
F Special Construction							
Special Construction							
F1040	Special Facilities	1970	2010	3	10	GA 08/29/13	In-ground indoor swimming pool. Six (6) lanes. Gutter is all around perimeter of pool set up with a 25-yard lap swimming at deep end. A moveable bulkhead separates a shallow end for lessons, etc. One-meter diving board (closed). The plaster is stained and some patching visible. The main drains have been updated (2010?) to comply with the Virginia Graeme Baker (VGB) Pool and Spa Safety Act. Two (2) covers can be seen from the deck and patching of the plaster indicates the piping may have been modified to equalize the drains. Verify that the permits for the work and final pool data forms from the Health Department are on file. ADA has been met with portable stairs at the shallow end and a lift. No lift is at the other side (deep end) of the bulkhead, which is required. Pool depth markings are not to code. Only mark 3-feet, 5-feet, and 14-feet. Need at all slope changes and at 25-inches or less apart.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Hartman Park Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Hartman Park Infrastructure	Site Improvements	\$50,000	\$15,000	\$13,000	\$39,000	\$117,000	\$111,309
	Site Electrical utilities	\$3,200	\$960	\$832	\$2,496	\$7,488	\$6,802
	Facility Total	\$53,200	\$15,960	\$13,832	\$41,496	\$124,488	\$118,112
Hartman Park Swimming Pool Building	Foundations	\$39,500	\$11,850	\$10,270	\$30,810	\$92,430	\$87,511
	Exterior Closure	\$188,000	\$56,400	\$48,880	\$146,640	\$439,920	\$400,601
	Roofing	\$305,534	\$91,660	\$79,439	\$238,317	\$714,950	\$683,137
	Interior Construction	\$46,000	\$13,800	\$11,960	\$35,880	\$107,640	\$101,605
	Interior Finishes	\$129,000	\$38,700	\$33,540	\$100,620	\$301,860	\$289,081
	Vertical Transportation	\$5,600	\$1,680	\$1,456	\$4,368	\$13,104	\$13,104
	Plumbing	\$140,439	\$42,132	\$36,514	\$109,542	\$328,627	\$301,319
	HVAC	\$282,662	\$84,799	\$73,492	\$220,476	\$661,429	\$654,264
	Fire Protection	\$56,493	\$16,948	\$14,688	\$44,065	\$132,194	\$132,194
	Electrical	\$95,017	\$28,505	\$24,704	\$74,113	\$222,339	\$206,571
	Equipment	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$11,700
	Furnishings	\$9,800	\$2,940	\$2,548	\$7,644	\$22,932	\$22,932
	Special Construction	\$54,662	\$16,399	\$14,212	\$42,636	\$127,909	\$124,584
	Facility Total	\$1,357,707	\$407,312	\$353,004	\$1,059,011	\$3,177,033	\$3,028,604
Site Total		\$1,410,907	\$423,272	\$366,836	\$1,100,507	\$3,301,521	\$3,146,715

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Hartman Park Site

Total Observed Deficiency Repair Direct Cost : \$1,410,907
Total Observed Deficiency Repair Direct Cost (Present Value): \$1,344,750

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Hartman Park Infrastructure			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$50,000
System: Site Improvements			Total System Deficiency Repair Cost (Present Value):					\$47,568
Parking Lots								
Parking Lots	4	3	Pavement is deteriorating with alligatoring, cracking, and wear. Concrete curb is of poor quality concrete and is spalling. Curbs are cracking and displaced in some locations. Pavement markings are faded or lacking.	In west lot, provide 50 sy of asphalt patching, then overlay lot with 1.5-inches Class B asphalt. In east lot, clean and seal coat asphalt. In both lots, remove and replace approximately 300 lf of extruded concrete curb and provide ADA accessible routes, and all new pavement markings.	1	\$40,000.00	ls	\$40,000
		2013						
Landscaping								
Trees	4	1	Large trees drop excessive material on roof.	Assess, trim, or remove trees as needed.	10	\$1,000.00	ea	\$10,000
		2013						
Facility: Hartman Park Infrastructure			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$3,200
System: Site Electrical utilities			Total System Deficiency Repair Cost (Present Value):					\$2,907
Site Lighting								
Lighting	4	5	Pole lights in parking lots are reported to have old fixtures.	Replace pole lights with energy efficient light emitting diode (LED) fixtures.	8	\$400.00	ea	\$3,200
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Hartman Park Site

Total Observed Deficiency Repair Direct Cost : \$1,410,907
Total Observed Deficiency Repair Direct Cost (Present Value): \$1,344,750

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
		Survey Year						
Facility:	Hartman Park Swimming Pool Building				Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$39,500
System:	Foundations				Total System Deficiency Repair Cost (Present Value):			\$37,398
Standard Foundations								
Foundation	5	0	Slab on grade is failing in several areas, especially to the east, possibly due to foundation issues.	Investigate integrity of foundation in areas of slab on grade failure at north and south portions of east pool room outside wall.	2	\$1,000.00	ea	\$2,000
		2013	Concrete footing. Concrete stem walks.					
Slab On Grade								
Slab on Grade	4	3	Slab currently is cracking and spalling in areas with past repairs visible. Suspect subgrade issues (related to underground duct issues).	Replace slabs or shore up and add a top coat for new, uniform, non-slip surface.	2,500	\$15.00	sf	\$37,500
		2013						
Facility:	Hartman Park Swimming Pool Building				Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$188,000
System:	Exterior Closure				Total System Deficiency Repair Cost (Present Value):			\$171,197
Exterior Walls								
Walls	4	2	Walls may be deteriorating from inside-out. Pilasters show exterior rust assumed from corroding (failing) interior rebar.	Conduct testing at worst location to determine cause of pilaster rust marks and assess structural integrity.	2	\$1,000.00	ea	\$2,000
		2013						
Exterior Windows								
Storefront Windows	4	5	Aluminum frame with double pane glass. Some seals look broken, condensation is a big issue unless building is heated up to 85 degrees.	Replace with new thermally broken frames and insulated glass.	3,000	\$60.00	sf	\$180,000
		2013						
Exterior Doors								

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Hartman Park Site

Total Observed Deficiency Repair Direct Cost : \$1,410,907

Total Observed Deficiency Repair Direct Cost (Present Value): \$1,344,750

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
		Survey Year						
Storefront Doors	4	2	Closers and hardware show signs of deterioration.	Replace doors.	60	\$100.00	sf	\$6,000
		2013	In addition, see the deficiency for the "Exterior Windows" section above.					
Facility: Hartman Park Swimming Pool Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$305,534
System: Roofing					Total System Deficiency Repair Cost (Present Value):			\$291,939
Roof Coverings								
Roof Coverings	4	1	Various issues with roof coverings (see "Inspection" Observed Deficiency noted in this section). Following full inspection, repair and replace as needed.	Budget to repair and replace roof coverings and minimal tapered insulation (to slope to drain) as recommended in the roofing inspection.	12,554	\$7.00	sf	\$87,878
		2013						
Roof Insulation	4	3	Roofing has minimal, if any, insulation.	Add insulation to the roof assembly. Tear off existing roof and add insulation to meet current energy code. Roof parapets would be raised.	12,554	\$14.00	sf	\$175,756
		2013						
Inspection	5	0	Multiple issues with roof coverings. See plumbing sections for downspouts and overflow roof drains.	Conduct detailed roof coverings inspection; repair and replace as recommended.	1	\$5,000.00	ls	\$5,000
		2013	Scuppers, roof drains, membrane, trees, roof drains and overflow roof drains, metal roof.					
Roof Openings								
Skylights	4	3	The women's changing room skylights are original and have yellowed; some cracks are visible. The natatorium skylights appear to be original and have little thermal insulating value.	Upgrade skylights to increase energy efficiency, meet current code, and extend life.	13	\$1,300.00	ea	\$16,900
		2013						

Projections

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Hartman Park Site

Total Observed Deficiency Repair Direct Cost : \$1,410,907
Total Observed Deficiency Repair Direct Cost (Present Value): \$1,344,750

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
		Survey Year						
Parapet/Mansard	4	3 2013	Parapets/mansard is bent, damaged, and peeling apart.	Repair, repaint, and replace parapets/mansard as needed.	1,000	\$20.00	sf	\$20,000
Facility: Hartman Park Swimming Pool Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$46,000
System: Interior Construction					Total System Deficiency Repair Cost (Present Value):			\$43,421
Interior Doors								
Interior Doors	4	3 2013	Doors have dry rot, peeling finish, and are failing and sticking.	Replace doors and hardware in existing frame.	20	\$2,300.00	ea	\$46,000
Facility: Hartman Park Swimming Pool Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$129,000
System: Interior Finishes					Total System Deficiency Repair Cost (Present Value):			\$123,539
Floor Finishes								
Floor Finishes	4	2 2013	Current floor finishes (tile at changing rooms) look dated. The grit added makes them look dirty and poorly maintained.	Replace tile (or cover if possible) with an elastomeric flooring system with embedded texture for non-slip surface.	2,000	\$16.00	sf	\$32,000
Tile Floor	4	1 2013	Locker room floor is dirty and gritty with excessive complaints from users, pool staff, and maintenance.	Remove top floor surface. Replace existing tile with terrazzo tile.	2,000	\$16.00	sf	\$32,000
Ceiling Finishes								
Ceiling Finishes	4	3 2013	The acoustic ceiling tiles over the pool deck are sagging and about six (6) are broken. The natatorium environment is tough on these tiles and the metal track.	Remove acoustical ceiling tile system and replace with an acoustic system designed for natatoriums.	10,000	\$6.50	sf	\$65,000

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 4 of 8

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Hartman Park Site

Total Observed Deficiency Repair Direct Cost : **\$1,410,907**
Total Observed Deficiency Repair Direct Cost (Present Value): **\$1,344,750**

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility:	Hartman Park Swimming Pool Building				Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$5,600
System:	Vertical Transportation				Total System Deficiency Repair Cost (Present Value):				\$5,600
Other Conveying Systems									
Roof Access	5	0	No permanent roof access.	Install permanent roof access ladders to low and high roofs.	2	\$2,800.00	ea	\$5,600	
2013									
Facility:	Hartman Park Swimming Pool Building				Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$140,439
System:	Plumbing				Total System Deficiency Repair Cost (Present Value):				\$128,769
Plumbing Fixtures									
Plumbing Fixtures	4	3	Some 1996 plumbing fixture trim are slow or difficult to operate.	Test, adjust, and replace trim as needed.	20	\$200.00	ea	\$4,000	
2013									
Domestic Water Distribution									
Service Distribution	4	5	Water service and distribution at end of life with heavy corrosion at service entry.	Schedule replacement of distribution pipe.	12,554	\$3.50	sf	\$43,939	
2013									
Sanitary Waste									
Drain, Waste, and Vent	4	5	Some fixtures slow to flush and drain.	Test, inspect, and repair as needed.	10	\$200.00	ea	\$2,000	
2013									
Pool Deck Drains	4	2	Some drains are not draining; reportedly drain piping is corroded and/or crushed under the slab on grade.	Test, inspect, and repair or replace pool deck drains as needed.	300	\$15.00	lf	\$4,500	
2013									
Rain Water Drainage									
Overflow Roof Drains	5	0	No overflow roof drains for lobby and locker room roof area.	Install overflow roof drains per code.	2	\$3,000.00	ea	\$6,000	
2013									

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Hartman Park Site

Total Observed Deficiency Repair Direct Cost : \$1,410,907

Total Observed Deficiency Repair Direct Cost (Present Value): \$1,344,750

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
		Survey Year						
Downspouts	4	2 2013	PVC roof drain downspouts are temporary and deteriorating.	Install permanent roof drain downspouts.	10	\$500.00	ea	\$5,000
Other Plumbing Systems								
Pool System	4	5 2013	Filter tank, pool pump, pipe, valve, and fittings, and controls are all original equipment; all are at or near end of useful life and using old technology.	Replace equipment with modern pool waste systems.	1	\$75,000.00	ls	\$75,000
Facility: Hartman Park Swimming Pool Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$282,662
System: HVAC					Total System Deficiency Repair Cost (Present Value):			\$279,600
Energy Supply								
Underground Storage Tank	4	2 2013	Underground storage tank is reportedly abandoned in place.	Decommission/remove underground storage tank per code.	1	\$5,000.00	ls	\$5,000
HVAC Distribution Systems								
Ductwork	5	0 2013	Underground duct has corroded, collapsed, and failed, apparently resulting in structural damage to slab on grade above.	Replace duct.	200	\$1,000.00	ft	\$200,000
Terminal and Package Units								
Make-Up Air Unit	4	1 2013	Men's and women's make-up air units are well past end of life.	Replace make-up air units and associated ductwork and grilles, registers, and diffusers (GRD).	2	\$20,000.00	ea	\$40,000
Controls and Instrumentation								
Controls	4	3 2013	Mix of older and some newer controls with unclear sequence. Marginal comfort and poor humidity control.	Replace with DDC controls.	12,554	\$3.00	sf	\$37,662

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Hartman Park Site

Total Observed Deficiency Repair Direct Cost : \$1,410,907
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Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Hartman Park Swimming Pool Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$56,493
System: Fire Protection					Total System Deficiency Repair Cost (Present Value):			\$56,493
Fire Protection Sprinkler Systems								
Fire Sprinkler System	5	0 2013	No fire sprinkler.	Install fire sprinkler.	12,554	\$4.50	sf	\$56,493
Facility: Hartman Park Swimming Pool Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$95,017
System: Electrical					Total System Deficiency Repair Cost (Present Value):			\$88,278
Electrical Service and Distribution								
Electrical Service Panel	4	4 2013	Main service panel is old. All equipment panel is old, obsolete, and rusty.	Replace electrical service panels, branch panels, and feeders.	12,554	\$7.25	sf	\$91,017
Lighting and Branch Wiring								
Branch Wiring	5	0 2013	Lack of circuits and receptacles in front office; circuits are tripping.	Add outlets and circuits in front office.	1	\$4,000.00	ls	\$4,000
Facility: Hartman Park Swimming Pool Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$5,000
System: Equipment					Total System Deficiency Repair Cost (Present Value):			\$5,000
Other Equipment								
Pool Equipment Storage	5	0 2013	Improper pool equipment storage violates code.	Provide code compliant storage and egress/safety.	1	\$5,000.00	ls	\$5,000
Facility: Hartman Park Swimming Pool Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$9,800
System: Furnishings					Total System Deficiency Repair Cost (Present Value):			\$9,800
Fixed Furnishings								
Wood Grandstands	5	0 2013	The original wood grandstand seating is broken and cannot retract.	Replace grandstands with new manual retractable grandstands. 20 feet 1x5 tiers high for both.	2	\$4,900.00	ea	\$9,800

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Hartman Park Site

Total Observed Deficiency Repair Direct Cost : \$1,410,907

Total Observed Deficiency Repair Direct Cost (Present Value): \$1,344,750

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Hartman Park Swimming Pool Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$54,662
System: Special Construction					Total System Deficiency Repair Cost (Present Value):			\$53,241
Special Facilities								
Pool Safety Remediation	4	2	Address any safety issues identified in pool safety report (see observed deficiency for Pool Safety Report for details).	Repair, replace, or modify as recommended in safety study.	12,554	\$3.00	ls	\$37,662
		2013						
Pool Safety Report	5	0	No recent pool safety study/report.	Complete full pool safety inspection.	1	\$5,000.00	ls	\$5,000
		2013						
ADA Lift	5	0	Currently ADA code is not being met for access to the pool, since the existing access is only at the shallow end, and the bulkhead prevents access to the rest of the pool.	Add a new deck-mounted ADA lift to serve the deep end of the pool; 300-lbs, HiLo, armrests.	1	\$7,000.00	ea	\$7,000
		2013	Mounted lift on pool deck to serve deep end.					
Diving Board	5	0	The existing one-meter diving board is corroded and appears to be shut down.	Analyze if the pool diving profile meets current code and replace the diving board (and/or add small water slide).	1	\$5,000.00	ea	\$5,000
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Opportunity Summary By Subsystem

City of Redmond						
Site: Hartman Park Site		Total Site Opportunity Cost: \$882,918				

Subsystem		Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Hartman Park Swimming Pool Building							
System: Foundations		Total Cost: \$4,500					
A1010	Standard Foundations						
		Insulate the exterior slabs to meet current energy code.	Insulate slab.	300.00	\$15.00	If	\$4,500
Facility: Hartman Park Swimming Pool Building							
System: Exterior Closure		Total Cost: \$288,000					
B2010	Exterior Walls						
		Add insulation to exterior walls for increased user comfort and energy savings. This would also alter/update the look of the building.	Add an insulating wall system to the exterior and seal interior.	8,000.00	\$36.00	sf	\$288,000
Facility: Hartman Park Swimming Pool Building							
System: Roofing		Total Cost: \$125,540					
B3010	Roof Coverings						
		Roofing has minimal, if any, insulation. Adding insulation can improve pool user guest and staff comfort, lower energy use, and reduce moisture condensation.	Add insulation to the roof assembly. Tear off existing roof and add insulation to meet current energy code. Roof parapets would be raised.	12,554.00	\$10.00	sf	\$125,540
Facility: Hartman Park Swimming Pool Building							
System: Plumbing		Total Cost: \$55,000					
D2030	Sanitary Waste						
		Pool filter back wash and deck drain water is currently discharged to sanitary sewer. This water can be used for flushing water closets and urinals or for irrigation.	Install storage tank, pump and flushing water piping to water closets and urinals.	1.00	\$30,000.00	ls	\$30,000
D2040	Rain Water Drainage						
		Rain water is collected from roof and discharged to site storm system. This relatively clean rain water can be filtered and used as pool water make-up, flushing fixtures, or lavatory use.	Install 10,000-gallon rain water harvesting (RWH) system with pre-filter and make-up to pool water.	1.00	\$25,000.00	ls	\$25,000

Opportunity Summary By Subsystem

City of Redmond

Site: Hartman Park Site

Total Site Opportunity Cost: **\$882,918**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Hartman Park Swimming Pool Building System: HVAC Total Cost: \$250,000						
D3030	Cooling Generating Systems	Current cooling and humidity control is ventilation only. New direct expansion (DX)-cooling technology allows much improved humidity control plus heat recovery to both space and pool water.	1.00	\$200,000.00	ls	\$200,000
D3050	Terminal and Package Units	Existing men's and women's locker room and lobby HVAC is 100% once-through outside air with no heat recovery.	2.00	\$25,000.00	ea	\$50,000
Facility: Hartman Park Swimming Pool Building System: Electrical Total Cost: \$99,878						
D5020	Lighting and Branch Wiring	Original building electrical branches are from 1970, over 40 years old. Opportunity to upgrade existing devices and wiring.	12,554.00	\$7.00	sf	\$87,878
D5030	Low Voltage Communication Security and Fire Alarm	Opportunity for upgrade with a new data/voice system.	1.00	\$12,000.00	ls	\$12,000
Facility: Hartman Park Swimming Pool Building System: Equipment Total Cost: \$60,000						
E1090	Other Equipment	Provide an appropriate staff lounge for preparing food. Add storage capacity for all equipment currently stored on the pool deck.	400.00	\$150.00	sf	\$60,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 2 of 2

Facility Summary

City of Redmond

Maintenance Operations Center Site

Central Stores Warehouse Building 5 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F.	4,500
Year Of Original Construction	1988
Facility Use Type	warehouse with mezzanine
Construction Type	Medium
# of Floors	2
Energy Source	Electric
Year Of Last Renovation	1988
Historic Register	No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.1			
Facility Condition Index (FCI)	0.17			
Current Replacement Value (CRV)	\$1,251,000	Predicted Renewal Budget (6 yrs)	\$28,000	\$27,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$374,000	\$312,000
		Observed Deficiencies (6 yrs)	\$132,000	\$130,000
		Observed Deficiencies (ALL)	\$132,000	\$130,000
		Opportunity Total Project Cost	\$250,000	N/A

Facility Condition Summary

Architectural:

No architectural comments.

Electrical:

The Central Stores Warehouse Building #5 has 200A 120/240V 3-wire service, the main panel is located at the corner of work/storage on the first floor. Service comes underground from Puget Sound Energy transformer outside of the building. The building has two (2) cobra head wall lights outside. Building has fluorescent lighting, mostly fluorescent industrial fixtures, some 2x4 troffers in office. All branch wiring installed in conduits; devices are 15A, grounded. All lighting controls are done by manual switches. Building has a fire alarm system. Building has no security alarm system.

Mechanical:

Two-story pre-engineered metal building including small office to southwest, semi-heated storage room to southeast, small shop to northeast, small lab to northwest, open high bay storage at center east with open lit path to second floor, one (1) toilet room off southeast storage room; second story is open unheated warehouse.

HVAC includes baseboard electric for office, overhead electric unit heaters for semi-heated shop and small storage spaces. Ventilation is natural by operable window for some first floor small spaces, and by operable main warehouse overhead door and second floor peak roof manual ridge vents. Plumbing is minimal with one toilet room and several hose bibs. No fire sprinkler.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Central Stores Warehouse Building 5 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
A Substructure				3.0			
Foundations							
A1010	Standard Foundations	1988	1988	3	63	RD 08/26/13	Poured in place foundation. No deficiencies observed.
A1030	Slab On Grade	1988	1988	3	63	RD 08/26/13	Floor slab. No deficiencies observed.
B Shell				3.0			
Superstructure							
B1010	Floor Construction	1988	1988	3	25	RD 08/26/13	See "Slab on Grade" section above. Second floor wood frame with 2x12 at 12-inch on center on bearing walls, built up beams and 6x16 beams. Plywood deck. Floor feels solid with no apparent deflection.
B1020	Roof Construction	1988	1988	3	25	RD 08/26/13	Corrugated metal roofing on metal purlins on steel bents. Typical pre-engineered metal building. Two (2) internal gutters and two (2) downspouts. Roof drainage has no overflow and downspouts are not connected to the drain.
Exterior Closure							
B2010	Exterior Walls	1988	1988	3	25	RD 08/26/13	Typical corrugated metal siding on metal frame for pre-engineered metal building. Siding damaged by impact in several locations exposing insulation, etc.
B2020	Exterior Windows	1988	1988	3	20	RD 08/26/13	Double glazed metal frame windows. Plastic trim broken and falling off.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Central Stores Warehouse Building 5 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems									
B Shell					3.0				
Exterior Closure									
B2030	Exterior Doors		1988	1988	3	25	RD	08/26/13	Hollow metal doors. Worn but functional condition.
Roofing									
B3010	Roof Coverings		1988	1988	3	15	RD	08/26/13	Corrugated metal roof. In acceptable condition except for drainage. See "Roof Construction" section above.
B3020	Roof Openings		1988	1988	3	15	RD	08/26/13	Roof hatch and limited mechanical openings. No opening assist. No hold open. Bad flashing.
C Interiors					3.0				
Interior Construction									
C1010	Partitions		1988	1988	3	25	RD	08/26/13	Wood frame partitions. No deficiencies reported or observed.
C1020	Interior Doors		1988	1988	3	15	RD	08/26/13	Wood interior doors and frames. Worn but functional.
C1030	Fittings		1988	1988	3	10	RD	08/26/13	Wood, metal, and plastic storage racks and shelving. Random and worn but functional.
Staircases									
C2010	Stair Construction		1988	1988	3	25	RD	08/26/13	Two (2) wooden stairways. Tread overhang and rails not to code.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Central Stores Warehouse Building 5 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
C Interiors				3.0			
Interior Finishes							
C3010	Wall Finishes	1988	1988	3	3	RD 08/26/13	Painted gypsum wall board. Minor isolated repairs needed.
C3020	Floor Finishes	1988	1988	3	3	RD 08/26/13	Carpet in limited areas. Carpet is in acceptable condition.
C3030	Ceiling Finishes	1988	1988	3	8	RD 08/26/13	Limited suspended acoustical ceiling. Isolated tile replacement needed.
D Services				3.4			
Vertical Transportation							
D1090	Other Conveying Systems	1988	1988	5	0	DCS 08/26/13	No hoist. Opportunity to provide hoist. Deficiency for missing roof access ladder, see "Roof Openings" section for roof hatch issue.
Plumbing							
D2010	Plumbing Fixtures	1988	1988	3	10	DCS 08/26/13	One (1) water closet and one (1) lavatory. Fair condition.
D2020	Domestic Water Distribution	1988	1988	3	15	DCS 08/26/13	City water, copper piping, small (5 to 10 gallon) domestic hot water heater and two (2) outside hose bibs. Hose bibs are not installed correctly. Domestic hot water (DHW) piping is not insulated. DHW heater is not installed per code. All less than \$2,000 to address.
D2030	Sanitary Waste	1988	1988	3	10	DCS 08/26/13	City sewer with unknown drain, waste, and vent

Facility Summary

City of Redmond

Maintenance Operations Center Site

Central Stores Warehouse Building 5 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.4			
Plumbing						
D2030 Sanitary Waste						(DW&V) materials inside the warehouse, but assumed ABS. Water closet is somewhat slow flushing but not overly so.
D2040 Rain Water Drainage	1988	1988	4	1	DCS 08/26/13	Concealed gutter behind parapet with downspout to grade. No apparent overflow roof drain system. Needs work. See "Roof Construction" section for Observed Deficiency.
HVAC						
D3050 Terminal and Package Units	1988	1988	4	3	DCS 08/26/13	Electric resistance wall heaters and overhead unit heaters for heated and semi-heated spaces. Operable windows for natural ventilation of small office. No ventilation for semi-heated spaces. Natural ventilation for open warehouse area. Heaters are nearing end of life and provide marginal comfort. Ventilator is marginal. No cooling.
D3060 Controls and Instrumentation	1988	1988	4	3	DCS 08/26/13	Manual thermostats mounted on equipment. Replace with programmable thermostat.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1988	1988	5	0	DCS 08/26/13	No fire sprinkler. Install dry pipe fire sprinkler.
D4030 Fire Protection Specialties	1988	1988	3	10	DCS 08/26/13	Several fire extinguishers. Consider providing extinguisher storage cabinet.
Electrical						

Facility Summary

City of Redmond

Maintenance Operations Center Site

Central Stores Warehouse Building 5 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems								
D Services				3.4				
Electrical								
D5010	Electrical Service and Distribution	1988	1988	2	15	RA	08/26/13	The building has one (1) electrical panel, 200A 120/240V 3-wire Square-D equipment. Panel is in good condition.
D5020	Lighting and Branch Wiring	1988	1988	3	5	RA	08/26/13	The building has mostly fluorescent fixtures, consisting of fluorescent industrial fixtures in storage rooms, mezzanine, and 2x4 troffers in office area. On-off controls are done by switches. Devices are 15A grounded. Building lighting has no automatic controls. Need more outlets in office and work shop.
D5030	Low Voltage Communication Security and Fire Alarm	1988	1988	3	5	RA	08/26/13	Building has a fire alarm system, Kidde KAS-200 system with heat detectors, horn strobes, and pull station. Building has no security alarm system. Building fire alarm system is in working condition. 1988 equipment with newer alarm transmitter in 1998. Building has Cat-6 data/voice system; in good condition.
D5090	Other Electrical Systems	1988	1988	5	0	RA	08/26/13	Building has no emergency generator. Building has one (1) battery pack emergency light. Insufficient emergency lighting in building.
E Equipment and Furnishings				3.0				
Furnishings								
E2010	Fixed Furnishings	1988	1988	3	5	RD	08/26/13	Built-in counter. Functioning and in good shape.
E2020	Moveable Furnishings (Capital Funded Only)	1988	1988	3	5	RD	08/26/13	Desks and chairs. Dated and worn but functional.

Facility Summary

City of Redmond
Maintenance Operations Center Site
Central Stores Warehouse Building 5 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components						
Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
E Equipment and Furnishings			3.0			

Furnishings

E2020 Moveable Furnishings (Capital Funded Only)

Facility Summary

City of Redmond

Maintenance Operations Center Site

Decant Facility Building 11 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F.	3,500
Year Of Original Construction	1998
Facility Use Type	office
Construction Type	Medium
# of Floors	1
Energy Source	Gas
Year Of Last Renovation	2013
Historic Register	No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.0			
Facility Condition Index (FCI)	0.13			
Current Replacement Value (CRV)	\$1,690,000	Predicted Renewal Budget (6 yrs)	\$14,000	\$13,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$467,000	\$391,000
		Observed Deficiencies (6 yrs)	\$88,000	\$86,000
		Observed Deficiencies (ALL)	\$88,000	\$86,000
		Opportunity Total Project Cost	\$74,000	N/A

Facility Condition Summary

Architectural:

Extensive protect underway to expand facility to increase capacity and provide additional treatment.

Electrical:

The building has a 208/120V 4-wire electrical system, with underground service from Puget Sound Energy transformer. The main electrical panel and distribution equipment are located at the backside of the building. Building lighting in the Decant consists of wall flood and ceiling fixtures, high intensity discharge (HID) type lamps. In the small office, fluorescent strip fixtures are used. Building branch wiring are all installed in conduits. Electrical devices are 15A, grounding type. Building has fire alarm system. Building has no security alarm system. Building has generator power backup.

Mechanical:

The Decant Facility consists of two (2) major elements: covered decant bins totaling approximately 3,000 sf, and small 500 sf office, laundry, and mechanical equipment support space. A major addition and process upgrade is under construction at time of survey (August 2013). HVAC for covered decant bins is natural ventilation (no wall to north). HVAC for support building is electric resistance wall heaters, natural ventilation via operable windows for offices and exhaust fans for laundry. Plumbing includes large (1.5-inch) hydrant and wash-down hose for bins. No fire sprinkler.

Facility Summary

City of Redmond
Maintenance Operations Center Site
Decant Facility Building 11 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
A Substructure				3.0			
Foundations							
A1010	Standard Foundations	1998	1998	3	73	RD 08/27/13	Poured in place concrete. No deficiencies observed.
A1030	Slab On Grade	1998	1998	3	35	RD 08/27/13	Slab on grade is exterior. Heavy use but holding up well.
B Shell				3.0			
Superstructure							
B1010	Floor Construction	1998	1998	3	35	RD 08/27/13	Slab on grade. See "Slab on Grade" section above.
B1020	Roof Construction	1998	1998	3	45	RD 08/27/13	Plywood on 2x105 or 4x12 depending on location. Supported composite wood beams on steel pipe columns. Metal gutter; every joint leaks. Repair gutter, slope to drain. (Less than \$2,000.)
Exterior Closure							
B2010	Exterior Walls	1998	1998	3	45	RD 08/27/13	Wood frame with metal siding. No deficiencies observed or reported.
B2020	Exterior Windows	1998	1998	3	80	RD 08/27/13	Metal frame with double pane glass. Limited windows. No deficiencies observed.
B2030	Exterior Doors	1998	1998	3	35	RD 08/27/13	Hollow metal doors and frames. Worn but functional.

Facility Summary

City of Redmond
Maintenance Operations Center Site
Decant Facility Building 11 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
B Shell					3.0				
Roofing									
B3010	Roof Coverings		1998	1998	3	25	RD	08/27/13	Metal roof. Except for gutter noted in "Roof Construction" section above, no deficiencies observed or reported.
C Interiors					3.1				
Interior Construction									
C1010	Partitions		1998	1998	3	35	RD	08/27/13	Wood frame. Very limited partitions. No deficiencies observed.
Interior Finishes									
C3010	Wall Finishes		1998	1998	4	1	RD	08/27/13	Gypsum wall board. Painted. Wall at back of laundry space needs repair and paint.
C3030	Ceiling Finishes		1998	1998	3	18	RD	08/27/13	Hard-lid gypsum wall board in office and laundry rooms; mechanical room not available for inspection due to Decant facility expansion project. No deficiencies observed or reported.
D Services					2.9				
Vertical Transportation									
D1090	Other Conveying Systems		1998	1998	4	2	DCS	08/27/13	No roof access at support bay. Provide roof access.
Plumbing									
D2010	Plumbing Fixtures		1998	1998	3	25	DCS	08/27/13	Sink in support building wash room. Laundry wall

Facility Summary

City of Redmond
Maintenance Operations Center Site
Decant Facility Building 11 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.9			
Plumbing						
D2010 Plumbing Fixtures						box. No issues reported.
D2020 Domestic Water Distribution	1998	1998	3	15	DCS 08/27/13	Large 1.5 to 2-inch yard hydrants and hoses for vehicle and material wash down. Several hydrants are difficult to operate. One has been recently replaced.
D2030 Sanitary Waste	1998	2013	3	15	DCS 08/27/13	City sewer via settling vault. System is currently undergoing major capacity increase.
D2040 Rain Water Drainage	1998	1998	3	25	DCS 08/27/13	Gutters and downspouts. See "Roof Coverings" section above for gutter leak issue.
D2090 Other Plumbing Systems	1998	2013	3	20	DCS 08/27/13	Decant water collections, treatment, and transfer system. 8,000-gallon de-icing fluid tank with 10-hp transfer pump. Decant system is undergoing major expansion. De-icing system should be studied for tank's seismic resistance and spill containment.
HVAC						
D3010 Energy Supply	1998	1998	3	25	DCS 08/27/13	Natural gas from Puget Sound Energy via meter number 1116709 with 1,000-cfh capacity, supplying support building mechanical room to southwest. Reportedly main gas load was for the pressure washer which has been moved to the Building 1 wash room area.
D3050 Terminal and Package Units						

Facility Summary

City of Redmond
Maintenance Operations Center Site
Decant Facility Building 11 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				2.9					
HVAC									
D3050	Terminal and Package Units	1998	1998	4	3	DCS	08/27/13	Electric resistance heat for support building office and laundry rooms. Little ventilation. Heaters are in marginal condition. No mechanical ventilation except exhaust fans for laundry room.	
D3060	Controls and Instrumentation	1998	1998	3	5	DCS	08/27/13	Manual thermostat for support building heated space. Replace with programmable thermostats when heaters are replaced. (Less than \$2,000.)	
Fire Protection									
D4010	Fire Protection Sprinkler Systems	1998	1998	5	0	DCS	08/27/13	No fire sprinkler for wood superstructure and support building. Provide dry-pipe or deluge sprinkler system.	
D4030	Fire Protection Specialties	1998	1998	3	10	DCS	08/27/13	Wall mounted fire extinguisher. Consider cabinets to protect fire extinguisher(s).	
Electrical									
D5010	Electrical Service and Distribution	1998	1998	2	25	RA	08/27/13	Building electrical system is 208/120V 4-wire. Distribution consists of a main panel, transfer switch, and a branch panel; all Nema-3R, located outdoor. Another branch panel is located in the office building. All panels and equipment are in good condition.	
D5020	Lighting and Branch Wiring	1998	1998	3	15	RA	08/27/13	Lighting in the office building is fluorescent with open strip 2-lamp fixtures. In the main Decant building, lighting consists of wall mount high intensity discharge (HID) floods and ceiling mount HID square box fixtures. Overall, lighting is working. Suggest to replace	

Facility Summary

City of Redmond

Maintenance Operations Center Site

Decant Facility Building 11 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				2.9					
Electrical									
D5020	Lighting and Branch Wiring							the high intensity discharge ceiling fixtures to light emitting diode (LED) vapor-tight fixtures which illuminate more evenly. Lighting has no occupancy control.	
D5030	Low Voltage Communication Security and Fire Alarm		1998	1998	3	8	RA	08/27/13	Building has a fire alarm system. Heat detectors in the Decant building; pull station and horn strobes in office building.
									Building has no security alarm system. Building fire alarm system is in working condition.
D5090	Other Electrical Systems		1998	1998	2	10	RA	08/27/13	Building power has generator backup through the outdoor transfer switch.
									Transfer switch supplies power to the branch panel. Circuit loads were not available for survey.
E Equipment and Furnishings									
Equipment									
E1010	Commercial Equipment		1998	1998	3	10	RD	08/27/13	Residential washer and dryer.
									No deficiencies observed or reported.
Furnishings									
E2020	Moveable Furnishings (Capital Funded Only)		1998	1998	3	15	RD	08/27/13	Desk and two (2) chairs.
									Worn but usable and functional.
F Special Construction									
Special Construction									
F1040	Special Facilities		1998	2013	3	20	RD	08/27/13	Decant facility.
									Noted as sized too small for need. Currently

Facility Summary

City of Redmond	
Maintenance Operations Center Site	18080 NE 76th Street
Decant Facility Building 11 Building	Redmond, WA 98052

Facility Components	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems						

F Special Construction

Special Construction

F1040 Special Facilities

being expanded.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Building 1 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 11,700
Year Of Original Construction 1977
Facility Use Type Maintenance
Construction Type Medium
of Floors 1
Energy Source Gas
Year Of Last Renovation 1998
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.2			
Facility Condition Index (FCI)	0.21			
Current Replacement Value (CRV)	\$3,803,000	Predicted Renewal Budget (6 yrs)	\$623,000	\$594,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$1,635,000	\$1,436,000
		Observed Deficiencies (6 yrs)	\$1,181,000	\$1,124,000
		Observed Deficiencies (ALL)	\$1,181,000	\$1,124,000
		Opportunity Total Project Cost	\$1,382,000	N/A

Facility Condition Summary

Architectural:

No architectural comments.

Electrical:

Maintenance Operations Center Building 1 has 280/120V 4-wire 800A electrical system; underground service comes into building from Puget Sound Energy 150-kva transformer. Building lighting is fluorescent for interior, high intensity discharge (HID) lighting for exterior. Building has branch wiring; wiring installed in conduits. Devices are 15A, grounding type. The building has a fire alarm system; older fire alarm panel; marginal coverage. The building has access control system which controls gates and doors. The building has no security alarm system. The building has a 250-kw outdoor generator.

Mechanical:

Maintenance and Operations Center Building 1 was purpose built in 1977 as Redmond's primary Maintenance Operations Center (MOC) building with administration to southeast, shops with loading dock to northeast, and vehicle maintenance to west. In 1998, the shops were connected to the office, air conditioning was added, windows were upgraded, and a roof-over reportedly completed.

HVAC includes three (3) roof top unit gas-packs for office areas, one (1) air handling unit for shop, shop infrared gas heater, shop vehicle engine exhaust, general and industrial exhaust and computer room ductless split air conditioning unit.

Plumbing includes city water and sewer, electric domestic hot water heater, toilet and locker room fixtures, kitchenette fixtures, shop compressed air, shop fluids, shop oily waste, and wash rack pressure washing system with water reclaim.

Fire sprinkler is not provided; newer fire extinguishers are located throughout.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Building 1 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
A Substructure				3.0			
Foundations							
A1010	Standard Foundations	1977	1977	3	52	RD 08/26/13	Poured in place concrete. No exceptions noted.
A1030	Slab On Grade	1977	1977	3	52	RD 08/26/13	Slab on grade. No deficiencies noted.
B Shell				3.0			
Superstructure							
B1010	Floor Construction	1977	1977	3	52	RD 08/26/13	Wood mezzanine floor. Wood floor deflects and should be verified.
B1020	Roof Construction	1977	1977	3	52	RD 08/26/13	Plywood sheathing on wood joists and wood beams or trusses. No deficiencies noted.
Exterior Closure							
B2010	Exterior Walls	1977	1977	3	24	RD 08/26/13	Exterior walls are big brick units mostly without furring or insulation. Fur and insulate walls. Verify if existing furred walls have insulation.
B2020	Exterior Windows	1977	1977	3	9	RD 08/26/13	Double pane windows observed. Most are functioning correctly. Two (2) units in east wall are leaking. A work order is in. Several screens are damaged. At least one bucket style operable window should be reversed to awning style.
B2030	Exterior Doors	1977	1977	3	14	RD 08/26/13	Exterior hollow metal doors.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Building 1 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components										
Systems		Original System Date		Last Major System Renew.		Cond. Scores	Subsystem Remain. Useful Life - Yrs		Surveyor/ Survey Date	Comments
B Shell						3.0				
Exterior Closure										
B2030		Exterior Doors		Clean, adjust, and paint needed.						
Roofing										
B3010		Roof Coverings		1977	1998	3	10	RD	08/26/13	Torch down roof. Roof in acceptable condition for age.
B3020		Roof Openings		1977	1998	3	25	RD	08/26/13	There are many roof penetrations for mechanical/electrical equipment. All are on curbs. Openings at center roof well may leak if overflow roof drain allows deep ponding (see mechanical section).
B3030		Projections		1977	1977	3	25	RD	08/26/13	Projecting roof over doors. A door on south of Fleet Maintenance/Shop has been hit and needs repair or replacement.
C Interiors						3.2				
Interior Construction										
C1010		Partitions		1977	1998	3	35	RD	08/26/13	Masonry and wood frame with gypsum wall board. No deficiencies noted.
C1020		Interior Doors		1977	1998	3	25	RD	08/26/13	Solid core wood doors and frames. Dings need to be sanded and doors/jambs need to be refinished.
C1030		Fittings		1977	1998	3	12	RD	08/26/13	White boards and fittings.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Building 1 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				3.2					
Interior Construction									
C1030	Fittings							Dated but functional.	
Staircases									
C2010	Stair Construction	1977	1977	3	56	RD	08/26/13	Wood stair to mezzanine. Non ADA compliant stair.	
C2020	Stair Finishes	1977	1977	3	5	RD	08/26/13	Wood stair at mezzanine. See "Stair Construction" section above.	
Interior Finishes									
C3010	Wall Finishes	1977	1998	3	7	RD	08/26/13	Painted and unpainted masonry. Painted gypsum wall board. Minor isolated damage from use. Patch and paint as needed.	
C3020	Floor Finishes	1977	1998	4	1	RD	08/26/13	Concrete, carpet, vinyl composition tile, sheet vinyl. All applied flooring needs to be replaced.	
C3030	Ceiling Finishes	1977	1998	3	18	RD	08/26/13	Suspended acoustical tile. Gypsum wall board hard lid. Limited isolated damaged tiles to be replaced.	
D Services				3.5					
Vertical Transportation									
D1090	Other Conveying Systems	1977	1977	5	0	DCS	08/26/13	Ladder to low roof. No ladder to two (2) high roofs. No shop hoists or cranes. Lack of high roof access complicates	

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Building 1 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.5			
Vertical Transportation						
D1090 Other Conveying Systems						maintenance. Shop should have overhead hoist(s) and/or crane(s).
Plumbing						
D2010 Plumbing Fixtures	1977	1998	4	5	DCS 08/26/13	Mix of mostly older and some newer water closets, urinals, lavatories, showers, drinking fountains, kitchenette sinks, custodial sinks, and shop deep sinks. Mostly poor and some fair fixtures with little or no ADA compliance.
D2020 Domestic Water Distribution	1977	1998	3	10	DCS 08/26/13	City water, mostly copper water distribution and 80-gallon domestic hot water electric heater replaced in 2007. Some poor, but mostly fair condition with no major issues reported or observed.
D2030 Sanitary Waste	1977	1977	4	5	DCS 08/26/13	City sewer, unknown drain, waste, and vent (DW&V) system materials of construction, trench drain at shop entry, floor drains in some locations. Some slow draining and flushing fixtures suggest further investigation is needed, followed by repairs or replacements as needed.
D2040 Rain Water Drainage	1977	1998	4	5	DCS 08/26/13	Mix of interior roof drains with unclear overflow roof drains and gutters and downspouts. Interior overflow roof drain is too distant and high from roof drains.
D2090 Other Plumbing Systems	1977	1998	4	5	DCS 08/26/13	Shop compressed air systems with 10-hp compressor, vertical storage tank, refrigerated air dryer and distribution system. Shop fluids system with tanks, pumps, distribution, and overhead hose reels. Oily waste collection and holding system. Wash room pressure washer

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Building 1 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.5			
Plumbing						
D2090 Other Plumbing Systems						(gas-fired) with waste water recycling system. Mostly older systems in poor to fair condition. Detached fluids shed is deteriorating with variety of code issues. Opportunity to provide waste oil heat recovery system. Newer pressure washer system; but appears to be older water reclaim system.
HVAC						
D3010 Energy Supply	1977	1998	3	20	DCS 08/26/13	Natural gas from Puget Sound Energy via Meter Number 1116712 with 1,000-cfh capacity and seismic valve. Newer branch piping to pressure washer. Natural gas used by roof top unit gas-packs, shop infrared heaters, and wash rack pressure washer. Opportunity to replace older electric equipment with new gas-fired equipment.
D3020 Heat Generating Systems	1977	1998	3	10	DCS 08/26/13	Shop infrared overhead vented gas-fired heaters by Re-Verber-Ray. In fair condition; controls are unclear.
D3030 Cooling Generating Systems	1977	2012	4	3	DCS 08/26/13	Main distribution frame (MDF) ductless split cooling, Fujitsu 1.5-ton installed in 2012. Ventilation cooling for waste water department SCADA rack. Three (3) ceiling fans in shop. Main distribution frame (MDF) cooling is not properly designed or constructed. Unreliable cooling of SCADA closet; opportunity for improved cooling at shop.
D3040 HVAC Distribution Systems	1977	1977	4	3	DCS 08/26/13	Air handling unit (AHU) and ductwork serving maintenance shop. AHU has electric resistance heater. Air handling unit is past end of useful life.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Building 1 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.5			
HVAC						
D3050 Terminal and Package Units	1977	1998	3	5	DCS 08/26/13	Original office electrical baseboard heat abandoned in place. Two (2) new 2013 roof top unit gas-packs (Trane 4-ton and 7.5-ton) and one (1) older 1992 roof top unit. Roof well may be recirculating contaminated air to occupied spaces. The older 1992 roof top unit is near end of life. Shop radiant heater is in fair condition.
D3060 Controls and Instrumentation	1977	1998	4	5	DCS 08/26/13	Mix of original 1977, middle aged 1998, and several new 2013 controls. Mix of mostly manual, some programmable, and no DDC controls. Replace remainder of original controls with newer. Plan upgrade to full DDC controls.
D3090 Other HVAC Systems and Equipment	1977	1998	3	10	DCS 08/26/13	Shop vehicle engine exhaust system is Nederman. Welding hood exhaust system. Newer engine exhaust is fair to good condition. Older welding exhaust system in fair to poor condition (less than \$2,000 to renew). Opportunity for shop ventilation.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1977	1977	5	0	DCS 08/26/13	No fire sprinkler. Install fire sprinkler.
D4030 Fire Protection Specialties	1977	1998	3	10	DCS 08/26/13	Fire extinguishers, automatic external defibrillator (AED) and first aid kits installed throughout. No issues.
Electrical						
D5010 Electrical Service and Distribution	1977	1977	3	5	RA 08/26/13	Building electrical system is 800A, 208/120V 4-wire. Main panel is located at hallway next to

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Building 1 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.5			
Electrical						
D5010 Electrical Service and Distribution						exterior door. Main panel feeds subpanels throughout. Building electrical system is backed-up by an outdoor generator via a 800 transfer switch. The building's electrical equipment and panels are old, GE equipment over 30 years, and at end of life. Electrical system equipment is in working condition, marginal capacity. Electrical system should be upgraded in the next 5 years.
D5020 Lighting and Branch Wiring	1977	1977	4	8	RA 08/26/13	Building interior lighting is fluorescent, consists of 2x4 troffers in meeting rooms, 1x4 wraps in the hallways, 1x4 reflectors in large office areas, and some recess lights in the lobby. Controls of lighting by manual wall switch; minimal occupancy sensors are seen. Building wire devices are old, over 30 years old, 15A ground type outlets; insufficient outlets in Fleet Maintenance Bay. Building lighting is in working condition. Light fixtures are over 20 years old. Building has no automatic lighting controls. Lighting levels are adequate. Insufficient electrical outlets in Fleet Maintenance Bay and in shop.
D5030 Low Voltage Communication Security and Fire Alarm	1977	1977	3	2	RA 08/26/13	The building's fire alarm system is a Notifier System 500 with fire alarm control panel in the main hallway. Devices consist of heat detectors and horn strobes. Only one smoke detector seen at the entry lobby. Data/voice system is Cat-6 wiring system with IDF (intermediate distribution frame) located in IT room off the hallway. Building has no security alarm system. Building has access system for controls of exterior gates operators and doors. Fire alarm system is working but equipment is over 20 years old. Replace with new fire alarm system in next 5 years.
D5090 Other Electrical Systems	1977	2011	1	18	RA 08/26/13	Building power is backed-up by a 250-kw generator located at southwest corner of the site.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Building 1 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.5			
Electrical						
D5090 Other Electrical Systems						Underground feeder runs between generator, step down 208/120 transformer, and building transfer switch and main panel. Transfer switch is located inside building, is old and outdated, breaker type switching devices, normal feed, three (3) sets of 250 MCM. Emergency feed, three (3) sets of 250 kcmil, load output wires, three (3) sets of 250 kcmil. Equipment is by Trans-O-Matic, Lake Shore Electric. The generator is 250-kw, 480/277V, Caterpillar, 2011. 400A output breaker. Wiring in 3-inch conduit; in excellent, new condition.
E Equipment and Furnishings			3.0			
Equipment						
E1010 Commercial Equipment	1977	1998	3	6	RD 08/26/13	Office equipment in office areas including multiple copiers. No issues reported or observed.
E1020 Institutional Equipment	1998	1998	3	6	RD 08/26/13	Minor lab equipment in several departments. No issues reported or observed.
E1030 Vehicular Equipment	1977	1977	3	10	RD 08/26/13	Overhead exhaust and fluid delivery floor lifts and repair equipment. No issues reported or observed.
E1090 Other Equipment	1977	1998	3	6	RD 08/26/13	Vending machine in hallway. Extensive maintenance equipment in shops. Hallway is not ventilated; warm/hot by machines. Some shop equipment is aged and worn, but functional; some equipment is newer.
Furnishings						

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Building 1 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
E Equipment and Furnishings				3.0					
Furnishings									
E2010	Fixed Furnishings	1977	1998	3	15	RD	08/26/13	Fixed furnishings, cabinets, and counters. Dated and worn, but functional.	
E2020	Moveable Furnishings (Capital Funded Only)	1977	1998	3	15	RD	08/26/13	Furnishings dated and worn, mostly functional. No deficiencies noted.	
F Special Construction				3.0					
Special Construction									
F1020	Integrated Construction	1977	1998	3	15	RD	08/26/13	Pesticide storage unit with integrated containment. Miscellaneous fluid storage temporary containments. Pesticide storage unit is in good condition. Miscellaneous storage marginal; consider replacing with packaged unit(s) similar to pesticide unit.	
F1030	Special Construction Systems	1977	1998	3	20	RD	08/26/13	Wash rack and shed. West wall and building end wall damaged.	

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Infrastructure

18080 NE 76th Street
Redmond, WA 98052

Facility Condition Summary

MOC site is located at the northeast corner of NE 76th Street and 178th Place NE. It is a large site, primarily covered with asphalt paving and numerous maintenance and operations buildings. Construction is currently underway for the "MOC Decant Facility Improvements", scheduled to be completed in Winter 2013. The site includes the following buildings and site structures. Buildings 1, 3, 5, 8, and 11 were included in the FCA building assessment.

Building 1 - Public Works Maintenance & Operations Center, 11,700 sf, brick. Wash station on west end.
Building 2 - Signals, approximately 30' x 100', metal sided.
Building 3 - Street Department Modular, 1000 sf, metal sided.
Building 4 - Water and Storm storage, approximately 40' x 50', metal sided.
Building 5 - Central Stores Warehouse (Shipping and Receiving), 4,500 sf, metal sided.
Building 6 - Public Works Storage, approximately 20' x 120', metal sided and steel mesh.
Building 7 - Equipment Shed, approximately 20' x 60', open sides with roof only.
Building 8 - Parks Operation Center, 8,200 sf, metal sided.
Building 9 - Parks Storage & wash area, approximately 15' x 45', wood sided. Wash station on west end.
Building 10 - Fuel Island & Canopy.
Building 11 - Decant Facility & Canopy, approximately 35' x 170', metal sided.
Building 12 - Parks Storage, approximately 20' x 150', metal sided.

Other smaller out-buildings and structures are listed below. Note: there are also many dumpsters, storage racks, and 2-drum storage containers throughout the site that are not included herein.

South and west sides Building 1:

Beige metal shed for air compressor room & bulk oil, 10' x 15'
White metal shed "Hazardous Storage", 7' x 10'
White metal storage container, 8' x 20'

North side of Building 2:

Two (2) flammable material storage cabinets
Metal "Emergency Shed", 8 x 40' container

North side of Building 6:

Fabric storage garage for boom truck
Blue wood storage shed w/ roll up door, for Natural Resources, 10' x 12'

East of Building 6:

Quonset hut with ecology block base & fabric top, 30'x50'
Metal storage racks for Parks Dept., approximately 42" wide x 135'
Beige metal storage container, 8' x 20'

Building 8:

Plastic cylindrical calcium chloride storage tank, 8,000 gallons

Westside of Building 12:

Four (4) Metal Fuel storage cabinets
White metal shed "Hazardous Storage", 7' x 10'
Large dumpster with metal access stair/landing

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Infrastructure

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2010 Roadways	1977	1998	3	5	MK 08/26/13	With the exception of the striped parking areas, the remaining asphalt and concrete pavement throughout the site is considered "Roadways", since it is all subject to vehicular traffic. The majority of the site is asphalt pavement, with concrete pavement at the two (2) storm water vaults, the east and west sides of Building 8 (Parks Operations), at the fuel island/underground fuel storage tanks, at the Decant Building 11, and at the area east of Building 6 that contains the open aggregate/spoils bins and Quonset hut. There are some extruded concrete curbs throughout the site. □
						□ The concrete pavement areas exhibit more cracking and failures than the asphalt areas, and several of these areas should be replaced. There is some cracking of asphalt pavement, primarily along construction joints, that should be repaired. Some concrete curb requires repair. See Deficiencies. Cracked concrete pavement of the Storm water vaults is addressed in the "Storm Drain" section below. The asphalt access driveway on the east side of the Trinity Building site is included in the Trinity Assessment.
G2020 Parking Lots	1977	1998	2	15	MK 08/26/13	The majority of parking lots are around the Maintenance Operations Center Building 1. There is an additional parking lot southwest of the Parks Operations Building 8 and at the front and east side of this building. □ There are some ADA stalls throughout the site, but they are not in compliance. It appears there may be an inadequate number of stalls.
G2030 Pedestrian Paving	1977	1998	2	9	MK 08/26/13	Exposed aggregate walk at front of Maintenance Operations Center Building 1, and concrete walks at Street Department Building 3, and Parks Operations Building 8. □ □ Good condition.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Infrastructure

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2030 Pedestrian Paving						
G2040 Site Development	1977	1977	3	8	MK 08/26/13	A few fixed bike racks and benches throughout the site. ☐ No known issues.
G2050 Landscaping	1977	1977	3	8	MK 08/26/13	Mostly mature trees with limited shrubs and groundcover. The limited areas of open ground are covered with grass, ivy, or wood chips. ☐ Landscaping is adequate for the type of use.
Site Civil / Mechanical Utilities						
G3010 Water Supply	1977	1977	3	9	MK 08/26/13	Domestic service lines and fire sprinkler supply lines to buildings from the City of Redmond system. Numerous fire hydrants throughout the site. There are several wash areas (see General Comments for a list) and many exterior hose bibs throughout the site. ☐ No known issues with water supply.
G3020 Sanitary Sewer	1977	1977	3	14	MK 08/26/13	Sanitary sewer services to buildings from the City of Redmond system. ☐ ☐ No known issues with the sanitary sewer service.
G3030 Storm Sewer	1977	1977	3	9	MK 08/26/13	Catch basins and trench drains throughout the site in paved areas. Building downspouts discharge onto the ground or into underground system. There are two (2) large underground storm water vault: 1) Approximately 20'x120' vault along the west fence line of the site, and 2) Approximately 20'x60' vault due east of Building 6 in the aggregates/spoils storage bin area. Adjacent to the storage vaults are pump vaults and above grade control panels. Storm water is

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Infrastructure

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Civil / Mechanical Utilities						
G3030 Storm Sewer						pumped to City of Redmond system in adjacent streets. □ □ The storm water vault east of Building 6 has extensive cracking and damage to the top slab. Access hatch is currently covered with a steel plate and may be failing. Alarms sound several times a year. A technical review of the vault and pump systems should be considered.
G3060 Fuel Distribution	1977	1977	3	10	MK 08/26/13	Natural gas meter with seismic valve on south side of Building 1, and gas meter with no seismic valve on east side of Building 8. Propane fueling tank (250 gallons?), south side of Building 1. Underground fuel storage tanks: 1) on south side of Fuel Island, 2) on north side of Fuel Island. Underground waste oil storage tank, 500 gallons, on north side of Maintenance Operations Center Building 1. □ □ No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	1977	1977	3	10	MK 08/26/13	Underground electrical services to all site buildings. This is a 150 kva transformer at south side of Maintenance Operations Center Building 1, a 100 kva transformer at north side of Streets Building 3, and a 225 kva transformer south of Parks Operations Building 8. There is a 480 volt, 250 kva emergency generator southwest of Maintenance Operations Center Building 1, and a small generator just east of Parks Operations Building 8. □ □ No known problems.
G4020 Site Lighting	1977	1977	3	8	MK 08/26/13	Pole lights and wall lights on building exteriors are present throughout the site. □ □ No known issues.
G4030 Site Communications and Security						

Facility Summary

City of Redmond

Maintenance Operations Center Site

Maintenance Operations Center Infrastructure

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments

G Sitework

Site Electrical utilities

G4030 Site Communications and Security

1977	1977	3	6	MK	08/26/13	"Elite" brand gate access gate system appears to have damaged safety edge. Underground telephone service. □ □ Cost of gate repair is less than \$2.000.

Other Site Construction

G9090 Other Site Systems

1970	1998	3	10	MK	08/26/13	Parks storage Building 9. Siding stain deteriorating; opportunity to re-stain.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Parks Operations Center Building 8 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 8,202

Year Of Original Construction 1970

Facility Use Type Maintenance

Construction Type Medium

of Floors 2

Energy Source Gas

Year Of Last Renovation 1998

Historic Register No

No Photo Available

		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.0			
Facility Condition Index (FCI)	0.16			
Current Replacement Value (CRV)	\$2,691,000	Predicted Renewal Budget (6 yrs)	\$237,000	\$227,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$1,071,000	\$924,000
		Observed Deficiencies (6 yrs)	\$526,000	\$503,000
		Observed Deficiencies (ALL)	\$526,000	\$503,000
		Opportunity Total Project Cost	\$521,000	N/A

Facility Condition Summary

Architectural:

Steel framed original building to east purchased by the City from Hos Brothers Hauling and renovated in 1998 including addition of multipurpose room to west and locker room to east. Additions are wood framed.

High bay canopies were also added to east and west of north high bay shop areas. Outbuilding and equipment including small wash pad to east under canopy, plus wood shop dust collector; parks detached small equipment storage shed and grated wash rack to north; attached mechanical shack with pressure wash pump (no heater) and air compressor with refrigerated air dryer; covered patio/bike storage to west of multipurpose; and condensing units (CU -1, 2, and 4) to west under canopy and CU-3 and 5 to east under canopy. The Parks Operations Center is roughly half offices, half high bay shop.

Electrical:

The Parks Operations Center Building has a 208/120V 4-wire electrical system; underground service comes into the building from a Puget Sound Energy 225-kva transformer at front. Building lighting has many styles of fixtures. They are all fluorescent lamp type fixtures. Building branch wiring is all installed in conduits. Electrical devices are 15A, 20A grounding type. Building has a fire alarm system and a paging system. Building has no security system. Building has an outdoor generator.

Mechanical:

HVAC includes five (5) high efficiency gas-fired furnaces with split Dx cooling and semi-zoned variable volume and temperature (VVT) controls for office areas; gas-fired unit heaters and ceiling exhaust fans for main high bay shop; electric unit heaters and sidewall exhaust fans for wood shop; and electric unit heaters and exhaust fans plus ceiling fans for drying room.

Plumbing is city water and sewer with large gas domestic hot water heater in locker room addition.

Both original and addition are dry-pipe sprinkled throughout with post indicator valve (PIV) and fire department connection (FDC) at front of building.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Parks Operations Center Building 8 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				3.0					
Foundations									
A1010	Standard Foundations	1970	1998	3	73	RD	08/27/13	Concrete foundation. No deficiencies observed.	
A1020	Special Foundations	1970	1998	3	73	RD	08/27/13	Sonotube column/foundation. No deficiencies observed.	
A1030	Slab On Grade	1970	1998	3	45	RD	08/27/13	Slab on grade/floors. Minor cracks appeared controlled in office areas. Recommend they be cleaned and sealed.	
B Shell				3.0					
Superstructure									
B1010	Floor Construction	1970	1998	3	45	RD	08/27/13	Wood frame second floor. No deficiencies observed.	
B1020	Roof Construction	1970	1998	3	43	RD	08/27/13	Pre-engineered metal building (1970). Metal clad wood frame (1998). Exterior soffits. Soffits generally need to be cleaned, lights caulked and painted. West canopy at multipurpose room shows water damage.	
Exterior Closure									
B2010	Exterior Walls	1970	1998	3	15	RD	08/27/13	Wood and metal siding over wood and metal frame. No deficiencies observed except for minor wall damage.	
B2020	Exterior Windows	1970	1998	3	10	RD	08/27/13	Double glazed metal frame windows.	

Facility Summary

City of Redmond

Maintenance Operations Center Site

Parks Operations Center Building 8 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
B Shell				3.0			
Exterior Closure							
B2020	Exterior Windows						No deficiencies observed.
B2030	Exterior Doors	1970	1998	3	10	RD 08/27/13	Exterior hollow metal doors and frames. Wood door on pressure washer shed. Replace rusted hinges. Clean and paint shop doors. Replace wood door.
Roofing							
B3010	Roof Coverings	1970	1998	3	7	RD 08/27/13	Corrugated and standing seam metal roofs. No roof access. See "Other Conveying System" section below.
B3020	Roof Openings	1970	1998	3	10	RD 08/27/13	Openings for vents and ventilators. No deficiencies observed.
B3030	Projections	1970	1998	3	3	RD 08/27/13	Wood sun screen on south façade second floor. Canopy roofs off shop area and multipurpose room. Steel column finish is oxidized and needs refinishing. Wood is exposed and needs to be retreated. (Less than \$2,000.)
C Interiors				3.0			
Interior Construction							
C1010	Partitions	1970	1998	3	35	RD 08/27/13	Gypsum wall board on wood frame. Oriented-strand board (OSB) on wood frame. No deficiencies observed.
C1020	Interior Doors	1970	1998	3	25	RD 08/27/13	Hollow metal and wood.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Parks Operations Center Building 8 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				3.0					
Interior Construction									
C1020	Interior Doors							In need of some minor repairs (less than \$2,000).	
C1030	Fittings		1970	1998	3	15	RD	08/27/13	Whiteboards and lockers. Worn but functional.
Staircases									
C2010	Stair Construction		1970	1998	3	43	RD	08/27/13	Wood and concrete stairs. Stairs are in good condition.
C2020	Stair Finishes		1970	1998	2	10	RD	08/27/13	Rubber stair treads. No deficiencies observed.
Interior Finishes									
C3010	Wall Finishes		1970	1998	3	10	RD	08/27/13	Paint, sealed oriented-strand board (OSB), plastic laminate wainscot. Painted gypsum wall board needs limited wall repair and touchups.
C3020	Floor Finishes		1970	1998	3	2	RD	08/27/13	Carpet in office areas. Worn and needs replacement.
C3030	Ceiling Finishes		1970	1998	3	18	RD	08/27/13	Suspended acoustical ceiling tile (ACT) and hard lid. No deficiencies observed.
D Services				3.0					
Vertical Transportation									
D1010	Elevators and Lifts								

Facility Summary

City of Redmond

Maintenance Operations Center Site

Parks Operations Center Building 8 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
D Services				3.0			
Vertical Transportation							
		1993	1993	3	21	DCS 08/27/13	Two-stop hydraulic Thyssen Krupp 15-hp elevator with fully finished cab. No issues reported or observed.
D1090	Other Conveying Systems	1970	1970	5	0	DCS 08/27/13	No hoists or cranes. No roof access. Opportunity to add hoist and/or crane to high bay shop bay(s).
Plumbing							
D2010	Plumbing Fixtures	1970	1998	3	20	DCS 08/27/13	Porcelain water closets, urinals, and lavatories in first floor locker room and second floor toilet room. Shower in locker rooms. Stainless steel sinks in multipurpose room. Deep sink in shop. Drinking fountain in hallway. One (1) water closet in men's locker room is leaking. Most flushing fixtures trim needs adjustment.
D2020	Domestic Water Distribution	1970	1998	3	21	DCS 08/27/13	City water 2.5-inch service entry with 2-inch pressure reducing valve (PRV), 1.5-inch PRV and PRV bypass. All copper pipe. 1999 domestic hot water (DHW) heater is gas-fired standard efficiency 199-mbh, 125-gallon with recirculation pump. Domestic hot water (DHW) heater is aging but operational. Water pressure, color, and taste are good.
D2030	Sanitary Waste	1970	1998	3	25	DCS 08/27/13	City sewer with unknown materials in building. Floor drains in locker room. No issues reported or observed. Opportunity to add floor drains and/or trench drains in shop areas.
D2040	Rain Water Drainage	1970	1998	3	25	DCS 08/27/13	Metal gutter and PVC downspout to storm drain svstem.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Parks Operations Center Building 8 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
Plumbing						
D2040 Rain Water Drainage						PVC downspouts are PVC with sleeved connections which are easily damaged; some sleeved connections are leaking (less than \$2,000 to repair leaking sleeves). Opportunity for rain water harvesting (RWH).
D2090 Other Plumbing Systems	1970	2011	3	13	DCS 08/27/13	Equipment shack at northwest includes: compressed air system with 3-hp vertical 60-gallon infrared tank dated 2011 with refrigerated air dryer (RAD); and electric pressure wash pump (no heater). Equipment shack is in marginal condition with standing water on floor; a floor drain should be installed (less than \$2,000). Opportunities to install compressed air distribution to shop area and add hot water to pressure wash system. See Decant Facility Building 11 reports for opportunity to reuse currently unused wash rack for park equipment washing in lieu of current plan to add new wash rack and oil/water separator at northwest corner of Parks Operations Center.
HVAC						
D3010 Energy Supply	1970	1998	3	25	DCS 08/27/13	Natural gas from Puget Sound Energy via meter number 503731 with 1,000-cfh capacity. Capacity appears generous for Parks Operations Center, allowing for additional gas-fired equipment.
D3030 Cooling Generating Systems	1970	1998	4	5	DCS 08/27/13	Four (4) Lennox R-22 208V condensing units (CU) installed with 1998 renovation; CU- 1, 2, 3, and 4. Small CU-5 added about 1999 during second floor mezzanine office additions. All condensing units appear functional but will soon be approaching end of life. Units are located under canopies which may concentrate heat near the building they are trying to cool. During replacement units should be relocated to

Facility Summary

City of Redmond

Maintenance Operations Center Site

Parks Operations Center Building 8 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
HVAC						
D3030 Cooling Generating Systems						avoid heat concentration.
D3040 HVAC Distribution Systems	1970	1998	4	5	DCS 08/27/13	Office areas include four (4) high efficiency gas-fired furnaces with split direct expansion (DX) cooling; all variable volume and temperature (VVT) distributed via sheet metal and flexible duct. System 5 serving mezzanine is a heat pump. Furnaces will soon be nearing end of life. Occupants report comfort complaints throughout. Fan coil serving mezzanine is not code compliant (no ventilation air or economizer).
D3050 Terminal and Package Units	1970	1998	3	10	DCS 08/27/13	One (1) large gas-fired vented unit heater serving high bay shop area. Electric resistance 7.5-kw King unit heater serving wood shop and gear drying rooms. Aging and dusty/dirty but in operable condition.
D3060 Controls and Instrumentation	1970	1998	4	2	DCS 08/27/13	Variable volume and temperature (VVT) controls for office areas. Manual controls and non-programmable controls for shop areas. Variable volume and temperature (VVT) is not working properly, and is torn apart in some areas. Marginal shop controls.
D3090 Other HVAC Systems and Equipment	1970	2008	4	2	DCS 08/27/13	United Air Specialists (UAS) wood shop dust collector systems installed in 2008. Despite newer dust collector, excessive dust in wood shop is fouling all surfaces and electrical devices, lighting, and other equipment.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1998	1998	3	25	DCS 08/27/13	Dry pipe sprinkled throughout. 6-inch service supplying 4-inch main with post indicator valve (PIV) and fire department connection (FDC) in

Facility Summary

City of Redmond

Maintenance Operations Center Site

Parks Operations Center Building 8 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
Fire Protection						
D4010 Fire Protection Sprinkler Systems						yard island to southwest. Inspections appear to be current.
D4030 Fire Protection Specialties	1981	1998	3	15	DCS 08/27/13	Fire extinguishers, first aid kits, and automatic external defibrillators (AEDs). Inspections are current.
Electrical						
D5010 Electrical Service and Distribution	1970	1998	2	25	RA 08/27/13	Building electrical system, 208/120V, 4-wire, main service in electrical room on first floor; consists of six (6) service disconnects. Each disconnect feeds a panel directly. The automatic transfer switch (ATS) and the generator disconnect are located in same electrical room. Disconnect switches and panels are Square-D equipment; in good condition. Two (2) panels, panel-B and panel-C, are old and at end of life; consider replacement.
D5020 Lighting and Branch Wiring	1970	1998	4	15	RA 08/27/13	Building lighting is mostly fluorescent, mostly 2x4 parabolic wrap around industrial type reflector, 2x4 surface box fixtures. The second floor has special pendant lights for direct/indirect lighting. Building exterior lighting is high intensity discharge (HID) and fluorescent type fixtures. Shop/storage has old HID open high bay fixtures which are at end of life. There are no automatic lighting controls. Lighting is in good condition in operations office wing. Electrical devices are 15A grounding type in office wing and are in good condition. Lighting is in poor condition in shop storage and wood shop. Devices in shop/storage and wood shop are in poor condition. Wood shop electrical branches are in poor condition. A lot of sawdust has accumulated at the top of all outlet boxes and inside panel dead front. The sawdust should be removed, and outlets and devices cleaned immediately to avoid fire hazards. See

Facility Summary

City of Redmond

Maintenance Operations Center Site

Parks Operations Center Building 8 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components							
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services				3.0			
Electrical							
D5020	Lighting and Branch Wiring						mechanical section for ventilation improvement. Electrical installation should upgrade to dust-tight and power interlocking control.
D5030	Low Voltage Communication Security and Fire Alarm						
	1970	1998	2	10	RA	08/27/13	Building has fire alarm system, Notifier 5000 control panel, located in front office area, with a separate outdoor fire alarm annunciator at main entry. Building has no security alarm system. Building has a paging system with ceiling speakers and volume controls. Sound amplifier located in hallway. Data/voice system is a Cat-5 wiring system with intermediate distribution frame (IDF) located in IT room on second floor. Fire alarm system is in good condition. Devices consist of smoke detectors at elevator lobby and at fire alarm panel, duct smoke detectors at HVAC, horn strobes, and Building-9 heat detector. Paging system is in good condition.
D5090	Other Electrical Systems						
	1970	1997	2	15	RA	08/27/13	Building has an outdoor generator at southeast corner in parking lot area. The generator, manufactured by Generac, is 50-kw, diesel base tank, 208/120V. The generator feeder runs underground to an automatic transfer switch (ATS) in the building's electrical room, which feeds Panel-X in shop storage next to the elevator equipment room. The outdoor generator is in good condition. The generator provides backup power to building interior lights, exterior lights, equipment load, and plug load via one (1) transfer switch.
E Equipment and Furnishings				3.0			
Equipment							
E1010	Commercial Equipment						
	1970	1998	3	7	RD	08/27/13	Office copier, residential washer and dryer. No deficiencies reported or observed.
E1030	Vehicular Equipment						

Facility Summary

City of Redmond

Maintenance Operations Center Site

Parks Operations Center Building 8 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
E Equipment and Furnishings				3.0					
Equipment									
E1030	Vehicular Equipment	1970	1998	3	7	RD	08/27/13	Wash down area. Insulated overhead doors. See "Exterior Doors" and "Other Plumbing Systems" sections above.	
E1090	Other Equipment	1970	1998	3	10	RD	08/27/13	Kitchen equipment. No deficiencies reported or observed.	
Furnishings									
E2010	Fixed Furnishings	1970	1998	3	15	RD	08/27/13	Casework and counters. No deficiencies reported or observed.	
E2020	Moveable Furnishings (Capital Funded Only)	1970	1998	3	15	RD	08/27/13	Desks, tables, and chairs. Worn but functional.	
F Special Construction				3.0					
Special Construction									
F1040	Special Facilities	1970	1998	3	10	RD	08/27/13	High bay shop. Under-used space. Current use is low rack storage.	

Facility Summary

City of Redmond

Maintenance Operations Center Site

Street Department Modular Building 3 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 1,850
Year Of Original Construction 1998
Facility Use Type Office
Construction Type Light
of Floors 1
Energy Source Electric
Year Of Last Renovation 2011
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.1			
Facility Condition Index (FCI)	0.17			
Current Replacement Value (CRV)	\$804,000	Predicted Renewal Budget (6 yrs)	\$63,000	\$61,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$339,000	\$288,000
		Observed Deficiencies (6 yrs)	\$139,000	\$134,000
		Observed Deficiencies (ALL)	\$139,000	\$134,000
		Opportunity Total Project Cost	\$68,000	N/A

Facility Condition Summary

Architectural:

No architectural comments.

Electrical:

The building is 120/240V 3-wire underground service from Puget Sound Energy padmount transformer, feeds main panel adjacent to rear entry door. Building has interior fluorescent lights, exterior high intensity discharge (HID) lights. Building has no fire alarm system, security alarm system, or emergency lights.

Mechanical:

Building is L&I Gold Labeled "Factory Built Housing" DSN #28438. One-story double wide modular structure on concrete foundation with crawl space. Includes two (2) large open and two (2) private offices, break room, and men's and women's locker and toilet rooms. A covered deck has been added to the north. HVAC is one (1) roof top unit heat pump (all electric forced air heating and cooling) and toilet room exhaust fans. Plumbing is city water and sewer with men's and women's toilet room fixtures and kitchenette sink. No fire sprinkler but at least one fire extinguisher is present.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain Useful Life - Yrs	Surveyor/ Survey Date	Comments
A Substructure			3.0			

Facility Summary

City of Redmond

Maintenance Operations Center Site

Street Department Modular Building 3 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				3.0					
Foundations									
A1010	Standard Foundations		1999	1999	3	36	RD	08/26/13	Poured in place concrete forming crawl space. Crawl space ground vapor barrier is 20% to 30% damaged/missing. Crawl has excessive construction debris.
B Shell				3.0					
Superstructure									
B1010	Floor Construction		1999	1999	3	16	RD	08/26/13	Wood frame floor. No deficiencies observed.
B1020	Roof Construction		1999	1999	3	16	RD	08/26/13	Wood frame roof. Approximately 2-inch gap between the two halves of the building, but appear to be original construction intent.
Exterior Closure									
B2010	Exterior Walls		1999	1999	3	15	RD	08/26/13	Metal siding on wood frame.
B2020	Exterior Windows		1999	1999	3	15	RD	08/26/13	Awning frame double glazed. No deficiencies observed.
B2030	Exterior Doors		1999	1999	4	2	RD	08/26/13	Hollow metal doors. Rusting through and a cat door.
Roofing									
B3010	Roof Coverings		1999	1999	3	11	RD	08/26/13	PVC roof in acceptable condition for age. No deficiencies observed.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Street Department Modular Building 3 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
B Shell					3.0				
Roofing									
B3020	Roof Openings		1999	1999	3	16	RD	08/26/13	Limited openings. No deficiencies noted.
B3030	Projections		1999	1999	3	5	RD	08/26/13	Rear unpermitted deck and roof. Slope is very shallow, leaking, water damage to structure, building paper exposed.
C Interiors					3.2				
Interior Construction									
C1010	Partitions		1999	1999	3	16	RD	08/26/13	Wood frame with gypsum wall board. Only localized damage; repair as necessary.
C1020	Interior Doors		1999	1999	3	16	RD	08/26/13	Wood doors. Minor isolated damage. Repair minor damage.
C1030	Fittings		1999	1999	3	16	RD	08/26/13	Lockers. Lockers are worn but functional.
Interior Finishes									
C3010	Wall Finishes		1999	1999	3	8	RD	08/26/13	Paint on gypsum wall board. Minor isolated repairs needed.
C3020	Floor Finishes		1999	1999	4	2	RD	08/26/13	Vinyl composition tile and carpet. Replace flooring.
C3030	Ceiling Finishes		1999	1999	3	19	RD	08/26/13	Suspended acoustical ceiling.

Facility Summary

City of Redmond

Maintenance Operations Center Site

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18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
C Interiors				3.2			
Interior Finishes							
C3030	Ceiling Finishes						Isolated tile needs to be replaced.
D Services				3.1			
Vertical Transportation							
D1090	Other Conveying Systems						
		1999	1999	2	16	DCS 08/26/13	Permanent ladder to roof located on north side. Good condition.
Plumbing							
D2010	Plumbing Fixtures						
		1999	1999	3	16	DCS 08/26/13	Water closets, urinals, lavatories in men's and women's. Signs of wear but no issues reported or
D2020	Domestic Water Distribution						
		1999	1999	3	16	DCS 08/26/13	City water 3/4-inch service. Mix of galvanized and copper piping. Electric 30-gallon domestic hot water heater. Galvanized should be replaced with all copper piping. (Less than \$2,000.)
D2030	Sanitary Waste						
		1999	1999	3	16	DCS 08/26/13	City sewer. All ABS drain, waste, and vent (DW&V) piping. Floor drains in men's toilet room. Consider adding floor drains to women's room to facilitate housekeeping. (Less than \$2,000.)
D2040	Rain Water Drainage						
		1999	1999	3	16	DCS 08/26/13	Four (4) sets of roof drains and overflow roof drains with interior drain bodies connecting to exterior downspouts. Rood drain downspouts are not sealed to storm sewer connection just above grade. (Less than \$2,000.)

Facility Summary

City of Redmond

Maintenance Operations Center Site

Street Department Modular Building 3 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Systems			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services					3.1			
HVAC								
D3030	Cooling Generating Systems		1999	1999	4	1	DCS 08/26/13	Small data cabinet in break room has field build ventilation cooling system. Cabinet vent filters are filthy, sharply reducing air flow resulting in overheated equipment cabinet. Clean and service. (Less than \$2,000.)
D3040	HVAC Distribution Systems		1999	1999	4	3	DCS 08/26/13	Ceiling exhaust fans for men's and women's restrooms with side wall relief hoods. Exhaust fans and reliefs need service; replace if needed. (Less than \$2,000.)
D3050	Terminal and Package Units		1999	1999	4	3	DCS 08/26/13	One (1) Carrier 4-ton rooftop heat pump package unit supplying fully ducted distribution system; duct is located in ceiling plenum space including galvanized sheet metal and insulated flex duct. The roof top unit is vibrating excessively despite reported recent repairs. Signs of occupant discomfort include portable heaters. Ductwork appears to be leaking in ceiling plenum space.
D3060	Controls and Instrumentation		1999	2010	2	12	DCS 08/26/13	Programmable thermostat in open office. Thermostat partially blocked by sign material. (Less than \$2,000.)
Fire Protection								
D4010	Fire Protection Sprinkler Systems		1999	1999	5	0	DCS 08/26/13	No fire sprinkler. Install fire sprinkler.
D4030	Fire Protection Specialties		1999	1999	3	16	DCS 08/26/13	Fire extinguisher on wall. Consider installing in cabinet. (Less than \$2,000.)
Electrical								
D5010	Electrical Service and Distribution							

Facility Summary

City of Redmond

Maintenance Operations Center Site

Street Department Modular Building 3 Building

18080 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components							
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services				3.1			
Electrical							
		1999	1999	2	16	RA 08/26/13	Building has underground service, 120/240V system, 200A main panel, Square-D equipment. Only one (1) panel for the building. Main panel is in good condition with sufficient capacity.
D5020	Lighting and Branch Wiring	1999	1999	3	16	RA 08/26/13	Building interior lighting is fluorescent, consisting on mostly 2x4 troffers. Devices are 15A, ground type. Controls of lighting done by wall switches. There are no automatic occupancy controls. Some ballasts and lamps are not working, showing signs of wear, and may need replacement of fixtures. Not enough electrical outlets in break room and office.
D5030	Low Voltage Communication Security and Fire Alarm	1999	1999	2	11	RA 08/26/13	The building has no fire alarm system or security alarm system. The building has a small data/voice IDF (intermediate distribution frame) under the cabinet in the break room. Building data/voice is in good condition; Cat-6 system.
D5090	Other Electrical Systems	1999	1999	5	0	RA 08/26/13	The building has no emergency generator or emergency lights. Building has no battery backup egress lighting. Building battery backup exit lights are not working.
E Equipment and Furnishings				3.0			
Equipment							
E1010	Commercial Equipment	1999	1999	3	7	RD 08/26/13	Minor office equipment. No issues.
E1090	Other Equipment	1999	1999	3	6	RD 08/26/13	Kitchenette in break room.

Facility Summary

City of Redmond

Maintenance Operations Center Site

Street Department Modular Building 3 Building

18080 NE 76th Street
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Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
E Equipment and Furnishings				3.0					
Equipment									
E1090	Other Equipment								
Furnishings									
E2010	Fixed Furnishings								
		1999	1999	3	16	RD	08/26/13	Counters.	
								Dated but functional.	
E2020	Moveable Furnishings (Capital Funded Only)								
		1999	1999	3	16	RD	08/26/13	Desks and chairs.	
								Functional.	

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Maintenance Operations Center Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Central Stores Warehouse Building 5 Building	Superstructure	\$3,800	\$1,140	\$988	\$2,964	\$8,892	\$8,724
	Exterior Closure	\$4,300	\$1,290	\$1,118	\$3,354	\$10,062	\$9,858
	Roofing	\$3,000	\$900	\$780	\$2,340	\$7,020	\$6,887
	Staircases	\$4,400	\$1,320	\$1,144	\$3,432	\$10,296	\$9,533
	Vertical Transportation	\$2,000	\$600	\$520	\$1,560	\$4,680	\$4,505
	HVAC	\$4,000	\$1,200	\$1,040	\$3,120	\$9,360	\$8,836
	Fire Protection	\$27,000	\$8,100	\$7,020	\$21,060	\$63,180	\$63,180
	Electrical	\$7,750	\$2,325	\$2,015	\$6,045	\$18,135	\$18,023
	Facility Total	\$56,250	\$16,875	\$14,625	\$43,875	\$131,625	\$129,545
Decant Facility Building 11 Building	Interior Finishes	\$2,400	\$720	\$624	\$1,872	\$5,616	\$5,508
	Vertical Transportation	\$2,000	\$600	\$520	\$1,560	\$4,680	\$4,505
	Plumbing	\$10,500	\$3,150	\$2,730	\$8,190	\$24,570	\$23,192
	HVAC	\$1,500	\$450	\$390	\$1,170	\$3,510	\$3,313
	Fire Protection	\$21,000	\$6,300	\$5,460	\$16,380	\$49,140	\$49,140
	Facility Total	\$37,400	\$11,220	\$9,724	\$29,172	\$87,516	\$85,658
Maintenance Operations Center Building 1 Building	Superstructure	\$2,500	\$750	\$650	\$1,950	\$5,850	\$5,630
	Exterior Closure	\$4,000	\$1,200	\$1,040	\$3,120	\$9,360	\$8,836
	Roofing	\$3,500	\$1,050	\$910	\$2,730	\$8,190	\$7,439
	Interior Construction	\$8,000	\$2,400	\$2,080	\$6,240	\$18,720	\$17,335
	Staircases	\$4,500	\$1,350	\$1,170	\$3,510	\$10,530	\$10,132
	Interior Finishes	\$42,250	\$12,675	\$10,985	\$32,955	\$98,865	\$96,981
	Vertical Transportation	\$2,000	\$600	\$520	\$1,560	\$4,680	\$4,680
	Plumbing	\$76,000	\$22,800	\$19,760	\$59,280	\$177,840	\$162,218
	HVAC	\$161,400	\$48,420	\$41,964	\$125,892	\$377,676	\$352,189
	Fire Protection	\$58,500	\$17,550	\$15,210	\$45,630	\$136,890	\$136,890
	Electrical	\$130,000	\$39,000	\$33,800	\$101,400	\$304,200	\$294,101
	Special Construction	\$12,000	\$3,600	\$3,120	\$9,360	\$28,080	\$27,544
	Facility Total	\$504,650	\$151,395	\$131,209	\$393,627	\$1,180,881	\$1,123,975
Maintenance Operations Center Infrastructure	Site Improvements	\$90,000	\$27,000	\$23,400	\$70,200	\$210,600	\$191,293
	Site Civil / Mechanical Utilities	\$40,000	\$12,000	\$10,400	\$31,200	\$93,600	\$85,019

Print Date: 03/10/14

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Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Maintenance Operations Center Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
	Facility Total	\$130,000	\$39,000	\$33,800	\$101,400	\$304,200	\$276,312
Parks Operations Center Building 8 Building	Foundations	\$9,000	\$2,700	\$2,340	\$7,020	\$21,060	\$20,264
	Superstructure	\$4,000	\$1,200	\$1,040	\$3,120	\$9,360	\$9,182
	Exterior Closure	\$3,100	\$930	\$806	\$2,418	\$7,254	\$7,116
	Roofing	\$6,000	\$1,800	\$1,560	\$4,680	\$14,040	\$13,511
	Interior Finishes	\$12,000	\$3,600	\$3,120	\$9,360	\$28,080	\$27,020
	Vertical Transportation	\$6,000	\$1,800	\$1,560	\$4,680	\$14,040	\$14,040
	Plumbing	\$11,800	\$3,540	\$3,068	\$9,204	\$27,612	\$25,387
	HVAC	\$90,707	\$27,212	\$23,584	\$70,751	\$212,254	\$198,755
	Electrical	\$82,000	\$24,600	\$21,320	\$63,960	\$191,880	\$188,225
	Facility Total	\$224,607	\$67,382	\$58,398	\$175,193	\$525,580	\$503,500
Street Department Modular Building 3 Building	Foundations	\$2,775	\$833	\$722	\$2,165	\$6,494	\$6,248
	Exterior Closure	\$5,700	\$1,710	\$1,482	\$4,446	\$13,338	\$12,835
	Roofing	\$9,600	\$2,880	\$2,496	\$7,488	\$22,464	\$20,800
	Interior Finishes	\$16,650	\$4,995	\$4,329	\$12,987	\$38,961	\$37,491
	HVAC	\$11,850	\$3,555	\$3,081	\$9,243	\$27,729	\$26,515
	Fire Protection	\$9,250	\$2,775	\$2,405	\$7,215	\$21,645	\$21,645
	Electrical	\$3,500	\$1,050	\$910	\$2,730	\$8,190	\$8,190
	Facility Total	\$59,325	\$17,798	\$15,425	\$46,274	\$138,821	\$133,724
	Site Total	\$1,012,232	\$303,670	\$263,180	\$789,541	\$2,368,623	\$2,252,713

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Maintenance Operations Center Site

Total Observed Deficiency Repair Direct Cost : \$1,012,232
Total Observed Deficiency Repair Direct Cost (Present Value): \$962,698

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Central Stores Warehouse Building 5 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$3,800
System: Superstructure					Total System Deficiency Repair Cost (Present Value):			\$3,728
Roof Construction								
Roof Drains	4	1	Roof drains lead to downspouts to tight line drains. Each side of roof have one (1) drain and no overflow. One of two downspouts is disconnected from drain.	Provide overflow scupper or drain on each side of roof. Route through soffit and expose. Reattach downspout to drain.	2	\$1,900.00	ea	\$3,800
		2013						
Facility: Central Stores Warehouse Building 5 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$4,300
System: Exterior Closure					Total System Deficiency Repair Cost (Present Value):			\$4,213
Exterior Walls								
Metal Siding	4	1	Corrugated metal siding is damaged by impact, bent, and open to weather. Insulation exposed.	Repair or replace panels.	400	\$10.00	sf	\$4,000
		2013						
Exterior Windows								
Metal Windows	4	2	Plastic trim and screen frames are failed and broken.	Replace trim and screen frames.	6	\$50.00	ea	\$300
		2013	Double glazed metal frame windows.					
Facility: Central Stores Warehouse Building 5 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$3,000
System: Roofing					Total System Deficiency Repair Cost (Present Value):			\$2,943
Roof Openings								
Roof Hatch Openings	4	1	Hatch has no spring or counter balance, no hold open. Hatch flashing is not tight to roof.	Provide approved hatch cover and hold open. Re-flash after installations.	1	\$3,000.00	ea	\$3,000
		2013						

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Maintenance Operations Center Site

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Total Observed Deficiency Repair Direct Cost (Present Value): \$962,698

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility:	Central Stores Warehouse Building 5 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$4,400
System:	Staircases					Total System Deficiency Repair Cost (Present Value):			\$4,074
Stair Construction									
Wood Stairs		4	4	Tread overhang and handrail do not meet code requirements.	Permit and rebuild stairs.	2	\$2,200.00	ea	\$4,400
			2013						
Facility:	Central Stores Warehouse Building 5 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$2,000
System:	Vertical Transportation					Total System Deficiency Repair Cost (Present Value):			\$1,925
Other Conveying Systems									
Roof Access		4	2	While a roof hatch is installed, there is no permanent ladder or stair to the hatch.	Install permanent ladder to roof; approximately 12-feet high.	1	\$2,000.00	ea	\$2,000
			2013						
Facility:	Central Stores Warehouse Building 5 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$4,000
System:	HVAC					Total System Deficiency Repair Cost (Present Value):			\$3,776
Terminal and Package Units									
Electric Heater		4	3	Wall heater and unit heaters nearing end of life.	Schedule replacement in kind.	5	\$500.00	ea	\$2,500
			2013						
Controls and Instrumentation									
Thermostats		4	3	Manual thermostats.	Install programmable thermostats.	5	\$300.00	ea	\$1,500
			2013						
Facility:	Central Stores Warehouse Building 5 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$27,000
System:	Fire Protection					Total System Deficiency Repair Cost (Present Value):			\$27,000
Fire Protection Sprinkler Systems									
Fire Sprinkler System		5	0	No fire sprinkler in warehouse full of combustible material.	Install dry-pipe fire sprinkler system.	4,500	\$6.00	sf	\$27,000
			2013						

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Maintenance Operations Center Site

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Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Central Stores Warehouse Building 5 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$7,750
System: Electrical			Total System Deficiency Repair Cost (Present Value):					\$7,702
Lighting and Branch Wiring								
Branch Wiring	5	1 2013	Insufficient electrical outlets in shop and office.	Add electrical outlets.	10	\$250.00	ea	\$2,500
Other Electrical Systems								
Emergency Lighting	5	0 2013	Building has one (1) emergency light; insufficient.	Add battery pack emergency lights at interior and exterior egress.	15	\$350.00	ea	\$5,250
Facility: Decant Facility Building 11 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,400
System: Interior Finishes			Total System Deficiency Repair Cost (Present Value):					\$2,354
Wall Finishes								
Painted Gypsum Wall Board	4	1 2013	Gypsum wall board finish in laundry room has been poorly repaired or revised.	Remove and rewall board; tape, finish, and paint.	120	\$20.00	sf	\$2,400
Facility: Decant Facility Building 11 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,000
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):					\$1,925
Other Conveying Systems								
Roof Access	4	2 2013	No roof access to maintain flues and inspect/maintain the roof itself.	Install ladder and roof hatch from support building mechanical room.	1	\$2,000.00	ea	\$2,000
Facility: Decant Facility Building 11 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$10,500
System: Plumbing			Total System Deficiency Repair Cost (Present Value):					\$9,911
Domestic Water Distribution								
Yard Hydrants	4	3 2013	Three (3) of four (4) yard hydrants are original and difficult to operate.	Replace hydrants.	3	\$3,500.00	ea	\$10,500

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Maintenance Operations Center Site

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Facility: Decant Facility Building 11 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$1,500
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$1,416
Terminal and Package Units								
Heaters	4	3 2013	Heaters near end of life.	Replace heaters.	3	\$500.00	ea	\$1,500
Facility: Decant Facility Building 11 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$21,000
System: Fire Protection			Total System Deficiency Repair Cost (Present Value):					\$21,000
Fire Protection Sprinkler Systems								
Fire Sprinkler System	5	0 2013	No fire sprinkler.	Provide dry pipe or deluge type fire sprinkler.	3,500	\$6.00	sf	\$21,000
Facility: Maintenance Operations Center Building 1 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,500
System: Superstructure			Total System Deficiency Repair Cost (Present Value):					\$2,406
Floor Construction								
Wood Floor	4	2 2013	Wood mezzanine floor deflects and appears heavily loaded.	Further study to verify load capacity for this 250 sf space.	1	\$2,500.00	ls	\$2,500
Facility: Maintenance Operations Center Building 1 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$4,000
System: Exterior Closure			Total System Deficiency Repair Cost (Present Value):					\$3,776
Exterior Doors								
Hollow Metal Doors	4	3 2013	Hollow metal doors have had heavy use. Paint is worn, doors are unprotected and sticking.	Clean, paint, repair as necessary, and adjust.	20	\$200.00	ea	\$4,000

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

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			Survey Year						
Facility: Maintenance Operations Center Building 1 Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$3,500
System: Roofing						Total System Deficiency Repair Cost (Present Value):			\$3,179
Projections									
Metal Canopy		4	5	Metal canopy at south main door of Fleet Maintenance Shop is damaged by impact.	Repair or replace metal canopy.	1	\$3,500.00	ea	\$3,500
			2013						
Facility: Maintenance Operations Center Building 1 Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$8,000
System: Interior Construction						Total System Deficiency Repair Cost (Present Value):			\$7,408
Interior Doors									
Wood Doors		4	4	Wood doors and frames damaged by use.	Sand and refinish doors.	40	\$200.00	ea	\$8,000
			2013						
Facility: Maintenance Operations Center Building 1 Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$4,500
System: Staircases						Total System Deficiency Repair Cost (Present Value):			\$4,330
Stair Construction									
Wood Stair		4	2	Wood stair at mezzanine does not meet code for rails and rise/run.	Build new stair to meet code.	1	\$4,500.00	ea	\$4,500
			2013						
Facility: Maintenance Operations Center Building 1 Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$42,250
System: Interior Finishes						Total System Deficiency Repair Cost (Present Value):			\$41,445
Floor Finishes									
Floor Finishes		4	1	Applied flooring (vinyl composition tile, carpet, sheet vinyl) finishes are worn and damaged.	Replace flooring.	6,500	\$6.50	sf	\$42,250
			2013						

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

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			Survey Year						
Facility: Maintenance Operations Center Building 1 Building				Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,000
System: Vertical Transportation				Total System Deficiency Repair Cost (Present Value):					\$2,000
Other Conveying Systems									
Roof Access		5	0	No roof access to two (2) high roofs.	Provide two (2) permanent ladders between low and high roofs.	2	\$1,000.00	ea	\$2,000
			2013						
Facility: Maintenance Operations Center Building 1 Building				Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$76,000
System: Plumbing				Total System Deficiency Repair Cost (Present Value):					\$69,324
Plumbing Fixtures									
Plumbing Fixtures		4	5	Many damaged, discolored, improperly installed, ADA non-compliant, slow draining, slow flushing, and non-user friendly plumbing fixtures.	Replace plumbing fixtures.	12	\$3,000.00	ea	\$36,000
			2013						
Sanitary Waste									
Drain, Waste, and Vent		4	5	Some slow draining and flushing fixtures.	Investigate and repair/replace as needed.	1	\$6,000.00	ls	\$6,000
			2013						
Rain Water Drainage									
Overflow Roof Drains		5	1	Overflow roof drain is too high above roof drains risking flooding and/or structural damage.	Install new center roof well overflow roof drain.	1	\$4,000.00	ea	\$4,000
			2013						
Other Plumbing Systems									
Shop Fluids		4	5	Shop fluids building and systems are at end of life.	Schedule for renewal: compressed air, waste oil transfer, and four (4) shop fluid systems.	6	\$5,000.00	ea	\$30,000
			2013						

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

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Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Maintenance Operations Center Building 1 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$161,400
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$150,508
Cooling Generating Systems								
Cooling	4	3	Old main distribution frame (MDF) transfer air cooling system interfering with new system. SCADA systems transfer air cooling is unreliable.	Demo or layup main distribution frame (MDF) transfer air system. Provide ductless split cooling for SCADA.	2	\$3,000.00	ea	\$6,000
		2013	Computer room cooling.					
HVAC Distribution Systems								
Air Handling Unit	4	3	Shop air handling unit is past end of life.	Replace shop air handling unit. See "Energy Supply" Opportunity section for possible upgrade.	1	\$15,000.00	ea	\$15,000
		2013						
Terminal and Package Units								
Roof Top Units	4	2	Roof well may be recirculating flue gas, exhaust, drain waste and vent (DW&V) vent to roof (VTR) sewer gas, and shop exhaust to occupied spaces.	Reconfigure HVAC system to eliminate roof well short cycling effect.	11,700	\$5.00	sf	\$58,500
		2013						
Controls and Instrumentation								
Controls	4	5	Mix of old and new controls.	All newer controls plus retro-commissioning (Cx) and re-TAB (test, adjust, and balance).	11,700	\$7.00	sf	\$81,900
		2013						
Facility: Maintenance Operations Center Building 1 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$58,500
System: Fire Protection			Total System Deficiency Repair Cost (Present Value):					\$58,500
Fire Protection Sprinkler Systems								
Fire Sprinkler System	5	0	No fire sprinkler system.	Install wet and dry pipe systems.	11,700	\$5.00	sf	\$58,500
		2013						

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

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Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Maintenance Operations Center Building 1 Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$130,000
System: Electrical						Total System Deficiency Repair Cost (Present Value):			\$125,684
Electrical Service and Distribution									
Transformer	5	0	Outdoor dry transformer is rusted out and outdated.	Replace with new outdoor dry type transformer, 112.5-kva, 480-208/120.	1	\$8,000.00	ea		\$8,000
		2013							
Lighting and Branch Wiring									
Branch Wiring	4	1	Insufficient electrical outlets in Fleet Maintenance Bay and shop.	Replace existing and add additional outlets for Fleet Maintenance Bay and shop.	1	\$50,000.00	ls		\$50,000
		2013							
Electrical Disconnect	5	0	Roof equipment fuse disconnect switches are rusty and past end of life.	Replace roof disconnect switches with new. Replace electrical panel.	1	\$12,000.00	ls		\$12,000
		2013							
Other Electrical Systems									
Automatic Transfer Switch	4	3	Existing automatic transfer switch is outdated, obsolete equipment. 800A rated.	Replace transfer switch, 800A controls and feeders.	1	\$60,000.00	ea		\$60,000
		2013							
Facility: Maintenance Operations Center Building 1 Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$12,000
System: Special Construction						Total System Deficiency Repair Cost (Present Value):			\$11,771
Special Construction Systems									
Wash Rack	4	1	Wash rack shed exterior wall and fiberglass panes damaged. Fiberglass deteriorated. Wood bollard rotting.	Replace exterior metal siding. Replace fiberglass and bollard.	1	\$12,000.00	ls		\$12,000
		2013							

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

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Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Maintenance Operations Center Infrastructure			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$90,000
System: Site Improvements			Total System Deficiency Repair Cost (Present Value):					\$81,749
Roadways								
Asphalt Roadways	3	5	Asphalt cracking along construction joints. Concrete curb is cracked and displaced.	Remove and replace asphalt pavement, full depth to match existing section. This quantity includes approximately 400 sy at the north side of the Decant Building 11, which is scheduled to be replaced during the current Decant Facility construction. Remove and replace approximately 200 lf of extruded concrete curb.	1,200	\$45.00	sy	\$54,000
		2013						
Concrete Pavement	3	5	Two concrete pavement areas are cracked and failing.	Remove existing concrete pavement and replace with full depth asphalt section.	800	\$45.00	sy	\$36,000
		2013	Concrete pavement slabs at east and west sides of Parks Operations Building 8.					
Facility: Maintenance Operations Center Infrastructure			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$40,000
System: Site Civil / Mechanical Utilities			Total System Deficiency Repair Cost (Present Value):					\$36,333
Storm Sewer								
Storm Water Vault Top Slab	3	5	All panels in concrete top slab are cracked and damaged. Access hatch appears to be damaged and is covered with a steel plate.	Remove and replace concrete top slabs, approximately 20' x 60'. Provide new truck bearing access hatches.	1	\$40,000.00	ls	\$40,000
		2013	Top slab of the storm water vault east of Building 6 is cracking and failing.					

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Print Date: 03/10/14

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Page 9 of 15

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond			
Site: Maintenance Operations Center Site			
		Total Observed Deficiency Repair Direct Cost :	\$1,012,232
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Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
		Survey Year						
Facility:	Parks Operations Center Building 8 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$9,000
System:	Foundations			Total System Deficiency Repair Cost (Present Value):				\$8,660
Slab On Grade								
Slab on Grade	4	2	Surface is worn and collecting dirt, especially in toilet and shower areas.	Steam clean and reseal surface.	4,500	\$2.00	sf	\$9,000
		2013	1970 and 1988 floor slabs.					
Facility:	Parks Operations Center Building 8 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$4,000
System:	Superstructure			Total System Deficiency Repair Cost (Present Value):				\$3,924
Roof Construction								
Soffits	4	1	Wood and gypsum wall board soffits. Water damage appears to be from above soffit. Lights need to be caulked and screens repaired.	General clean, repair caulk, and paint.	600	\$3.00	sf	\$1,800
		2013						
Soffits	4	1	Exterior soffits have extensive water spotting on west soffit.	Recommend further investigation for source of water.	1	\$2,200.00	ea	\$2,200
		2013						
Facility:	Parks Operations Center Building 8 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$3,100
System:	Exterior Closure			Total System Deficiency Repair Cost (Present Value):				\$3,041
Exterior Doors								
Wood Doors	4	1	Door on pressure washer shed is damaged with make-shift repairs. Leaks.	Replace door and frame with hollow metal and new hardware.	1	\$3,100.00	ea	\$3,100
		2013						
Facility:	Parks Operations Center Building 8 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$6,000
System:	Roofing			Total System Deficiency Repair Cost (Present Value):				\$5,774
Projections								
Steel Columns	4	2	Structural steel at canopies exposed to weather. Protective paint is oxidized.	Prep and paint.	24	\$250.00	ea	\$6,000
		2013						

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

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Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Parks Operations Center Building 8 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$12,000
System: Interior Finishes					Total System Deficiency Repair Cost (Present Value):			\$11,547
Floor Finishes								
Carpet	4	2 2013	Office carpet is worn and at end of useful life.	Remove and replace carpet.	2,000	\$6.00	sf	\$12,000
Facility: Parks Operations Center Building 8 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$6,000
System: Vertical Transportation					Total System Deficiency Repair Cost (Present Value):			\$6,000
Other Conveying Systems								
Roof Access	5	0 2013	No permanent roof access to medium and high roofs.	Install caged ladder to medium and high roofs.	2	\$3,000.00	ea	\$6,000
Facility: Parks Operations Center Building 8 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$11,800
System: Plumbing					Total System Deficiency Repair Cost (Present Value):			\$10,849
Plumbing Fixtures								
Trim	4	1 2013	Most flushing fixture trim (flush valves) need adjustment (flushes too low, too short or difficult to start).	Adjust or replace flush valves.	9	\$200.00	ea	\$1,800
Domestic Water Distribution								
Domestic Hot Water Heater	3	5 2013	Aging domestic hot water heater.	Replace domestic hot water heater with high efficiency type.	1	\$10,000.00	ea	\$10,000

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Print Date: 03/10/14

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Page 11 of 15

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Maintenance Operations Center Site

Total Observed Deficiency Repair Direct Cost :

\$1,012,232

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Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Parks Operations Center Building 8 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$90,707
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$84,938
Cooling Generating Systems								
Condensing Units	4	5	Condensing units approaching end of life and concentrate heat near building.	Plan replacement including relocation away from semi-enclosed covered area.	5	\$5,000.00	ea	\$25,000
		2013						
HVAC Distribution Systems								
Heat Pump	5	0	Mezzanine fan coil unit has no outside air for ventilation and/or economized (free) cooling.	Provide ventilation and economized air per code.	1	\$5,000.00	ls	\$5,000
		2013						
Furnaces	4	5	Furnaces functional but nearing end of life.	Replace furnaces.	4	\$5,500.00	ea	\$22,000
		2013						
Controls and Instrumentation								
Variable Volume and Temperature (VVT) Controls	4	2	Variable volume and temperature (VVT) controls are failing with widespread comfort complaints. Improperly wired.	Replace with current variable volume and temperature (VVT) and/or Thermafuser technology. Programmable controls with override for shop.	8,202	\$3.50	sf	\$28,707
		2013						
Other HVAC Systems and Equipment								
Dust Collection	4	2	Despite newer 2008 dust collector, excessive wood dust is fouling all work surfaces and building systems.	Add points of collection and optimize system performance.	1	\$10,000.00	ls	\$10,000
		2013						

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Print Date: 03/10/14

Copyright MENG Analysis 2013

Page 12 of 15

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Maintenance Operations Center Site

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Facility: Parks Operations Center Building 8 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$82,000
System: Electrical			Total System Deficiency Repair Cost (Present Value):					\$80,438
Lighting and Branch Wiring								
Lighting	4	1	Shop/storage and wood shop building interior lighting is insufficient; fixtures are at end of life.	Provide new fluorescent lens fixtures with T5HO lamps. Provide occupancy sensors.	3,500	\$8.00	ea	\$28,000
		2013						
Branch Wiring	4	1	Electrical devices at shop/storage and wood shop are old and at end of life. Shop storage electrical devices are covered with dust.	Provide new electrical device wiring. Provide dust-tight conduits/boxes in wood shop. Provide power shunt trip and interlock controls.	4,500	\$12.00	ea	\$54,000
		2013						
Facility: Street Department Modular Building 3 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,775
System: Foundations			Total System Deficiency Repair Cost (Present Value):					\$2,670
Standard Foundations								
Crawl Space	4	2	Crawl space is cluttered with construction debris, and vapor barrier is folded and torn.	Clean crawl space and repair or replace vapor barrier.	1,850	\$1.50	sf	\$2,775
		2013						
Facility: Street Department Modular Building 3 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$5,700
System: Exterior Closure			Total System Deficiency Repair Cost (Present Value):					\$5,485
Exterior Doors								
Hollow Metal Doors	4	2	Hollow metal doors rusting through. One has cat door cut into bottom.	Replace doors in existing frame; new hardware.	3	\$1,900.00	ea	\$5,700
		2013						

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

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Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility:	Street Department Modular Building 3 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$9,600
System:	Roofing					Total System Deficiency Repair Cost (Present Value):			\$8,889
Projections									
Projections		4	4	Unpermitted deck and roof. Roof too shallow, leaks, building paper exposed, water damage to structure.	Permit deck and stair; build new roof.	300	\$32.00	sf	\$9,600
			2013						
Facility:	Street Department Modular Building 3 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$16,650
System:	Interior Finishes					Total System Deficiency Repair Cost (Present Value):			\$16,022
Floor Finishes									
Floor Finishes		4	2	Vinyl composition tile and carpet severely worn.	Replace floor finishes.	1,850	\$9.00	sf	\$16,650
			2013						
Facility:	Street Department Modular Building 3 Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$11,850
System:	HVAC					Total System Deficiency Repair Cost (Present Value):			\$11,331
Terminal and Package Units									
Ductwork		4	2	Duct is leaking.	Seal duct; balance system.	1,850	\$1.00	sf	\$1,850
			2013						
Economizer		4	1	While rooftop unit appears to have economizer, no building relief path observed.	Install relief system and interlock with rooftop unit economizer controls.	1	\$3,000.00	ea	\$3,000
			2013						
Roof Top Unit		4	3	Package unit heat pump vibrates excessively; appears to be near end of life.	Replace or repair rooftop unit.	1	\$7,000.00	ea	\$7,000
			2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Maintenance Operations Center Site

Total Observed Deficiency Repair Direct Cost : \$1,012,232
Total Observed Deficiency Repair Direct Cost (Present Value): \$962,698

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Street Department Modular Building 3 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$9,250
System: Fire Protection			Total System Deficiency Repair Cost (Present Value):					\$9,250
Fire Protection Sprinkler Systems								
Fire Sprinkler System	5	0	No fire sprinkler.	Install residential style (non-metallic piping) fire sprinkler system with new stand pipe.	1,850	\$5.00	sf	\$9,250
		2013						
Facility: Street Department Modular Building 3 Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$3,500
System: Electrical			Total System Deficiency Repair Cost (Present Value):					\$3,500
Other Electrical Systems								
Emergency Lighting	5	0	Building has no emergency lights. Exit light battery packs have failed.	Add battery pack emergency lights at interior and exterior egress. Replace exit lights.	10	\$350.00	ea	\$3,500
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 15 of 15

Opportunity Summary By Subsystem

City of Redmond

Site: Maintenance Operations Center Site

Total Site Opportunity Cost: **\$981,843**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Central Stores Warehouse Building 5 Building System: Vertical Transportation Total Cost: \$5,000						
D1090	Other Conveying Systems					
	A hoist may increase productivity in the warehouse by facilitating movement of materials between first and second floors.	Install 2 to 3-ton electric hoist.	1.00	\$5,000.00	ea	\$5,000
Facility: Central Stores Warehouse Building 5 Building System: HVAC Total Cost: \$15,000						
D3050	Terminal and Package Units					
	Offices have no mechanical ventilators and no cooling. Opportunity to improve comfort and indoor air quality for occupied space.	Install ductless split heat pumps and heat recovery ventilators for occupied spaces.	3.00	\$5,000.00	ea	\$15,000
Facility: Central Stores Warehouse Building 5 Building System: Electrical Total Cost: \$86,625						
D5030	Low Voltage Communication Security and Fire Alarm					
	Building has no security alarm system.	Add security alarm system.	4,500.00	\$2.50	sf	\$11,250
	Building fire alarm system is old and outdated.	Replace fire alarm system with new addressable system.	4,500.00	\$2.75	sf	\$12,375
D5090	Other Electrical Systems					
	Existing electrical outlets are old and outdated.	Replace electrical outlets and wiring.	4,500.00	\$7.00	sf	\$31,500
	Existing lighting is over 20 years old and has no automatic controls.	Upgrade lighting fixtures and add occupancy sensors.	4,500.00	\$7.00	sf	\$31,500
Facility: Decant Facility Building 11 Building System: HVAC Total Cost: \$12,000						
D3010	Energy Supply					
	Parks plan to install a new wash rack with full oil water separator at Building 8 (Park Operations Center).	Restore Decant wash rack and designate for use by Parks in lieu of all new systems at Building 8 (Park Operations Center).	1.00	\$10,000.00	ls	\$10,000
D3050	Terminal and Package Units					
	No mechanical ventilation for support building office area.	Provide heat recovery ventilator (HRV) for support area ventilation.	1.00	\$2,000.00	ea	\$2,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Page 1 of 6

Print Date: 03/10/14

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Opportunity Summary By Subsystem

City of Redmond

Site: Maintenance Operations Center Site

Total Site Opportunity Cost: \$981,843

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Decant Facility Building 11 Building						
System: Electrical	Total Cost: \$19,600					
D5020	Lighting and Branch Wiring					
	Lighting fixtures in the office are open strip fluorescent fixtures with no glare control and no occupancy control.	Replace light fixtures with wrap around lens fixtures and add occupancy sensors in office and storage room.	6.00	\$600.00	ea	\$3,600
	Lighting fixtures are ceiling mounted high intensity discharge (HID) lights, mounted at front of the bay, provide less illumination to the central area.	Replace ceiling mounted high intensity discharge (HID) lights with new 1x4 light emitting diode (LED) vapor-tight fixtures. Add LED lights over the center area, and timer control occupancy control.	20.00	\$800.00	ea	\$16,000
Facility: Maintenance Operations Center Building 1 Building						
System: Superstructure	Total Cost: \$26,325					
B1020	Roof Construction					
	Roof is only sporadically insulated.	Insulate roof to R-38.	11,700.00	\$2.25	sf	\$26,325
Facility: Maintenance Operations Center Building 1 Building						
System: Exterior Closure	Total Cost: \$68,000					
B2010	Exterior Walls					
	Most walls have no insulation. Some furred walls may have some insulation.	Fur and insulate exterior walls.	6,800.00	\$10.00	sf	\$68,000
Facility: Maintenance Operations Center Building 1 Building						
System: Roofing	Total Cost: \$35,100					
B3010	Roof Coverings					
	Roof is in good condition for age. Suggest cleaning and coating to extend roof life.	Clean and coat roof.	11,700.00	\$3.00	sf	\$35,100
Facility: Maintenance Operations Center Building 1 Building						
System: Vertical Transportation	Total Cost: \$5,000					
D1090	Other Conveying Systems					
	Vehicle shop needs overhead hoist(s) and/or crane(s).	Provide one (1) mobile 5-ton crane system.	1.00	\$5,000.00	ea	\$5,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 2 of 6

Opportunity Summary By Subsystem

City of Redmond

Site: Maintenance Operations Center Site

Total Site Opportunity Cost: **\$981,843**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Maintenance Operations Center Building 1 Building System: Plumbing Total Cost: \$50,000						
D2040	Rain Water Drainage					
	The wash rack uses non-potable water.	Collect roof drain water in a rain water harvesting system for non-potable use, specifically for the wash rack.	1.00	\$25,000.00	ls	\$25,000
D2090	Other Plumbing Systems					
	Waste oil can be retained on-site for use in waste oil-to-energy furnace.	Install waste oil-to-energy system to assist in shop heating.	1.00	\$25,000.00	ea	\$25,000
Facility: Maintenance Operations Center Building 1 Building System: HVAC Total Cost: \$106,800						
D3010	Energy Supply					
	Shop ventilation system is electric resistance heat; domestic hot water heater is electric.	Connect shop ventilation and domestic hot water heater to gas-fired at next renewal.	2.00	\$10,000.00	ea	\$20,000
D3030	Cooling Generating Systems					
	Shop is often too hot for work during warm/hot summer weather. Ceiling fans are marginal.	Install evaporative cooling system for large shop areas.	1.00	\$15,000.00	ls	\$15,000
D3040	HVAC Distribution Systems					
	Some air handling units have no cooling. Ceiling fans are few and too small.	Install evaporative cooling system for partial shop cooling.	1.00	\$25,000.00	ls	\$25,000
D3060	Controls and Instrumentation					
	DDC controls can improve occupant comfort and productivity, save energy, and facilitate maintenance.	Install new DDC control system.	11,700.00	\$3.00	sf	\$35,100
D3090	Other HVAC Systems and Equipment					
	Currently unclear shop ventilation.	Install shop high/low ventilation with demand control ventilation (DCV).	5,850.00	\$2.00	sf	\$11,700
Facility: Maintenance Operations Center Building 1 Building System: Electrical Total Cost: \$289,575						
D5010	Electrical Service and Distribution					
	Electrical service panel and branch panels are old and outdated.	Replace electrical service panel, branch panel, and feeder wiring.	11,700.00	\$8.00	ft	\$93,600

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Page 3 of 6

Print Date: 03/10/14

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Opportunity Summary By Subsystem

City of Redmond

Site: Maintenance Operations Center Site

Total Site Opportunity Cost: **\$981,843**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
D5020	Lighting and Branch Wiring					
	Existing wiring devices are old and past end of life.	Replace existing devices and branch wiring.	11,700.00	\$7.00	sf	\$81,900
	Existing lighting fixtures are old, outdated, and lack automatic lighting controls.	Upgrade lighting with new and add occupancy sensors.	11,700.00	\$7.00	sf	\$81,900
D5030	Low Voltage Communication Security and Fire Alarm					
	Existing fire alarm is old and outdated.	Replace fire alarm system with new addressable fire alarm system.	11,700.00	\$2.75	sf	\$32,175
Facility: Maintenance Operations Center Building 1 Building System: Special Construction Total Cost: \$10,000						
F1020	Integrated Construction					
	Miscellaneous fluid storage is temporary.	Provide semi-permanent packaged hazardous materials storage unit with integral containment similar to pesticide unit; approximately 8-feet wide by 16-feet long by 8-feet high.	1.00	\$10,000.00	ea	\$10,000
Facility: Maintenance Operations Center Infrastructure System: Other Site Construction Total Cost: \$1,200						
G9090	Other Site Systems					
	Exterior plywood siding is exposed to weather.	Clean and re-stain or paint.	400.00	\$3.00	sf	\$1,200
Facility: Parks Operations Center Building 8 Building System: Vertical Transportation Total Cost: \$6,000						
D1090	Other Conveying Systems					
	Hoist and/or crane may increase functionality of high bay shop area.	Install 2-ton hoists.	2.00	\$3,000.00	ea	\$6,000
Facility: Parks Operations Center Building 8 Building System: Plumbing Total Cost: \$75,000						
D2010	Plumbing Fixtures					
	Existing fixtures are standard efficiency.	As fixtures and trim age, replace fixtures with high efficiency, water conserving fixtures and trim.	20.00	\$1,000.00	ea	\$20,000
D2030	Sanitary Waste					

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Page 4 of 6

Print Date: 03/10/14

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Opportunity Summary By Subsystem

City of Redmond

Site: Maintenance Operations Center Site

Total Site Opportunity Cost: **\$981,843**

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
D2040 Rain Water Drainage	Floor drain and/or trench drains may increase functionality of high bay shop areas when wet equipment is brought in.	Add trench drains at north drive-through bays.	2.00	\$5,000.00	ea	\$10,000
	Roof drains may be collected to rain water harvesting (RHW) systems and used for flushing, laundry, and small equipment wash rack operations.	Install 10,000-gallon rain water harvesting system.	1.00	\$30,000.00	ls	\$30,000
D2090 Other Plumbing Systems	Pressure washing is improved by hot water.	Install gas-fired pressure wash heater at northwest wash area in conjunction with planned new oil/water separator wash.	1.00	\$10,000.00	ls	\$10,000
	Shop has no compressed air system, but compressed air system is installed at northwest shop corner of building.	Install compressed air distribution system in shop.	10.00	\$500.00	drop	\$5,000
Facility: Parks Operations Center Building 8 Building System: HVAC Total Cost: \$80,000						
D3040 HVAC Distribution Systems	Occupants report thermal discomfort throughout fully conditioned (office) areas.	Replace with variable refrigerant flow (VRF) and heat recovery ventilation (HRV) systems.	4,000.00	\$20.00	sf	\$80,000
Facility: Parks Operations Center Building 8 Building System: Electrical Total Cost: \$59,505						
D5010 Electrical Service and Distribution	Two (2) branch panels in shop/storage (Panel-B and Panel-C) are old and at end of life.	Replace two (2) branch panels.	2.00	\$4,500.00	ea	\$9,000
D5020 Lighting and Branch Wiring	Lighting and branch wiring devices are old and outdated.	Provide new lighting, branch wiring, devices, and occupancy sensors.	1.00	\$10,000.00	ls	\$10,000
	Upgrade building exterior lighting.	Provide new light emitting diode (LED) exterior lighting and controls.	1.00	\$20,000.00	ls	\$20,000
D5030 Low Voltage Communication Security and Fire Alarm	Building has no security alarm system.	Provide addressable security alarm system.	8,202.00	\$2.50	sf	\$20,505

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 5 of 6

Opportunity Summary By Subsystem

City of Redmond							
Site: Maintenance Operations Center Site				Total Site Opportunity Cost: \$981,843			

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility:	Parks Operations Center Building 8 Building					
System:	Special Construction Total Cost: \$2,200					
F1040	Special Facilities					
	High bay shop area appears under-used with low storage racks.	Review program to verify best use for this very high space. Consider high rack storage or mezzanine.	1.00	\$2,200.00	ea	\$2,200
Facility:	Street Department Modular Building 3 Building					
System:	Electrical Total Cost: \$28,913					
D5020	Lighting and Branch Wiring					
	Insufficient electrical outlets.	Add electrical outlets in break room and offices.	25.00	\$250.00	ea	\$6,250
	Existing lighting is starting to fail.	Upgrade lighting fixtures and add occupancy sensors.	1,850.00	\$7.00	sf	\$12,950
D5030	Low Voltage Communication Security and Fire Alarm					
	Building has no fire alarm system.	Add fire alarm system with new addressable system.	1,850.00	\$2.75	sf	\$5,088
	Building has no security alarm system.	Add security alarm system.	1,850.00	\$2.50	sf	\$4,625

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 107,212
Year Of Original Construction 2005
Facility Use Type Admin - Mid rise
Construction Type Medium
of Floors 4
Energy Source Gas
Year Of Last Renovation 2005
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	1.7			
Facility Condition Index (FCI)	0.05			
Current Replacement Value (CRV)	\$60,360,000	Predicted Renewal Budget (6 yrs)	\$905,000	\$822,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$12,436,000	\$10,297,000
		Observed Deficiencies (6 yrs)	\$158,000	\$146,000
		Observed Deficiencies (ALL)	\$158,000	\$146,000
		Opportunity Total Project Cost	\$559,000	N/A

Facility Condition Summary

Architectural:

Four-story administration building on auger cast piles and standard foundation. 9-inch slab on grade with no basement. Structure consists of steel frame and composite metal deck. Roofing is PVC system, fully adhered. Exterior walls are combination of aluminum curtain wall, metal stud with stone veneer, and aluminum metal panels. Concrete column support floor and canopies. Canopies are metal frame with wood purlins. Steel sun shades occur on all wall sides. Interior partitions are steel frame with gypsum wall board. Wall finish consists of paint, stone, wood panel, and fabric panels. Acoustic ceiling tile and hard lid occur throughout. Flooring consists of combination of carpet, sealed concrete, tile, stone, and sheet vinyl. Elevators, passenger and freight, serve all four floors. Emergency stairs are precast concrete. Main lobby stairs are metal frame with tile treads. Stainless steel/glass handrails at interior stairs and balcony. City council room includes sloped floor and fixed seating. Wood casework throughout.

Electrical:

Power from Puget Sound Energy 750-kva pad mounted transformer at southwest corner of site supplying 480V 3-phase power to main electrical room at southwest first floor area; main switchboard is 480v/3-phase 2,000 amps. Standby dual-fuel (diesel and natural gas) generator is also at southwest corner of site, adjacent to Puget Sound Energy transformer. See Infrared Report of 2012 for two (2) "serious" problems. Site lighting includes pole mounted and building mounted fixtures. Several additional transformers and all-weather enclosures were reportedly recently installed for use by Parks Department or Municipal Campus outdoor events. Inside lighting is mostly T-8 fixtures with some compact fluorescent lamp (CFL) recessed can-lights in some public and community areas. Low voltage includes communications, access control, CCTV, and special systems.

Mechanical:

Redmond City Hall is located on the southwest quadrant of the Redmond Municipal Campus which borders the Sammamish River directly to the west. Redmond City Hall was designed, built, operated, and maintained (DBOM) by Wright Runstad from 2005 to September 2013, when the City exercised an option to buy City Hall and the associated parking garage from Wright Runstad. Wright Runstad is currently operating Redmond City Hall under an interim 90-day contract while the City evaluates long term operations and maintenance options. Redmond City Hall is a four-story, medium construction, LEED certified, well designed and constructed facility with several special features including an unusually large lobby with fireplace, round council chamber surrounded by window wall overlooking a constructed reflecting pond with artwork, several large roof decks, and a large patio adjacent to a rain garden. The HVAC system is four-pipe VAV with penthouse boilers and chillers, rooftop cooling tower, two (2) rooftop VAV air handling units, hydronic hot water terminal VAV reheat units, multiple dedicated/supplemental split direct expansion (DX) cooling systems, dedicated council chamber air handling unit, and recently upgraded DDC controls. Plumbing is city water and sewer with all metallic piping and water conserving plumbing fixtures. Domestic hot water is electric tank-type heaters. Fire protection is wet pipe sprinkler in conditioned spaces, dry pipe under the large outside canopy covered areas, and a wet heat-traced standpipe.

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

in the unheated southeast glass stair well tower.

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				1.6					
Foundations									
A1010	Standard Foundations	2005	2005	1	80	JB	09/30/13	Standard concrete foundations.	
A1020	Special Foundations	2005	2013	2	80	JB	09/30/13	Auger cast piles. Epoxy injection repairs on-going.	
A1030	Slab On Grade	2005	2005	1	80	JB	09/30/13	9-inch slab on grade. Good condition.	
B Shell				1.1					
Superstructure									
B1010	Floor Construction	2005	2005	1	80	JB	09/30/13	Concrete on metal deck, steel frame. Good condition.	
B1020	Roof Construction	2005	2005	1	80	JB	09/30/13	Steel frame, concrete on composite deck. Good condition.	
Exterior Closure									
B2010	Exterior Walls	2005	2005	2	52	JB	09/30/13	Steel frame, insulation, stone veneer/metal panel. Minor repairs for leaks reported at metal panels.	
B2020	Exterior Windows	2005	2005	1	37	JB	09/30/13	Curtain wall system.	

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
B Shell						
1.1						
Exterior Closure						
B2020 Exterior Windows						Good condition.
B2030 Exterior Doors	2005	2005	1	43	JB 09/30/13	Some hollow metal doors, coiling dock door. Good condition; hardware good.
Roofing						
B3010 Roof Coverings	2005	2005	1	17	JB 09/30/13	PVC roofing, parapet cap and flashing. Good condition.
B3030 Projections	2005	2005	1	42	JB 09/30/13	Steel frame canopies with wood purlins. Steel sun shades. Good condition.
C Interiors						
1.2						
Interior Construction						
C1010 Partitions	2005	2005	1	42	JB 09/30/13	Steel stud frame. Good condition.
C1020 Interior Doors	2005	2005	1	32	JB 09/30/13	Hollow metal frame, wood doors, hardware, relites in some locations. Overhead coiling doors at some counters. Good condition.
C1030 Fittings	2005	2005	1	22	JB 09/30/13	Various marker boards, signs, shelving. Good condition.
Staircases						
C2010 Stair Construction						

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components								
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
C Interiors				1.2				
Staircases								
		2005	2005	1	80	JB	09/30/13	Emergency stairs are precast concrete and steel handrails. Front lobby stairs are steel frame. Other miscellaneous stairs are precast concrete (i.e. council chambers).
								Good condition.
C2020	Stair Finishes							
		2005	2005	1	8	JB	09/30/13	Tile on main entry stairs, carpet at council chambers.
								Good condition.
Interior Finishes								
C3010	Wall Finishes							
		2005	2005	2	14	JB	09/30/13	Gypsum wall board, paint, some stone at fireplace, wood panels, fabric at acoustic applications.
								Good condition.
C3020	Floor Finishes							
		2005	2005	1	16	JB	09/30/13	Combination of carpet, tile, stone, and vinyl flooring.
								Good condition.
C3030	Ceiling Finishes							
		2005	2005	1	25	JB	09/30/13	Combination of gypsum wall board and acoustic ceiling tile.
								Good condition.
D Services				2.5				
Vertical Transportation								
D1010	Elevators and Lifts							
		2005	2005	2	28	DCS	09/30/13	Two (2) Thyssen Krupp TAC50 traction elevators with split direct expansion (DX) cooling at elevator machinery room (EMR). One (1) Thyssen Krupp Continental 50 TAC20 hydraulic freight elevator. All elevator cabs fully finished, four-stop.

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.5			
Vertical Transportation						
D1010 Elevators and Lifts						In good working order with smooth reliable operator. No major issues reported or observed except traction EMR condensing unit location.
D1090 Other Conveying Systems						
	2005	2005	3	27	DCS 09/30/13	Freight elevator to fourth floor; mechanical penthouse is on roof above. While freight elevator allows heavy mechanical equipment to reach the fourth floor, there is no fixed rigging to get replacement equipment between the fourth floor and roof mechanical penthouse. Opportunity to install permanent rigging.
Plumbing						
D2010 Plumbing Fixtures						
	2005	2005	3	32	DCS 09/30/13	Dual flush water closets, waterless urinals, infrared automatic lavatory faucets, kitchenette stainless steel sinks with chrome trim, men's and women's locker room showers (two each), dual height drinking fountains, and various other fixtures. Chronic problems with Caroma water closets including leaks, difficult to obtain replacement parts, and toilets pulling away from wall, reportedly due to weak carriers. Waterless urinals while well maintained may cause premature drain, waste, and vent system failure over time.
D2020 Domestic Water Distribution						
	2005	2005	2	36	DCS 09/30/13	Four-inch city water service with unknown meter size (assume three-inch) with two (2) reduced pressure backflow prevention at southeast riser room. Insulated copper distribution piping. Pressure at 80-psig (No pressure reducing valve). Two (2) 119-gallon electric domestic hot water heaters on first floor with receive pump and small expansion tank. One (1) medium size electric domestic hot water heater at penthouse security utility sink. Service may be over-sized for a LEED project with low flow plumbing fixtures. Pressure to lower

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.5			
Plumbing						
D2020 Domestic Water Distribution						floors may be too high. Domestic hot water expansion tank may be undersized (less than \$2,000).
D2030 Sanitary Waste	2005	2005	3	27	DCS 09/30/13	Cast iron hubless drain, waste, and vent piping; floor drains with trap primers. Cast iron piping life may be shortened by waterless urinals - see "Plumbing Fixtures" section for opportunity to change to pint-per-flush fixtures. Reportedly some concerns regarding plumbing fixture trim driven trap primers; opportunity to upgrade to independent trap primers.
D2040 Rain Water Drainage	2005	2005	2	32	DCS 09/30/13	Roof drain and overflow roof drain system with internal building piping to storm. Opportunity to capture rain water for reflecting pond make-up, cooling tower make-up, or flushing water use.
D2090 Other Plumbing Systems	2005	2005	3	17	DCS 09/30/13	Reflecting pond with underground ventilated pump, filter, and treatment vault. Four (4) pumps. One (1) sand filter. PVC piping. Reportedly one (1) pump is failing and scheduled for repair or replacement (less than \$2,000).
HVAC						
D3010 Energy Supply	2005	2005	2	32	DCS 09/30/13	Natural gas service from Puget Sound Energy via a 7,000-cfh rotary meter with seismic shut-off valve. Loads include two (2) boilers, dual-fuel standby generator, and lobby fireplace. Gas service appears oversized for building loads, with opportunity for more gas-fired equipment including future upgrade to gas-fired domestic hot water heat or addition of commercial kitchen. See "Domestic Water Distribution" section above for domestic hot water opportunity.

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.5			
HVAC						
D3010 Energy Supply						
D3020 Heat Generating Systems	2005	2005	3	12	DCS 09/30/13	Two (2) RBI standard efficiency (80%) non condensing gas-fired hydronic hot water boilers in rooftop penthouse. Boilers are neatly installed, clean, and operable; but flue gas venting system does not appear compatible with the penthouse negative pressure ventilation system. Opportunity for future upgrade to high efficiency boiler.
D3030 Cooling Generating Systems	2005	2005	3	23	DCS 09/30/13	One (1) 220-ton Carrier water cooled chiller with one (1) BAC 171-ton horizontal forced draft open loop cooling tower. Five (5) Carrier split direct expansion (DX) roof top condensing units, 2- to 3-ton each. Awkward rooftop enclosure may be short cycling hot air from condensing units to cooling tower; main _ access to some equipment within the enclosure may be difficult. Cooling tower drift climate media is somewhat fouled; unable to observe cooling tower media directly. Cooling tower water chemistry pump is being replaced (less than \$2,000).
D3040 HVAC Distribution Systems	2005	2005	2	32	DCS 09/30/13	Forced air VAV system with two (2) Aeon RL155 VAV air handling units at roof, Nailor terminal hydronic re-heat units at each zone, and open plenum returns. Dedicated air handling unit for council chamber. Rooftop air handling units are located in an innovative sliding panel enclosure to facilitate maintenance access and to a lesser degree optimize air flow. Occupants report good comfort throughout the building.
D3050 Terminal and Package Units	2005	2005	3	12	DCS 09/30/13	Five (5) split direct expansion (DX) systems for MDF, TV studio, traffic, and other heavy/special cooling load spaces. Runtal baseboard heat at council chamber outside perimeter window wall. Electric unit heaters and wall heaters in utility

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.5			
HVAC						
D3050 Terminal and Package Units						rooms. No issues reported or observed except condensing unit location discussed in "Cooling Generating Systems" section above, and possible need for additional cooling in several smaller spaces.
D3060 Controls and Instrumentation	2005	2013	2	10	DCS 09/30/13	Full DDC with distributed controllers and central software upgraded to "reliable" controls in 2013. Optimization of recently upgraded hardware and software continues. Opportunity to complete this work with the assistance of more formal re-TAB (test, adjust, and balance) and retro-commissioning (Cx).
D3090 Other HVAC Systems and Equipment	2005	2005	2	16	DCS 09/30/13	Gas fireplace in main lobby with flue draft inducer at roof. Good condition. Possible opportunity for future light commercial kitchen or small coffee shop at unusually large break room first floor south.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	2005	2005	2	34	DCS 09/30/13	Eight-inch city fire service and six-inch riser manifold, leading to six-inch wet sprinkler riser, four-inch dry riser; six-inch fire department connector leading to sprinkler manifold and wet stand pipe below. Inspections current. City pressure is 95-psig, dry pipe pressure is 28-psig.
D4020 Stand-Pipe and Hose Systems	2005	2005	2	27	DCS 09/30/13	Wet standpipe in unconditioned southeast stairwell standpipe is heat-traced and insulated. Inspections current.
D4030 Fire Protection Specialties	2005	2005	2	15	DCS 09/30/13	Fire extinguishers, automatic external

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.5			
Fire Protection						
D4030 Fire Protection Specialties						defibrillators (AED), and first aid kits throughout. Most fire extinguishers in cabinets. Fire extinguishers have current inspections.
Electrical						
D5010 Electrical Service and Distribution	2005	2005	2	32	DCS 09/30/13	Power from Puget Sound Energy 750-kva transformer to 480V, 3-phase, 60-hx, 2000 amp Cutler Hammer main switchboard; distributed to eight (8) stacked electrical rooms, one north, one south, one each floor with 480/208v transformer and panel boards. Good condition with no issues reported or observed; plenty of capacity for future upgrades to other building systems. Opportunity for internal monitoring for improved energy management.
D5020 Lighting and Branch Wiring	2005	2005	3	22	DCS 09/30/13	T-8 fluorescent lay-in lighting fixtures in office area, fluorescent recessed can-lights in hard lid and common areas. Receptacles in office areas. Recessed can lights under exterior canopies. No emergency lighting (selected lighting circuits powered by generator). Opportunity to upgrade emergency and can lights.
D5030 Low Voltage Communication Security and Fire Alarm	2005	2005	3	17	DCS 09/30/13	Notifier fire alarm system with main fire alarm control panel in sprinkler riser room and sub-panels in electrical rooms. Card-key access system in current use. Outside perimeter CCTV system with unclear status. Multiple communications and data carrier service entries at MDF, with unclear status. Main city data center located at adjacent Public Safety Building. No issues reported or observed other than some small room/spaces with low voltage and other electrical equipment appear minimally cooled/ventilated.
D5090 Other Electrical Systems						

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.5			
Electrical						
D5090 Other Electrical Systems						
	2005	2005	3	12	DCS 09/30/13	Dual fuel (diesel and natural gas) standby generator at southwest corner of site with three (3) automatic transfer switches (ATS) - two (2) in main electrical room and one (1) at mechanical penthouse. No dedicated emergency lighting system. Opportunity to install dedicated emergency lighting system to reduce panic upon loss of power.
E Equipment and Furnishings			1.0			
Equipment						
E1010 Commercial Equipment						
	2005	2005	1	17	JB 09/30/13	Miscellaneous kitchen equipment at café. Good condition.
E1020 Institutional Equipment						
	2005	2005	1	17	JB 09/30/13	Audio-visual equipment at council chambers. Good condition.
E1030 Vehicular Equipment						
	2005	2005	1	17	JB 09/30/13	Dock equipment. Good condition.
Furnishings						
E2010 Fixed Furnishings						
	2005	2005	1	22	JB 09/30/13	Casework at work areas, copier rooms, counters at reception areas, window coverings, artwork at elevator lobby at second floor, main lobby art, seating at council chambers. All in good condition.
F Special Construction						
Special Construction						

Facility Summary

City of Redmond
Municipal Campus Site
City Hall Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems						

F Special Construction

Special Construction

F1020 Integrated Construction

2005	2005	1	27	JB	09/30/13	Fireplace. Good condition.

Facility Summary

City of Redmond

Municipal Campus Site

Municipal Campus Infrastructure

8701 160th Avenue NE
Redmond, WA 98052

Facility Condition Summary

The Redmond Municipal Campus includes the following buildings:

Public Safety Building, 90,000 sf, constructed 1991, 3-story

Senior Center, 23,000 sf, constructed 1991, 1-story

City Hall, 38,000 sf footprint, constructed 2005, 4-story

Parking Garage, 34,000 sf footprint, constructed 2005, 3-story

The four Municipal Campus buildings are sited on an open campus, just east of the Sammamish River/Trail. The building sites have open lawn areas with landscaping, patio areas, and walkways. There are asphalt access roads to the buildings, and surface parking lots on the east and west sides of the Parking Garage, north of the Senior Center, and east of the City Hall. The City Hall lot is shared with the Redmond Regional Library. The site is accessed by vehicles via the main Municipal Campus entry drive off of 160th Avenue NE, and by the City Hall entry drive off of NE 85th Street. The buildings are served by City of Redmond utilities. The Redmond Regional Library and King County Court House are not part of the Municipal Campus.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/	Survey Date	Comments
G Sitework							
Site Improvements							
G2010 Roadways	1990	2005	3	8	MK	08/19/13	Site roadways include the following: 1) an east-west access road into the Campus off of 160th Avenue NE. This road extends to and includes the cul-de-sac in front of the Senior Center, and includes the back-in parking along it; 2) a ramp driveway that extends to the lower garage level on the north side of the Public Safety Building; 3) a limited access road (police vehicles only) on the east side of the Public Safety Building; 4) a north-south access road on the east side of the Parking Garage; and 5) an entry drive and cul-de-sac on the east side of City Hall building. All roadways are asphalt pavement with concrete curb & gutter, except the City Hall cul-de-sac is concrete. Pavement is in good to fair condition. The main east-west access road (item 1 above) exhibits deficiencies due to asphalt deterioration (cracking & failure) and should be repaired. These areas should be saw cut and removed and replaced with new pavement. See deficiencies.
G2020 Parking Lots	1990	2005	3	8	MK	08/19/13	Campus asphalt parking lots are as follows:

Facility Summary

City of Redmond
Municipal Campus Site
Municipal Campus Infrastructure

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2020 Parking Lots						1) parking lot east of the Senior Center (approx. 30 vehicles; 2) lot north of the Senior Center (approx. 40 vehicles); 3) lot east of City Hall (50 vehicles; and 4) lot east of the Parking Garage (approx. 110 vehicles). Lots have extruded concrete curb, with lighting and striping. There are also two (2) small parking areas on north side of Public Safety Building at the Sally Port, of concrete pavement. These have limited access via the 'Green Gate' on the north and the 'Red Gate' on the east. The four-story Parking Garage provides approximately 380 parking stalls. Additional garage parking is provided in the basement level of the Public Safety Building. □ The asphalt lots at the Senior Center and City Hall are generally in good shape. Some minor pavement and curb repairs are warranted in the Senior Center lots. The concrete pavement on the east side of the Public Safety Building Sally Port exhibits cracking & spalling. Some repairs have been made. Additional repairs likely required within next five (5) years. The parking lot east of the Parking Garage has worn pavement markings and slope erosion along the west side. Recommend restriping of this lot and construction of landscape block wall. See deficiencies.
G2030 Pedestrian Paving	1990	2005	3	8	MK 08/19/13	Asphalt and concrete pedestrian walks, and plaza/patio areas of concrete pavement throughout the site. □ Walkways and plaza/patio areas are generally in good condition. They have significant remaining useful life. Some cracking and joint separation observed along west side of Public Safety Building where there is differential settlement due to underground parking garage.
G2040 Site Development	1990	2005	4	2	MK 08/19/13	Fixed bike racks and seating benches throughout. Picnic tables at Senior Center patios. Two (2) large metal/fabric sun canopies, two (2) tennis courts and an outdoor exercise equipment area on the west side of Senior Center. Flag poles at front of City Hall.

Facility Summary

City of Redmond
Municipal Campus Site
Municipal Campus Infrastructure

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2040 Site Development						□ Approximately 2,500 SF of exterior decks at rear of City Hall. □ Trex-like decking is in poor condition due to buckling and flaking of material. All other site development in good condition. See deficiencies.
G2050 Landscaping	1990	2005	2	18	MK 08/19/13	Ornamental landscaping throughout site and in raised planters and parking lot islands. Supplemented with grass lawns, and areas of groundcover and bark. □ □ Very good variety and condition of plantings. Irrigation systems appears to function well.
Site Civil / Mechanical Utilities						
G3010 Water Supply	1990	2005	3	23	MK 08/19/13	Domestic service lines and fire sprinkler supply lines to the buildings from the City of Redmond system. Parking Garage is sprinklered but does not appear to have domestic water supply. □ □ No known issues with water supply.
G3020 Sanitary Sewer	1990	2005	3	28	MK 08/19/13	Sanitary sewer services to the Public Safety Building, Senior Center, and City Hall from the City of Redmond system. □ □ Reports of clogging of internal sanitary lines in the Public Safety Building - see building's Mechanical section.
G3030 Storm Sewer	1990	2005	3	23	MK 08/19/13	At the Public Safety Building, runoff from roof and slab areas appears to be piped by internal downspouts to three sump pump systems in the basement garage level. There are two (2) sumps at the southwest corner of the garage - one (1) for the groundwater (underdrain/footing drain system), and one (1) for the floor drains. The sump at the southeast corner of the garage, in the shop, is for the roof drains. All sumps have duplex pumps with 4-inch discharge pipes.

Facility Summary

City of Redmond
Municipal Campus Site
Municipal Campus Infrastructure

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Civil / Mechanical Utilities						
G3030 Storm Sewer						Presumably these lines discharge into the City of Redmond system. The Senior Center, Parking Garage, and City Hall also appear to have internal roof downspouts, and likely connect into the City system. It appears some of the City Hall roof runoff is discharged to an infiltration area at the west side of the building. Runoff from site roadways, parking lots, and pedestrian areas are conveyed via catch basins, area/trench drains, and ditches to City of Redmond system. □ □ In the Public Safety Building there are reports of water infiltrating up into the garage from below the floor slab during rainy periods, with some flooding, especially in the event of sump pump failure. Rust stains and efflorescence (white powder) also indicate water intrusion. Review of the sump pump operation may be warranted in an effort to maintain a lower groundwater level within the system. Also, it is unfortunate that roof and parking area runoff from upper levels is routed to the basement and then pumped. The basis of this design is unknown but normally gravity discharge should be used for storm water where at all possible, and pumping used for only the portion of runoff that is too low to discharge by gravity.
G3060 Fuel Distribution	1990	2005	3	18	MK 08/19/13	Natural gas meters with seismic sensors are located at southeast corner of Public Safety Building, the north side of Senior Center, and the west side of City Hall. □ □ No known issues with fuel distribution.
Site Electrical utilities						
G4010 Electrical Distribution	1990	2005	3	18	MK 08/19/13	Underground electrical service to all buildings. Transformers present as follows: 500kva transformer at southeast corner of the Public Safety Building; 300 kVA transformers on north side of Senior Center and north side of Parking Garage; 750 kVA transformer on southwest

Facility Summary

City of Redmond
Municipal Campus Site
Municipal Campus Infrastructure

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Electrical utilities						
G4010 Electrical Distribution						corner, and 167 kVA transformer on northwest corner of City Hall. Emergency generators with base tanks at Public Safety Building and City Hall. □ See building Electrical sections.
G4020 Site Lighting	1990	2005	3	8	MK 08/19/13	Over a dozen large fixed light bollards in the patio west of the Public Safety Building. Several types of small pole lights, bollard lights, and tall pole lights are located throughout the site. All parking lots lit with pole lights. See also building Electrical sections. □ Site lighting appears adequate. See also building Electrical sections.
Other Site Construction						
G9090 Other Site Systems	2005	2005	2	7	MK 08/19/13	Water feature at front of City Hall, pool of water that surrounds the City Council chambers. □ Underground vault with four (4) pumps for water feature located east of City Hall. Minor leakage from pumps should be repaired.

Facility Summary

City of Redmond

Municipal Campus Site

Municipal Campus Parking Garage Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 90,000
Year Of Original Construction 2005
Facility Use Type Parking Garage
Construction Type Heavy
of Floors 3
Energy Source Electric
Year Of Last Renovation 2005
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	2.6			
Facility Condition Index (FCI)	0.10			
Current Replacement Value (CRV)	\$8,857,000	Predicted Renewal Budget (6 yrs)	\$613,000	\$567,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$1,112,000	\$993,000
		Observed Deficiencies (6 yrs)	\$200,000	\$192,000
		Observed Deficiencies (ALL)	\$284,000	\$257,000
		Opportunity Total Project Cost	\$199,000	N/A

Facility Condition Summary

Architectural:

Three-story concrete parking garage. Slab on grade with concrete columns and beams supporting concrete deck. Roof top parking access by means of drive ramps for vehicles and concrete stairs and elevators for pedestrians. Structure includes a secure parking area, concrete masonry unit storage, and mechanical room and other interior fabricated spaces for workshop and media production. Exterior consists of precast concrete panels, aluminum storefront metal mesh panels, and some glazing. Sun shades and steel canopies provide architectural feature. Exterior doors include storefront at entrance area, roll-up vehicle gates, hollow metal doors to mechanical areas, and overhead coiling doors on northwest corner. Interior partitions consist of cast in place concrete, masonry, and steel mesh fencing panels. Steel handrails and parking rails exist throughout.

Electrical:

Electrical service from Puget Sound Energy pad mounted transformers to north. Electrical room includes one (1) 480V panel, 480/240/120V transformers, and one (1) 240/120V panel. Fluorescent T8 fixtures throughout Parking Garage with approximately 50% during daytime hours, and remainder on at night. Limited low voltage systems including fire alarm control panel.

Mechanical:

The Redmond Municipal Campus Parking Garage is located on the northeast corner of the Redmond Municipal Campus. The Parking Garage was designed, built, operated, and maintained by Wright Runstad from 2005 to September 2013, when the City exercised an option to buy the garage associated with City Hall from Wright Runstad. Wright Runstad currently operated the Parking Garage under a 90-day contract while the City evaluates long term operations and maintenance options.

The Parking Garage is a three-story, heavy construction, naturally ventilated (open) parking garage with one (1) elevator lobby at the southwest corner, and includes mobile TV station truck bay and support space to the northwest, two (2) shop storage spaces under the middle portions of the first floor, electrical and riser room to center north, and two (2) motor operated access control doors to the west adjacent to a unique public art rain chain system.

HVAC includes multiple electric resistance unit and wall heaters for support at shop/storage spaces. Ventilation cooling for elevator machinery room.

No general parking garage ventilation.

Plumbing includes city water and storm drain with oil/water separator.

Fire protection includes dry pipe fire sprinklers throughout plus elevator/stair tower standpipe.

Facility Summary

City of Redmond
Municipal Campus Site
Municipal Campus Parking Garage Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				2.0					
Foundations									
A1010	Standard Foundations	2005	2005	2	80	JB	09/30/13	Reinforced concrete. While cracking was reported, particularly in supported structure above, only very limited signs of cracking were observed. A more detailed investigation is recommended.	
A1030	Slab On Grade	2005	2005	2	80	JB	09/30/13	Concrete slab on grade. Appear to be in fair to good condition.	
B Shell				2.5					
Superstructure									
B1010	Floor Construction	2005	2005	2	80	JB	09/30/13	Concrete vehicle deck on concrete beams. Good condition; some cracking.	
B1020	Roof Construction	2005	2005	2	80	JB	09/30/13	Upper vehicle deck is concrete supported by concrete beams. Some cracking.	
Exterior Closure									
B2010	Exterior Walls	2005	2005	4	15	JB	09/30/13	Concrete tilt up panel. Cast in place at mechanical and elevator. Steel mesh panels. Steel wire mesh. Metal systems show signs of rusting in most areas.	
B2020	Exterior Windows	2005	2005	2	37	JB	09/30/13	Storefront system at southwest stair, fixed, frosted glazing at east vehicle entrance. Fair condition.	

Facility Summary

City of Redmond

Municipal Campus Site

Municipal Campus Parking Garage Building

8701 160th Avenue NE

Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				2.5					
Exterior Closure									
B2030	Exterior Doors	2005	2005	3	15	JB	09/30/13	Large overhead coiling doors at northwest corner. Hollow metal doors and frames to mechanical areas. Doors are in need of paint. Function is fair. Replace weather seals where needed.	
Roofing									
B3010	Roof Coverings	2005	2005	2	17	JB	09/30/13	Roofing at elevator/stair shaft. Good condition.	
B3030	Projections	2005	2005	4	10	JB	09/30/13	Steel canopies. (Frame only) Steel sunshades. Paint needed. Rusting.	
C Interiors				4.0					
Interior Construction									
C1010	Partitions	2005	2005	4	10	JB	09/30/13	Cast in place concrete at elevator. Some concrete masonry unit (CMU). Wire mesh panels. Steel wire mesh panels are rusting.	
Staircases									
C2010	Stair Construction	2005	2005	4	10	JB	09/30/13	Steel frames and precast stair sections. Steel frame supporting southeast stairs shows considerable rust.	
Interior Finishes									
C3010	Wall Finishes	2005	2005	3	10	JB	09/30/13	Paint at interior walls. Fair condition.	

Facility Summary

City of Redmond

Municipal Campus Site

Municipal Campus Parking Garage Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.7			
Vertical Transportation						
D1010 Elevators and Lifts						
	2005	2005	2	28	DCS 09/30/13	One (1) three-stop Thyssen Krupp hydraulic elevator with fully finished cab. Ventilation cooling from elevator machinery room (EMR). Hydraulic cylinder seals recently replaced. Inspections are current. No issues reported or observed.
Plumbing						
D2020 Domestic Water Distribution						
	2005	2005	3	32	DCS 09/30/13	1-inch city water service with reduced pressure backflow prevention (RPBP) and 80-psig pressure. Copper piping to several garage hose bibs for housekeeping. No water heater. Piping is exposed and unprotected in garage, but no damage reported or observed.
D2030 Sanitary Waste						
	2005	2005	3	27	DCS 09/30/13	Floor drains, cast iron drain, waste, and vent (DW&V) piping, leading to oil/water separator located immediately west of garage. DW&V is hubless cast iron. No issues reported or observed, except minor standing water and light oil/grease around several lower floor drains.
D2040 Rain Water Drainage						
	2005	2005	3	27	DCS 09/30/13	Top level floor drains, cast iron drain piping, appears to lead to same drain system as Sanitary Waste system, including oil/water separator. Confirm system configuration. If combined, consider separating covered and uncovered drains as permitted by code.
HVAC						
D3030 Cooling Generating Systems						
	2005	2005	3	22	DCS 09/30/13	Ventilation cooling system for elevator machinery room (EMR). No issues reported or observed.

Facility Summary

City of Redmond

Municipal Campus Site

Municipal Campus Parking Garage Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems								
D Services				2.7				
HVAC								
D3050	Terminal and Package Units	2005	2005	3	12	DCS	09/30/13	Electric wall and vent heaters for utility and shop/storage spaces. Wall heaters and unit heaters are in fair to good condition, but shop/storage spaces are not ventilated per code.
D3060	Controls and Instrumentation	2005	2005	3	12	DCS	09/30/13	Stand alone controls for unit heaters, wall heaters, and elevator machinery room (EMR) cooling. No issues reported or observed. Opportunity to install DDC controls for remote monitoring.
Fire Protection								
D4010	Fire Protection Sprinkler Systems	2005	2005	3	27	DCS	09/30/13	6-inch city fire service with post indicator valve (PIV) and fire department connector (FDC) to northwest. Three (3) dry-pipe sprinkler risers, one (1) for each level. One (1) dry pipe stand-pipe at southwest elevator/stairwell. Sprinkler piping throughout garage is not primed or painted, and is corroding, especially where exposed to weather.
D4020	Stand-Pipe and Hose Systems	2005	2005	3	27	DCS	09/30/13	Dry pipe stand-pipe in southwest stair/elevator tower. No issues reported or observed.
D4030	Fire Protection Specialties	2005	2005	3	17	DCS	09/30/13	Fire extinguishers mounted on walls. While fire extinguishers have current inspections, there are no cabinets. Cabinets should be provided to protect fire extinguishers (less then \$2,000). Combustible material in shop/storage rooms may exceed limit.
Electrical								
D5010	Electrical Service and Distribution							

Facility Summary

City of Redmond

Municipal Campus Site

Municipal Campus Parking Garage Building

8701 160th Avenue NE

Redmond, WA 98052

Facility Components

Facility Components									
Systems			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
D Services					2.7				
Electrical									
D5010	Electrical Service and Distribution								
		2005	2005	3	27	DCS	09/30/13	480V service from Puget Sound Energy to one (1) 480V panel at Level 1 electrical room. One (1) 480/240/120V transformer serving one (1) 240/120V distribution panel.	
								No issues reported or observed.	
D5020	Lighting and Branch Wiring								
		2005	2005	3	17	DCS	09/30/13	T8 fixtures with approximately 50% on during occupied daytime hours, and remainder on at night.	
								Fixture lenses are yellowing prematurely. Controls are limited.	
D5030	Low Voltage Communication Security and Fire Alarm								
		2005	2005	3	12	DCS	09/30/13	Fire alarm system with Notifier fire alarm control panel in riser room.	
								Inspections are current.	
E Equipment and Furnishings									
Equipment									
E1030	Vehicular Equipment								
		2005	2005	2	17	JB	09/30/13	Motor driven vehicle access. Overhead rolling gates. Pipe bollards. Vehicle wire fencing.	
								Good condition; some minor damage due to use.	
F Special Construction									
Special Construction									
F1020	Integrated Construction								
		2005	2005	2	27	JB	09/30/13	Exterior art work, east side of building, representing rain chain.	
								Good condition.	

Facility Summary

City of Redmond

Municipal Campus Site

Police Garage North Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 1,250

Year Of Original Construction 2008

Facility Use Type Parking Garage

Construction Type Medium

of Floors 1

Energy Source Gas

Year Of Last Renovation 2008

Historic Register No

No Photo Available

		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	2.0			
Facility Condition Index (FCI)	0.02			
Current Replacement Value (CRV)	\$124,000	Predicted Renewal Budget (6 yrs)	\$1,000	\$1,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$10,000	\$8,000
		Observed Deficiencies (6 yrs)	\$9,000	\$9,000
		Observed Deficiencies (ALL)	\$9,000	\$9,000
		Opportunity Total Project Cost	\$26,000	N/A

Facility Condition Summary

Architectural:

The Police Garage North Building is located on the far northeast corner of the Public Safety Building sub-site, immediately north, across the concrete apron from the Police Garage South Building. Police Garage North houses Redmond Police Emergency Response Team (SWAT) vehicles and equipment. Police Garage North also includes a covered and fully enclosed trash container storage area. The Police Garage North is a two-bay garage with roll-up doors.

Electrical:

Power includes a 240/120V 50-amp panel serving lighting, receptacles, and miscellaneous equipment loads. Lighting includes exterior metal halide wall packs and interior sealed T8 fluorescent fixtures. Low voltage systems are minimal but include fire alarm.

Mechanical:

HVAC includes gas-fired overhead unit heaters, general exhaust, and vehicle engine exhaust systems. Plumbing includes city water for hose bibs, garage floor drains, and perimeter scupper box and downspout roof drains. Fire protection includes wet pipe fire sprinkler with unknown source, and wall mounted fire extinguishers.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
A Substructure			2.0			

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage North Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Foundations									
A1010	Standard Foundations		2008	2008	2	75	DCS	08/19/13	Continuous concrete footings with concrete stem walls assumed. No issues reported or observed.
A1030	Slab On Grade		2008	2008	2	75	DCS	08/19/13	Concrete slab on grade. No issues reported or observed.
B Shell					2.0				
Superstructure									
B1020	Roof Construction		2008	2008	2	83	DCS	08/19/13	Steel framed building with steel roof deck supported directly by steel building frame. No issues reported or observed.
Exterior Closure									
B2010	Exterior Walls		2008	2008	2	45	DCS	08/19/13	Steel framed building. Assume steel girts with batt insulation between frames. Skin is heavy stucco. Good condition. With no eaves at roof, stucco will require regular cleaning to minimize dirt, mold, and mildew.
B2020	Exterior Windows		2008	2008	2	35	DCS	08/19/13	Minimal glazing. Some include security bars. No issues reported or observed.
B2030	Exterior Doors		2008	2008	2	40	DCS	08/19/13	Hollow metal man doors. Two (2) powered coiling overhead roll-up doors. Good condition.
Roofing									
B3010	Roof Coverings		2008	2008	2	20	DCS	08/19/13	White membrane roof.

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage North Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				2.0					
Roofing									
B3010	Roof Coverings							Good condition, except several small areas that may not be well sloped to roof drains (minor issue).	
B3020	Roof Openings	2008	2008	2	35	DCS	08/19/13	Flashed and sealed openings for garage exhaust fan, heater B-vent, plumbing vent, engine exhaust and others.	
								No issues reported or observed.	
B3030	Projections	2008	2008	2	40	DCS	08/19/13	Canopy over garage doors to south.	
								No issues reported or observed but clean height is not marked (less than \$2,000).	
C Interiors				2.0					
Interior Construction									
C1010	Partitions	2008	2008	2	40	DCS	08/19/13	Partitions between garage and trash storage area.	
								No issues reported or observed.	
C1030	Fittings	2008	2008	2	20	DCS	08/19/13	Minimal.	
								No issues.	
Interior Finishes									
C3010	Wall Finishes	2008	2008	2	12	DCS	08/19/13	Water and light impact resistance panel low and painted gypsum wall board (GWB) high.	
								In good condition.	
C3020	Floor Finishes	2008	2008	3	15	DCS	08/19/13	Unfinished, but apparently sealed concrete.	

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage North Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				2.0					
Interior Finishes									
C3020	Floor Finishes							In fair to good condition. Opportunity to seal floor with epoxy or similar heavy duty finish to better protect the underlying concrete and improve lighting performance (less than \$2,000).	
C3030	Ceiling Finishes		2008	2008	2	25	DCS	08/19/13	White painted exposed ceiling structure. No issues reported or observed. Annual cleaning of flat structural surfaces is suggested for good housekeeping.
D Services				2.1					
Vertical Transportation									
D1090	Other Conveying Systems		2008	2008	5	0	DCS	08/19/13	No roof access. Roof access is needed for roof maintenance.
Plumbing									
D2010	Plumbing Fixtures		2008	2008	3	30	DCS	08/19/13	No fixtures. Opportunity to install deep sink to improve function.
D2020	Domestic Water Distribution		2008	2008	2	35	DCS	08/19/13	City water to hose bibs. Water source unclear.
D2030	Sanitary Waste		2008	2008	2	30	DCS	08/19/13	Floor drain(s) in garage. Investigate if upgrade may be needed to allow inside vehicle wash, similar to fire stations. Need to install floor drains to sewer at trash enclosure per code.
D2040	Rain Water Drainage		2008	2008	2	35	DCS	08/19/13	Roof drains to perimeter scupper boxes with

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage North Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
D Services				2.1			
Plumbing							
D2040	Rain Water Drainage						downspouts to site storm drain system. Confirm code compliant overflow roof drain path is present; add if needed (less than \$2,000).
D2090	Other Plumbing Systems	2008	2008	3	15	DCS 08/19/13	No systems currently installed. Opportunity to install small permanent compressed air system for vehicle tire service (less than \$2,000).
HVAC							
D3010	Energy Supply	2008	2008	2	35	DCS 08/19/13	Natural gas from Puget Sound Energy. Assumed to be a branch line from the adjacent Public Safety Building service. Opportunity to separately meter Police Garage North gas usage (less than \$2,000).
D3040	HVAC Distribution Systems	2008	2008	2	30	DCS 08/19/13	General garage exhaust with roof top exhaust fan and side wall air intake louver. Not high/low ventilation, which may be acceptable assuming this is a storage garage, not a maintenance garage.
D3050	Terminal and Package Units	2008	2008	2	13	DCS 08/19/13	Gas-fired Reznor low profile (horizontal) unit heater. No issues reported or observed.
D3060	Controls and Instrumentation	2008	2008	2	13	DCS 08/19/13	Stand-alone unit heater and exhaust control. Carbon monoxide sensor/control. No issues reported or observed. Opportunity to add Public Safety Building DDC system for monitoring purposes (less than \$2,000).
D3090	Other HVAC Systems and Equipment						

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage North Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				2.1					
HVAC									
D3090	Other HVAC Systems and Equipment								
		2008	2008	2	15	DCS	08/19/13	One (1) vehicle engine exhaust system. Appears infrequently used; ensure periodic maintenance is performed.	
Fire Protection									
D4010	Fire Protection Sprinkler Systems								
		2008	2008	2	35	DCS	08/19/13	Fire sprinkled garage. Water source unclear; may be from adjacent Public Safety Building.	
D4030	Fire Protection Specialties								
		2008	2008	2	20	DCS	08/19/13	Wall mounted fire extinguishers. Opportunity to install cabinets to better protect extinguishers.	
Electrical									
D5010	Electrical Service and Distribution								
		2008	2008	2	35	DCS	08/19/13	One (1) 240/120V 50-amp panel; source assumed to be from adjacent Public Safety Building. While in good condition and adequate for current use, the 50-amp panel provides minimal flexibility for future use; a future upgrade to at least 100-amp should be considered.	
D5020	Lighting and Branch Wiring								
		2008	2008	2	20	DCS	08/19/13	Miscellaneous receptacles for plug loads. Inside sealed (moisture resistant) T8 ceiling fixtures. Exterior halogen wall packs. No issues reported or observed.	
D5030	Low Voltage Communication Security and Fire Alarm								
		2008	2008	2	15	DCS	08/19/13	Low voltage system appears limited to fire alarm system with ceiling mounted detectors, wall pull station(s), and notification device(s). No issues reported or observed. Opportunity to install security access control and/or monitoring (less than \$2,000).	

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage North Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			2.1			
Electrical						
D5030 Low Voltage Communication Security and Fire Alarm						
D5090 Other Electrical Systems						
	2008	2008	3	10	DCS 08/19/13	None. Opportunity to install emergency interior lighting wall pack (bug-eyes) to provide minimal lighting while the on-site generator starts up (less than \$2,000).
E Equipment and Furnishings						
Equipment						
E1020 Institutional Equipment						
	2008	2008	2	15	DCS 08/19/13	Miscellaneous shelving for police equipment storage. Storage could be better organized for function and safety.
E1090 Other Equipment						
	2008	2008	3	15	DCS 08/19/13	Dumpster(s) in trash storage area. Normal wear and tear.

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage South Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 1,000
Year Of Original Construction 2008
Facility Use Type Parking Garage
Construction Type Medium
of Floors 1
Energy Source Gas
Year Of Last Renovation 2008
Historic Register No

No Photo Available

		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	2.0			
Facility Condition Index (FCI)	0.02			
Current Replacement Value (CRV)	\$99,000	Predicted Renewal Budget (6 yrs)	\$1,000	\$0
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$8,000	\$6,000
		Observed Deficiencies (6 yrs)	\$5,000	\$5,000
		Observed Deficiencies (ALL)	\$5,000	\$5,000
		Opportunity Total Project Cost	\$30,000	N/A

Facility Condition Summary

Architectural:

The Police Garage South is located on the far southeast corner of the Public Safety Building sub-site, immediately south, across the concrete apron from the Police Garage North Building. Police Garage South houses the Redmond Police Incident Response vehicles and equipment. Police Garage South is nearly identical to Police Garage North, except: mirror image (garage door faces north instead of south), no additional structure (just open two-bay garage).

Electrical:

Power includes a 240/120V 50-amp panel serving lighting, receptacles, and miscellaneous equipment loads. Lighting includes exterior metal halide wall packs and interior sealed T8 fluorescent fixtures. Low voltage systems are minimal but include fire alarm.

Mechanical:

HVAC includes gas-fired overhead unit heaters, general exhaust, and vehicle engine exhaust systems. Plumbing includes city water for hose bibs, garage floor drains, and perimeter scupper box and downspout roof drains. Fire protection includes wet pipe fire sprinkler with unknown source, and wall mounted fire extinguishers.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
A Substructure			2.0			

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage South Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Foundations									
A1010	Standard Foundations		2008	2008	2	75	DCS	08/19/13	Continuous concrete footings with concrete stem wall assumed. No issues reported or observed.
A1030	Slab On Grade		2008	2008	2	75	DCS	08/19/13	Concrete slab on grade. No issues reported or observed.
B Shell					2.0				
Superstructure									
B1020	Roof Construction		2008	2008	2	83	DCS	08/19/13	Steel framed building with steel roof deck supported directly by steel building frame. No issues reported or observed.
Exterior Closure									
B2010	Exterior Walls		2008	2008	2	45	DCS	08/19/13	Steel framed building; assume steel girts with batt insulation between frames; skin is heavy stucco. Good condition. With no eaves at roof, stucco will require regular cleaning to minimize dirt, mold, and mildew.
B2020	Exterior Windows		2008	2008	2	35	DCS	08/19/13	Minimal glazing. Unlike Police Garage North, no security bars at windows. This is a less secure building.
B2030	Exterior Doors		2008	2008	2	40	DCS	08/19/13	Hollow metal man doors. Two (2) coiling overhead roll-up doors, both powered. Good condition.
Roofing									
B3010	Roof Coverings								

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage South Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				2.0					
Roofing									
B3010	Roof Coverings	2008	2008	2	20	DCS	08/19/13	White membrane roof. Good condition except several small areas that may not be well sloped to the roof drains (minor issue).	
B3020	Roof Openings	2008	2008	2	35	DCS	08/19/13	Flashed and sealed openings for garage exhaust, heater B-vent, and others. No issues.	
B3030	Projections	2008	2008	2	40	DCS	08/19/13	Canopy over garage doors to north. No issues reported or observed but clear height is not marked (less than \$2,000).	
C Interiors				2.1					
Interior Construction									
C1030	Fittings	2008	2008	2	20	DCS	08/19/13	Minimal. No issues.	
Interior Finishes									
C3010	Wall Finishes	2008	2008	2	12	DCS	08/19/13	Water and light impact resistant panel low and painted gypsum wall board high. In good condition.	
C3020	Floor Finishes	2008	2008	3	15	DCS	08/19/13	Unfinished but apparently sealed concrete. In fair to good condition. Opportunity to seal floor with epoxy or similar heavy duty finish to better protect the underlying concrete and improve lighting performance (less than \$2,000).	
C3030	Ceiling Finishes								

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage South Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				2.1					
Interior Finishes									
C3030	Ceiling Finishes	2008	2008	2	25	DCS	08/19/13	White painted exposed ceiling structure. No issues reported or observed; annual cleaning of flat structural surfaces is suggested for good housekeeping.	
D Services				2.1					
Vertical Transportation									
D1090	Other Conveying Systems	2008	2008	5	0	DCS	08/19/13	No roof access. Roof access is needed for roof maintenance.	
Plumbing									
D2010	Plumbing Fixtures	2008	2008	3	30	DCS	08/19/13	No fixtures. Opportunity to install deep sink to improve function.	
D2020	Domestic Water Distribution	2008	2008	2	35	DCS	08/19/13	City water to hose bibs. Water source unclear.	
D2030	Sanitary Waste	2008	2008	2	30	DCS	08/19/13	Floor drain(s) in garage. Investigate if upgrade may be needed to allow inside vehicle wash, similar to fire stations.	
D2040	Rain Water Drainage	2008	2008	2	35	DCS	08/19/13	Roof drains to perimeter scupper boxes with downspouts to site storm drain system. Confirm code compliant overflow roof drain path is present; add if needed (less than \$2,000).	
D2090	Other Plumbing Systems	2008	2008	3	15	DCS	08/19/13	No systems currently installed.	

Facility Summary

City of Redmond

Municipal Campus Site

Police Garage South Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				2.1					
Plumbing									
D2090	Other Plumbing Systems								
							Opportunity to install small permanent compressed air system for vehicle tire service or minimum maintenance (less than \$2,000).		
HVAC									
D3010	Energy Supply								
		2008	2008	2	35	DCS	08/19/13	Natural gas from Puget Sound Energy; assumed to be a branch line from the adjacent Public Safety Building service.	
							Opportunity to separately meter Police Garage South gas usage (less than \$2,000).		
D3040	HVAC Distribution Systems								
		2008	2008	2	30	DCS	08/19/13	General garage exhaust with roof top exhaust fan and side wall air intake louver.	
							Not high/low ventilation, which may be acceptable assuming this is a storage garage, not a maintenance garage.		
D3050	Terminal and Package Units								
		2008	2008	2	13	DCS	08/19/13	Gas-fired Reznor low profile (horizontal) unit heater.	
							No issues reported or observed.		
D3060	Controls and Instrumentation								
		2008	2008	2	13	DCS	08/19/13	Stand-alone unit heater and exhaust control.	
							No issues reported or observed. Opportunity to add Public Safety Building DDC system for monitoring purposes (less than \$2,000).		
D3090	Other HVAC Systems and Equipment								
		2008	2008	3	15	DCS	08/19/13	None.	
							Opportunity to install a vehicle engine exhaust system similar to Police Garage North to increase flexibility.		
Fire Protection									
D4010	Fire Protection Sprinkler Systems								

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage South Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems									
D Services					2.1				
Fire Protection									
D4010	Fire Protection Sprinkler Systems		2008	2008	2	35	DCS	08/19/13	Fire sprinkled garage.
									Water source unclear, may be from adjacent Public Safety Building.
D4030	Fire Protection Specialties		2008	2008	2	20	DCS	08/19/13	Wall mounted fire extinguishers.
									Opportunity to install cabinets to better protect extinguishers.
Electrical									
D5010	Electrical Service and Distribution		2008	2008	2	35	DCS	08/19/13	One (1) 240/120V 50-amp panel; source assumed to be from adjacent Public Safety Building.
									While in good condition and adequate for current use, the 50-amp panel provides minimal flexibility for future use; a future upgrade to at least 100-amp should be considered.
D5020	Lighting and Branch Wiring		2008	2008	2	20	DCS	08/19/13	Miscellaneous receptacles for plug loads. Inside sealed (moisture resistant) T8 ceiling fixtures. Exterior halogen wall packs.
									No issues reported or observed.
D5030	Low Voltage Communication Security and Fire Alarm		2008	2008	2	15	DCS	08/19/13	Low voltage systems appears limited to fire alarm system with ceiling mounted detectors, wall panel pull station(s), and notification device(s).
									No issues reported or observed. Opportunity to install security access control and/or monitoring.
D5090	Other Electrical Systems		2008	2008	3	10	DCS	08/19/13	None.
									Opportunity to install emergency interior lighting wall packs (bug-eyes) to provide minimal lighting while the on-site generator starts up (less than \$2,000).

Facility Summary

City of Redmond
Municipal Campus Site
Police Garage South Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
D Services				2.1			
Electrical							
D5090 Other Electrical Systems							
E Equipment and Furnishings							
Equipment							
E1020 Institutional Equipment							
		2008	2008	2	15	DCS 08/19/13	Limited shelving for storage. Consider additional shelving or wall lockers/cabinets for storage (less than \$2,000).

Facility Summary

City of Redmond
Municipal Campus Site
Public Safety Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 94,975
Year Of Original Construction 1990
Facility Use Type Police Station - with garage
Construction Type Medium
of Floors 2
Energy Source Gas
Year Of Last Renovation 1990
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	2.7			
Facility Condition Index (FCI)	0.14			
Current Replacement Value (CRV)	\$53,803,000	Predicted Renewal Budget (6 yrs)	\$3,545,000	\$3,374,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$18,393,000	\$15,635,000
		Observed Deficiencies (6 yrs)	\$3,147,000	\$3,001,000
		Observed Deficiencies (ALL)	\$3,147,000	\$3,001,000
		Opportunity Total Project Cost	\$5,554,000	N/A

Facility Condition Summary

Architectural:

Public Safety Building is generally in good condition given its age of 23 years. Roof flashing and gutters, stucco and tile walls and soffits, and exterior windows present deficiencies. Otherwise, localized maintenance and repairs are needed.

Electrical:

Public Safety Building electrical 480/277 service, underground service from Puget Sound Energy padmount transformer. 480/277v service is connected to main switchboard in main electrical room on first floor. Main switchboard, 1200A, 480/277v, with breaker distribution section. 208/120 step down transformer to provide 208/3 and 120/1 power. Building lighting is all fluorescent with a few high intensity discharge lighting. The building's emergency power is served by two (2) diesel generators, 250-kw, and a separate 400-kw unit; both are 480/277v. The building has fire alarm system protection, CCTV system protection, card access system for access controls, voice/data system with main MDF room and IDF room per floor. Overall, the systems are in good working condition, with no major problems observed.

Mechanical:

The Redmond Public Safety Building is located in the center east area of the Redmond Municipal center. The Public Safety Building includes:

- 1) Original 1990 two-story main building with full semi-open below grade parking garage, partial east and west mechanical mezzanines, and large attic ceiling plenum space. Approximately 30,000 sf footprint for 90,000 sf total.
- 2) Original 1990 gun range below grade to northeast, roughly 1,500 sf; includes range, range control, and gun cleaning room.
- 3) Original 1990 utility building to southeast with one (1) 250-kw Cumming Onan diesel generator, one (1) condenser water system cooling tower, and underground fuel oil storage tank.
- 4) Three 2006 additions including: roughly 1,500 sf vehicle evidence storage to northwest; approximately 1,200 sf police garage to northeast including approximately 200 sf trash enclosure; and approximately 1,000 sf police garage to southeast.
- 5) New 2012 400-kw Caterpillar diesel generator with new emergency panel switchgear to far southeast.

The primary HVAC system is a water service heat pump (WSHP) system with two (2) nearly new (2010) gas-fired boiler, two (2) condenser water circulation pumps, one (1) evaporatively cooled closed loop fluid cooler (cooling tower), and 38 WSHPs distributed throughout the mechanical mezzanines and open plenum attic ceiling space. One (1) large air handling unit (AHU-1) serves the bulk of the building to the east; the unit appears to be a dedicated make-up air unit (MAU), not an AHU as labeled; this unit only partially conditions the make-up air using one condenser water coil with supplemental receive pump. Additionally multiple split Dx cooling system serves mission critical area such as 911 call center and data/communication/radio rooms. The evidence garage to the northwest is served by two (2) roof top units (RTU) gas packs. Both police parking garages are served by gas-fired overhead unit heaters and set of exhaust fans and intake louvers. The gun range has a gas-fired MAU and end-of-range large exhaust fan.

Facility Summary

City of Redmond
Municipal Campus Site
Public Safety Building

8701 160th Avenue NE
Redmond, WA 98052

The main HVAC system has multiple issues causing occupant thermal discomfort and poor indoor air quality. The mission critical systems are functionally but marginally so.
Building plumbing is City water with gas-fired domestic hot water (DHW) heat all in fair condition. Fire sprinklers include wet pipe, dry pipe, and pre-action systems.

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				3.0					
Foundations									
A1010	Standard Foundations	1990	1990	3	65	RD	08/19/13	Poured in place concrete with some masonry walls. Concrete is in good condition, but shows efflorescence and markings from water intrusion. (See also "Slab on Grade" section below.)	
A1030	Slab On Grade	1990	1990	3	65	RD	08/19/13	Reinforced slab on grade. Efflorescence in places; ground water intrusion.	
Basements									
A2020	Basement Walls	1990	1990	3	65	RD	08/19/13	Poured in place concrete. Efflorescence and water intrusion. (See also "Slab on Grade" section above.)	
B Shell				2.6					
Superstructure									
B1010	Floor Construction	1990	1990	2	65	RD	08/19/13	Concrete floors on steel deck. No deflection or problems noted.	
B1020	Roof Construction	1990	1990	2	65	RD	08/19/13	Roof structure is metal or torch down on insulation over steel deck on steel frame. No significant problems noted.	

Facility Summary

City of Redmond
Municipal Campus Site
Public Safety Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Facility Components			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems									
B Shell			2.6						
Exterior Closure									
B2010	Exterior Walls		1990	2005	3	30	RD	08/19/13	Stucco over metal frame; some sloped surface. Tile walls and soffits.
									Generally good condition. South wall second floor water enters wall at gutter or above windows. Stucco failing. Tile soffits at west entry loosening due to water intrusion.
B2020	Exterior Windows		1990	1990	3	10	RD	08/19/13	Anodized aluminum frame double pane windows. All fixed units.
									Windows in original building corroding, possibly due to contact with stucco. Glass seals failing.
B2030	Exterior Doors		1990	1990	3	27	RD	08/19/13	Metal doors and metal coiling doors.
									Hollow metal doors and frames are in generally good condition. Coiling doors show some rust and finish issues; need maintenance.
Roofing									
B3010	Roof Coverings		1990	2012	3	10	RD	08/19/13	Torch down roof recoated (Garco) 2012. Applied over insulation; generally in good condition. Standing seam metal roof; generally in good condition. Lower edge of panels need work. Gutters need support.
									Torch down shows some ponding. Metal needs surface maintenance at lower edge. South wall metal needs neoprene stops or similar to stop water intrusion in wind. North and south gutters need to be straightened, flashed, and supported.
B3020	Roof Openings		1990	1990	2	20	RD	08/19/13	Few roof penetrations. Generally good condition where there are penetrations.
									No issues noted.
B3030	Projections		1990	1990	2	27	RD	08/19/13	Parapets with stucco, tile, and metal cap.

Facility Summary

City of Redmond
Municipal Campus Site
Public Safety Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
B Shell			2.6			
Roofing						
B3030 Projections						Balcony rails. All in good condition.
C Interiors			2.4			
Interior Construction						
C1010 Partitions	1990	1990	2	27	RD 08/19/13	Interior partition light gauge metal with gypsum wall board (GWB) each side. Well maintained and in good condition. Some minor repair needed in isolated locations.
C1020 Interior Doors	1990	1990	3	17	RD 08/19/13	Solid core wood doors. Need refinish and adjustment.
C1030 Fittings	1990	1990	3	10	RD 08/19/13	Shelving, lockers, built in counters. Acceptable condition.
Staircases						
C2010 Stair Construction	1990	1990	2	65	RD 08/19/13	Steel stairs with new carpet. Very good condition.
C2020 Stair Finishes	1990	2012	1	16	RD 08/19/13	Carpeted stairs with painted rails. Very good condition.
Interior Finishes						
C3010 Wall Finishes	1990	2004	3	7	RD 08/19/13	Painted walls. The City repairs as needed.

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C Interiors				2.4					
Interior Finishes									
C3020	Floor Finishes	1990	2012	1	24	RD	08/19/13	Carpet tile, ceramic tile, vinyl composition tile (VCT). Carpet and vinyl composition tile (VCT) new in 2012. Other tile in good condition.	
C3030	Ceiling Finishes	1990	1990	3	10	RD	08/19/13	Suspended acoustical tile, painted gypsum wall board (GWB). Painted ceilings are updated with wall paint. Suspended tile is in good condition, except for limited broken or damaged tile.	
D Services				2.9					
Vertical Transportation									
D1010	Elevators and Lifts	1990	1990	3	13	DCS	08/19/13	One (1) passenger elevator to west; Dover 25-hp. One (1) freight elevator to mid-building; Dover 30-hp. Fully finished cab interiors in both. Dedicated water source heat pump (WSHP) cooling for both elevator machine rooms. Heat relief vents at top of both elevator hoist ways. Both elevators in fair to good condition; while occupants/users report slow operation of the freight elevator, speed appears normal for a hydraulic freight elevator.	
D1090	Other Conveying Systems	1990	1990	5	0	DCS	08/19/13	No roof access to mid-level roofs to west or 2006 addition roofs. No fall protection for sloped metal roofs. No anchor points for wall or window maintenance. Provide roof access to all roofs with equipment and systems needed regular maintenance.	
Plumbing									
D2010	Plumbing Fixtures	1990	1990	3	17	DCS	08/19/13	Porcelain water closets, urinals, and lavatories with chrome trim (faucets and flush valves); showers; drinking fountains; housekeeping mop	

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D Services			2.9			
Plumbing						
D2010 Plumbing Fixtures						sinks, and kitchenette stainless steel sinks and trim. See "Other Plumbing Systems" section for correctional fixtures. In fair condition with many faucets and trim needing service or replacement. Several fixtures with minor damage.
D2020 Domestic Water Distribution	1990	1990	4	10	DCS 08/19/13	Two-inch city water service with pressure reduce valve (PRV) station at northwest basement mechanical room. Copper water distribution. Two (2) gas-fired domestic hot water (DHW) heaters at level 1 west mechanical room with 550-gallon DHW storage tank. Hose bibs outside perimeter. Water pressure is high on level 1 and low at level 2. Domestic hot water (DHW) heaters are near end of useful life. Taste and color are acceptable in most areas, but discolored with marginal taste at less used/remote fixtures. DHW pipe insulation is damaged or missing in some areas.
D2030 Sanitary Waste	1990	1990	4	12	DCS 08/19/13	Cast iron drain, waste, and vent (DW&V) piping with side sewer connection to campus sanitary sewer service (See G-series). Cast iron is single clamped hubless with mastic coating in parking garage areas. Floor drains in most toilet rooms, locker rooms, and mechanical room. Partially insulated in parking garage. While most fixtures flush or drain well, the drain, waste, and vent (DW&V) pipe in the parking overhead appear marginally installed with some runs not properly sloped to drain. There are few vents-to-roof (VTR). No trap primers reported or observed. No sanitary service to parking garages.
D2040 Rain Water Drainage	1990	1990	4	7	DCS 08/19/13	Sloped roofs are gutter and downspout. Flat roofs are interior drain to parking garage lift station. There are three (3) sumps with duplex lift pumps: large southeast roof drain (4-inch discharge), large southwest ground water (4-inch drainage), and medium southwest garage floor drain. An oil water separator (OWS) serves the

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D Services			2.9			
Plumbing						
D2040 Rain Water Drainage						garage floor drains. Roof gutters and downspout performance is marginal and may be resulting in needless building structure damage (see B-series). Storm pumps can not keep up with storm water flow during heavy rain allowing flooding in the garage.
D2090 Other Plumbing Systems	1990	1990	4	5	DCS 08/19/13	Stainless steel detention fixtures with remote pneumatic trim at approximately half dozen holding cells. Vertical 5-hp air compress at garage storage north center service vehicle evidence garage above. Detention fixture rusted with minor damage. Some trim inoperable or marginal. Air compressor surrounded by excessive combustible storage material.
HVAC						
D3010 Energy Supply	1990	1990	3	17	DCS 08/19/13	Natural gas service from Puget Sound Energy with Meter Number 325338 located to the northeast above gun range control room; capacity is 1,400-cfh and includes seismic valve. Approximately 3-inch line runs through gun range cleaning room to east mechanical mezzanine via garage area. Underground fuel oil storage tank of unknown size and exact location; appear to be under original and/or new generator. Gas meter assembly has a very minor gas leak; gas piping in gun range may not be a good idea. Check for proper diesel fuel tank venting. Mark location of fuel tank and fill station.
D3020 Heat Generating Systems	1990	2010	1	22	DCS 08/19/13	Two (2) nearly new evolution (EVO) high efficiency condensing gas-fired boilers with receive pumps. Provide heat at water service heat pump (WSHP) condenser water loop during heating season. No issues reported or observed.

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D Services			2.9			
HVAC						
D3020 Heat Generating Systems						
D3030 Cooling Generating Systems	1990	1990	4	3	DCS 08/19/13	Condenser water loop piping, two (2) 550-gpm at 110-foot total dynamic head (TDH) pumps with 25-hp motors, and one (1) Baltimore Aircoil Company (BAC) Model F1343-N cooling tower (evaporated cooled closed loop fluid cooler). Piping is not insulated. Water chemistry control at cooling tower. Multiple condensing units for mission critical spaces. Cooling tower is at end of life. Pumps should be overhauled. Opportunity to retrofit variable speed pumping for energy savings. Ensure proper condensing water chemistry. Mix of old and new condensing units.
D3040 HVAC Distribution Systems	1990	1990	4	5	DCS 08/19/13	38 water source heat pumps (WSHP) serves most of the main building levels 1 and 2, plus mezzanine areas. Ducted supply air with open plenum return to recirculation WSHPs. Air handling unit (AHU-1) supply partially conditioned outside air to WSHPs at east end of building. West end outside air is ducted unconditioned from an outside air plenum. Waster source heat pumps (WSHP)are failing. Little or no outside air to west end of building. Questionable outside air delivery for AHU-1 to east end. Dirty and damaged other return air plenum. Outside air intake plenums damaged and dirty and do not meet code plenum requirements. Flex duct pinched, loose, and damaged in some attic locations. Duct sealing is unclear. Some sheet metal ducts not properly supported.
D3050 Terminal and Package Units	1990	2006	3	10	DCS 08/19/13	Two (2) roof top gas pack units (RTU) serves to 2006 north evidence storage garage addition. Electric resistant unit heaters serve many of the smaller storage rooms and mechanical, electrical, and plumbing (MEP) rooms, especially at the parking garage level. New roof top units are in good condition but location in roof pocket area with nearby exhaust may adversely effect indoor air quality. Some

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D Services			2.9			
HVAC						
D3050 Terminal and Package Units						unit heaters are close to excessive combustible material.
D3060 Controls and Instrumentation	1990	2005	4	5	DCS 08/19/13	Piece metal control systems with variety of manual and programmable stand alone controls, and partially upgraded DDC system. Many thermostat cover plates are broken or missing. Many abandoned in place old controls. Many control boxes open or exposed with improperly secured wiring.
D3090 Other HVAC Systems and Equipment	1990	2006	3	10	DCS 08/19/13	Gun range gas fired make-up air unit (MAU) and end of range backstop exhaust fan. Original generator engine plume booster. Northeast police garage vehicle engine exhaust systems. No garage exhaust system. Gun range system appears dirty, but functional. Original generator exhaust is too long and likely exceeding manufacture's backpressure limit. Portion of parking garage may not meet code minimum requirements for ventilation.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1990	1990	3	17	DCS 08/19/13	8-inch city water fire service entry with 4-inch wet pipe riser, 4-inch dry pipe riser to parking garage, three (3) 4-inch floor control valves, and pre-action system for holding cells. Risers are in good condition; some corrosion, strike damage in garage. No pre-action for mission critical areas.
D4020 Stand-Pipe and Hose Systems	1990	1990	3	12	DCS 08/19/13	Hose system is abandoned in place. No stand pipe system. Clever use of several abandoned hose cabinets as art displays.
D4030 Fire Protection Specialties						

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D Services			2.9			
Fire Protection						
D4030 Fire Protection Specialties	1990	1990	3	7	DCS 08/19/13	Fire extinguishers in cabinets throughout. Automated external defibrillators (AED) and other rescue gear throughout. Inspection tags are up to date.
D4090 Other Fire Protection Systems	1990	1990	5	0	DCS 08/19/13	Rated egress corridor along spine of building on levels 1 and 2. Rated assembly damaged at multiple locations along level 2 corridor.
Electrical						
D5010 Electrical Service and Distribution	1990	1990	2	17	RA 08/19/13	Padmount transformer, Puget Sound Energy 500-kva, 480/277V, outside at building's southeast corner. 408/277V power feeds underground to main switchboard in first floor electrical room. 480/277V panels and 208/120V panels are derived from main switchboard and 208/120V step-down dry type transformers. Branch panels at each location including hallway, mechanical rooms, first floor, second floor, garages, etc. 480/277V and 208/120V panels are located side-by-side. Main switchboard (GE-AV line breaker board) from 1990, is in good condition. Branch panels (GE-A style) breaker panels are in good condition. Main electrical room is good size with good clearance per code, but all wall spaces are fully used. Only utility meters are used; no network electrical meters used.
D5020 Lighting and Branch Wiring	1990	1990	2	13	RA 08/19/13	Lighting wiring and device wiring are installed in a raceway system. Interior lighting is fluorescent with some high intensity discharge (HID) lights at stair step lights, and high pressure sodium (HPS) lights in the garage. Outside lights are all HID. Electrical outlets are 10A device, grounding type, with ivory plastic covers. Controls are by manual switch; there are no occupancy and daylight controls.

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D Services			2.9			
Electrical						
D5020 Lighting and Branch Wiring						Interior lighting fixtures are in good condition, consist of 2x4 lens troffer, 1x4 paracube surface linears, recess down lights, 1x4 prison type surface lens. Exterior lights consist of recess soffit lights, wall lights, and bollards lighting. General lighting system is in good condition. Lighting level is good throughout the building. Garage level has some darker areas, and some more lights should be added over the driving lanes. Currently, there are no light fixtures over by the driving lanes. Insufficient electrical outlets in the garage levels. More receptacles could be added for convenience walls. Lighting fixtures in the firing range consist of open reflector 2-lamp fixtures, without lenses; they should be replaced with new vapor tight lens fixtures. The radio room, located in the mechanical mezzanine, needs to add more uninterrupted power supply (UPS) powered dedicated circuits and devices for radio equipment rack out back wall. Exterior lights at east end of building entry area: soffit lights are dirty, filled with dust debris, and should be cleaned. Exterior lighting at rear of the garage building: lenses are blinded with rust-like debris, and should be replaced. Exterior lighting at door entry of the Police garage building at north side: one wall light lens is heating up by the lamp and should be replaced. Both of the Police garage building at east of the Public Safety Building: the electrical power, lighting, and fire alarm system are in good condition and fully operational.
D5030 Low Voltage Communication Security and Fire Alarm	1990	1990	3	8	RA 08/19/13	Building has full fire alarm system. Fire alarm panel is Silent Knight with separate radio transmitter, and is located in the main electrical room. Building has full Cat-5e, Cat-6 data/voice wiring system with main distribution frame (MDF) room on first floor, and separate independent distribution frame (IDF) rooms on first and second floors. The building has full CCTV system, consisting on indoor and outdoor cambers. Building has full access control system, 2006 Altronix equipment. Overall systems are in good operating condition, but fire alarm system is the original 1990 system, the components are >20 years, system performance is functional, adequate; should look

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D Services			2.9			
Electrical						
D5030 Low Voltage Communication Security and Fire Alarm						for replacement in next 5 to 10 years. CCTV system with indoor and outdoor cameras: cameras are outdated and in fair condition; performance is adequate, with outdated camera controls. CCTV system should be upgraded in the next 5 years with high definition cameras and digital equipment with network capabilities.
D5090 Other Electrical Systems						
	1990	2012	2	15	RA 08/19/13	Building has two (2) diesel generators: one (1) 250-kw, and one (1) 400-kw. One (1) indoor automatic transfer switch (ATS) outside the generator room building. Generators supply emergency power to lighting, uninterrupted power supply (UPS) power and HVAC cooling equipment. Automatic transfer switch (ATS) and indoor generator, 250-kw, Onan, Cummins Northwest, 1990 equipment; excellent condition. ATS outdoor and indoor generator, 400-kw, Caterpillar, 2012 equipment; excellent condition.
E Equipment and Furnishings			3.0			
Equipment						
E1010 Commercial Equipment						
	1990	2000	2	15	RD 08/19/13	Office equipment including copiers, projectors, and screens. No dates available, but equipment is largely much newer than building. No deficiencies noted.
E1020 Institutional Equipment						
	1990	1990	3	5	RD 08/19/13	Detention, security, and presentation equipment. Presentation equipment is mostly newer than building. Detention and security equipment is dated but adequate. Upgrades should be considered.
E1030 Vehicular Equipment						
	1990	1990	3	8	RD 08/19/13	Sally port coiling doors. Secure parking gates. Parking gates appear to work correctly. Sally

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Systems								
E Equipment and Furnishings					3.0			
Equipment								
E1030	Vehicular Equipment							port doors need maintenance.
Furnishings								
E2010	Fixed Furnishings		1990	1990	3	7	RD 08/19/13	Fixed counters and desks. Fixed counters and desks are dated but seem to work correctly.
F Special Construction								
Special Construction								
F1010	Special Structures		1990	1990	3	27	RD 08/19/13	Sally port, detention facilities. Dated and low-tech but functional. No deficiencies observed.
F1040	Special Facilities		2006	2006	3	28	RD 08/19/13	Generator building - steel frame. Structural components and roof grills rusting.
F1050	Special Controls and Instrumentation		1990	1990	2	10	RD 08/19/13	Lots of antennas and communication equipment and weather instruments on roof. No deficiencies observed.

Facility Summary

City of Redmond
Municipal Campus Site
Senior Center Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 22,000
Year Of Original Construction 1990
Facility Use Type Community Center
Construction Type Medium
of Floors 1
Energy Source Gas
Year Of Last Renovation 1990
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.0			
Facility Condition Index (FCI)	0.16			
Current Replacement Value (CRV)	\$9,725,000	Predicted Renewal Budget (6 yrs)	\$428,000	\$404,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$4,418,000	\$3,774,000
		Observed Deficiencies (6 yrs)	\$1,539,000	\$1,464,000
		Observed Deficiencies (ALL)	\$1,539,000	\$1,464,000
		Opportunity Total Project Cost	\$750,000	N/A

Facility Condition Summary

Architectural:
No architectural comments.

Electrical:
The Senior Center building has 208/120V, 3-phase, 4-wire power fed underground from Puget Sound Energy, 300-kva padmount transformer, located outside of main electrical room. The main switchboard is 1600A, 208/120v, 3-phase, 4-wire. 1600A main disconnect switch feeds a distribution panel to distribute power to branch panels. Building lighting is mostly fluorescent, with some minor quantities of incandescent lights used for track lighting, storage room, and multi-purpose room area. Exterior lighting is outdated and at end of life. Building emergency lights are wall mounted bug-eyes; many are not working. The building has no generator. The building has a fire alarm system, security alarm system, and voice/data system with main distribution frame (MDF) rack in fire sprinkler/mechanical room. Overall, the systems are working; original systems with building construction. Lamps were upgraded in 2007 from T12 to T8.

Mechanical:
The Redmond Senior Center includes: entry canopy and vestibule; lobby, administration, and store; dayroom, TV room, and coffee bar; activity, art, library, and pool (billiards) rooms; patio with dining, exercise, and tennis courts; multipurpose room with stage, low fly and dressing room; commercial kitchen and dining area; loading dock, dumpster yard, cooling tower enclosure; toilet rooms and custodial rooms; and north and south mechanical rooms.
The HVAC system is water source heat pump (WSHP) with one (1) natural gas boiler, one (1) cooling tower, and 18 WSHPs.
Plumbing includes city water and sewer service, gas and electric hot water heaters, toilet room, activity room sinks, and commercial kitchen support. Wet and dry pipe fire sprinkler systems, fire extinguishers, automated external defibrillators (AED), and first aid kits.
While mechanical system ages and types are similar to the adjacent Public Safety Building, the Senior Center systems are better designed and constructed than those in the Public Safety Building. Nevertheless, much of the original (1990) mechanical equipment is at or near the end of useful life and will soon need replacement, including water source heat pumps (WSHP), cooling towers, domestic hot water heaters, kitchen make-up air units (MAU), and other items.

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A Substructure				3.0					
Foundations									
A1010	Standard Foundations	1990	1990	3	65	RD	08/20/13	Poured in place concrete. No deficiencies observed.	
A1030	Slab On Grade	1990	1990	3	65	RD	08/20/13	Slab on grade floor. No settlement or cracking observed.	
B Shell				3.0					
Superstructure									
B1010	Floor Construction	1990	1990	3	65	RD	08/20/13	Wood floor on concrete at multipurpose room. Wood floor on wood frame at stage. Wood floor at stage level needs to be painted.	
B1020	Roof Construction	1990	1990	3	65	RD	08/20/13	Wood joists, trusses, and glue-laminated beams and wood frame. No deficiencies observed.	
Exterior Closure									
B2010	Exterior Walls	1990	1990	3	37	RD	08/20/13	Dryvit and ceramic tile. Dryvit is in good condition except at northwest corner and roof wall between pool room and library; each show prior water damage, likely from earlier roof problems. Tile on east and northeast walls near entry is cracked or loosened in places by temperature and water; repairs underway on a portion of the tile.	
B2020	Exterior Windows	1990	1990	3	22	RD	08/20/13	Double glazed metal windows in good condition. Double and single glazed greenhouse glass in poor condition. Greenhouse glazing seals are broken, some glass is cracked; wall damaged.	

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B Shell				3.0					
Exterior Closure									
B2020	Exterior Windows								
B2030	Exterior Doors		1990	1990	3	27	RD	08/20/13	Anodized aluminum doors. Hollow metal doors. Doors are in fair condition; need cleaning and adjustment.
Roofing									
B3010	Roof Coverings		1990	2004	3	15	RD	08/20/13	Torch down roof and standing seam metal roof. Some blistering on torch down. Ponding throughout. Need more drains. Metal is in generally good condition. Gutter overflow at patio exits through fascia.
B3020	Roof Openings		1990	1990	3	17	RD	08/20/13	Roof hatches and penetrations original to building. Re-flashed with re-roof in 2004. Need cosmetic maintenance.
B3030	Projections		1990	1990	4	3	RD	08/20/13	Canopy glue-laminated beams on steel pipe columns with polycarbonate panels. Entry canopy and vestibule roof. System leaks with polycarbonate breaking down in ultraviolet (UV) light; glue-laminated beams delaminating and water damage to finishes.
C Interiors				3.0					
Interior Construction									
C1010	Partitions		1990	1990	3	27	RD	08/20/13	Gypsum wall board (GWB) on wood frame. Generally in good condition. Continued maintenance and paint required.
C1020	Interior Doors		1990	1990	3	17	RD	08/20/13	Solid core wood doors, sliding panel room

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C Interiors						3.0					
Interior Construction											
C1020	Interior Doors										dividers, and accordion doors. Wood and divider doors are in good condition for age. Kitchen accordion door needs replacement.
C1030	Fittings		1990	1990	3	7	RD	08/20/13	Lockers, storage, and shelving. Storage cabinets, lockers, etc. are dated and show their age.		
Interior Finishes											
C3010	Wall Finishes		1990	1990	3	15	RD	08/20/13	Wall finishes are paint. The ongoing program of painting when needed is working.		
C3020	Floor Finishes		1990	2000	3	14	RD	08/20/13	Carpet, tile, concrete, and wood. Carpet new in 2000. Concrete looks new. Wood floor is well maintained.		
C3030	Ceiling Finishes		1990	1990	3	10	RD	08/20/13	Drop in acoustical ceiling tile (ACT). Wood ceilings. Generally in good condition; some stained. Tiles are below equipment in some areas. Grid is rusting over coffee maker in kitchen.		
D Services						3.0					
Vertical Transportation											
D1090	Other Conveying Systems		1990	1990	4	12	DCS	08/20/13	Two (2) low roof access hatches, one (1) at south mechanical room, and one (1) at the kitchen to the north. No access to high roof above stage fly space. No tie-offs for work on sloped roof above multipurpose room. (Less than \$2,000.)		

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D Services			3.0			
Vertical Transportation						
D1090 Other Conveying Systems						
Plumbing						
D2010 Plumbing Fixtures	1990	1990	3	17	DCS 08/20/13	Porcelain water closets, urinals, and lavatories with mix of auto (infrared) and manual trim (flush valves and faucets). Commercial kitchen flow sink(s) and wall boxes. Electric cooled drinking fountain. Some water closets are pulling away from the wall. Staining and/or unsanitary condition at full-height urinals. Floor sinks are missing at commercial scullery area.
D2020 Domestic Water Distribution	1990	1990	3	21	DCS 08/20/13	City water service at 90 to 100 psig with 2.5-inch pressure reducing valve (PRV), 1.5-inch PRV, delivering 60-psig plus bypass. Hose bibs outside. One (1) 120-gallon 36-kw and electric domestic hot water (DHW) heater and circulation pump to south, and one (1) 125-gallon 300,000-btuh gas DHW heater and circulation pump to north. Pressure seems somewhat high at some plumbing fixtures, but not overly so. Original domestic hot water (DHW) heaters are at or near end of useful life.
D2030 Sanitary Waste	1990	1990	3	20	DCS 08/20/13	Cast iron drain, waste, and vent (DW&V) piping. Floor drains in toilet rooms and mechanical rooms. Cast iron is hubless double clamped. Cast iron drain, waste, and vent (DW&V) is in fair to good condition. Floor drains missing in men's rooms. Floor drain trap primers not observed, but few or no floor drain sewer gas odors were detected.
D2040 Rain Water Drainage	1990	1990	4	17	DCS 08/20/13	Primary and overflow roof drains at flat roof. Gutter and downspouts at sloped roof. Ponding on roof. Roof drains are blocked by tree debris. Overflow roof drains have been fit with

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Senior Center Building

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Redmond, WA 98052

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D Services			3.0			
Plumbing						
D2040 Rain Water Drainage						temporary black PVC pipe to grade.
HVAC						
D3010 Energy Supply	1990	1990	2	20	DCS 08/20/13	Natural gas from Puget Sound Energy via Meter Number 473520 with 1,000-cfh capacity and earthquake valve. Gas to north back room, south gas log fireplace, and two (2) outside barbecue locations. Gas system is in good condition except portions of gas piping on roof is falling off of sleepers.
D3020 Heat Generating Systems	1990	2004	3	10	DCS 08/20/13	One (1) Laars 1,000,000-btu/hour 80% efficiency gas-fired boiler and two (2) 10-hp constant volume condensing water pumps. Boiler flue cap is corroded and failing. Opportunity to install water source heat pump (WSHP) two-way valve control and variable frequency drive (VFD) on both condensing water pumps.
D3030 Cooling Generating Systems	1990	1990	4	3	DCS 08/20/13	One (1) closed loop fluid cooling with evaporative spray cooling (cooling tower). Evaporative section circulation pump is 3/4-hp. New 2013 water chemistry with anti-corrosion and biocide tanks and injection pumps. See "Heat Generating Systems" section above for condensing water pumps (two at 10-hp each). One (1) kitchen refrigerator condensing unit in kitchen roof well. Original 1990 cooling tower is at end of useful life; otherwise in fair condition. Outside air intake for water source heat pumps (WSHP) serving north portion of building are nearly directly above the cooling tower.
D3040 HVAC Distribution Systems	1990	1990	3	17	DCS 08/20/13	Water source heat pump (WSHP) system with 18 WSHPs, ducted supply, returns, and outside air to each WSHP. General exhaust fans for toilet rooms, janitor closets, and similar.

Facility Summary

City of Redmond
Municipal Campus Site
Senior Center Building

8701 160th Avenue NE
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
HVAC						
D3040 HVAC Distribution Systems						Water source heat pumps (WSHP) are at end of useful life and beginning to fail. Some outside air dampers are missing or damaged. Minor duct leakage throughout. Poor outside air intake location for some WSHPs, specifically to the north by cooling towers. Pool (billiards) room is chronically too hot/too cold and under-ventilated.
D3050 Terminal and Package Units	1990	1990	3	10	DCS 08/20/13	Electric resistance unit heaters for mechanical, electrical, and storage room(s). Unit heaters are in fair to good condition.
D3060 Controls and Instrumentation	1990	2006	3	10	DCS 08/20/13	Mix of some old and mostly new DDC controls. Unclear system type, commissioning, test adjust and balance (TAB), and sequences. No local operator interface. Low voltage control wiring junction boxes and water source heat pump (WSHP) control panel covers are often missing or open, with wires hanging loose.
D3090 Other HVAC Systems and Equipment	1990	1990	4	2	DCS 08/20/13	Commercial kitchen grease hood with Reznor gas-fired roof top make-up air units (MAU) and up blast exhaust fans. Ceiling fans in pool (billiards) room. Greenhouse exhaust fan. Kitchen walk-in cooler. Kitchen make-up air unit (MAU) is past end of useful life and may fail at any time. Grease hood exhaust is recirculated back to MAU intake under certain wind conditions since they are close proximity and in the same roof well. General kitchen exhaust does not capture some kitchen equipment moisture, specifically at the coffee maker. The pool room ceiling fans are operable. Greenhouse exhaust fans are in fair to good condition, but outside air intake louver appears frozen in position (<\$2,000 to repair). No apparent auto wash system for grease hood, but probably not practical, given relatively light use of the kitchen. Walk-in cooler has excessive humidity and/or contaminants, resulting in dirt,

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Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
HVAC						
D3090 Other HVAC Systems and Equipment						mold, and mildew on food supplies.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1990	1990	3	19	DCS 08/20/13	City fire service with 8-inch entry, 6-inch stub, and 4-inch riser, running at 95 psig. Branch off distribution main to dry pipe riser at dining area storage closet for entry and patio canopies. Wet pipe sprinkled throughout interior spaces. No issues reported or observed.
D4030 Fire Protection Specialties	1990	1990	3	12	DCS 08/20/13	Fire extinguisher in cabinets throughout. Automated external defibrillators (AED) and first aid kits wall are mounted in several locations. Fire extinguisher inspection tags are current. Automated external defibrillators (AED) alarm is not operable. First aid kits appear to need restocking.
D4090 Other Fire Protection Systems	1990	2000	3	10	DCS 08/20/13	Commercial kitchen grease hood fire suppression system. Minor corrosion on agent cylinders and controls, but inspection is current and no reported issues.
Electrical						
D5010 Electrical Service and Distribution	1990	1990	2	17	RA 08/20/13	Building electrical system is 1600A, 208/120V, 3-phase, 4-wire. Electrical service is served by Puget Sound Energy padmount transformer outside building, 300-kva. Service feeder is underground from transformer to main switchboard in electrical room. Main switchboard is rated 1600A; main disconnect switch is 208/120V. It has two (2) distribution sections serving branch panels throughout the building. Switchboard is GE-AV line. Branch panels are GE-A style. Original 1990 building electrical equipment; in good condition.

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Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
Electrical						
D5010 Electrical Service and Distribution						
D5020 Lighting and Branch Wiring						
	1990	1990	3	10	RA 08/20/13	Lighting wiring and devices wiring are installed in a raceway system. Interior lighting is 90% fluorescent system with incandescent fixtures in multipurpose room. General lighting fixtures are 2x4, 4x4 lay-in troffers. Electrical outlets are 15A grounding type receptacles. Manual light switches. Interior lighting fixtures are in good condition; lamps were upgraded in 2007 from T12 to T8 lamps. Exterior lighting fixtures are in fair condition; lenses are dirty and need cleaning out and fixtures should be replaced in the next 5 years. Multipurpose room has stage lighting over by the stage; Strand Lighting Equipment. Main lighting controller is located at the corner of the stage. The house lighting controller at the main door is not working; non-functional. Interior lighting has no automatic controls per current energy code; only the smaller room and toilet lighting are controlled by wall occupancy sensors. Kitchen lighting troffers are 2x4 lay-in fixtures without gasket.
D5030 Low Voltage Communication Security and Fire Alarm						
	1990	1990	3	8	RA 08/20/13	The building has a full fire alarm system with horn strobes and pull stations. Horn strobes are mounted higher than 6'-6" above finished floor. The building has security alarm system with motion detectors and two (2) key pads; it is a small system with outdated equipment. Building fire alarm system is in good working order, but equipment is over 20 years old and needs to be upgraded within the next 8 years. Building security alarm system is in working condition, but equipment is outdated, and more motion detectors are needed; consider system upgrade within the next 8 years. Building has a Cat-5 data/voice system. Main distribution frame (MDF) is a wall rack and is located in fire sprinkler room. Data/voice system is in good condition.
D5090 Other Electrical Systems						
	1990	1990	4	2	RA 08/20/13	Building has no emergency generator.

Facility Summary

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Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.0			
Electrical						
D5090 Other Electrical Systems						Emergency lights are battery backup wall type bug-eye fixtures. Emergency lights are located inside building area. There are no exterior emergency lights. The existing emergency lights are not reliable; they are over 23 years and at end of life.
E Equipment and Furnishings			3.0			
Equipment						
E1010 Commercial Equipment						
	1990	1990	3	5	RD 08/20/13	Laundry and office equipment. Equipment observed is dated but functional. No deficiencies noted.
E1020 Institutional Equipment						
	1990	1990	3	5	RD 08/20/13	Stage and audio/visual equipment. Small stage with fly and audio/visual units noted. No deficiencies noted.
E1030 Vehicular Equipment						
	1990	1990	3	20	RD 08/20/13	Concrete loading dock. No equipment. No deficiencies observed.
E1090 Other Equipment						
	1990	1990	3	8	RD 08/20/13	Kitchen equipment. Coffee maker needs repair; it turns off before done. Freezers need to be lockable. Pantry cupboard needs new doors. New commercial can opener needed.
Furnishings						
E2010 Fixed Furnishings						
	1990	1990	3	7	RD 08/20/13	Counters, cabinets. Fixed furnishings are very dated but functional. Tile grout needs steam cleaning and seal.

Facility Summary

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Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments

E Equipment and Furnishings

3.0

Furnishings

E2020 Moveable Furnishings (Capital Funded Only)

1990	1990	3	7	RD	08/20/13	Tables and chairs. Moveable furnishings are very dated but functional.

F Special Construction

Special Construction

F1050 Special Controls and Instrumentation

2005	2005	2	8	RD	08/20/13	Weather monitoring station with sensor on roof. No issues reported or observed.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Municipal Campus Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
City Hall Building	Exterior Closure	\$5,500	\$1,650	\$1,430	\$4,290	\$12,870	\$12,383
	Vertical Transportation	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$10,628
	Plumbing	\$48,000	\$14,400	\$12,480	\$37,440	\$112,320	\$102,532
	HVAC	\$9,000	\$2,700	\$2,340	\$7,020	\$21,060	\$19,988
	Facility Total	\$67,500	\$20,250	\$17,550	\$52,650	\$157,950	\$145,532
Municipal Campus Infrastructure	Site Improvements	\$25,000	\$7,500	\$6,500	\$19,500	\$58,500	\$56,293
	Facility Total	\$25,000	\$7,500	\$6,500	\$19,500	\$58,500	\$56,293
Municipal Campus Parking Garage Building	Foundations	\$2,000	\$600	\$520	\$1,560	\$4,680	\$4,418
	Exterior Closure	\$45,000	\$13,500	\$11,700	\$35,100	\$105,300	\$101,327
	HVAC	\$15,000	\$4,500	\$3,900	\$11,700	\$35,100	\$35,100
	Fire Protection	\$21,000	\$6,300	\$5,460	\$16,380	\$49,140	\$45,279
	Electrical	\$2,500	\$750	\$650	\$1,950	\$5,850	\$5,522
	Facility Total	\$85,500	\$25,650	\$22,230	\$66,690	\$200,070	\$191,646
Police Garage North Building	Vertical Transportation	\$2,000	\$600	\$520	\$1,560	\$4,680	\$4,680
	Plumbing	\$2,000	\$600	\$520	\$1,560	\$4,680	\$4,680
	Facility Total	\$4,000	\$1,200	\$1,040	\$3,120	\$9,360	\$9,360
Police Garage South Building	Vertical Transportation	\$2,000	\$600	\$520	\$1,560	\$4,680	\$4,680
	Facility Total	\$2,000	\$600	\$520	\$1,560	\$4,680	\$4,680
Public Safety Building	Exterior Closure	\$161,000	\$48,300	\$41,860	\$125,580	\$376,740	\$348,618
	Roofing	\$125,000	\$37,500	\$32,500	\$97,500	\$292,500	\$281,462
	Vertical Transportation	\$42,500	\$12,750	\$11,050	\$33,150	\$99,450	\$99,450
	Plumbing	\$141,200	\$42,360	\$36,712	\$110,136	\$330,408	\$318,467
	HVAC	\$804,505	\$241,352	\$209,171	\$627,514	\$1,882,542	\$1,788,076
	Fire Protection	\$60,000	\$18,000	\$15,600	\$46,800	\$140,400	\$140,400
	Electrical	\$10,800	\$3,240	\$2,808	\$8,424	\$25,272	\$24,320
	Facility Total	\$1,345,005	\$403,502	\$349,701	\$1,049,104	\$3,147,312	\$3,000,793
Senior Center Building	Exterior Closure	\$225,500	\$67,650	\$58,630	\$175,890	\$527,670	\$498,731
	Roofing	\$92,000	\$27,600	\$23,920	\$71,760	\$215,280	\$202,211

Print Date: 03/10/14

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Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Municipal Campus Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Senior Center Building	Interior Construction	\$13,000	\$3,900	\$3,380	\$10,140	\$30,420	\$29,271
	Vertical Transportation	\$7,000	\$2,100	\$1,820	\$5,460	\$16,380	\$16,380
	Plumbing	\$85,500	\$25,650	\$22,230	\$66,690	\$200,070	\$190,815
	HVAC	\$206,500	\$61,950	\$53,690	\$161,070	\$483,210	\$462,379
	Electrical	\$28,000	\$8,400	\$7,280	\$21,840	\$65,520	\$64,196
	Facility Total	\$657,500	\$197,250	\$170,950	\$512,850	\$1,538,550	\$1,463,984
Site Total		\$2,186,505	\$655,952	\$568,491	\$1,705,474	\$5,116,422	\$4,872,287

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond
Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505
Total Observed Deficiency Repair Direct Cost (Present Value): \$2,082,174

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility:	City Hall Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$5,500
System:	Exterior Closure						Total System Deficiency Repair Cost (Present Value):		\$5,292
Exterior Walls									
Aluminum Panels	4	2	2013	Reported leaks at exterior wall assembly where metal panel siding occurs.	Trace location of leaks, remove panels, and repair weather seal; caulk as needed.	1	\$5,500.00	ls	\$5,500
Facility:	City Hall Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$5,000
System:	Vertical Transportation						Total System Deficiency Repair Cost (Present Value):		\$4,542
Elevators and Lifts									
Elevator Machine Room Cooling	4	5	2013	Condensing unit is wedged between traction elevator machine room stair and penthouse boiler room resulting in poor maintenance access, marginal airflow, and full exposure to afternoon sun.	Relocate to more appropriate location upon replacement.	1	\$5,000.00	ls	\$5,000
Facility:	City Hall Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$48,000
System:	Plumbing						Total System Deficiency Repair Cost (Present Value):		\$43,817
Plumbing Fixtures									
Water Closets	4	5	2013	Caroma water closets are failing prematurely with difficult to obtain parts. Toilets are pulling away from walls.	Replace with heavier duty dual flush or high efficient toilets.	30	\$1,500.00	ea	\$45,000
Domestic Water Distribution									

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value): \$2,082,174

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Pressure Reducing Valve	4	1 2013	No pressure reducing valve for building or pressure zones (floors) may be damaging fixture trim on lower levels.	Install duplex pressure reducing valves with bypass for floors 1 and 2 if piping configuration supports; alternately study possible retrofit paths.	1	\$3,000.00	ls	\$3,000
Facility: City Hall Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$9,000
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$8,542
Heat Generating Systems								
Boilers	5	0 2013	Boiler flue draft dampers warped sticking and leaking flue gas to penthouse space.	Redesign and retrofit to meet manufacture and code requirements.	2	\$2,000.00	ea	\$4,000
Cooling Generating Systems								
Cooling Tower	4	5 2013	Based on observing drift elimination and condenser water color, assume cooling tower media may need replacement.	Schedule cooling tower media replacement.	1	\$5,000.00	ls	\$5,000
Facility: Municipal Campus Infrastructure			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$25,000
System: Site Improvements			Total System Deficiency Repair Cost (Present Value):					\$24,057
Site Development								
Trex Decking	4	2 2013	Approximately 2500 sf of Trex decking appears to be failing and shows buckling and flaking. Decking appears to have expanded and no gaps remaining between boards, which is undesirable. Trex decking has been subject to several class action lawsuits.	Investigate possible warranty or class action settlements for replacement of failed decking. Replace all surface decking. Treated wood joists and supports are likely in acceptable condition.	2,500	\$10.00	sf	\$25,000

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

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Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility:	Municipal Campus Parking Garage Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$2,000
System:	Foundations					Total System Deficiency Repair Cost (Present Value):			\$1,888
Standard Foundations									
Foundation	3	3	Reports of excessive cracking in several locations with unknown cause.	Investigate cause of cracking; plan corrective action as needed.	1	\$2,000.00	ls	\$2,000	
		2013							
Facility:	Municipal Campus Parking Garage Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$45,000
System:	Exterior Closure					Total System Deficiency Repair Cost (Present Value):			\$43,302
Exterior Walls									
Concrete Paint	4	2	Paint is fading, chipped, and shows some damage.	Prep and repaint exterior.	1	\$45,000.00	ls	\$45,000	
		2013							
Facility:	Municipal Campus Parking Garage Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$15,000
System:	HVAC					Total System Deficiency Repair Cost (Present Value):			\$15,000
Terminal and Package Units									
Ventilation	5	0	No ventilation for Level 1 shop and storage spaces.	Install ventilation per code.	3,000	\$5.00	sf	\$15,000	
		2013							
Facility:	Municipal Campus Parking Garage Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$21,000
System:	Fire Protection					Total System Deficiency Repair Cost (Present Value):			\$19,350
Fire Protection Sprinkler Systems									
Fire Sprinkler Piping	4	5	Unprimed/unpainted, exposed fire sprinkler piping is rusting and corroding.	Clean, prime, and paint fire sprinkler piping.	90,000	\$0.20	sf	\$18,000	
		2013							
Fire Sprinkler Density	5	0	Shop/storage room combustible material may exceed sprinkler density capacity.	Upgrade sprinkler.	3,000	\$1.00	sf	\$3,000	
		2013							

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505
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Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Municipal Campus Parking Garage Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,500
System: Electrical			Total System Deficiency Repair Cost (Present Value):					\$2,360
Lighting and Branch Wiring								
Lighting Fixtures	4	3 2013	Garage light fixture lenses are yellowed, reducing light transmittance.	Replace light fixtures.	100	\$25.00	ea	\$2,500
Facility: Police Garage North Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,000
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):					\$2,000
Other Conveying Systems								
Roof Access	5	0 2013	No roof access.	Install permanent roof access ladder.	1	\$2,000.00	ls	\$2,000
Facility: Police Garage North Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,000
System: Plumbing			Total System Deficiency Repair Cost (Present Value):					\$2,000
Sanitary Waste								
Sanitary Floor Drain	5	0 2013	No floor drain for trash storage area.	Install two (2) floor drains leading to sanitary sewer as required by code.	2	\$1,000.00	ea	\$2,000
Facility: Police Garage South Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$2,000
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):					\$2,000
Other Conveying Systems								
Roof Access	5	0 2013	No roof access.	Install permanent roof access ladder.	1	\$2,000.00	ls	\$2,000

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505

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Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility: Public Safety Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$161,000
System: Exterior Closure						Total System Deficiency Repair Cost (Present Value):			\$148,982
Exterior Walls									
Stucco and Tile		4	3	Stucco at second floor south wall has water from roof and from sloped stucco in wall. Stucco cracking and potential serious water damage in wall void. There appears to be water behind tile soffit at west entry and southeast corner walls.	Remove stucco and tile and sheathing. Investigate damage. Repair and refinish.	2,200	\$35.00	sf	\$77,000
			2013	Stucco walls, tile walls and soffits					
Exterior Windows									
Windows and Frames		4	5	Frames are corroding. Glass seals broken.	Remove and repair or replace frames. Reinstall with separation from stucco. Repair and recharge glass units.	24	\$3,500.00	ea	\$84,000
			2013	Anodized aluminum window frames. Double pane glass.					
Facility: Public Safety Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$125,000
System: Roofing						Total System Deficiency Repair Cost (Present Value):			\$120,283
Roof Coverings									
Metal Gutters and Roof		4	2	Water is blowing up under roof and also leaking from overloaded gutters on north and south eaves of main roof.	Re-flash lower edge of roof and include neoprene gaskets to stop blind blown water intrusion. Remove and redesign gutters and gutter support. Flash from 24-inches up roof to over wall with gutter.	500	\$250.00	lf	\$125,000
			2013	Metal gutters; standing seam metal roof. Water penetration at bottom of metal roof edge and along metal gutters at north and south.					

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value): \$2,082,174

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility: Public Safety Building				Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$42,500
System: Vertical Transportation				Total System Deficiency Repair Cost (Present Value):					\$42,500
Other Conveying Systems									
Fall Protection	5	0	No fall protection or superstructure service anchors.	Install fall protection for sloped metal roof and anchors for wall and window maintenance.	30,000	\$1.00	sf		\$30,000
		2013							
Roof Access	5	0	No roof access to mid-level west end roofs and 2006 addition roofs.	Provide permanent roof access to all areas with equipment requiring regular maintenance.	5	\$2,500.00	ea		\$12,500
		2013							
Facility: Public Safety Building				Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$141,200
System: Plumbing				Total System Deficiency Repair Cost (Present Value):					\$136,097
Plumbing Fixtures									
Plumbing Fixtures	4	3	Many lavatory faucets loose, poorly operating, aerators missing or blocked, etc. Some fixtures with minor damage. Some flush valves with marginal operation. Reportedly unoriginal shower conditions.	Repair or replace as needed.	24	\$300.00	ea		\$7,200
		2013	Some fixtures, many faucets, and some other trim.						
Domestic Water Distribution									
Piping Insulation	4	5	Damaged or missing domestic hot water (DHW) pipe insulation in some areas.	Repair or replace pipe insulation.	500	\$4.00	lf		\$2,000
		2013							
Domestic Hot Water Heater	4	2	Domestic hot water (DHW) heaters near end of useful life.	Replace domestic hot water heaters.	2	\$5,000.00	ea		\$10,000
		2013							

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost :

\$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value):

\$2,082,174

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Pressure Reducing Valves	4	3 2013	Pressure reducing valves and/or distribution configuration resulting in excessively high pressure on Level 1 and low pressure on Level 2.	Troubleshoot, repair, or replace pressure reducing valves as needed.	2	\$2,500.00	ea	\$5,000
Sanitary Waste Piping Insulation	4	2 2013	Drain, waste, and vent (DW&V) piping insulation is missing or damaged throughout the parking garage.	Repair and replace piping insulation as needed.	1,000	\$5.00	lf	\$5,000
Drain, Waste, and Vent Piping	4	5 2013	Drain, waste, and vent (DW&V) piping is single clamped hubless at parking garage with signs of deteriorations. Hubless, single clamped drain, waste, and vent (DW&V) piping.	Upgrade to double clamped and slope drain main to better drain.	500	\$20.00	lf	\$10,000
Trap Primers	5	0 2013	Drain, waste, and vent (DW&V) trap primers are missing, causing odors throughout.	Install trap primers.	20	\$1,000.00	ea	\$20,000
Rain Water Drainage Storm Sumps	4	2 2013	Pumps of marginal capacity, resulting in flooding during heavy rains and standing water at other times. Three systems: 1. Large southeast roof 2. Large southwest groundwater 3. Medium garage with oil water separator	Upgrade sumps to eliminate flooding and standing water.	3	\$5,000.00	ea	\$15,000
Garage Drainage	5	0 2013	Portions of parking garage used for vehicle wash and servicing drain to storm system.	Install new floor drain system with light station to sewer, not storm system.	1	\$25,000.00	ls	\$25,000

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value): \$2,082,174

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
		Survey Year						
Roof Drains	4	3	Several areas of standing water on the flat roof.	Relocate or provide new roof drains to eliminate standing water.	3	\$3,000.00	ea	\$9,000
		2013						
Gutter System	4	3	Gutter system may be contributing to exterior wall damage.	Reconfigure gutter for proper metal roof drainage.	600	\$50.00	lf	\$30,000
		2013						
Floor Drains	5	0	Dumpster storage area missing floor drains to sewer; currently drains to storm.	Provide floor drains to sewer.	1	\$3,000.00	ea	\$3,000
		2013						
Facility: Public Safety Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$804,505
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$764,135
Cooling Generating Systems								
Condensing Unit	4	3	Mix of old and new outside condensing units and inside units for mission critical 911 center, data/communications/radio room and related spaces.	Design and install bona fide mission critical cooling equipment for applicable spaces.	3	\$10,000.00	ea	\$30,000
		2013						
Pumps	4	5	Pumps are aging.	Refurbish pumps.	2	\$2.50	ea	\$5
		2013						
Cooling Tower	4	2	Cooling tower is corroded and leaking; past end of useful life.	Replace cooling tower.	1	\$35,000.00	ea	\$35,000
		2013						
HVAC Distribution Systems								
Exhaust	5	0	No apparent exhaust for kitchenette, break room, and copy center.	Install exhaust per code.	6	\$2,000.00	ea	\$12,000
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 8 of 15

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost :

\$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value):

\$2,082,174

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Ductwork	4	5 2013	Damaged, leaking duct.	Clean, repair, seal, and leak test ducts.	60,000	\$0.50	sf	\$30,000
Return Air Plenum	4	3 2013	AH/ceiling return air plenum is dirty.	Clean ceiling return air plenum.	30,000	\$0.25	sf	\$7,500
Water Source Heat Pumps	4	3 2013	Water source heat pumps (WSHP) at end of life.	Schedule replacement of all water source heat pumps (WSHP) not already replaced.	30	\$4,000.00	ea	\$120,000
Outside Air	5	0 2013	Little or no outside air to some water source heat pumps (WSHP). Dirty, non-code compliant outside air intake plenums.	Bring outside air plenum up to code and provide minimum outside air to all spaces per code.	60,000	\$0.50	sf	\$30,000
Controls and Instrumentation								
Controls	4	3 2013	Various types and manufactured controls with unclear DDC system.	Test, repair, replace, re-TAB (test, adjust and balance), and retro-commissioning (Cx) as needed.	70,000	\$7.00	sf	\$490,000
Other HVAC Systems and Equipment								
Generator Exhaust	5	0 2013	Original generator exhaust and run to high roof is too long.	Retrofit booster; work should be similar to new generator.	1	\$20,000.00	ea	\$20,000
Garage Exhaust	5	0 2013	Portion of parking garage may not meet code ventilation requirements.	Install code minimum ventilation in parking garage.	10,000	\$3.00	sf	\$30,000

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Print Date: 03/10/14

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Page 9 of 15

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value): \$2,082,174

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Public Safety Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$60,000
System: Fire Protection			Total System Deficiency Repair Cost (Present Value):					\$60,000
Fire Protection Sprinkler Systems								
Pre-Action Sprinkler	5	0 2013	No pre-action sprinkler for mission critical areas (911 call center, data center, radio, communications, etc.)	Retrofit pre-action and/or gaseous fire suppression for mission critical areas.	5	\$10,000.00	ea	\$50,000
Other Fire Protection Systems								
Rated Ceiling Assemblies	5	0 2013	Level 2 rated corridor ceiling assemblies damaged.	Repair rated corridor ceiling assemblies.	2,000	\$5.00	sf	\$10,000
Facility: Public Safety Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$10,800
System: Electrical			Total System Deficiency Repair Cost (Present Value):					\$10,393
Lighting and Branch Wiring								
Lighting & Branch Wiring Devices	4	2 2013	Insufficient electrical outlets in parking garage.	Add ground fault interrupter (GFI) electrical outlets, circuits in parking garage.	12	\$400.00	ea	\$4,800
			Parking garage lighting; parking garage electrical outlets and circuits.					
Lighting & Branch Wiring Devices	4	2 2013	Insufficient lighting, poor lighting level in parking garage driving lanes.	Add lighting fixtures and controls over driving lanes.	10	\$600.00	ea	\$6,000
			Parking garage lighting; parking garage electrical outlets and circuits.					

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value): \$2,082,174

									Direct Construction
Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Cost	
		Survey Year							
Facility: Senior Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):						\$225,500
System: Exterior Closure			Total System Deficiency Repair Cost (Present Value):						\$213,133
Exterior Walls									
Stucco	4	2	Portions of stucco is cracked. Unsealed aluminum extrusions embedded in stucco.	Repair crack and seal embedded extrusions per Wetherholt Report of 9/10/2013.	5,000	\$3.00	sf	\$15,000	
		2013							
Ceramic Tile	4	3	Ceramic tile exterior wall skin is problematic. While current (2013) re-sealing may help, ultimately this system should be replaced.	Replace with masonry veneer with rain screen.	3,000	\$50.00	sf	\$150,000	
		2013							
Exterior Windows									
Windows	4	3	Condensation and leaks have damaged glazing system, frame, and concrete wall.	Remove glazing and wall, replace both. Refurbish frame and reinstall.	1	\$48,000.00	ea	\$48,000	
		2013	Metal frame windows and glass at greenhouse. Glass cracked, adjacent wall crumbling from water intrusion.						
Windows	4	3	Clerestory and penthouse insulating glass units have failed and failing seals.	Inspect and replace insulating glass units.	500	\$25.00	sf	\$12,500	
		2013	Metal frame windows and glass at greenhouse. Glass cracked, adjacent wall crumbling from water intrusion.						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value): \$2,082,174

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Senior Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$92,000
System: Roofing			Total System Deficiency Repair Cost (Present Value):					\$86,415
Roof Coverings								
Torch Down Roof	4	5	Large blister in torch down roof is pulling seam apart. Gutter on west above patio overflows through fascia when full.	Remove air under roof, patch. Install mambrane patch. Re-flash and reseal. Provide overflow that will exit gutter without going through structure, clean drain.	80	\$150.00	lf	\$12,000
		2013						
Projections								
Projections	4	3	Ultraviolet (UV) light is breaking down the polycarbonate. Glue-laminated beams are delaminating. Finishes are stained. Steel pipe columns appear alright.	Remove and construct new canopy.	1	\$80,000.00	ea	\$80,000
		2013	Polycarbonate, wood, and steel. System is leaking and needs replacement.					
Facility: Senior Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$13,000
System: Interior Construction			Total System Deficiency Repair Cost (Present Value):					\$12,509
Interior Doors								
Accordion Door	4	2	Kitchen sliding accordion door will no longer stay on track.	Remove existing and replace accordion door.	1	\$13,000.00	ea	\$13,000
		2013						
Facility: Senior Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$7,000
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):					\$7,000
Other Conveying Systems								
Roof Access	5	0	No access to high roof. No fall protection tie-offs to sloped roofs.	Install caged roof ladder and tie-offs at sloped roof (above multi-purpose room).	1	\$7,000.00	ls	\$7,000
		2013						

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value): \$2,082,174

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Senior Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$85,500
System: Plumbing			Total System Deficiency Repair Cost (Present Value):					\$81,545
Plumbing Fixtures								
Flushing Fixtures	4	3	Some water closets are pulling away from the wall. Urinals are difficult to maintain in sanitary condition.	Replace or repair water closets and urinals with new hangers.	10	\$3,000.00	ea	\$30,000
		2013						
Kitchen Floor Sinks	5	0	Scullery sinks are missing floor sink drains.	Provide sink drains per code.	3	\$1,500.00	ea	\$4,500
		2013						
Domestic Water Distribution								
Domestic Hot Water Heater	4	3	Gas domestic hot water heater is at end of useful life. Electric domestic hot water heater is nearing end of useful life.	Replace gas domestic hot water heater soon. Schedule electrical domestic hot water heater replacement in near future.	2	\$5,000.00	ea	\$10,000
		2013						
Sanitary Waste								
Floor Drains	4	3	No floor drains in men's room.	Install floor drains in men's room.	3	\$3,000.00	ea	\$9,000
		2013						
Rain Water Drainage								
Roof Drains	4	2	Ponding, roof drain blockage, and improper overflow roof drain modifications.	Add new roof drains and overflow roof drains. Establish roof debris maintenance schedule. Remove overflow roof drain's temporary piping.	10	\$3,200.00	ea	\$32,000
		2013						

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Print Date: 03/10/14

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Page 13 of 15

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value): \$2,082,174

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Senior Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$206,500
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$197,598
Energy Supply								
Gas Supply	5	0 2013	Rooftop gas piping falling off sleepers at northeast side of roof (near kitchen roof well).	Repair or replace rooftop gas piping. Replace and anchor sleeper.	100	\$5.00	ft	\$500
Cooling Generating Systems								
Cooling Tower	4	2 2013	Cooling tower at end of useful life.	Replace cooling tower.	1	\$25,000.00	ea	\$25,000
HVAC Distribution Systems								
Billiards Room HVAC	4	2 2013	Billiards room is reported by staff to be often too hot/too cold/under ventilated.	Provide dedicated rooftop units (RTU) to properly condition this heavily used space.	1	\$15,000.00	ea	\$15,000
Water Source Heat Pumps	4	2 2013	Water source heat pumps (WSHP) past end of useful life and failing.	Replace water source heat pumps.	16	\$4,000.00	ea	\$64,000
Controls and Instrumentation								
DDC	4	3 2013	Completion of 2006 control system upgrade is not evident. Many open panels, loose wires, and some comfort complaints from occupants.	Complete DDC upgrades; provide local operator interface; close up all junction boxes and equipment panels. Retro-commission (Cx) and re-TAB (test adjust and balance).	22,000	\$3.50	sf	\$77,000
Other HVAC Systems and Equipment								
Kitchen Hood Make-Up Air Unit	4	2 2013	Kitchen hood make-up air unit (MAU) is past end of useful life and recirculates odors from adjacent exhaust fans.	Replace and reconfigure to reduce recirculation from hood exhaust fan.	1	\$15,000.00	ea	\$15,000

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Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Municipal Campus Site

Total Observed Deficiency Repair Direct Cost : \$2,186,505

Total Observed Deficiency Repair Direct Cost (Present Value): \$2,082,174

		Material		Deficiency				Unit	Direct Construction
Material	Cond.	Useful Life	Condition Notes	Action	Qty	Unit Cost	Unit	Cost	
		Survey Year							
Kitchen General Exhaust	5	1	Little or no exhaust near coffee maker is resulting in damage to ceiling and potentially the roof structure above.	Provide adequate general exhaust and ventilation for kitchen.	1	\$5,000.00	ls	\$5,000	
		2013							
Kitchen Walk-In Cooler	5	0	Excessive dirt and moisture in walk-in cooler is resulting in mold and mildew growth in stored food products.	Investigate. Consider insulated floor, evaporative condensing drain, kitchen general exhaust ventilation air, house keeping practices and similar solutions.	1	\$5,000.00	ls	\$5,000	
		2013							
Facility: Senior Center Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$28,000	
System: Electrical					Total System Deficiency Repair Cost (Present Value):			\$27,434	
Lighting and Branch Wiring									
Lighting Controller	5	0	Multipurpose room lighting controller is not working/non-functional.	Replace house lighting controller.	1	\$10,000.00	ls	\$10,000	
		2013							
Kitchen Lighting	5	0	No gasket provided for lighting fixtures in kitchen area.	Add A, B, and C gaskets to kitchen 2x4 troffers.	1	\$3,000.00	ls	\$3,000	
		2013							
Other Electrical Systems									
Emergency Lighting	4	2	Building emergency lights are aged, unreliable, and insufficient.	Replace existing emergency lights. Provide additional emergency lights at indoor and exterior doors outside.	1	\$15,000.00	ls	\$15,000	
		2013							

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Opportunity Summary By Subsystem

City of Redmond

Site: Municipal Campus Site

Total Site Opportunity Cost: \$3,047,024

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: City Hall Building System: Roofing Total Cost: \$2,200						
B3010	Roof Coverings					
	Observed several parapet cap screws rusting and some backing out. Along east parapet on upper roof covered entry, sealant is coming out of flashing joint.	Reattach, rescreen with galvanized screens and neoprene washers all rusted or loose parapet cap screens.	1.00	\$2,200.00	ls	\$2,200
Facility: City Hall Building System: Vertical Transportation Total Cost: \$7,500						
D1090	Other Conveying Systems					
	Freight elevator to fourth floor but not to penthouse.	Install crane rail and hoist at southeast stair tower from fourth floor to penthouse roof level.	1.00	\$7,500.00	ls	\$7,500
Facility: City Hall Building System: Plumbing Total Cost: \$59,000						
D2010	Plumbing Fixtures					
	Beyond rough-in opportunity cited above, replace waterless urinals with pint-per-flush urinals for reduced operations and maintenance cost and improved sanitary conditions.	Replace waterless urinals with pint-per-flush urinals.	8.00	\$1,000.00	ea	\$8,000
	Current waterless urinals may shorten life of drain, waste, and vent piping and may be creating additional operations and maintenance cost beyond the value of the water they are saving. Opportunity to rough-in flushing water during upcoming water closet replacement and work.	Rough-in flushing water to urinal locations.	8.00	\$500.00	ea	\$4,000
D2020	Domestic Water Distribution					
	Assumed 3-inch city water meter; may be over-sized for water conserving plumbing fixtures.	Study actual water load and reduce meter size to reduce life-cycle cost related to meter demand (will serve) change.	1.00	\$2,000.00	ea	\$2,000
	All electric domestic hot water heat. Puget Sound Energy natural gas service has excess capacity.	Upon scheduled renewal of domestic hot water heater(s), upgrade to high efficiency gas-fired domestic hot water heat.	2.00	\$5,000.00	ea	\$10,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 1 of 7

Opportunity Summary By Subsystem

City of Redmond

Site: Municipal Campus Site

Total Site Opportunity Cost: \$3,047,024

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
D2030 Sanitary Waste	Plumbing fixture trim driven floor drain trap primers.	Upgrade to automatic electric trap primers.	10.00	\$500.00	ea	\$5,000
D2040 Rain Water Drainage	Roof drain water currently directed to site storm drain system. Need for non-potable water for pond and cooling tower make-up and flushing water.	Install rain water harvesting system, approximately 20,000 gallons.	1.00	\$30,000.00	ls	\$30,000
Facility: City Hall Building System: HVAC						
Total Cost: \$152,524						
D3020 Heat Generating Systems	Upon scheduled replacement of current standard efficiency (80%) boilers, upgrade to high efficiency (90%) boilers.	Replace standard efficiency boilers with high efficiency boilers.	2.00	\$50,000.00	ea	\$100,000
D3030 Cooling Generating Systems	Opportunity for "free cooling" using "water-side economizer."	Install plaster framed water side economizer.	1.00	\$15,000.00	ea	\$15,000
D3060 Controls and Instrumentation	Continue optimization of newly upgraded DDC controls supplemented by formal re-TAB (test, adjust, and balance) and retro-commissioning (Cx).	Optimize DDC controls including re-TAB (test, adjust, and balance) and retro-commission (Cx).	107,212.00	\$0.35	sf	\$37,524
Facility: City Hall Building System: Electrical						
Total Cost: \$17,500						
D5010 Electrical Service and Distribution	No internal monitoring for active energy management.	Coordinate with Puget Sound Energy to install real-time energy demand and use monitoring to assist in pro-active energy management.	1.00	\$5,000.00	ls	\$5,000
D5090 Other Electrical Systems	No emergency lighting system; selected circuits powered by generator. Building is dark until generator starts and automatic transfer switch (ATS) transfers. Opportunity to install battery packs in main corridor and open offices to reduce panic.	Install battery pack emergency lighting in corridor, open offices, and other large areas.	50.00	\$250.00	ea	\$12,500

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Print Date: 03/10/14

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Page 2 of 7

Opportunity Summary By Subsystem

City of Redmond

Site: Municipal Campus Site

Total Site Opportunity Cost: \$3,047,024

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Municipal Campus Infrastructure						
System: Site Civil / Mechanical Utilities	Total Cost: \$5,000					
G3030 Storm Sewer	In the Public Safety Building there are reports of water infiltrating up into the garage from below the floor slab during rainy periods. Piping of the underdrain system has apparently been inspected and is not clogged. It was noted that the inlet pipe to the sump from the underdrain system is generally submerged within the sump, indicating some or all of the underdrain system may be submerged. Review of the sump pump operation may be warranted in an effort to lower the groundwater elevation within the system.	Review and analyze the current operation of the groundwater sump pump system to see if the static water level in the system could be lowered. This would provide greater storage capacity with the system and perhaps reduce infiltration that is occurring through the slab.	1.00	\$5,000.00	Is	\$5,000
Facility: Municipal Campus Parking Garage Building						
System: Exterior Closure	Total Cost: \$37,200					
B2020 Exterior Windows	Rust occurring at steel structure at southeast stair shaft. Ongoing maintenance issue.	Infill exterior storefront frame with glazing to keep rain from hitting stair structure.	600.00	\$62.00	sf	\$37,200
Facility: Municipal Campus Parking Garage Building						
System: HVAC	Total Cost: \$9,000					
D3060 Controls and Instrumentation	No DDC controls.	Upgrade to DDC controls to improve remote monitoring and energy control.	90,000.00	\$0.10	sf	\$9,000
Facility: Municipal Campus Parking Garage Building						
System: Electrical	Total Cost: \$39,000					
D5020 Lighting and Branch Wiring	Opportunity to install electric vehicle charging stations.	Install 12 electric vehicle charging stations.	12.00	\$2,000.00	ea	\$24,000
	Garage fixtures are T8 fluorescent with deteriorating lenses. Consider replacing with light emitting diode (LED) and/or auto-sensing fixtures.	Replace existing light fixtures with light emitting diode (LED).	100.00	\$150.00	ea	\$15,000

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Print Date: 03/10/14

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Page 3 of 7

Opportunity Summary By Subsystem

City of Redmond

Site: Municipal Campus Site

Total Site Opportunity Cost: \$3,047,024

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Police Garage North Building						
System: Plumbing	Total Cost: \$3,000					
D2010 Plumbing Fixtures						
	Appears program may benefit from a deep sink.	Install deep sink with small electric water heater.	1.00	\$3,000.00	Is	\$3,000
Facility: Police Garage North Building						
System: Electrical	Total Cost: \$5,000					
D5020 Lighting and Branch Wiring						
	Existing 50-amp service provides minimal future flexibility. Upgrade to 125-amp will greatly increase ability to add future loads.	Upgrade to 125-amp service.	1.00	\$5,000.00	Is	\$5,000
Facility: Police Garage North Building						
System: Equipment	Total Cost: \$3,000					
E1020 Institutional Equipment						
	Excessive police equipment and materials are piled on the floor or haphazardly stored. Opportunity for better organized shelving and/or storage lockers.	Install shelving or lockers.	1.00	\$3,000.00	Is	\$3,000
Facility: Police Garage South Building						
System: Plumbing	Total Cost: \$3,000					
D2010 Plumbing Fixtures						
	Appears program may benefit from a deep sink.	Install deep sink with small electric water heater.	1.00	\$3,000.00	Is	\$3,000
Facility: Police Garage South Building						
System: HVAC	Total Cost: \$5,000					
D3090 Other HVAC Systems and Equipment						
	Police Garage North has a vehicle engine exhaust system. An identical system at Police Garage South may increase future flexibility.	Install vehicle engine exhaust system at Police Garage South.	1.00	\$5,000.00	Is	\$5,000

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Print Date: 03/10/14

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Page 4 of 7

Opportunity Summary By Subsystem

City of Redmond

Site: Municipal Campus Site

Total Site Opportunity Cost: \$3,047,024

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Police Garage South Building						
System: Electrical	Total Cost: \$5,000					
D5010	Electrical Service and Distribution					
	Existing 50-amp service provides minimal future flexibility. An upgrade to 125-amp will greatly increase ability to add future loads.	Upgrade to 125-amp service.	1.00	\$5,000.00	ls	\$5,000
Facility: Public Safety Building						
System: Exterior Closure	Total Cost: \$1,800,000					
B2010	Exterior Walls					
	1990 code minimum insulation in thermal envelope. Opportunity to improve occupant thermal comfort and reduce energy use by bringing some or all thermal envelope systems to at least current energy code in conjunction with other repairs recommended by this Facility Condition Assessment.	Upgrade thermal envelope to current code including additions of encapsulated blanket insulation to underside of roof, furring out all water damaged walls, and replacing failed/failing windows.	60,000.00	\$30.00	sf	#####
Facility: Public Safety Building						
System: HVAC	Total Cost: \$158,000					
D3030	Cooling Generating Systems					
	Large quantities of rain and especially ground water are reportedly pumped much of the year. The water may be used for cooling the building, and possibly even heating in conjunction with water source heat pumps (WSHP).	Install ground water heat recovery system.	1.00	\$25,000.00	ls	\$25,000
	Reduce energy use by varying condenser water loop flow based on water source heat pump (WSHP) condenser water demand.	Provide water source heat pump (WSHP) condenser water flow control valves (two-way) at each WSHP. Install variable frequency drive (VFD) at condensing water pipe.	2.00	\$10,000.00	ea	\$20,000
D3040	HVAC Distribution Systems					
	No economizer for free cooling.	Retrofit economizer per current energy code for free cooling.	1.00	\$60,000.00	ls	\$60,000
	No heat recovery from data center/communications room cooling. During heating season, heat can be recovered from data center/communications room to heat other spaces.	Install heat recovery systems.	3.00	\$5,000.00	ea	\$15,000

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Print Date: 03/10/14

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Page 5 of 7

Opportunity Summary By Subsystem

City of Redmond

Site: Municipal Campus Site

Total Site Opportunity Cost: \$3,047,024

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
	Code minimum water source heat pumps (WSHP).	Upgrade to high-efficiency water source heat pumps (WSHP) when replaced.	38.00	\$1,000.00	ea	\$38,000
Facility: Public Safety Building System: Electrical						
Total Cost: \$415,600						
D5020	Lighting and Branch Wiring					
	Firing range lighting fixtures are open type fluorescent industrial fixtures; not suitable for the environment uses. Dirt accumulates quickly. High maintenance.	Replace existing fluorescent open reflector lights with vapor lens light emitting diode (LED) 1x4 fixtures and controls.	24.00	\$650.00	ea	\$15,600
D5030	Low Voltage Communication Security and Fire Alarm					
	Existing CCTV system is out of date.	Replace existing CCTV system with digital, network DVR equipment and high definition cameras.	1.00	\$400,000.00	ls	\$400,000
Facility: Senior Center Building System: Exterior Closure						
Total Cost: \$152,000						
B2010	Exterior Walls					
	Existing stucco walls are in need of current repair and on-going maintenance. Walls are batt insulated only. Opportunity to replace skin with metal panels and/or masonry including current code rigid insulation.	Remove existing stucco and replace with metal panels over 2-inch (R-10) continuous rigid insulation.	5,000.00	\$30.00	sf	\$150,000
B2020	Exterior Windows					
	Existing punched-opening windows do not have sill pans. Opportunity to upgrade to sill pane for additional protection against future leakage.	When windows are replaced, upgrade to include sill pane.	10.00	\$200.00	sf	\$2,000
Facility: Senior Center Building System: HVAC						
Total Cost: \$64,000						
D3020	Heat Generating Systems					
	Condenser water system is constant volume. Retrofit variable capacity system to improve energy efficiency.	Install two-way water source heat pump (WSHP) control valves and variable frequency drive (VFD) for pumps.	2.00	\$5,000.00	ea	\$10,000
D3040	HVAC Distribution Systems					
	No outside air economizer for free cooling and improved indoor air quality.	Retrofit economizer at all water source heat pumps (WSHP).	18.00	\$3,000.00	ea	\$54,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 6 of 7

Opportunity Summary By Subsystem

City of Redmond						
Site: Municipal Campus Site				Total Site Opportunity Cost: \$3,047,024		

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Senior Center Building						
System: Electrical	Total Cost: \$104,500					
D5030	Low Voltage Communication Security and Fire Alarm					
	Out of date security alarm system.	Upgrade security alarm system with new addressable system.	22,000.00	\$2.00	Is	\$44,000
	Out of date fire alarm equipment.	Upgrade new fire alarm system with new addressable system.	22,000.00	\$2.75	Is	\$60,500

Facility Summary

City of Redmond

Old Fire House Teen Center Site

Old Fire House Teen Center Building

16510 NE 79th Street
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F.	8,600
Year Of Original Construction	1952
Facility Use Type	Community Center
Construction Type	Heavy
# of Floors	1
Energy Source	Gas
Year Of Last Renovation	2000
Historic Register	No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.4			
Facility Condition Index (FCI)	0.22			
Current Replacement Value (CRV)	\$4,144,000	Predicted Renewal Budget (6 yrs)	\$909,000	\$865,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$2,024,000	\$1,812,000
		Observed Deficiencies (6 yrs)	\$520,000	\$502,000
		Observed Deficiencies (ALL)	\$520,000	\$502,000
		Opportunity Total Project Cost	\$1,286,000	N/A

Facility Condition Summary

Architectural:

The Facility Condition Assessment team was told, "This is the oldest, darkest, grimmest place for teens to go in Redmond." The building has served as City Hall, Fire and Police Station, YMCA, and as a community teen center. It needs to be refreshed, remodeled, and reconfigured to address the Teen Center mission. Building went through a comprehensive seismic retrofit in 2000. The inclusion of hose tower needs to be verified.

Electrical:

Old Fire House Teen Center building's electrical service is 120/208V IP, 3-wire overhead service from Puget Sound Energy pole mounted transformer, 37.5-kva rated. Building interior lighting is all fluorescent, T8 lamps, 2x4 troffer in offices; open reflector industrial in storage; and 1x4 wrap around fixtures in hallway. Building exterior lights are wall mounted high pressure sodium (HPS) wall pack, to provide lighting to building perimeter and parking area. Branch wiring devices are old and has insufficient outlets. Building fire alarm system and security alarm system are outdated and small capacity but are working. Building has battery pack emergency wall lights. In general, the building's electrical systems are working at marginal capacity, except the fluorescent lamps, main electrical service and main panels, along with two (2) newer branch panels; all other electrical systems are old and outdated.

Mechanical:

Original construction in 1952 for use as Redmond City Hall, Police, and Fire Station. Tenant improved approximately 1980 for use by YMCA. Use changed to Teen Center in the late 1990s. Tenant improvement in 2000 as Teen Center including: seismic retrofit; conversion of north garage addition to sound room/studio; ADA toilet room with shower; vinyl composition tile floor and carpet; outside paint; new main electrical panel (400 amp); darkroom; kitchen; and north storm drain improvement. In 2004 new torch down roof installed and awnings added. New computer lab in 2006. HVAC is four (4) gas fired unit heaters, one roofing gas-pack unit, several resistance wall heaters, natural ventilation via operable windows and doors and exhaust fans for toilet rooms.

Plumbing is city water and sewer with gas-fired domestic hot water heaters.

Fire sprinkler is from city services and is a dry pipe system throughout.

Facility Summary

City of Redmond
Old Fire House Teen Center Site
Old Fire House Teen Center Building

16510 NE 79th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				3.0					
Foundations									
A1010	Standard Foundations	1952	1952	3	17	RD	08/22/13	Poured in place concrete. No deficiencies observed.	
A1030	Slab On Grade	1952	1952	3	17	RD	08/22/13	Concrete slab floor.	
Basements									
A2020	Basement Walls	1952	1952	3	20	RD	08/22/13	Very small basement area under hose tower with 2-foot wide by 3-foot high tunnel to kitchen area. Reportedly abandoned in place; all original MEP (mechanical, electrical, plumbing) distribution rerouted above grade around 1990.	
B Shell				3.2					
Superstructure									
B1020	Roof Construction	1952	1952	3	17	RD	08/22/13	Wood deck on wood and steel beams on steel columns. Roof deck over multipurpose room has been damaged by earlier leaks.	
Exterior Closure									
B2010	Exterior Walls	1952	2000	3	10	RD	08/22/13	Exterior stucco with rock aggregate on block cement board siding. Stucco is wearing well. Cement board is failing.	
B2020	Exterior Windows	1952	1952	4	3	RD	08/22/13	Original metal frame, single pane windows. Windows are allowing air infiltration and some water which produces condensation; silicon caulk holding Plexiglas panes in some frames.	
B2030	Exterior Doors								

Facility Summary

City of Redmond
Old Fire House Teen Center Site
Old Fire House Teen Center Building

16510 NE 79th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				3.2					
Exterior Closure									
B2030	Exterior Doors	1952	1952	3	5	RD	08/22/13	Hollow metal doors. No deficiencies noted. Doors are worn but currently functional.	
Roofing									
B3010	Roof Coverings	1952	2004	3	16	RD	08/22/13	Torch down roof. In good condition. Coating may extend roof life.	
B3020	Roof Openings	1952	1952	3	30	RD	08/22/13	Limited roof openings. No exception.	
B3030	Projections	1952	2004	3	15	RD	08/22/13	Awnings. Main awning is in good condition. Smaller red awnings need new covers.	
C Interiors				3.4					
Interior Construction									
C1010	Partitions	1952	1952	3	10	RD	08/22/13	Partitions on frame or masonry with lath and plaster. Wall structure has no deficiencies.	
C1020	Interior Doors	1952	1952	4	1	RD	08/22/13	Interior wood doors and frames. Doors damaged or missing. Frames damaged.	
C1030	Fittings	1952	1952	3	5	RD	08/22/13	Counters and vanities. Counters and vanities are aged and dated but functional.	

Facility Summary

City of Redmond

Old Fire House Teen Center Site

Old Fire House Teen Center Building

16510 NE 79th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				3.4					
Interior Finishes									
C3010	Wall Finishes								
		1952	2000	3	2	RD	08/22/13	Wall paint is random, aged, discolored, and worn.	
								Repaint majority of surfaces.	
C3020	Floor Finishes								
		1952	2000	3	8	RD	08/22/13	Vinyl composition tile (VCT), carpet, and rubber tile.	
								Except for carpet in storage rooms, floors are in good condition under heavy use.	
C3030	Ceiling Finishes								
		1952	1980	4	5	RD	08/22/13	Open ceilings, suspended acoustical ceiling tile (ACT).	
								Suspended ceilings are dated, lack sway braces and struts, and have broken tiles.	
D Services				3.6					
Vertical Transportation									
D1090	Other Conveying Systems								
		1952	1952	5	0	DCS	08/22/13	No roof access.	
								Provide roof access to facilitate maintenance.	
Plumbing									
D2010	Plumbing Fixtures								
		1952	1980	4	3	DCS	08/22/13	Porcelain, fiberglass, and stainless steel plumbing fixtures with chrome trim.	
								Plumbing fixtures are worn, damaged, slow draining, slow flushing, discolored, leaking, outdated, and mismatched.	
D2020	Domestic Water Distribution								
		1952	1980	4	5	DCS	08/22/13	City water with mix of older galvanized and newer copper distribution piping. 1991 gas domestic hot water (DHW) heater. Irrigation system with reduced pressure backflow preventers from domestic cold water.	

Facility Summary

City of Redmond

Old Fire House Teen Center Site

Old Fire House Teen Center Building

16510 NE 79th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.6			
Plumbing						
D2020 Domestic Water Distribution						Marginal water pressure and taste. Domestic hot water (DHW) heaters are at end of useful life. DHW piping is uninsulated. DHW heaters and distribution piping do not meet several code requirements. Hose bibs are not frost free.
D2030 Sanitary Waste	1952	1952	4	5	DCS 08/22/13	City sewer service is a mix of cast iron and ABS drain, waste, and vent (DW&V) piping. Several floor drains in toilet rooms. Plumbing fixtures are slow draining and flushing. Screens in vents-to-roofs (VTR) may be a code violation.
D2040 Rain Water Drainage	1952	1980	4	5	DCS 08/22/13	Entire multi-level roof sheet flows to north to two (2) sets of gutters; one (1) east and one (1) west, each with one (1) downspout. Gutter is narrow and damaged. Downspouts are made of multiple materials. A second downspout should be added to each gutter to increase capacity and reliability.
D2090 Other Plumbing Systems	1952	2000	5	0	DCS 08/22/13	Dark room equipment and systems including plumbing support. Dark room appears abandoned in place but chemicals and support system remain in place. Hazardous materials and chemicals should be removed.
HVAC						
D3010 Energy Supply	1952	1980	3	10	DCS 08/22/13	Natural gas from Puget Sound Energy via Meter Number 804490 with 425-cfh capacity; gas distribution to four (4) unit heaters and one (1) rooftop gas-pack unit. No seismic valve at gas service entry. Some gas piping may be below grade/foundation. Less than \$2,000 to address.

Facility Summary

City of Redmond

Old Fire House Teen Center Site

Old Fire House Teen Center Building

16510 NE 79th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.6			
HVAC						
D3030 Cooling Generating Systems						
	1952	1952	5	0	DCS 08/22/13	No cooling systems, except roof top units serving sound room/studio. Cooling should be provided for the staff administration area and computer rooms as a minimum. Opportunity for enhanced natural ventilation using hose tower.
D3040 HVAC Distribution Systems						
	1952	1980	5	0	DCS 08/22/13	Minimal HVAC for all areas except sound room/studio. Currently, most spaces are heated by gas-fired unit heaters, electric wall heaters, and naturally ventilated via operable windows and doors. Opportunity to install an HVAC system more suitable for current use. No exhaust fan kitchen. Unknown exhaust chemical containing darkroom. No HVAC service for vault and most storage rooms.
D3050 Terminal and Package Units						
	1952	2000	3	7	DCS 08/22/13	Four (4) gas-fired vented ceiling mounted unit heaters serving large spaces (multipurpose, activity, and game room). One (1) roof top unit gas-pack with rooftop internally insulated galvanized sheet metal ductwork. Surface mounted electric resistance wall heaters for administration and computer areas. Equipment is in fair to good condition. No discrete source of combustion air for unit heaters. Marginal comfort as detailed in "HVAC Distribution Systems" section above.
D3060 Controls and Instrumentation						
	1952	2000	3	3	DCS 08/22/13	Programmable thermostats for unit heaters and manual thermostats for wall heaters. Reverse acting manual thermostat for computer room transfer air fan. Thermostats are aging. Opportunity to upgrade to DDC in conjunction with all new HVAC system suggested in "HVAC Distribution Systems" section above.

Fire Protection

Facility Summary

City of Redmond

Old Fire House Teen Center Site

Old Fire House Teen Center Building

16510 NE 79th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.6			
D4010 Fire Protection Sprinkler Systems						
	1990	1990	3	17	DCS 08/22/13	There is a 4-inch fire service from city with post indicator valve (PIV) and fire department connection (FDC) in yard to southwest. One (1) 3-inch dry pipe riser serving entire building including outside sprinkler head under multipurpose room garage door awning. Service pressure is at 95-psig; air pressure is at 40-psig. Fire sprinkler riser room is dirty and used for storage, but riser is accessible. Sprinkler piping used to support various items in some locations (especially in the multipurpose room). Move items away from sprinkler riser and mark clear area on floor (less than \$2,000).
D4030 Fire Protection Specialties						
	1990	1990	3	7	DCS 08/22/13	Fire extinguishers in plastic cabinets. Automatic external defibrillator (AED) in cabinets. First aid kit in administration area. Plastic cabinets are aging and discolored, but functional. Fire extinguisher tags are mostly current (outside units are out of date); (less than \$2,000).
Electrical						
D5010 Electrical Service and Distribution						
	1952	2000	3	27	RA 08/22/13	Electrical panel MDP (main distribution panel) is in custodian room; 400A, 120/280v IP, 3-wire system, subfeeds two (2) newer Square-D branch panels and other small older Square-D load center in the building. All panels are breaker type. The main MDP panel and two (2) branch panels installed in 2000 and are in good condition. Service was upgraded to 400A, 120/280V. There are about four (4) Square-D load centers in storage room apparatus bay which are small and outdated; needs replacement.
D5020 Lighting and Branch Wiring						
	1952	2000	3	17	RA 08/22/13	Interior lighting is all fluorescent by manual control with switches; fixtures consist of 2x4 troffer, fluorescent industrial, recess down lights 1x4 wrap around. Lamps are T8. Fixtures are old, over 20 years. Exterior lighting is wall pack fixtures, high pressure sodium (HPS) lamps with

Facility Summary

City of Redmond

Old Fire House Teen Center Site

Old Fire House Teen Center Building

16510 NE 79th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				3.6					
Electrical									
D5020	Lighting and Branch Wiring							insufficient coverage. All electrical branch wiring and devices are old, over 20 years, and at end of life. Interior lighting is generally working; fixtures are over 20 years and should be upgraded (including controls) in the next 5 years. Exterior lighting is insufficient, poorly installed, marginal wiring method; should be upgraded to provide sufficient lighting around the building. Insufficient electrical outlets throughout building.	
D5030	Low Voltage Communication Security and Fire Alarm								
	1952	1990	3	5	RA	08/22/13	Building has a Cat-6 data/voice system with IDF (intermediate distribution frame) in janitor room; in working condition. The building has a small fire alarm system, Fire-Lite #5012, 4-zones, hard wired system. Fire alarm device consists of horn strobes, pull station, and old heat detectors. The building has a small security alarm system which consists of motion detectors and keypad. Fire alarm system and security alarm system are outdated but working. Recommend replacement in the next 5 years.		
D5090	Other Electrical Systems								
	1952	1990	3	10	RA	08/22/13	Building has no emergency generator. Building emergency lights are battery backup type wall mounted units. Building emergency lights are located inside building egress paths. Some hallways, large rooms, and exterior door areas do not have emergency lights.		
E Equipment and Furnishings				3.0					
Equipment									
E1020	Institutional Equipment								
	1952	2004	3	5	RD	08/22/13	Recording equipment. Older equipment; functional.		
Furnishings									

Facility Summary

City of Redmond

Old Fire House Teen Center Site

Old Fire House Teen Center Building

16510 NE 79th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
E Equipment and Furnishings			3.0			
E2010 Fixed Furnishings						
	1952	2004	3	3	RD 08/22/13	Vinyl blinds. No deficiencies.
E2020 Moveable Furnishings (Capital Funded Only)						
	1952	2004	3	3	RD 08/22/13	Office and casual furniture. Worn and aged but functional.
F Special Construction						
Special Construction						
F1010 Special Structures						
	1952	1952	3	10	RD 08/22/13	Hose drying tower. Tower leaks water into building. Recommend further investigation. Building has obvious seismic retrofit except for hose tower. Status of tower's seismic resistance as noted in presumed seismic report should be verified.
F1030 Special Construction Systems						
	2000	2000	3	7	RD 08/22/13	Sound room with recording studio equipment. While sound equipment and instruments are aging, reportedly they are donated so not carried as a cost item under this Facility Condition Assessment.

Facility Summary

City of Redmond

Old Fire House Teen Center Site

Old Fire House Teen Center Infrastructure

16510 NE 79th Street
Redmond, WA 98052

Facility Condition Summary

The Old Fire House Teen Center site extends between NE 79th and NE 80th Streets. It includes two asphalt parking lots and a large fenced in outdoor patio area. There is a smaller patio of pavers near the front door. The site includes a paved basketball court and lawn area, and a gravel area at the rear for storm water infiltration. The building is served by City of Redmond utilities.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2020 Parking Lots	1952	1980	3	5	MK 08/21/13	Asphalt parking lot at north side of building for approximately 25 vehicles. Portion of the lot is an old concrete slab. Small parking lot on east side of building is deteriorating and lacks markings. ADA stalls do not have pavement markings but have signs. Parking lot on east side needs patching and striping.
G2030 Pedestrian Paving	1952	1980	3	10	MK 08/21/13	Large concrete patio at front of building. Asphalt walkways at rear of building. Patio is in good condition with some cracking. Asphalt areas are in good condition.
G2040 Site Development	1952	1980	2	10	MK 08/21/13	Picnic tables throughout. Basketball court at rear of building. All features are in good condition.
G2050 Landscaping	1952	1980	3	10	MK 08/21/13	Limited site landscaping, primarily grass and mature trees. Small vegetable area. Landscaping is in fair condition. Irrigation control valve is by the front door. Unclear if irrigation is operational.
Site Civil / Mechanical Utilities						
G3010 Water Supply						

Facility Summary

City of Redmond

Old Fire House Teen Center Site

Old Fire House Teen Center Infrastructure

16510 NE 79th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Civil / Mechanical Utilities						
	1952	1980	3	10	MK 08/21/13	Domestic water and fire sprinkler supply from the City of Redmond system. No known issues.
G3020 Sanitary Sewer	1952	1980	3	10	MK 08/21/13	Building sanitary sewer connects to City of Redmond system. No known issues.
G3030 Storm Sewer	1952	2000	3	10	MK 08/21/13	Roof runoff discharges by downspout onto ground and to underground piping. Parking lot and site runoff is collected in catch basins and area drains and conveyed to City of Redmond system. There appears to be a gravel infiltration area at the rear of the building. No known issues.
G3060 Fuel Distribution	1952	1980	3	10	MK 08/21/13	Natural gas meter with seismic valve located near front entry. No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	1952	2000	3	10	MK 08/21/13	Service to building from Puget Sound Energy; reportedly upgraded to 400-amp service in year 2000. No issues reported or observed.
G4020 Site Lighting	1952	2004	3	20	MK 08/21/13	Wall lights on all sides of the building. Pole lights throughout site and in parking areas. Some lighting is reported to be marginal, although there are a lot of exterior fixtures. Upgrades/repairs probably warranted. (See building's electrical sections.)

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Old Fire House Teen Center Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Old Fire House Teen Center Building	Superstructure	\$3,500	\$1,050	\$910	\$2,730	\$8,190	\$7,584
	Exterior Closure	\$46,100	\$13,830	\$11,986	\$35,958	\$107,874	\$105,387
	Roofing	\$2,250	\$675	\$585	\$1,755	\$5,265	\$4,970
	Interior Construction	\$36,900	\$11,070	\$9,594	\$28,782	\$86,346	\$83,936
	Interior Finishes	\$23,800	\$7,140	\$6,188	\$18,564	\$55,692	\$53,591
	Vertical Transportation	\$2,500	\$750	\$650	\$1,950	\$5,850	\$5,850
	Plumbing	\$61,800	\$18,540	\$16,068	\$48,204	\$144,612	\$135,428
	HVAC	\$27,650	\$8,295	\$7,189	\$21,567	\$64,701	\$64,348
	Electrical	\$14,100	\$4,230	\$3,666	\$10,998	\$32,994	\$32,994
	Special Construction	\$3,500	\$1,050	\$910	\$2,730	\$8,190	\$7,881
	Facility Total	\$222,100	\$66,630	\$57,746	\$173,238	\$519,714	\$501,967
Old Fire House Teen Center Infrastructure	Site Improvements	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$10,834
	Facility Total	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$10,834
	Site Total	\$227,100	\$68,130	\$59,046	\$177,138	\$531,414	\$512,802

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Old Fire House Teen Center Site

Total Observed Deficiency Repair Direct Cost :	\$227,100
Total Observed Deficiency Repair Direct Cost (Present Value):	\$219,146

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Old Fire House Teen Center Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$3,500	
System: Superstructure					Total System Deficiency Repair Cost (Present Value):		\$3,241	
Roof Construction								
Wood Deck	4	4 2013	Wood roof deck in multipurpose room has water damage; some boards are loose and need repair.	Repair deck, pressure wash, and repaint.	1	\$3,500.00	ls	\$3,500
Facility: Old Fire House Teen Center Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):		\$46,100	
System: Exterior Closure					Total System Deficiency Repair Cost (Present Value):		\$45,037	
Exterior Walls								
Cement Board Siding	4	1 2013	Cement board siding near main entry has failing seals and attachments.	Remove and repair underlying walls.	250	\$100.00	sf	\$25,000
Exterior Windows								
Windows	4	1 2013	Single glazed metal frame windows with caulked in fiberglass: condensation accumulates during winter, air infiltrates, and leaks water.	Remove and replace windows.	28	\$575.00	ea	\$16,100
Exterior Doors								
Exterior Doors	4	3 2013	Doors worn but functional.	Schedule door replacement at end of life.	5	\$1,000.00	ea	\$5,000

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond							
Site: Old Fire House Teen Center Site							
		Total Observed Deficiency Repair Direct Cost :					
							\$227,100
		Total Observed Deficiency Repair Direct Cost (Present Value):					
							\$219,146

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility: Old Fire House Teen Center Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$2,250
System: Roofing						Total System Deficiency Repair Cost (Present Value):			\$2,124
Projections									
Awnings	4	3	Small red awnings are decorative and color has faded.	Remove and replace awnings.	5	\$450.00	ea	\$2,250	
		2013							
Facility: Old Fire House Teen Center Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$36,900
System: Interior Construction						Total System Deficiency Repair Cost (Present Value):			\$35,870
Interior Doors									
Wood Doors and Frames	4	1	Severely damaged wood doors and frames. Damage from impact or misuse.	Remove and replace doors in existing frames. Provide new hardware.	18	\$1,800.00	ea	\$32,400	
		2013							
Fittings									
Fittings	4	5	Several counters and vanities are aged and worn more than others.	Schedule counter and vanity renewals.	3	\$1,500.00	ea	\$4,500	
		2013							
Facility: Old Fire House Teen Center Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$23,800
System: Interior Finishes						Total System Deficiency Repair Cost (Present Value):			\$22,902
Wall Finishes									
Paint	4	2	Much of painted wall surface is aged, discolored, and worn.	Repair surfaces and repaint.	1	\$15,000.00	ls	\$15,000	
		2013							
Ceiling Finishes									
Suspended Ceiling	4	2	Suspended ceiling lacks sway bracing and struts; tiles are broken and system is dated.	Replace suspended ceiling.	1,600	\$5.50	sf	\$8,800	
		2013							

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond	
Site: Old Fire House Teen Center Site	
	Total Observed Deficiency Repair Direct Cost :
	\$227,100
	Total Observed Deficiency Repair Direct Cost (Present Value):
	\$219,146

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond							
Site: Old Fire House Teen Center Site							
Total Observed Deficiency Repair Direct Cost :						\$227,100	
Total Observed Deficiency Repair Direct Cost (Present Value):						\$219,146	

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Old Fire House Teen Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$27,650
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$27,499
Cooling Generating Systems								
Cooling	5	0 2013	No cooling for administration and computer room areas.	Provide cooling.	1,000	\$15.00	sf	\$15,000
HVAC Distribution Systems								
Ventilation	5	0 2013	No exhaust for kitchen. Unclear exhaust for dark room. No exhaust for several storage rooms.	Provide code minimum ventilation and exhaust for all spaces.	8,650	\$1.00	sf	\$8,650
Terminal and Package Units								
Unit Heaters	4	2 2013	No discrete combustive air source for unit heaters. Combustive air is drawn from the served space.	Provide combustive air to unit heaters.	4	\$1,000.00	ea	\$4,000
Facility: Old Fire House Teen Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$14,100
System: Electrical			Total System Deficiency Repair Cost (Present Value):					\$14,100
Electrical Service and Distribution								
Electrical Panels	5	0 2013	Existing branch panel load centers have insufficient capacity and are outdated.	Replace existing outdated branch panel load centers.	4	\$400.00	ea	\$1,600
Other Electrical Systems								
Emergency Lighting	5	0 2013	Battery backup emergency wall lights are missing in hallways, large rooms, and building exterior doors.	Add emergency lights in hallways, large rooms, multipurpose room, and building exterior doors.	25	\$500.00	ea	\$12,500

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Old Fire House Teen Center Site

Total Observed Deficiency Repair Direct Cost : \$227,100

Total Observed Deficiency Repair Direct Cost (Present Value): \$219,146

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Old Fire House Teen Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$3,500
System: Special Construction			Total System Deficiency Repair Cost (Present Value):					\$3,368
Special Structures								
Hose Drying Tower	4	2 2013	Hose drying tower leaks water into building under east wall.	Recommend further investigation of tower.	1	\$3,500.00	ls	\$3,500
Facility: Old Fire House Teen Center Infrastructure			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$5,000
System: Site Improvements			Total System Deficiency Repair Cost (Present Value):					\$4,630
Parking Lots								
Parking Lot	2	4 2013	East parking lot pavement is deteriorating and lacks striping.	Provide approximately 100 sy of pavement removal and replacement. Provide pavement markings for stalls and ADA.	1	\$5,000.00	ls	\$5,000

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Opportunity Summary By Subsystem

City of Redmond						
Site: Old Fire House Teen Center Site				Total Site Opportunity Cost: \$549,725		

Subsystem		Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Old Fire House Teen Center Building System: Superstructure Total Cost: \$77,850							
B1020	Roof Construction						
		Building has no insulated roof construction.	Insulate under roof.	8,650.00	\$9.00	sf	\$77,850
Facility: Old Fire House Teen Center Building System: Exterior Closure Total Cost: \$68,000							
B2010	Exterior Walls						
		Building exterior walls are uninsulated.	Fur-out and insulate exterior walls. Assume 2x6 multi-stud with R-21 batt insulation and painted gypsum wall board (GWB).	3,400.00	\$20.00	sf	\$68,000
Facility: Old Fire House Teen Center Building System: Interior Finishes Total Cost: \$60,200							
C3020	Floor Finishes						
		Current tile and carpet will wear out over the next 5 to 10 years. Opportunity to simplify with polished concrete.	Upon end of life for tile and carpet, polish concrete slab on grade floors in lieu of re-covering.	8,600.00	\$7.00	sf	\$60,200
Facility: Old Fire House Teen Center Building System: Plumbing Total Cost: \$45,000							
D2040	Rain Water Drainage						
		With interior roof drains, crawl space and lightly used basement are opportunities for rain water harvesting system at modest cost.	Install rain water harvesting system to supply flushing water to toilets and urinals.	15,000.00	\$3.00	gal	\$45,000
Facility: Old Fire House Teen Center Building System: HVAC Total Cost: \$105,950							
D3030	Cooling Generating Systems						
		Natural ventilation is currently via operable windows and doors only. The abandoned in place hose tower may be cleaned and configured for enhanced natural ventilation of much of the Teen Center.	Clean hose tower. Install louvers from occupied spaces to base of tower. Install relief hood at top of tower.	1.00	\$10,000.00	ls	\$10,000
D3040	HVAC Distribution Systems						

Opportunity Summary By Subsystem

City of Redmond

Site: Old Fire House Teen Center Site

Total Site Opportunity Cost: \$549,725

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
D3060 Controls and Instrumentation	Current HVAC system of unit heaters and natural ventilation is typical of semi-heated shop or warehouse space, not for human occupancy.	Install a code compliant HVAC system suitable for full heating and cooling.	7,000.00	\$10.00	sf	\$70,000
	Opportunity to install new DDC control system in conjunction with new HVAC for current use suggested in "HVAC Distribution Systems" section.	Install new DDC controls in conjunction with new HVAC system.	8,650.00	\$3.00	sf	\$25,950
Facility: Old Fire House Teen Center Building System: Electrical Total Cost: \$142,725						
D5020 Lighting and Branch Wiring	Old, outdated lighting fixtures and control switches. Lighting has no automatic lighting controls.	Upgrade building lighting and controls.	8,650.00	\$7.00	sf	\$60,550
	Old branch building wiring and devices are outdated are insufficient.	Upgrade building branch wiring and devices.	8,650.00	\$6.00	sf	\$51,900
D5030 Low Voltage Communication Security and Fire Alarm	Existing security alarm system is small capacity and outdated.	Upgrade security alarm system to addressable system.	8,650.00	\$1.50	sf	\$12,975
	Existing fire alarm system is small capacity and outdated.	Upgrade fire alarm system to addressable system.	8,650.00	\$2.00	sf	\$17,300
Facility: Old Fire House Teen Center Building System: Furnishings Total Cost: \$40,000						
E2020 Moveable Furnishings (Capital Funded Only)	All furnishings are worn, dated, and unattractive. New furnishings would support the Teen Center programs.	Replace furnishings.	1.00	\$40,000.00	ls	\$40,000
Facility: Old Fire House Teen Center Building System: Special Construction Total Cost: \$10,000						
F1030 Special Construction Systems	Abandoned in place hose drying tower currently used mostly as an unapproved graffiti gallery. Opportunity to do something creative with the tower: 1) indoor rock climbing wall; 2) short bungee jump; or 3) other innovative idea.	Allowance for creative re-use of tower.	1.00	\$10,000.00	ls	\$10,000

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 2 of 2

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F.	41,700
Year Of Original Construction	1922
Facility Use Type	Community Center
Construction Type	Medium
# of Floors	2
Energy Source	Gas
Year Of Last Renovation	1980
Historic Register	No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.0			
Facility Condition Index (FCI)	0.17			
Current Replacement Value (CRV)	\$18,433,000	Predicted Renewal Budget (6 yrs)	\$1,264,000	\$1,227,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$9,029,000	\$7,735,000
		Observed Deficiencies (6 yrs)	\$3,047,000	\$2,932,000
		Observed Deficiencies (ALL)	\$3,047,000	\$2,932,000
		Opportunity Total Project Cost	\$3,096,000	N/A

Facility Condition Summary

Two floors with partial basement.

Architectural:

High school built in 1922, elementary signed as 1925, gym built in 1950. Building is in surprisingly good condition. Metal and wood siding and roof need work. Metal caps on parapets need cleaning and paint. Some floor tile needs replacement. Wood windows in gym are nearing failure. Single glazed wood windows in main building present an opportunity to save energy.

Electrical:

The Old Redmond School House Community Center building has a new 1200A 208/120v electrical service served by Puget Sound Energy. Building has full fluorescent lighting system for interior lighting, and has outdated high intensity discharge (HID) exterior lighting system. The building has small capacity fire alarm system and small capacity security alarm system. The building has no paging system or card access system. Overall, the systems are working and are in good to fair condition.

Mechanical:

The Old Redmond School House was built as a high school in 1922. An elementary school addition was added to the east in 1923. The gym was constructed in 1950 to the north. It appears a modernization was completed around 1980. Lake Washington School District closed the school in the 1990's and in 2000 leased for 40 years to the City of Redmond as a community center. Prior to occupancy, the city made a number of improvements in 2000, including new elevator, roof repair, new carpet, fire sprinklers, air conditioning for staff offices, asbestos abatement in crowd spaces, and more. In 2004, a new electrical service was installed. In 2006, a new chiller was added to provide air conditioning for the auditorium and several other spaces; the commercial kitchen was also replaced. Despite all the above renewals, many more are needed, and opportunities abound. HVAC includes two (2) gas-fired steam boilers, steam radiators, unit ventilators, and steam heating coils at air handling units; one (1) newer air cooled chiller serving cooling coils at newer auditorium air handling units and four (4) other spaces; roof top unit gas-packs for administration area and general and specific exhaust.

Plumbing is city water and sewer with old failing plumbing fixtures, but some newer domestic hot water heaters.

Fire sprinklers throughout with both wet and dry pipe system.

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
A Substructure				3.0					
Foundations									
A1010	Standard Foundations	1922	1922	3	30	RD	08/22/13	Poured in place concrete. Foundation appears to be in good condition. Limited cracks and no observed differential settlement.	
Basements									
A2020	Basement Walls	1950	1950	3	25	RD	08/22/13	Concrete basement walls. Wood at crawl separations. No concerns noted.	
B Shell				3.0					
Superstructure									
B1010	Floor Construction	1922	1922	3	25	RD	08/22/13	Wood frame 2x10 joists, built up beams, concrete beam wall support. Floors appear to be solid and free of undue deflection.	
B1020	Roof Construction	1922	1950	3	25	RD	08/22/13	Gym roof steel purlins on steel trusses. Wood roof deck. Original building wood deck on 2x10's on wood frame. No concerns observed.	
Exterior Closure									
B2010	Exterior Walls	1922	1950	3	30	RD	08/22/13	Brick and concrete walls in good condition. Wood siding and plywood at gym and rear needs maintenance and paint. Metal siding has lost paint and galvanizing. Hardie board at gym is broken and needs repair. All wood siding needs to be pressure washed, repaired where necessary, and painted. All metal needs to be cleaned, re-galvanized, and painted.	

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				3.0					
Exterior Closure									
B2020	Exterior Windows	1922	1994	3	30	RD	08/22/13	Administration and classroom windows were new before 2000. Original wood windows in gym and hallways of main building.	
								Good condition except wood windows in gym.	
B2030	Exterior Doors	1922	1980	3	17	RD	08/22/13	Hollow metal doors.	
								Worn but functional.	
Roofing									
B3010	Roof Coverings	1922	1980	3	10	RD	08/22/13	Torch down roof is in good condition for age. Metal roof at gym.	
								Gym metal roof is rusting and will fail in the near future.	
B3020	Roof Openings	1922	1990	3	15	RD	08/22/13	HVAC, plumbing, and access penetrations.	
								No deficiencies noted.	
B3030	Projections	1922	1922	3	5	RD	08/22/13	Metal caps and parapet walls. Parapets have been braced and are in good condition. Metal caps are rusting.	
								Clean and paint metal caps.	
C Interiors				3.0					
Interior Construction									
C1010	Partitions	1922	2000	3	35	RD	08/22/13	Wood frame partitions and walls with plaster or gypsum wallboard, fiberboard wainscot in halls.	
								Walls in good condition. Some isolated repairs needed.	
C1020	Interior Doors								

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				3.0					
Interior Construction									
C1020	Interior Doors	1922	1980	3	10	RD	08/22/13	Doors are worn but functional. No deficiencies noted.	
C1030	Fittings	1922	1980	3	5	RD	08/22/13	Chalk boards. Dated but functional. Most are unused.	
Staircases									
C2010	Stair Construction	1925	1925	3	25	RD	08/22/13	Wood stairs with rubber treads and risers. No deficiencies noted.	
C2020	Stair Finishes	1925	2010	2	14	RD	08/22/13	Rubber treads. No deficiencies observed.	
Interior Finishes									
C3010	Wall Finishes	1922	2000	3	9	RD	08/22/13	Walls are painted gypsum wall board, plaster, or fiberboard. Most walls are in good condition with minor isolated repairs needed.	
C3020	Floor Finishes	1922	2000	3	11	RD	08/22/13	Vinyl composition tile (VCT), carpet, wood floors. Floors are in acceptable condition except vinyl composition tile (VCT) in main halls.	
C3030	Ceiling Finishes	1922	1980	3	10	RD	08/22/13	Glued on acoustical ceiling tile (ACT). Generally in good condition. Random tile needs replacement or to be reattached.	
D Services				3.1					

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.1			
Vertical Transportation						
D1010 Elevators and Lifts	2000	2000	3	20	DCS 08/22/13	One (1) Kone 20-hp hydraulic two-stop passenger elevator. One (1) stage accessible lift. Elevator operation is abrupt and disconcerting to users. No issues to report regarding stage lift.
D1090 Other Conveying Systems	1922	1980	3	10	DCS 08/22/13	Roof access via ladder and roof hatch from second floor janitor closet to northeast. While general roof access is good, additional small ladders on stairs are needed to facilitate access.
Plumbing						
D2010 Plumbing Fixtures	1950	1980	4	3	DCS 08/22/13	Mostly older (1950) but some newer (1980) plumbing fixtures. Water closets, urinals, and gang lavatories; porcelain with chrome trim. Stainless steel sinks. One-piece fiberglass shower enclosure. Electric cooled and non-cooled drinking fountains. Most fixtures are past end of useful life with discoloration, chips, cracks, leaks, slow flushing, show draining, and other issues. Primary grade fixtures not needed. Largely non-ADA compliant.
D2020 Domestic Water Distribution	1922	1980	4	5	DCS 08/22/13	City water service with unknown service entry. Mix of older galvanized and newer copper piping. At least one (1) newer gas-fired domestic hot water heater. Older steam-to-hot water converter is abandoned in place in the boiler room. Few or no hose bibs observed. Water taste is reportedly poor in most or all areas, is often discolored, and sometimes has odors. Some or all domestic hot water (DHW) piping is not insulated per code. Hose bibs may be missing for maintenance and grounds keeping.
D2030 Sanitary Waste	1922	1980	3	15	DCS 08/22/13	Cast iron bell and spigot drain, waste, and vent (DW&V) piping throughout. Gravity draining to

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.1			
Plumbing						
D2030 Sanitary Waste						city sewer system. Floor drains in some toilet room and mechanical room areas.
						While older, the bell and spigot cast iron system is well built. Slow draining and flushing fixtures appear due more to the fixtures themselves than the drain, waste, and vent (DW&V) system. Vent-to-roofs (VTR) are lead capped.
D2040 Rain Water Drainage	1922	1980	3	10	DCS 08/22/13	Mix of internal roof drains with overflow scupper box and downspout, and gutter and downspout.
						Aging and in need of cleaning and maintenance, but functional when properly serviced. Replace most or all with next reroof. (See B-series.)
D2090 Other Plumbing Systems	1922	2006	2	20	DCS 08/22/13	New commercial kitchen system installed in 2006 including grease cooking equipment with grease hood.
						No kitchen wastewater grease interceptor observed. The new kitchen is reportedly little used and in good to excellent condition.
HVAC						
D3010 Energy Supply	1922	1980	3	10	DCS 08/22/13	Natural gas from Puget Sound Energy via 5,000-cfh rotary meter and seismic shutoff valve. Black iron pipe distribution to gas using heating equipment and appliances.
						No issues reported or observed.
D3020 Heat Generating Systems	1922	1950	3	10	DCS 08/22/13	Two (2) 2.5-mmbtu/h gas-fired fire-tube forced draft steam heating boiler in semi-detached basement mechanical (boiler) room. New flue stack installed approximately 1990. Two (2) 0.75-hp feed water pumps, one (1) 200-gallon feed water tank, and water chemistry control system.
						Boilers are aged and inefficient but functional. Asbestos insulation materials through boiler room.

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.1			
HVAC						
D3020 Heat Generating Systems						
D3030 Cooling Generating Systems	1980	2006	2	23	DCS 08/22/13	One (1) older rooftop condensing unit. One (1) newer Petra 100-ton air-cooled chiller in fenced yard at grade north of boiler room to east. Two (2) 7.5-hp variable frequency drive (VFD) driven chilled water pumps. Old condensing unit has failed with no cooling to several spaces. New chilled water system was freeze damaged due to low glycol concentration but was reportedly repaired. The new chiller is oversized for future load creating turn down levels.
D3040 HVAC Distribution Systems	1922	1980	3	7	DCS 08/22/13	One (1) Pace 1980 air handling unit (AHU) for gym with 2010 replaced steam heating coil. One (1) abandoned in place 1968 AHU on roof for auditorium. Gym air handling unit (AHU) is aging but functional; but only serves the east half of the gym resulting in occupant/user discomfort. The abandoned auditorium unit should be demolished and roof curb insulated and capped off. Corridor HVAC system is reportedly non-operable. Steam piping in unknown condition; likely with asbestos insulation.
D3050 Terminal and Package Units	1922	1980	4	5	DCS 08/22/13	Classroom unit ventilators in old classrooms. Cast iron steam radiators in corridors and toilet rooms. Roof top unit gas-packs serving administration areas. Steam unit heaters serving mechanical, electrical, plumbing (MEP) and utility rooms. Ceiling steam cast iron radiator(s) in basement storage room(s). Unit ventilators are past end of useful life, but may have life remaining if refurbished. Steam radiators are in fair condition and can operate 100 years if periodically serviced. The administration area roof top units are newer with 5 to 10 years of life remaining. Opportunity for partial cooling via unit ventilators.

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.1			
HVAC						
D3060 Controls and Instrumentation	1922	1980	4	3	DCS 08/22/13	Mix of mostly older stand alone controls and some newer programmable thermostats and limited DDC controls (mostly for 2006 installed chilled water systems). Many controls appear inoperable and/or abandoned in place. Some of the newer controls are in better condition.
D3090 Other HVAC Systems and Equipment	1922	2006	2	17	DCS 08/22/13	Commercial kitchen's grease hood with rooftop exhaust fan and gas fired make-up air unit (MAU) installed in 2006. Two (2) kiln room oven exhaust hoods with exhaust fans and flex duct to side wall exhaust. Kitchen exhaust fan and make-up air unit in awkward but operable roof locations. Kiln exhaust is marginal; flex duct may be failing due to heat.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1980	1980	3	10	DCS 08/22/13	City supplied 6-inch fire service with risers at northwest shop space. Pressure at 95-psig. Four (4) risers: two (2) wet and two (2) dry for unconditioned attic and crawl space. Sprinkler coverage appears weak in some areas. Risers are in fair to good condition for their age.
D4030 Fire Protection Specialties	1980	2000	3	17	DCS 08/22/13	Fire extinguishers, automated external defibrillators (AED), and first aid kits. Fire extinguisher inspections are current.
D4090 Other Fire Protection Systems	1980	2006	2	23	DCS 08/22/13	Kitchen grease hood fire suppression system. Hallways and stairwells appear to be egress corridors. Kitchen use appears to be minimal. Egress corridors and stairwell doors are not labeled as fire rated.

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.1			
Fire Protection						
D4090 Other Fire Protection Systems						
Electrical						
D5010 Electrical Service and Distribution	1922	2004	3	31	RA 08/22/13	Building electrical service, 1200A, 208/120V, 4-wire, served by Puget Sound Energy padmount transformer outside building, 225-kva rated. Building main service disconnect switch is 1200A, 208/120V, 4-wire, Cutler-Hammer 2004 equipment and is located outdoors. Electrical service was upgraded in 2004 with outdoor Nema-3R switchboard in good condition, with three (3) indoor panels added inside the electrical room. Electrical panels in other rooms, including hallway, art pottery, and storage rooms, are not as new (from 1980s); in fair working condition.
D5020 Lighting and Branch Wiring	1922	1980	3	5	RA 08/22/13	Interior lighting is generally fluorescent and consists of 1x4 pendant reflector lights in classrooms. Hallway lights are 1x4 wrap with battery packs for emergency light. Staff office has cable hung direct/indirect fixtures. Administration office has some 2x4 parabolics at front desk. New lighting was done in the waiting area with down lights and wall sconces. Wiring devices are 20A, stainless steel plate, installed on wiremold with data/voice and TV outlets next to it. Offices have flushed electrical outlets, plus added outlets done by wiremold and surface conduits and boxes. Hallway has added electrical outlets by surface conduit and box. Classrooms are wiremold for data and power outlets, ground fault interrupter (GFI) outlets at sink station; original electrical outlets at front teaching wall. Auditorium lighting has 2x4, 4-lamp surface box fixtures at low and high ceilings with emergency bug-eyes mounted at over 20-feet high. There are not enough electrical outlets in the kitchen; only four (4) observed. Lighting in kitchen is 2x4; looks good. Gym lighting is 2x2 high ceiling mounted high intensity discharge (HID) light fixtures in working condition; no flickering seen, good lighting level. Toilet room has 1x4 surface mounted metal box fixtures controlled by switches. The coiling door power, kitchen electrical circuits, and auditorium electrical circuits are tripped.

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.1			
Electrical						
D5020 Lighting and Branch Wiring						Good lighting level. Manual switching. Lighting is not provided at the low ceiling area along wall with casework. Fixtures in classroom are old; some failing reflectors. T8 lamps are new, reflectors are yellowed out and aging. Exterior wall lights are old, over 20 years, and need upgrades. No automatic controls throughout the building. Branch wiring and devices are over 20 years, in working condition. Replacement within the next 8 years is recommended.
D5030 Low Voltage Communication Security and Fire Alarm	1922	2000	2	12	RA 08/22/13	Fire alarm system consists of: smoke detectors, horn strobes in hallway, horn strobe in classroom (no smoke detector in classroom), heat detector in lieu of smoke detector is used over the stair landing ceiling. No smoke detector in office space. Hallway has a mix of smoke and heat detectors, mostly heat detectors. The fire alarm panel is located in the fire sprinkler room, #EST-2 Edwards, 2000 Silent Knight 5128 STU-HL monetary unit; in good working condition. Security alarm consists of motion detectors in hallway and Radionic control panel in administration office; in good working condition. Intermediate distribution frame (IDF) in administration office, Cat-6 system, wall rack IDF, 110V blocks on plywood back board, providing phone and computer communications. The building has a TV distribution system; some TV sets were seen in classrooms and offices, and are in good working condition. The building has no intercom, paging, or clock system. Original master clock has been abandoned. The building has no card access system. Fire alarm system is working well, but needs minor fixes. Loose heat detector in stairway. Need to replace existing heat detectors.
D5090 Other Electrical Systems	1922	2004	2	10	RA 08/22/13	The building has no generator. Emergency lights are battery backup type. Battery-backed exit lights by exit doors. Batter pack 1x4 fluorescent lights in hallway. Battery pack wall mounted directional lights in hallway.

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Building

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Facility Components			Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems								
D Services					3.1			
Electrical								
D5090	Other Electrical Systems							Plenty of emergency lights throughout the building; in good working condition.
E Equipment and Furnishings					3.0			
Equipment								
E1010	Commercial Equipment		1950	2005	3	18	RD 08/22/13	Commercial kitchen hood; complete commercial cooking kitchen with gas-fired cooking equipment, stainless steep prep, wash, and serving counters, and supporting system.
								No deficiencies noted.
E1030	Vehicular Equipment		1925	1980	3	10	RD 08/22/13	Concrete deck on wood frame loading dock.
								Dock sees limited use. Bumpers are worn but functional.
Furnishings								
E2010	Fixed Furnishings		1922	2000	3	17	RD 08/22/13	Artwork and fixed casework.
								Fixed casework is worn but functional.
E2020	Moveable Furnishings (Capital Funded Only)		1922	2000	3	17	RD 08/22/13	Tables and chairs.
								Most tables and chairs are in good condition.
F Special Construction								
Special Construction								
F1030	Special Construction Systems		1922	1980	3	10	RD 08/22/13	Seismic parapet braces.
								No deficiencies noted.

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Infrastr

16600 NE 80th Street
Redmond, WA 98052

Facility Condition Summary

The Old School House Community Center has had extensive site improvements along the south and west sides of the building, with new entry patios, landscaping, and site improvements. There is a newer asphalt parking lot for approximately 85 vehicles on the west side of the building. An asphalt access road extends around the east and north sides of the building. These areas have older pavement with irregular, patched, and deteriorating areas. The building is served by City of Redmond utilities.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2010 Roadways	1922	1980	3	8	MK 08/21/13	Asphalt access road extends around the north and east sides of the building. Some cracking, deterioration, and root intrusion is present. Some limited pavement repairs/patching is probably warranted, however this is a low use road and not a high priority.
G2020 Parking Lots	1922	2012	2	12	MK 08/21/13	Asphalt parking lot for 87 vehicles, including four (4) ADA stalls, plus an additional four (4) service truck stalls. Lot has concrete curbs and is well marked. Parking lot was renewed in 2004 and restriped in 2012, and is in good condition. Size of parking stalls and aisles is generous. Reports of insufficient parking during high use events. Some additional parking could be gained by filling the grass swale at the west side of the lot, and possibly along the north access road.
G2030 Pedestrian Paving	1922	1980	2	10	MK 08/21/13	Concrete walks around perimeter of the buildings. Newer concrete patio areas at south side entries. Asphalt pedestrian areas around the northeast corner of the building is rough and irregular. Most of the concrete walkways are in very good condition. Walkways and pedestrian areas along the north and east sides are in fair condition, but have limited use.

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Infrastr

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2040 Site Development	1922	2004	2	10	MK 08/21/13	Fixed benches, picnic table, and bike racks throughout site. There are accessible ramps to building entries on the east and west sides. All features are in good condition.
G2050 Landscaping	1922	2004	2	20	MK 08/21/13	Extensive landscaping on west and south sides of the building including ornamentals, grass, and trees. Parking lot in planter islands. Landscaping is in good condition with very good variety, and many trees reaching maturity. Irrigation system appears to function well. Renewed in 2004.
Site Civil / Mechanical Utilities						
G3010 Water Supply	1922	1980	3	10	MK 08/21/13	Domestic water and fire sprinkler supply from the City of Redmond system. No known issues.
G3020 Sanitary Sewer	1922	1980	3	10	MK 08/21/13	Building sanitary sewer connects to City of Redmond system. No known issues.
G3030 Storm Sewer	1922	1980	3	10	MK 08/21/13	Roof runoff discharges by downspout onto ground in many areas. Parking lot and site runoff is collected in catch basins and area drains and conveyed to City of Redmond system. There is a grass drainage swale at the northwest corner of the parking area. Reportedly the existing catch basin in alcove on the east side (just south of boiler room) drains poorly and is full of gravel. Recommend cleaning and repair as required.
G3060 Fuel Distribution	1922	1980	3	10	MK 08/21/13	Natural gas meter with seismic sensor located at northeast corner of building.

Facility Summary

City of Redmond

Old Redmond School House Community Center Site

Old Redmond School House Community Center Infrastr

16600 NE 80th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Civil / Mechanical Utilities						
G3060 Fuel Distribution						No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	1922	1980	3	10	MK 08/21/13	Underground service to building is 225-kva transformer located at northwest corner of the building. See also building's electrical sections.
G4020 Site Lighting	1922	2004	3	20	MK 08/21/13	Wall lights on the north, east, and south sides of the building are high near roofline. Pole lights in parking area and some city street lights along adjacent public roads. Site lighting was upgraded in 2004. No known issues.
G4030 Site Communications and Security	1992	2000	3	7	MK 08/21/13	See building's electrical sections for details. The Old Redmond School House Community Center has communication (voice and data) service to support current operations. No issues reported or observed, but several opportunities may be present.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Old Redmond School House Community Center Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Old Redmond School House Community Center Building	Exterior Closure	\$70,700	\$21,210	\$18,382	\$55,146	\$165,438	\$155,172
	Roofing	\$16,000	\$4,800	\$4,160	\$12,480	\$37,440	\$35,341
	Interior Construction	\$130,000	\$39,000	\$33,800	\$101,400	\$304,200	\$304,200
	Interior Finishes	\$22,750	\$6,825	\$5,915	\$17,745	\$53,235	\$51,227
	Vertical Transportation	\$10,000	\$3,000	\$2,600	\$7,800	\$23,400	\$22,090
	Plumbing	\$305,950	\$91,785	\$79,547	\$238,641	\$715,923	\$671,369
	HVAC	\$727,650	\$218,295	\$189,189	\$567,567	\$1,702,701	\$1,648,495
	Electrical	\$19,000	\$5,700	\$4,940	\$14,820	\$44,460	\$44,460
	Facility Total	\$1,302,050	\$390,615	\$338,533	\$1,015,599	\$3,046,797	\$2,932,355
	Site Total	\$1,302,050	\$390,615	\$338,533	\$1,015,599	\$3,046,797	\$2,932,355

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Old Redmond School House Community Center Site

Total Observed Deficiency Repair Direct Cost : \$1,302,050
Total Observed Deficiency Repair Direct Cost (Present Value): \$1,253,143

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Old Redmond School House Community Center Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$70,700
System: Exterior Closure					Total System Deficiency Repair Cost (Present Value):			\$66,313
Exterior Walls								
Cement Board Siding	4	2 2013	Hardie board panels at gym have been hit and broken; pieces missing.	Remove and replace panels.	8	\$400.00	ea	\$3,200
Metal Siding	4	5 2013	Metal siding at gym is exposed and rusting.	Clean, re-galvanize, and repaint metal siding.	2,000	\$5.00	sf	\$10,000
Wood Siding	4	2 2013	Wood is uncovered and exposed. Paint is flaking or missing.	Power wash. Repair as necessary. Paint.	5,000	\$5.00	sf	\$25,000
Exterior Windows								
Wood Windows	4	4 2013	Wood windows at gym are weathered, sills and jambs exposed, leak air and likely water.	Replace windows.	13	\$2,500.00	ea	\$32,500
Facility: Old Redmond School House Community Center Building					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$16,000
System: Roofing					Total System Deficiency Repair Cost (Present Value):			\$15,103
Roof Coverings								
Metal Roof	4	3 2013	Metal roof at gym is exposed and has lost paint and galvanized coating.	Clean, re-galvanize, and paint metal roof.	1,000	\$12.00	sf	\$12,000
Projections								
Metal Caps	4	3 2013	Sheet metal flashing caps on parapet are rusting.	Clean and repaint metal flashing caps.	1,000	\$4.00	lf	\$4,000

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Old Redmond School House Community Center Site

Total Observed Deficiency Repair Direct Cost : \$1,302,050
Total Observed Deficiency Repair Direct Cost (Present Value): \$1,253,143

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Old Redmond School House Community Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$130,000		
System: Interior Construction			Total System Deficiency Repair Cost (Present Value):			\$130,000		
Interior Doors								
Doors	5	0	Doors are not fire rated.	Replace doors with code compliant fire rated doors, including door frames and automatic closure hardware.	50	\$2,600.00	ea	\$130,000
		2013						
Facility: Old Redmond School House Community Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$22,750		
System: Interior Finishes			Total System Deficiency Repair Cost (Present Value):			\$21,892		
Floor Finishes								
Vinyl Composition Tile	4	2	Vinyl composition tile (VCT) in hallways have broken edges and corners.	Remove and replace vinyl composition tile (VCT).	3,500	\$6.50	sf	\$22,750
		2013						
Facility: Old Redmond School House Community Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$10,000		
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):			\$9,440		
Elevators and Lifts								
Elevator	4	3	Elevator operation is abrupt at start and/or stop.	Troubleshoot and repair elevator.	1	\$5,000.00	ea	\$5,000
		2013						
Other Conveying Systems								
Roof Access	4	3	No roof access to several high and drop roof areas.	Provide permanent ladder or stair access to all roof areas to facilitate maintenance.	5	\$1,000.00	ea	\$5,000
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Old Redmond School House Community Center Site

Total Observed Deficiency Repair Direct Cost :	\$1,302,050
Total Observed Deficiency Repair Direct Cost (Present Value):	\$1,253,143

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Old Redmond School House Community Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$305,950
System: Plumbing			Total System Deficiency Repair Cost (Present Value):					\$286,910
Plumbing Fixtures								
Plumbing Fixtures	4	2	Most fixtures and trim are beyond end of useful life with damage, discoloration, code violation, poor drain and flush, etc.	Replace plumbing fixtures.	50	\$3,000.00	ea	\$150,000
		2013	Water closets, urinals, lavatories, trim, sinks.					
Domestic Water Distribution								
Piping	4	5	Mix of old galvanized and middle-age copper piping. Missing domestic hot water pipe insulation. Inadequate hose bibs and shut off valves.	Renew, replace, insulate, and upgrade domestic hot water piping as needed.	41,700	\$3.50		\$145,950
		2013	Piping, insulation, hose bibs, and shut off valves.					
Other Plumbing Systems								
Grease Interceptor	5	0	Missing grease interceptor.	Install grease interceptor.	1	\$10,000.00	ea	\$10,000
		2013						
Facility: Old Redmond School House Community Center Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$727,650
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$704,485
Cooling Generating Systems								
Chilled Water System	4	3	Chilled water system can not be turned down to serve spaces other than the auditorium due to short cycling.	Install thermal storage tank and advanced controls to allow full use of new chilled water system.	1	\$25,000.00	ls	\$25,000
		2013						

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Old Redmond School House Community Center Site

Total Observed Deficiency Repair Direct Cost :

\$1,302,050

Total Observed Deficiency Repair Direct Cost (Present Value):

\$1,253,143

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Cooling	5	0	The Old Redmond Schoolhouse was designed and built as a school, closed in summer. The community center appears to be the busiest during the summer. Due to summer heat and no cooling for most program areas, an excessive number of portable fans are in use, creating a variety of safety and health hazards.	Install a cooling system compatible with occupancy and use.	20,000	\$15.00	sf	\$300,000
		2013						
Data/Communications Cooling	4	2	No dedicated cooling for data/communications area/closet.	Provide ductless spot cooling for data/communications area.	1	\$5,000.00	ls	\$5,000
		2013						
Cooling	5	0	None of the 1980s installed classroom high outside wall outside air inlet louver and associated exhaust fans appear to work.	Repair or replace outside air inlet louver and exhaust fans as needed in kind.	30	\$1,500.00	ea	\$45,000
		2013						
HVAC Distribution Systems								
Gym HVAC	4	3	West half of gym not served by current HVAC.	Install HVAC for west side of gym.	2,000	\$10.00	sf	\$20,000
		2013						
Corridor HVAC	5	0	Corridor HVAC has failed.	Replace corridor HVAC.	5,000	\$5.00	sf	\$25,000
		2013						
Terminal and Package Units								
Unit Ventilators	4	5	Unit ventilators are past end of useful life, but life can be extended with refurbishment.	Refurbish unit ventilators.	30	\$3,000.00	ea	\$90,000
		2013						
Radiant Heaters	4	3	Radiant heaters are corroded, blocked, disconnected, and damaged.	Refurbish radiant heaters.	20	\$1,500.00	ea	\$30,000
		2013						
Controls and Instrumentation								

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 4 of 5

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Old Redmond School House Community Center Site

Total Observed Deficiency Repair Direct Cost :	\$1,302,050
Total Observed Deficiency Repair Direct Cost (Present Value):	\$1,253,143

								Direct Construction Cost
Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	
		Survey Year						
DDC Controls	4	3 2013	No integrated DDC. Many inoperable, out of date, and abandoned in place controls.	Replace all controls with modern DDC system.	41,700	\$4.50	sf	\$187,650
Facility: Old Redmond School House Community Center Building				Total System Deficiency Repair Cost (Undiscounted/Unescalated):				\$19,000
System: Electrical				Total System Deficiency Repair Cost (Present Value):				\$19,000
Lighting and Branch Wiring								
Branch Electrical Outlets	5	0 2013	Insufficient electrical outlets in kitchen and auditorium; circuits tripped.	Add outlets in kitchen and auditorium.	8	\$500.00	ea	\$4,000
Branch Electrical Outlets	5	0 2013	Circuits tripped for coiling door, no backup power after normal power loss.	Add dedicated circuit to coiling door. Add uninterruptible power supply (UPS) for coiling door power backup.	1	\$5,000.00	ea	\$5,000
Low Voltage Communication Security and Fire Alarm								
Fire Alarm System	5	0 2013	Old heat detectors used in the hallway are unreliable and in poor condition.	Replace old heaters with new smoke detectors.	1	\$10,000.00	ls	\$10,000

Opportunity Summary By Subsystem

City of Redmond						
Site: Old Redmond School House Community Center Site				Total Site Opportunity Cost: \$1,383,000		

Subsystem		Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Old Redmond School House Community Center Building System: Exterior Closure Total Cost: \$52,500							
B2020	Exterior Windows	There are a number of likely original single glazed wood framed windows in both the main building and gym. Replacement with double glazed thermal break metal or metal clad windows or vinyl windows is recommended for energy, air infiltration, and water infiltration advantages.	Replace windows with double glazed thermal break metal or metal clad windows or vinyl windows.	35.00	\$1,500.00	ea	\$52,500
Facility: Old Redmond School House Community Center Building System: HVAC Total Cost: \$382,500							
D3020	Heat Generating Systems	Old boilers are approximately 75% efficient. Rather than refurbishing at end of useful life, replace with new high efficiency condensing boilers. Additionally consider wholesale change from steam to hot water heat, which may be more familiar to city operations and maintenance staff.	Replace all low efficiency boilers with new high efficiency boilers.	2.00	\$150,000.00	ea	\$300,000
D3030	Cooling Generating Systems	Excessive use of portable fans.	Install ceiling fans in all regularly occupied spaces.	50.00	\$450.00	ea	\$22,500
D3050	Terminal and Package Units	Unit ventilators may be connected to seasonal partial cooling.	Connect unit ventilators and modify steam and condensate system and/or chilled water system for partial unit ventilator cooling.	30.00	\$2,000.00	ea	\$60,000
Facility: Old Redmond School House Community Center Building System: Electrical Total Cost: \$888,000							
D5020	Lighting and Branch Wiring	Building exterior wall lights are old, over 20 years.	Replace existing wall lights on building wall and roof. Add controls.	1.00	\$20,000.00	ls	\$20,000
D5030	Low Voltage Communication Security and Fire Alarm						

Opportunity Summary By Subsystem

City of Redmond						
Site: Old Redmond School House Community Center Site				Total Site Opportunity Cost: \$1,383,000		

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
	Building has a small capacity security alarm system with limited use of motion detector.	Replace existing security alarm system with new addressable system. Provide motion detectors in major egress, hallways, and offices.	124,000.00	\$2.00	ls	\$248,000
	Building has no card access system.	Provide card access system for building.	124,000.00	\$1.50	ls	\$186,000
	Building has no paging system for communications, selected paging, or emergency call paging.	Provide sound system for paging.	124,000.00	\$3.50	ls	\$434,000
Facility: Old Redmond School House Community Center Infrastr						
System: Site Improvements		Total Cost: \$60,000				
G2020	Parking Lots					
	Reportedly insufficient parking during community events. Opportunity for additional parking at west side of parking lot.	Fill grass swale at west side of parking lot and along north access wall.	1,000.00	\$60.00	sy	\$60,000

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 1

15503 NE 90th Street
Redmond, WA 98502

Facility Code

Facility Size - Gross S.F.	17,450
Year Of Original Construction	1980
Facility Use Type	Maintenance
Construction Type	Medium
# of Floors	1
Energy Source	Gas
Year Of Last Renovation	1980
Historic Register	No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.5			
Facility Condition Index (FCI)	0.27			
Current Replacement Value (CRV)	\$5,673,000	Predicted Renewal Budget (6 yrs)	\$1,700,000	\$1,645,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$2,347,000	\$2,170,000
		Observed Deficiencies (6 yrs)	\$1,882,000	\$1,843,000
		Observed Deficiencies (ALL)	\$1,882,000	\$1,843,000
		Opportunity Total Project Cost	\$483,000	N/A

Facility Condition Summary

Architectural:

No architectural comments.

Electrical:

Sammamish River Business Park Building 1's electrical service is a 208/120V, 3-phase, 4-wire system service underground from Puget Sound Energy padmount transformer 225-kva. Main electrical disconnect, 400A, 208/120v, serving a distribution with multiple meter/breaker units. The building's lighting system throughout is mostly all original building system consisting of incandescent, high intensity discharge (HID) lights; all are old, out of date, and at end of life. Fluorescent lights were added to spaces where occupied. Branch wiring and devices are old, out of date, and insufficient. Some outlets and circuits are abandoned. The building's fire alarm system is outdated with insufficient coverage. The building has no security alarm system; abandoned devices and control panel were left in place. The building has no emergency lighting system. In general, the building's electrical systems are working at marginal capacity, lighting fixtures in warehouses are failing due to failing ballasts.

Mechanical:

The Sammamish River Business Park site includes two buildings (1 and 2), which are mirror images of each other. Built in 1980 as a light industrial commercial property, the City purchased the site and both buildings approximately year 2000 in conjunction with construction of the adjacent bridge. HVAC is gas-fired unit heaters, several rooftop gas-pack units (RTU) serving the south-end Traffic Department signals shop areas, toilet room exhaust fans, and electric baseboard and wall heaters. Plumbing is City water and sewer with copper piping, electric resistance domestic hot water (DHW) heaters, and what appears to be largely ABS drain, waste, and vent (DW&V) piping. There is no fire sprinkler system.

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 1

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
A Substructure				3.0			
Foundations							
A1010	Standard Foundations	1980	1980	3	55	RD 08/21/13	Poured in place concrete. No deficiencies observed.
A1030	Slab On Grade	1980	1980	3	55	RD 08/21/13	Slab on grade. Minor cracking observed with tight contact and no separation observed.
B Shell				3.3			
Superstructure							
B1010	Floor Construction	1980	1980	3	55	RD 08/21/13	Slab on grade; limited wood mezzanine area. Slab floor construction is in good condition. Unpermitted mezzanine floor is stable and firm but lacks headroom, legal stairs, handrails, etc.
B1020	Roof Construction	1980	1980	3	55	RD 08/21/13	Roof is wood deck on wood joists on wood purlins supported by glue-laminated beams on steel pipe columns. System is functioning as designed.
Exterior Closure							
B2010	Exterior Walls	1980	1980	3	27	RD 08/21/13	Fluted and flat concrete masonry walls (CMU). Walls are in good condition with limited efflorescence and some cracking in from lateral movement. Cracks have been caulked and appear tight.
B2020	Exterior Windows	1980	1980	4	2	RD 08/21/13	Single pane glass windows in aluminum frames. Single pane glass with wood stops. Opportunity to upgrade windows to meet current energy code and improve energy efficiency. Glass in wood stops is failing and deficient.

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 1

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				3.3					
Exterior Closure									
B2020	Exterior Windows								
B2030	Exterior Doors								
		1980	1980	3	17	RD	08/21/13	Aluminum entrance doors. Hollow metal doors. Aluminum doors in good condition. Hollow metal doors in central delivery court need maintenance and, in some cases, repair.	
Roofing									
B3010	Roof Coverings								
		1980	1980	4	3	RD	08/21/13	Torch down roofing on majority of building is in passable condition but needs maintenance and repair. Coating roof would extend life. Metal roofs are in good condition. Venting is compromised by building paper closing upper vents. Downspouts need to be reconnected in some cases. Roof drains need weekly maintenance in fall. Overflow roof drains need to be reconstructed lower and bigger.	
B3020	Roof Openings								
		1980	1980	3	7	RD	08/21/13	Roof openings consist of mechanical and pipe penetrations. Mechanical equipment seems to leak water into building in limited places. This is likely due to standing water from overflow roof drain deficiency noted above.	
B3030	Projections								
		1980	1980	3	5	RD	08/21/13	Metal cap on roof parapet. Metal cap on roof parapet is rusting, fasteners have risen above surface and lack caulking; joints have disengaged. Cap is missing on court area wing walls.	
C Interiors				3.2					
Interior Construction									
C1010	Partitions								
		1980	1990	3	17	RD	08/21/13	Numerous partitions have been installed and	

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 1

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Facility Components											
Systems		Original System Date		Last Major System Renew.		Cond. Scores		Subsystem Remain. Useful Life - Yrs		Surveyor/ Survey Date	Comments
C Interiors										3.2	
Interior Construction											
C1010	Partitions										modified over the years. All appear to be gypsum wall board over wood frame. Walls are in generally good condition but some need surface repair.
C1020	Interior Doors		1980	2000	3	7	RD	08/21/13	Interior doors are solid core wood doors in wood frames. Most doors are in acceptable condition.		
C1030	Fittings		1980	1980	3	5	RD	08/21/13	Most counters and vanities are original to the building. Many are nearing end of they useful life. Some counters and vanities are newer and in good condition. Some have solid structure, but doors and drawers are failing.		
Staircases											
C2010	Stair Construction		1980	1990	4	2	RD	08/21/13	Wood stair to unpermitted mezzanine. See flooring deficiency report for "Floor Construction" section.		
Interior Finishes											
C3010	Wall Finishes		1980	1995	3	4	RD	08/21/13	Numerous walls in building have been installed at random times. Minor wall repair and continued painting are needed.		
C3020	Floor Finishes		1980	1995	4	1	RD	08/21/13	Most of building is concrete slab floor; limited carpet and sheet vinyl in areas. Concrete should be cleaned and resealed. Carpet needs to be replaced.		
C3030	Ceiling Finishes										

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 1

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems								
C Interiors				3.2				
Interior Finishes								
C3030	Ceiling Finishes	1980	1990	3	10	RD	08/21/13	Drop in acoustical ceiling, open space to underside of roof. Drop in ceiling in some areas is in fair condition. In some areas it is stained and broken from roof leaks. In signals storage area, it is suspended from limited cables.
D Services				4.3				
Vertical Transportation								
D1090	Other Conveying Systems	1980	1980	5	0	DCS	08/21/13	No roof access. Provide roof access.
Plumbing								
D2010	Plumbing Fixtures	1980	1980	4	5	DCS	08/21/13	Porcelain floor mount water closets, wall or counter mounted lavatories. Fixtures are heavily worn, damaged, discolored, poorly draining, and leaking.
D2020	Domestic Water Distribution	1980	1980	3	10	DCS	08/21/13	City water service, with service entry not found, appears to be at least 3/4-inch service size. Copper cold and hot water distribution pipe, not insulated. Electronic domestic hot water (DHW) tanks, 10 to 20-gallons located above toilet rooms, of various ages. One (1) hose bib each on east and west outside walls. Little or no valving observed. Domestic hot water (DHW) piping is not insulated per code, wasting energy and delaying arrival of hot water at plumbing fixtures. Hose bibs may not be frost free and are not properly installed. Backflow prevention devices are not working properly.
D2030	Sanitary Waste	1980	1980	4	5	DCS	08/21/13	ABS drain, waste, and vent (DW&V) piping with lead vent-to-roof (VTR) pipe caps. Floor drains in

Facility Summary

City of Redmond

Samamish River Business Park Site

Samamish River Business Park Building 1

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			4.3			
Plumbing						
D2030 Sanitary Waste						some shop and warehouse locations. Slow or no flush at some flushing fixtures. Dirty or completely blocked floor drains. Several vent-to-roof pipe caps are almost completely blocked off by improperly installed lead caps.
D2040 Rain Water Drainage	1980	1980	5	0	DCS 08/21/13	Four (4) cast iron roof drain bodies with ABS pipe down through interior wall and connected below grade to site storm drain system. Overflow roof drains are parapet wall box scuppers to mansard entry metal roof, down to gutter and downspout, discharging at grade in from (west), and direct to wall in back (east). Obvious signs of frequent roof drain back-ups including high water marks from 6-inch and 12-inch deep ponding on roof and roof leak damage in space below, especially to south in the Traffic Department signals shop. ABS piping is not insulated. Roof drain screens were all removed and scattered across the roof (some were replaced during the Facility Condition Assessment site visit.) The roof should be inspected monthly during the rainy season for proper drainage, while more permanent and robust solutions are developed.
D2090 Other Plumbing Systems	1980	2000	3	10	DCS 08/21/13	Light duty compressed air system in facilities maintenance shop areas. Consider upgrading to heavier duty compressed air system and extending to other shop areas, if need exists.
HVAC						
D3010 Energy Supply	1980	1990	3	10	DCS 08/21/13	Natural gas from Puget Sound Energy via three (3) banks of meters: north meter numbers 559965 at 250-cfh and 1189229 at 250-cfh; middle meter number 1076667 at 250-cfh; south meter numbers 953092 at 1,000-cfh and 423706 at 175-cfh. Gas is distributed to roof top unit (RTU) gas-packs serving Traffic Department

Facility Summary

City of Redmond

Samamish River Business Park Site

Samamish River Business Park Building 1

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			4.3			
HVAC						
D3010 Energy Supply						signals shop and multiple shop and warehouse unit heaters. Five (5) meters is excessive for only two tenants in the building, incurring needless meter charges. Opportunity to consolidate metering to reduce monthly gas utility bill. Gas piping on roof is corroding with poor sleeper support.
D3030 Cooling Generating Systems	1980	1990	4	3	DCS 08/21/13	One (1) condensing unit serving air handling unit for north office area. Ceiling fans in several locations. Operable windows in some offices. Two (2) warehouse gravity ventilators. Many dozens of portable fans. Condensing unit is failed and abandoned in place. Ceiling fans may be inoperable or blocked by moveable furnishings. Well below code minimum operable windows for natural ventilation. Rusty but semi-operable gravity ventilators, but missing controllable back-draft dampers. Excessive number of portable fans with variety of related safety concerns.
D3040 HVAC Distribution Systems	1980	1980	4	5	DCS 08/21/13	Toilet room ceiling exhaust fans up to sheet metal roof jacks. Toilet room ceiling exhaust fans are filthy; some are at end of useful life.
D3050 Terminal and Package Units	1980	1990	5	1	DCS 08/21/13	Four (4) roof top units (RTU- 1, 2, 3, and 4) gas-pack serving Traffic signals shop and offices. Baseboard and wall electric resistance heat in most other office areas. Gas-fired Reznor 75% efficient ceiling mounted B-vented unit heaters. All four roof top units are past end of useful life; one appears to be partially operable, others appear to be abandoned in place. However, distribution duct below is in fair to good condition. Baseboard and wall heaters in various conditions; some blocked by fixed and/or moveable furniture and combustible storage, creating a fire hazard. Shop and warehouse gas-

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 1

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			4.3			
HVAC						
D3050 Terminal and Package Units						fired unit heaters may be mix of original 1980 and later 1990 installed units.
D3060 Controls and Instrumentation	1980	1990	4	3	DCS 08/21/13	Stand alone thermostats, on/off switches, and other simple manual controls. Largely original thermostats and switch controls, some are failed and abandoned in place. Opportunity to add city-wide energy management and control system (EMCS).
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1980	1980	5	0	DCS 08/21/13	No fire sprinkler system. Retrofit fire sprinkler to protect life and property.
D4030 Fire Protection Specialties	1980	1990	3	10	DCS 08/21/13	Wall mounted fire extinguishers in several locations. Install cabinets to better protect fire extinguishers.
D4090 Other Fire Protection Systems	1980	1980	5	0	DCS 08/21/13	Rated fire separation between north and south halves of building. Holes are present in the fire structure.
Electrical						
D5010 Electrical Service and Distribution	1980	1980	4	20	RA 08/21/13	Building has a 400A 208/120V service main disconnect, serving about 12 tenant meter/breaker units and a house panel. Square-D GE equipment. There is one small electrical load center located in each addressed tenant space. All electrical equipment and branch panels are old, 1980, over 30 years old. The system has minimum, small capacity. All branch panels have limited capacity; insufficient capacity for tenant

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 1

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				4.3					
Electrical									
D5010	Electrical Service and Distribution								
								uses and future expansion.	
D5020	Lighting and Branch Wiring								
		1980	1980	4	1	RA	08/21/13	Interior lighting consists of 2x4 troffer. 8-foot strips, incandescent sockets, are seen throughout the building. Occupied office spaces have better 2x4 troffer lights. No automatic control; manual switches and breakers are used to switch lights. Exterior lights are old and at end of life. Electrical wiring and devices are old, original building system, and at end of life.	
								Approximately 85% of the interior lighting should be replaced. Existing lamps and ballasts are failing. All electrical wiring and devices are old, outdated, at end of life, and should be replaced. Insufficient outlets and circuits.	
D5030	Low Voltage Communication Security and Fire Alarm								
		1980	1980	4	2	RA	08/21/13	The building has fire alarm system; it is old, outdated, and consists of heat detectors and horns. Fire-Lites Miniscan #4020. The building has no security alarm system. Old control panels seen; abandoned. The building has data/voice system devices in occupied offices.	
								Replace old, obsolete fire alarm system with code compliant coverage.	
D5090	Other Electrical Systems								
		1980	1980	5	0	RA	08/21/13	Building has no emergency lighting.	
								Add battery pack emergency lights inside building egress and exterior building egress.	
E Equipment and Furnishings				3.0					
Furnishings									
E2010	Fixed Furnishings								
		1980	2000	3	15	RD	08/21/13	Window treatments.	
								No deficiencies noted.	

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 2

15503 NE 90th Street
Redmond, WA 98502

Facility Code

Facility Size - Gross S.F.	17,450
Year Of Original Construction	1980
Facility Use Type	Maintenance
Construction Type	Medium
# of Floors	1
Energy Source	Gas
Year Of Last Renovation	1980
Historic Register	No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.5			
Facility Condition Index (FCI)	0.27			
Current Replacement Value (CRV)	\$5,673,000	Predicted Renewal Budget (6 yrs)	\$1,700,000	\$1,645,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$2,457,000	\$2,264,000
		Observed Deficiencies (6 yrs)	\$1,890,000	\$1,843,000
		Observed Deficiencies (ALL)	\$1,890,000	\$1,843,000
		Opportunity Total Project Cost	\$483,000	N/A

Facility Condition Summary

Architectural:

Sammamish River Business Park Building 2 is generally in good condition structurally. Needs new finishes inside and limited roof drainage work. Roof cleaning and coating will significantly extend useful life.

Electrical:

Sammamish River Business Park Building 2's electrical service is a 208/120V, 3-phase, 4-wire system service underground from Puget Sound Energy padmount transformer 225-kva. Main electrical disconnect, 400A, 208/120v, serving a distribution with multiple meter/breaker units. The building's lighting system throughout is mostly all original building system consisting of incandescent, high intensity discharge (HID) lights; all are old, out of date, and at end of life. Fluorescent lights were added to spaces where occupied. Branch wiring and devices are old, out of date, and insufficient. Some outlets and circuits are abandoned. The building's fire alarm system is outdated with insufficient coverage. The building has no security alarm system; abandoned devices and control panel were left in place. The building has no emergency lighting system. In general, the building's electrical systems are working at marginal capacity, lighting fixtures in warehouses are failing due to failing ballasts.

Mechanical:

The Sammamish River Business Park site includes two buildings (1 and 2), which are mirror images of each other. Built in 1980 as a light industrial commercial property, the City purchased the site and both buildings approximately year 2000 in conjunction with construction of the adjacent bridge. HVAC is gas-fired unit heaters, two (2) vehicle shop low exhaust systems, toilet room exhaust fans, and electric baseboard and wall heaters. Plumbing is City water and sewer with copper piping, electric resistance domestic hot water (DHW) heaters, and what appears to be largely ABS drain, waste, and vent (DW&V) piping. There is no fire sprinkler system.

Facility Summary

City of Redmond

Samamish River Business Park Site

Samamish River Business Park Building 2

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
A Substructure				3.0			
Foundations							
A1010	Standard Foundations	1980	1980	3	55	RD 08/21/13	Poured in place concrete. No deficiencies observed.
A1030	Slab On Grade	1980	1980	3	55	RD 08/21/13	Slab on grade. Minor cracking observed with tight contact and no separation observed.
B Shell				3.3			
Superstructure							
B1010	Floor Construction	1980	1980	3	55	RD 08/21/13	Slab on grade. Limited wood mezzanine area. Slab floor construction is in good shape. One (1) unpermitted mezzanine is stable and firm but lacks headroom, legal stairs, handrails, etc. Second unpermitted mezzanine floor is loose and soft. And built ladder access, lacks headroom, etc.
B1020	Roof Construction	1980	1980	3	55	RD 08/21/13	Roof is wood deck on wood joists on wood purlins supported by glue-laminated beams on steel pipe columns. System is functioning as designed.
Exterior Closure							
B2010	Exterior Walls	1980	1980	3	27	RD 08/21/13	Fluted and flat concrete masonry walls. Walls are in good condition with limited efflorescence and some cracking from lateral movement. Cracks have been caulked and appear tight.
B2020	Exterior Windows	1980	1980	4	2	RD 08/21/13	Single pane glass windows in aluminum frames. Single pane glass with wood stops.

Facility Summary

City of Redmond

Samamish River Business Park Site

Samamish River Business Park Building 2

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
B Shell				3.3			
Exterior Closure							
B2020	Exterior Windows						Opportunity to upgrade windows to meet current energy code and improve energy efficiency. Glass in wood stops is failing and deficient.
B2030	Exterior Doors	1980	1980	3	17	RD 08/21/13	Aluminum entrance doors. Hollow metal doors. Aluminum doors are in good condition. Hollow metal doors in central delivery court need maintenance and, in some cases, repair.
Roofing							
B3010	Roof Coverings	1980	1980	4	3	RD 08/21/13	Torch down roofing on a majority of the building is in passable condition but needs maintenance and repair. Metal roofs are in good condition. Venting is compromised by building paper closing upper vents. Downspouts need to be reconnected in some areas. Roof drains need weekly maintenance in fall. Overflow roof drains need to be reconstructed lower and bigger. Opportunity to coat roof to extend life.
B3020	Roof Openings	1980	1980	3	7	RD 08/21/13	Roof openings consist of mechanical and pipe penetrations. Mechanical equipment seems to leak water into the building in limited places. This is likely due to standing water from overflow roof drain deficiency noted above.
B3030	Projections	1980	1980	3	5	RD 08/21/13	Metal cap on roof parapet. Metal cap on roof parapet is rusting, fasteners have risen above surface and lack caulking, joints have disengaged. Cap missing on court area wing walls.
C Interiors				3.2			

Facility Summary

City of Redmond

Samamish River Business Park Site

Samamish River Business Park Building 2

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				3.2					
Interior Construction									
C1010	Partitions	1980	1990	3	17	RD	08/21/13	Numerous partitions have been installed and modified over the years. All appear to be gypsum wall board over wood frame. Walls are generally in good condition but some need surface repair.	
C1020	Interior Doors	1980	2000	3	7	RD	08/21/13	Interior doors are solid core wood doors in wood frames. Most interior doors are in acceptable condition.	
C1030	Fittings	1980	1980	3	5	RD	08/21/13	Most counters and vanities are original to the building. Many are nearing end of useful life. Some counters and vanities are newer and in good condition. Some have solid structure but doors and drawers are failing.	
Staircases									
C2010	Stair Construction	1980	1980	4	2	RD	08/21/13	Wood stair to unpermitted mezzanine. See flooring deficiency report for "Floor Construction" section.	
Interior Finishes									
C3010	Wall Finishes	1980	1995	3	4	RD	08/21/13	Numerous walls in building have been installed at random times. Minor wall repair and continued painting are needed.	
C3020	Floor Finishes	1980	1995	4	1	RD	08/21/13	Most of the building is concrete slab floor. Limited carpet and sheet vinyl in areas. Concrete should be cleaned and resealed. Carpet need to be replaced.	
C3030	Ceiling Finishes								

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 2

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Facility Components								
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
C Interiors				3.2				
Interior Finishes								
		1980	1990	3	10	RD	08/21/13	Poorly installed drop in ceiling, open space to underside of roof. Drop in ceiling in some areas is in fair condition. In some areas, it is stained and broken from roof leaks.
D Services				4.3				
Vertical Transportation								
D1090	Other Conveying Systems							
		1980	1980	5	0	DCS	08/21/13	No roof access. Provide roof access.
Plumbing								
D2010	Plumbing Fixtures							
		1980	1980	4	5	DCS	08/21/13	Porcelain floor mount water closets, wall or counter mount lavatories. Fixtures heavily worn, damaged, discolored, poorly draining, and leaking.
D2020	Domestic Water Distribution							
		1980	1980	3	10	DCS	08/21/13	City water service with service entry not found, but appears to be at least 3/4-inch service size. Copper cold and hot water distribution piping, not insulated. Electric domestic hot water (DHW) tanks, 10 and 20-gallons located above toilet rooms, of various ages. One (1) hose bib each on east and west outside walls. Little or no valving observed. Domestic hot water piping is not insulated per code, is wasting energy, and delaying arrival of hot water to fixtures. Hose bibs may not be free and are not properly installed. Backflow prevention devices are not working properly.
D2030	Sanitary Waste							
		1980	1980	4	5	DCS	08/21/13	ABS drain, waste, and vent (DW&V) piping with lead vent-to-roof (VTR) pipe caps. Floor drains in some shop and warehouse locations. Slow or no flush at some flushing fixtures. Dirty

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 2

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			4.3			
Plumbing						
D2030 Sanitary Waste						or completely blocked floor drains. Several vent-to-roof pipe caps are almost completely blocked off by improperly installed lead caps.
D2040 Rain Water Drainage	1980	1980	5	0	DCS 08/21/13	Four (4) cast iron roof drain bodies with ABS pipe down through interior wall and connected below grade to site storm drain system. Overflow roof drains are parapet wall box scuppers to mansard entry metal roof, down to gutter and downspout, discharging at grade in front (west), and direct to wall in back (east). Obvious signs of frequent roof drain backups including high water marks from 12-inch to 18-inch deep ponding on roof and roof leak damage in space below, especially at lab tenant space to southeast. ABS piping is not insulated. The northeast overflow roof drain scupper is roofed over. The roof should be inspected monthly during the rainy season for proper drainage, while more permanent and robust solutions are developed. Signs of winter weather flooding at grade to north, evidenced by sand bags and water marks.
D2090 Other Plumbing Systems	1980	1990	3	10	DCS 08/21/13	Miscellaneous shop systems in lab tenant space; assume tenant owned. Investigate life/safety code compliance of lab tenant space.
HVAC						
D3010 Energy Supply	1980	1990	3	10	DCS 08/21/13	Natural gas from Puget Sound Energy via three (3) banks of meters: north meter numbers 409880 at 175-cfh, 1052037 at 250-cfh, and 440275 at 200-cfh; middle meter numbers 392401 at 200-cfh and 1189698 at 250-cfh; and south meter numbers 513329 at 275-cfh, 225044 at 275-cfh, and 1129561 at 250-cfh. Gas is distributed to multiple shop and warehouse unit heaters. Eight (8) meters is excessive for only two tenants

Facility Summary

City of Redmond

Samamish River Business Park Site

Samamish River Business Park Building 2

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			4.3			
HVAC						
D3010 Energy Supply						in the building, incurring needless meter charges. Opportunity to consolidate metering to reduce monthly gas utility bill.
D3030 Cooling Generating Systems	1980	1990	4	3	DCS 08/21/13	One (1) condensing unit serving air handling unit for north office area. Ceiling fans in several locations. Operable windows in some offices. Two (2) warehouse gravity ventilators. Many dozens of portable fans. Condensing unit is failed and abandoned in place. Ceiling fans may be inoperable or blocked by moveable furnishings. Well below code minimum operable windows for natural ventilation. Rusty, but semi-operable gravity ventilators, but missing controllable back-draft dampers. Excessive number of portable fans with variety of related safety concerns.
D3040 HVAC Distribution Systems	1980	1980	4	5	DCS 08/21/13	Toilet room ceiling exhaust fans are up to sheet metal roof jacks. Two vehicle shop low exhaust systems. Toilet room ceiling fans are filthy; some are at end of useful life. Vehicle shop exhaust duct is damaged, not functional.
D3050 Terminal and Package Units	1980	1990	5	1	DCS 08/21/13	Four (4) roof top units (RTU- 1, 2, 3, and 4) gas-packs serving traffic signals shop and offices. Baseboard and wall electric resistance heat in most other office areas. Gas-fired Reznor 75% efficient ceiling mounted B-vented unit heaters. All four roof top units are past end of useful life; one appears to be partially operable, other appear to be abandoned in place. However, distribution duct below is in fair to good condition. Baseboard and wall heaters in various conditions; some are blocked by fixed and/or moveable furniture and combustible storage, creating a fire hazard. Shop and warehouse gas-fired unit heaters may be mix of original 1980 and later 1990 installed units.

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 2

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			4.3			
HVAC						
D3060 Controls and Instrumentation	1980	1990	4	3	DCS 08/21/13	Stand alone thermostats, on/off switches, and other simple manual controls. Largely original thermostats and switch controls; some are failed and abandoned in place. Opportunity to add city-wide energy management and control system (ECMS).
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1980	1980	5	0	DCS 08/21/13	No fire sprinkler system. Retrofit fire sprinkler to protect life and property.
D4030 Fire Protection Specialties	1980	1990	3	10	DCS 08/21/13	Wall mounted fire extinguishers in several locations. Install cabinets to better protect fire extinguishers.
D4090 Other Fire Protection Systems	1980	1980	5	0	DCS 08/21/13	Rated fire separation between north and south halves of building. Double leaf fire door hardware is missing and doors are blocked open.
Electrical						
D5010 Electrical Service and Distribution	1980	1980	4	20	RA 08/21/13	The building has a 400A 208/120V service main disconnect serving about 12 tenant meter/breaker units, and a house panel. Square-D, GE equipment. There is one small electrical load center located in each addressed tenant space. All electrical equipment and branch panels are old, 1980, over 30 years old. The system has minimum, small capacity. All branch panels have limited capacity; insufficient capacity for tenant uses and future expansion.
D5020 Lighting and Branch Wiring						

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Building 2

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				4.3					
Electrical									
D5020	Lighting and Branch Wiring	1980	1980	4	1	RA	08/21/13	Interior lighting consists of 2x4 troffer 8-foot strips, incandescent sockets are seen throughout the building. Occupied spaces have better 2x4 troffer lights. No automatic control; manual switches and breakers are used to switch lights. Exterior lights are old and at end of life. Electrical wiring and devices are old, original building system, and at end of life.	
								Approximately 85% of the interior lighting should be replaced. Lamps and ballasts of the existing lights are failing. All electrical wiring and devices are old, outdated, and at end of life; should be replaced. Insufficient outlets and circuits.	
D5030	Low Voltage Communication Security and Fire Alarm	1980	1980	4	2	RA	08/21/13	The building has fire alarm system; the system is old, outdated, and consists of heat detectors and horns. Fire-Lites Miniscan #4020. The building has no security alarm system. An old control panel is seen, but abandoned. The building has data/voice system devices in occupied offices.	
D5090	Other Electrical Systems	1980	1980	5	0	RA	08/21/13	The building has no emergency lighting.	
								Add battery pack emergency lights inside building egress and exterior building egress.	
E Equipment and Furnishings				3.0					
Furnishings									
E2010	Fixed Furnishings	1980	2000	3	15	RD	08/21/13	Window treatments.	
								No deficiencies noted.	

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Infrastructure

15503 NE 90th Street
Redmond, WA 98502

Facility Condition Summary

The Sammamish River Business Park is a rectangular site with two similar buildings, surrounded by parking on the south and west. Evidently a strip of land along the north side of the original site was used for construction of NE 90th Street. An asphalt trail currently extends along the north side between the buildings and a retaining wall for NE 90th Street. The parking lots are asphalt with limited landscape islands. The Sammamish River and a green belt lies due-east of the site. The site is served by City of Redmond utilities.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2020 Parking Lots	1980	1980	4	4	MK 08/21/13	Parking lots consist of head-in parking stalls towards the west and south sides of the buildings, and a paved yard between the two buildings. All are asphalt with extruded concrete curbs. Pavement is in fair to poor condition. Pavement markings are faded or non-existent. Portions of the parking area along the south side of the buildings exhibit deficiencies due to asphalt deterioration (cracking and failure) and broken curbing; these should be repaired. These areas should be saw cut and removed and replaced with new pavement. The paved yard has extensive alligatoring, including subgrade weakness. Recommend an asphalt overlay of the entire yard.
G2030 Pedestrian Paving	1980	1980	3	7	MK 08/21/13	There are concrete pedestrian walkways around the outer perimeter of the buildings (but not in between the buildings). An asphalt walkway lies along the north side of the buildings. Walkways and patio areas are generally in good condition. Some minor cracking and joint separation observed.
G2050 Landscaping	1980	1980	4	7	MK 08/21/13	Mostly mature landscaping of limited variety. Some landscape areas are bare. Trees are mature. Parking islands are mostly ivy. Landscaping is aged and lacks variety. Some

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Infrastructure

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2050 Landscaping						have been removed or died. Trees along east side of Building 2 are overhanging and need limbing. Large tree with cracks may require removal.
Site Civil / Mechanical Utilities						
G3010 Water Supply	1980	1980	3	12	MK 08/21/13	Domestic service lines from City of Redmond system. No known issues with water supply.
G3020 Sanitary Sewer	1980	1980	3	17	MK 08/21/13	Sanitary sewer service to each building from the City of Redmond system. No known issues with sanitary sewer service.
G3030 Storm Sewer	1980	1980	3	12	MK 08/21/13	Runoff from building roofs discharges by downspouts onto adjacent walkways and paved area. Runoff from paved areas is conveyed to catch basins and into City of Redmond system. There appears to be sufficient slope throughout the site to allow it to drain. No known problems.
G3060 Fuel Distribution	1980	1980	3	7	MK 08/21/13	Six (6) sets of natural gas meters without seismic sensors are located in the paved yard between the buildings. No known issues with fuel distribution.
Site Electrical utilities						
G4010 Electrical Distribution	1980	1980	3	7	MK 08/21/13	Underground electrical service to buildings. One (1) 225-kva transformer at the southeast corner of Building 1. (See also buildings' electrical sections.)
G4020 Site Lighting	1980	1980	4	0	MK 08/21/13	Two exterior wall pack lights are located on each

Facility Summary

City of Redmond

Sammamish River Business Park Site

Sammamish River Business Park Infrastructure

15503 NE 90th Street
Redmond, WA 98502

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments

G Sitework

Site Electrical utilities

G4020 Site Lighting

side of both buildings.

Site lighting is outdated. Replace with new light emitting diode (LED) energy efficient wall lights.

G4030 Site Communications and Security

1980	1980	3	7	MK	08/21/13	Underground telephone service to buildings. Telephone vault box located at southeast corner of Building 1.

No known problems. See also buildings' electrical sections.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Sammamish River Business Park Building 1	Superstructure	\$18,000	\$5,400	\$4,680	\$14,040	\$42,120	\$40,531
	Exterior Closure	\$1,600	\$480	\$416	\$1,248	\$3,744	\$3,674
	Roofing	\$6,000	\$1,800	\$1,560	\$4,680	\$14,040	\$13,254
	Interior Finishes	\$87,500	\$26,250	\$22,750	\$68,250	\$204,750	\$200,849
	Vertical Transportation	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$11,700
	Plumbing	\$41,813	\$12,544	\$10,871	\$32,614	\$97,841	\$93,502
	HVAC	\$164,495	\$49,349	\$42,769	\$128,306	\$384,918	\$375,984
	Fire Protection	\$107,700	\$32,310	\$28,002	\$84,006	\$252,018	\$252,018
	Electrical	\$372,288	\$111,686	\$96,795	\$290,384	\$871,153	\$851,109
	Facility Total	\$804,395	\$241,319	\$209,143	\$627,428	\$1,882,284	\$1,842,621
Sammamish River Business Park Building 2	Superstructure	\$36,000	\$10,800	\$9,360	\$28,080	\$84,240	\$81,062
	Exterior Closure	\$1,600	\$480	\$416	\$1,248	\$3,744	\$3,674
	Roofing	\$6,000	\$1,800	\$1,560	\$4,680	\$14,040	\$13,773
	Interior Finishes	\$87,500	\$26,250	\$22,750	\$68,250	\$204,750	\$200,849
	Vertical Transportation	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$11,700
	Plumbing	\$41,813	\$12,544	\$10,871	\$32,614	\$97,841	\$93,502
	HVAC	\$141,895	\$42,569	\$36,893	\$110,678	\$332,034	\$318,348
	Fire Protection	\$106,700	\$32,010	\$27,742	\$83,226	\$249,678	\$249,678
	Electrical	\$381,013	\$114,304	\$99,063	\$297,190	\$891,569	\$870,756
	Facility Total	\$807,520	\$242,256	\$209,955	\$629,866	\$1,889,597	\$1,843,342
Sammamish River Business Park Infrastructure	Site Improvements	\$31,000	\$9,300	\$8,060	\$24,180	\$72,540	\$66,964
	Site Electrical utilities	\$19,200	\$5,760	\$4,992	\$14,976	\$44,928	\$40,810
	Facility Total	\$50,200	\$15,060	\$13,052	\$39,156	\$117,468	\$107,773
	Site Total	\$1,662,115	\$498,635	\$432,150	\$1,296,450	\$3,889,349	\$3,793,737

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost :	\$1,662,115
Total Observed Deficiency Repair Direct Cost (Present Value):	\$1,621,255

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Sammamish River Business Park Building 1			Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$18,000		
System: Superstructure			Total System Deficiency Repair Cost (Present Value):			\$17,321		
Floor Construction								
Wood Mezzanine	4	2	Stair to mezzanine has non-uniform riser, no handrail or extension, and no toe kicks. Mezzanine lack headroom, has no lateral bracing and is of undetermined capacity.	Structure needs to be demolished or documented and permitted with required upgrades or replacement.	1	\$18,000.00	ea	\$18,000
2013								
Facility: Sammamish River Business Park Building 1			Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$1,600		
System: Exterior Closure			Total System Deficiency Repair Cost (Present Value):			\$1,570		
Exterior Windows								
Wood Stopped Glass	5	1	Wood stops are failing and glass in some cases is slipping down to door frames. Both are hazards and allow energy loss.	The glass needs to be supported and new stops installed. This in an opportunity to add double pane glass.	8	\$200.00	ea	\$1,600
2013								
Facility: Sammamish River Business Park Building 1			Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$6,000		
System: Roofing			Total System Deficiency Repair Cost (Present Value):			\$5,664		
Roof Coverings								
Roof Drains	4	3	There are only four (4) roof drains and overflow roof drains for a 17,000 sf roof with many nearby trees. Drains are easily clogged and overflows are too small and too high leaving up to 12 inches of water on roof at times as seen by staining on parapet.	Install new larger overflow roof drains at 2-inches above roof deck. Provide weekly roof drain inspection during fall and early winter to remove debris.	4	\$1,500.00	ea	\$6,000
2013								

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost : \$1,662,115
Total Observed Deficiency Repair Direct Cost (Present Value): \$1,621,255

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Sammamish River Business Park Building 1			Total System Deficiency Repair Cost (Undiscounted/Unescalated): \$87,500					
System: Interior Finishes			Total System Deficiency Repair Cost (Present Value): \$85,833					
Floor Finishes								
Concrete and Carpet Floor Finishes	4	1 2013	Carpet is well past useful life. Concrete needs cleaning and resealing.	Remove and replace carpet. Clean and reseal concrete floor.	17,450	\$5.00	sf	\$87,250
Ceiling Finishes								
Suspended Ceiling	4	1 2013	Some ceiling tiles are severely damaged or stained. In signals storage, remaining ceiling and lights are not adequately supported. Suspended ceilings damaged by water or earlier demolition.	Remove and replace damaged tiles. Remove unsupported ceiling and lights.	50	\$5.00	ea	\$250
Facility: Sammamish River Business Park Building 1			Total System Deficiency Repair Cost (Undiscounted/Unescalated): \$5,000					
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value): \$5,000					
Other Conveying Systems								
Roof Access	5	0 2013	No roof access.	Provide roof access from electrical room, including permanent ladder and roof hatch.	1	\$5,000.00	ea	\$5,000
Facility: Sammamish River Business Park Building 1			Total System Deficiency Repair Cost (Undiscounted/Unescalated): \$41,813					
System: Plumbing			Total System Deficiency Repair Cost (Present Value): \$39,958					
Plumbing Fixtures								
Plumbing Fixtures	4	3 2013	Low quality fixtures and trim have been heavily used and abused and are damaged, failing, discolored, backing-up, and leaking. Water closets, lavatories, and trim.	Replace plumbing fixtures.	10	\$2,000.00	ea	\$20,000
Sanitary Waste								

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost : \$1,662,115

Total Observed Deficiency Repair Direct Cost (Present Value): \$1,621,255

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
		Survey Year						
Drain, Waste, and Vent	4	3	Slow or blocked waste drains; dirty or blocked floor drains.	Troubleshoot and repair waste drains as needed.	17,450	\$0.75	sf	\$13,088
		2013						
Rain Water Drainage								
Roof Drains	5	0	Roof drains back up and overflow roof drains are too high and may back up as well. On-going roof leaks are damaging space below and adversely impacting city operations and tenant business.	Implement a roof drain maintenance program and retrofit roof with more robust roof drain and overflow roof drain system.	17,450	\$0.50	sf	\$8,725
		2013						
Facility:	Sammamish River Business Park Building 1				Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$164,495
System:	HVAC				Total System Deficiency Repair Cost (Present Value):			\$160,677
Cooling Generating Systems								
Cooling	5	1	No cooling or ventilation for shop and warehouse areas; marginal for others.	Provide adequate cooling and ventilation for shop and warehouse areas.	12,215	\$5.00	sf	\$61,075
		2013						
Cooling	5	1	Little or no cooling in most office areas, with excessive number of portable fans, power strips, and extension cords.	Install permanent office cooling systems throughout.	5,235	\$10.00	sf	\$52,350
		2013						
Condensing Unit	5	0	Condensing unit is failed and abandoned in place.	Replace condensing unit.	1	\$3,000.00	ea	\$3,000
		2013						
Terminal and Package Units								
Heaters	4	3	Some Reznor gas fired unit heaters are approaching end of useful life.	Clean, inspect, test, and repair or replace unit heaters as needed.	1	\$15,000.00	ls	\$15,000
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost : \$1,662,115

Total Observed Deficiency Repair Direct Cost (Present Value): \$1,621,255

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
		Survey Year						
Roof Top Units	5	1	Rooftop units 1, 2, 3, and 4 are past end of useful life.	Replace rooftop units.	4	\$7,000.00	ea	\$28,000
		2013						
Heaters	4	3	Baseboard electric resistance heaters and electric resistance wall heaters: some units are damaged, blocked, undersized, oversized, or other issues.	Clean, inspect, test, and replace baseboard and wall heaters as needed.	2,535	\$2.00	sf	\$5,070
		2013						
Facility: Sammamish River Business Park Building 1					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$107,700
System: Fire Protection					Total System Deficiency Repair Cost (Present Value):			\$107,700
Fire Protection Sprinkler Systems								
Fire Sprinkler System	5	0	Retrofit new fire sprinkler system to protect assets.	Install fire protection system.	17,450	\$6.00	sf	\$104,700
		2013	Wet pipe and dry pipe.					
Other Fire Protection Systems								
Fire Separation Wall	5	0	Fire separation wall is damaged.	Repair fire separation wall.	1	\$3,000.00	ls	\$3,000
		2013						
Facility: Sammamish River Business Park Building 1					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$372,288
System: Electrical					Total System Deficiency Repair Cost (Present Value):			\$363,722
Electrical Service and Distribution								
Panels	4	2	Equipment/panels are old, over 30 years, and lack capacity on all electrical branch panels.	Replace all existing branch panels.	1	\$60,000.00	ls	\$60,000
		2013						
Lighting and Branch Wiring								
Interior Lighting	4	1	Building interior lighting is old, out of date, and is insufficient.	Replace and upgrade lighting and controls and branch wiring.	17,450	\$7.50	sf	\$130,875
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost :	\$1,662,115
Total Observed Deficiency Repair Direct Cost (Present Value):	\$1,621,255

Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Branch Wiring	4	1 2013	Electrical branch wiring is old, out of date, and insufficient.	Replace and upgrade electrical branch wiring and devices.	17,450	\$7.00	sf	\$122,150
Low Voltage Communication Security and Fire Alarm								
Fire Alarm System	4	2 2013	Old fire alarm system equipment and detectors with insufficient coverage.	Replace existing fire alarm system with new addressable system, with code compliant coverage.	17,450	\$2.25	sf	\$39,263
Other Electrical Systems								
Emergency Lighting	5	0 2013	No emergency lights.	Add emergency battery backup lights inside building egress and exterior building egress.	50	\$400.00	ea	\$20,000

Facility: Sammamish River Business Park Building 2	Total System Deficiency Repair Cost (Undiscounted/Unescalated):	\$36,000
System: Superstructure	Total System Deficiency Repair Cost (Present Value):	\$34,642

Floor Construction								
Wood Mezzanine	4	2 2013	Stair has non-uniform risers, no handrail or extension, and no toe kicks. Mezzanine lacks headroom, had no lateral bracing, and is of undetermined load capacity. Second mezzanine is similar but uses ladder; floor will not support weight.	Structure needs to be demolished or documented and permitted with required upgrades or replacement.	2	\$18,000.00	ea	\$36,000

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost : \$1,662,115

Total Observed Deficiency Repair Direct Cost (Present Value): \$1,621,255

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Sammamish River Business Park Building 2			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$1,600
System: Exterior Closure			Total System Deficiency Repair Cost (Present Value):					\$1,570
Exterior Windows								
Wood Stopped Glass	5	1	Wood stops are failing and glass in some cases is slipping down to door frame. Both are hazards and cause energy loss.	The glass needs to be supported and new stops installed. This is an opportunity to add double pane glass.	8	\$200.00	ea	\$1,600
2013								
Facility: Sammamish River Business Park Building 2			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$6,000
System: Roofing			Total System Deficiency Repair Cost (Present Value):					\$5,886
Roof Coverings								
Roof Drains	5	1	There are only four (4) roof drains and three (3) overflow roof drains for a 17,000 sf roof with many nearby trees. Drains are easily clogged and overflow roof drains are too small and too high for having up to 12-inches of water on roof at times as seen by staining on parapet. An additional overflow roof drain has been roofed over.	Install new larger overflow roof drains at 2-inches above roof deck. Provide weekly roof drain inspection during fall and early winter to remove debris.	4	\$1,500.00	ea	\$6,000
2013 Some overflow roof drains are up to 10-inches above drain level. Clogged roof drains.								
Facility: Sammamish River Business Park Building 2			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$87,500
System: Interior Finishes			Total System Deficiency Repair Cost (Present Value):					\$85,833
Floor Finishes								
Floor Finishes	4	1	Carpet is well past its useful life. Concrete needs replacement.	Remove and replace carpet. Clean and reseal concrete.	17,450	\$5.00	sf	\$87,250
2013								
Ceiling Finishes								
Suspended Ceiling	4	1	Some ceiling tiles are severely damaged or stained.	Remove and replace damaged ceiling tiles.	50	\$5.00	ea	\$250
2013								

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost : \$1,662,115
Total Observed Deficiency Repair Direct Cost (Present Value): \$1,621,255

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Sammamish River Business Park Building 2			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$5,000
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):					\$5,000
Other Conveying Systems								
Roof Access	5	0	No roof access.	Provide roof access from electrical room, including permanent ladder and roof hatch.	1	\$5,000.00	ea	\$5,000
2013								
Facility: Sammamish River Business Park Building 2			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$41,813
System: Plumbing			Total System Deficiency Repair Cost (Present Value):					\$39,958
Plumbing Fixtures								
Plumbing Fixtures	4	3	Low quality fixtures and trim have been heavily used and abused and are damaged, failing, discolored, backing up, and leaking.	Replace plumbing fixtures in Building 2.	10	\$2,000.00	ea	\$20,000
2013 Water closets, lavatories, and trim.								
Sanitary Waste								
Drain, Waste, and Vent	4	3	Slow or blocked waste drain. Dirty or blocked floor drains.	Troubleshoot and repair waste drain and floor drains as needed.	17,450	\$0.75	sf	\$13,088
2013								
Rain Water Drainage								
Roof Drains	5	0	Roof drains back up; overflow roof drains are too high and may back up as well. Ongoing roof leaks are damaging space below and adversely impacting city operations and tenant business.	Implement a roof drain maintenance program and retrofit roof with more robust roof drain and overflow roof drain system.	17,450	\$0.50	sf	\$8,725
2013								

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost : **\$1,662,115**
Total Observed Deficiency Repair Direct Cost (Present Value): **\$1,621,255**

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Sammamish River Business Park Building 2			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$141,895
System: HVAC			Total System Deficiency Repair Cost (Present Value):					\$136,046
Cooling Generating Systems								
Office Cooling	5	1	Little or no office cooling in most office areas, with excessive number of portable fans, power strips, and extension cords.	Install permanent office cooling systems throughout.	5,235	\$10.00	sf	\$52,350
		2013						
Shop and Warehouse Cooling	4	3	No cooling or ventilation for shop and warehouse areas; marginal for other areas.	Provide adequate cooling and ventilation for shop and warehouse areas.	12,215	\$5.00	sf	\$61,075
		2013						
HVAC Distribution Systems								
Exhaust Ductwork	4	0	Vehicle shop exhaust ductwork: both systems have damaged ductwork, possibly due to vehicle strike.	Repair damaged galvanized sheet metal duct. Install bollards to protect from future vehicle strikes.	2	\$1,500.00	ea	\$3,000
		2013						
Terminal and Package Units								
Heaters	4	3	Some gas-fired Reznor unit heaters are approaching end of useful life.	Clean, inspect, test, and repair or replace gas-fired unit heaters as needed.	5,000	\$3.00	sf	\$15,000
		2013						
Heaters	4	3	Some baseboard electric resistance heaters and electric resistance wall heaters are damaged, some are blocked, some are under-sized, some are over-sized, and other issues.	Clean, inspect, test and replace baseboard and wall heaters as needed.	5,235	\$2.00	sf	\$10,470
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost : **\$1,662,115**
Total Observed Deficiency Repair Direct Cost (Present Value): **\$1,621,255**

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Sammamish River Business Park Building 2			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$106,700
System: Fire Protection			Total System Deficiency Repair Cost (Present Value):					\$106,700
Fire Protection Sprinkler Systems								
Fire Sprinkler System	5	0	Retrofit new fire sprinkler system to protect assets.	Install fire protection system.	17,450	\$6.00	sf	\$104,700
		2013	Wet pipe and dry pipe.					
Other Fire Protection Systems								
Fire Separation Wall	5	0	Fire doors at fire separation wall in Building 2 are missing hardware and are blocked open.	Repair fire doors as soon as possible.	1	\$2,000.00	ls	\$2,000
		2013						
Facility: Sammamish River Business Park Building 2			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$381,013
System: Electrical			Total System Deficiency Repair Cost (Present Value):					\$372,118
Electrical Service and Distribution								
Panels	4	2	Equipment and panels are old, over 30 years, lacking in capacity on all electrical branch panels.	Replace all existing branch panels.	1	\$60,000.00	ls	\$60,000
		2013						
Lighting and Branch Wiring								
Branch Wiring	4	1	Electrical branch wiring is old, out of date, and insufficient.	Replace and upgrade electrical branch wiring and devices.	17,450	\$7.00	sf	\$122,150
		2013						
Interior Lighting	4	1	Building 2 interior lighting is old, out of date, and insufficient.	Replace and upgrade lighting and controls, and branch wiring.	17,450	\$7.50	sf	\$130,875
		2013						
Low Voltage Communication Security and Fire Alarm								
Fire Alarm System	4	2	Old fire alarm system equipment and detectors with insufficient coverage.	Replace existing fire alarm system with new addressable system with code compliant coverage.	17,450	\$2.75	sf	\$47,988
		2013						

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost : \$1,662,115

Total Observed Deficiency Repair Direct Cost (Present Value): \$1,621,255

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Other Electrical Systems								
Emergency Lighting	5	0	No emergency lights.	Add emergency battery backup lights inside building egress and exterior building egress.	50	\$400.00	ea	\$20,000
		2013						
Facility: Sammamish River Business Park Infrastructure					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$31,000
System: Site Improvements					Total System Deficiency Repair Cost (Present Value):			\$28,617
Parking Lots								
Parking Area	4	4	Pavement markings are in poor condition. Additional parallel parking stalls along 154th Avenue NE could be striped to increase parking count. Reports of insufficient parking stalls.	Restripe all parking stalls with new. Consider use of some designated compact stalls to increase count. Stripe new parallel stalls along curb on west side of Building 1.	1	\$3,000.00	ls	\$3,000
		2013						
Parking Area	4	4	Portions of the parking area along the south side of the buildings exhibits deficiencies due to asphalt deterioration (cracking and failure) and broken curbing.	Saw cut, remove, and replace sections of pavement as required. Remove and replace broken curb.	100	\$50.00	sy	\$5,000
		2013						
Paved Yard	4	4	The paved yard has extensive alligatoring, indicating subgrade weakness.	Recommend an asphalt overlay of the entire yard. Prep existing pavement and install asphalt overly. Provide pavement markings.	1,200	\$15.00	sy	\$18,000
		2013						
Landscaping								

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Page 10 of 11

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Sammamish River Business Park Site

Total Observed Deficiency Repair Direct Cost :	\$1,662,115
Total Observed Deficiency Repair Direct Cost (Present Value):	\$1,621,255

								Direct Construction Cost
Material	Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	
		Survey Year						
Landscaping	4	5	Landscaping is aged and lacks variety. Some has been removed or died. Trees along east side of Building 2 are overhanging and need limbing. Large trees with cracks may require removal.	Install new landscaping in areas where missing. Limb up the overhanging trees and remove one (1) large cracked maple on east side of Building 1.	1	\$5,000.00	ls	\$5,000
		2013						
Facility: Sammamish River Business Park Infrastructure					Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$19,200
System: Site Electrical utilities					Total System Deficiency Repair Cost (Present Value):			\$17,440
Site Lighting								
Site Lighting	5	5	Site lighting is outdated. There are two (2) wall lights on each side of both buildings.	Replace with new light emitting diode (LED) energy efficiency wall lights.	16	\$1,200.00	ea	\$19,200
		2013						

Opportunity Summary By Subsystem

City of Redmond

Site: Sammamish River Business Park Site

Total Site Opportunity Cost: \$413,200

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Sammamish River Business Park Building 1 System: Exterior Closure Total Cost: \$26,880						
B2020	Exterior Windows	Single glazed windows in aluminum frames could be replaced by double glazed unit with thermal break.	56.00	\$480.00	ea	\$26,880
Facility: Sammamish River Business Park Building 1 System: Roofing Total Cost: \$17,450						
B3010	Roof Coverings	Life of existing roof may be extended 10 to 15 years by coating.	17,450.00	\$1.00	sf	\$17,450
Facility: Sammamish River Business Park Building 1 System: HVAC Total Cost: \$54,350						
D3010	Energy Supply	Consolidate five (5) natural gas meters to two (2) meters to reduce monthly multiple gas meter charges.	2.00	\$1,000.00	ea	\$2,000
D3060	Controls and Instrumentation	Currently largely old and outdated non-programmable, non-intelligent temperature and ventilation controls, with little or no remote monitoring.	17,450.00	\$3.00	sf	\$52,350
Facility: Sammamish River Business Park Building 1 System: Electrical Total Cost: \$107,920						
D5010	Electrical Service and Distribution	Small electrical service, minimum capacity, insufficient for future use.	1.00	\$80,000.00	ls	\$80,000
D5030	Low Voltage Communication Security and Fire Alarm	No security alarm system.	17,450.00	\$1.60	sf	\$27,920

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

Print Date: 03/10/14

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Page 1 of 2

Opportunity Summary By Subsystem

City of Redmond

Site: Sammamish River Business Park Site

Total Site Opportunity Cost: \$413,200

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Sammamish River Business Park Building 2 System: Exterior Closure Total Cost: \$26,880						
B2020	Exterior Windows	Single glazed windows in aluminum frames could be replaced with double glazed with thermal break units.	56.00	\$480.00	ea	\$26,880
Facility: Sammamish River Business Park Building 2 System: Roofing Total Cost: \$17,450						
B3010	Roof Coverings	Existing roof life may be extended 10 to 15 years by coating.	17,450.00	\$1.00	sf	\$17,450
Facility: Sammamish River Business Park Building 2 System: HVAC Total Cost: \$54,350						
D3010	Energy Supply	Consolidate eight (8) natural gas to two (2) meters to reduce monthly multiple gas meter charges for Building 2.	2.00	\$1,000.00	ea	\$2,000
D3060	Controls and Instrumentation	Currently largely old and outdated non-programmable, non-intelligent temperature and ventilation controls, with little or no remote monitoring.	17,450.00	\$3.00	sf	\$52,350
Facility: Sammamish River Business Park Building 2 System: Electrical Total Cost: \$107,920						
D5010	Electrical Service and Distribution	Small electrical service, minimum capacity, insufficient for future use.	1.00	\$80,000.00	ls	\$80,000
D5030	Low Voltage Communication Security and Fire Alarm	No security alarm system.	17,450.00	\$1.60	sf	\$27,920

Note: Cost estimates shown are raw construction costs and do not include any mark-ups or escalation.

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Page 2 of 2

Facility Summary

City of Redmond
Trinity Building Site
Trinity Building

18104 NE 76th Street
Redmond, WA 98052

Facility Code

Facility Size - Gross S.F. 18,200
Year Of Original Construction 1981
Facility Use Type Maintenance Shop
Construction Type Medium
of Floors 2
Energy Source Gas
Year Of Last Renovation 1997
Historic Register No



		Total Project Cost		Total Project Cost - Present Value
Weighted Avg Condition Score	3.1			
Facility Condition Index (FCI)	0.18			
Current Replacement Value (CRV)	\$6,349,000	Predicted Renewal Budget (6 yrs)	\$503,000	\$462,000
Beginning Budget Year	2013	Predicted Renewal Budget (20 yrs)	\$2,382,000	\$2,002,000
		Observed Deficiencies (6 yrs)	\$669,000	\$660,000
		Observed Deficiencies (ALL)	\$669,000	\$660,000
		Opportunity Total Project Cost	\$869,000	N/A

Facility Condition Summary

Architectural:
No architectural comments.

Electrical:
Building has underground electrical service from Puget Sound Energy, 480/277v, served by 225-kva padmount transformer at front of building. Building has fluorescent 2x4 parabolic fixtures in the office wing, and high intensity discharge (HID) high bay fixtures in warehouse bays. Building branch wiring all installed in conduits. Building has 15A, 20A ground type, isolated ground type receptacles throughout the office wing. Open bay area devices are mostly 15A type devices. Building has fire alarm system and card access system; building has no security alarm system. Building has no generator.

Mechanical:
Constructed in 1981 and occupied by Genie for light manufacturing until sold to City of Redmond in 2008. Major improvement in 1997 including roof insulation, new storefront windows (double glazed with window film and mini blinds), three (3) new roof top unit gas-packs, and general tenant improvement work. High bay shop/warehouse to north and west; offices, training, and core system to southeast quadrant, two-story. HVAC is roof top unit gas-pack for office and training area. High bay shop's HVAC is gas-fired unit heaters with no ventilation system, other than several operable doors. Plumbing is city water and sewer with electric domestic hot water heat. Abandoned copper compressed air distribution piping in shop/warehouse space (no compressor). No fire sprinkler.

Facility Summary

City of Redmond
Trinity Building Site
Trinity Building

18104 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments	
Systems								
A Substructure				3.0				
Foundations								
A1010	Standard Foundations	1981	1997	3	56	RD	08/28/13	Poured in place concrete. Foundation is largely covered with bark. No deficiencies observed.
A1030	Slab On Grade	1981	1981	3	15	RD	08/28/13	Slab on grade. Slab shows excessive directional cracking.
B Shell				2.8				
Superstructure								
B1010	Floor Construction	1981	1997	3	56	RD	08/28/13	Second floor wood frame. No deficiencies observed.
B1020	Roof Construction	1981	1997	3	56	RD	08/28/13	Plywood on 2x wood frame on glue-laminated purlins on glue-laminated beams on steel columns. Roof deck damaged by barrier leak(s). Steel pulling away from wall panel. See "Slab on Grade" section above. Gutters leaking; scuppers clogged.
Exterior Closure								
B2010	Exterior Walls	1981	1981	3	28	RD	08/28/13	Tilt up concrete. Panels on north wall show rust at strike locations. Panels show damage at panel connections. Movement? See also "Slab on Grade" section above.
B2020	Exterior Windows	1981	1997	3	31	RD	08/28/13	Metal frame double glazed windows. No deficiencies observed except deterioration of window film. Suggest exterior shade.

Facility Summary

City of Redmond
Trinity Building Site
Trinity Building

18104 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain; Useful Life - Yrs	Surveyor/ Survey Date	Comments		
B Shell				2.8					
Exterior Closure									
B2030	Exterior Doors	1981	1997	3	18	RD	08/28/13	Aluminum storefront is in good condition. Hollow metal doors and frames. Some doors rusting or have impact damage.	
Roofing									
B3010	Roof Coverings	1981	2013	2	10	RD	08/28/13	Snow coated (2013) torch down roof. Coating shows telegraphed breaks in roofing and needs to be recoated in areas.	
B3020	Roof Openings	1981	1997	3	15	RD	08/28/13	Curbs and openings. No deficiencies observed.	
B3030	Projections	1981	1997	3	17	RD	08/28/13	Canopy near west main door. Canopy not over door. Relocate. (Less than \$2,000.)	
C Interiors				3.0					
Interior Construction									
C1010	Partitions	1981	1997	3	34	RD	08/28/13	Wood frame. No deficiencies observed.	
C1020	Interior Doors	1981	1997	3	24	RD	08/28/13	Solid core wood doors and frames. Door worn but functional.	
C1030	Fittings	1981	1997	3	14	RD	08/28/13	White boards, rails, and counters. Worn but functional.	

Facility Summary

City of Redmond
Trinity Building Site
Trinity Building

18104 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
C Interiors				3.0					
Staircases									
C2010	Stair Construction	1981	1997	3	56	RD	08/28/13	Wood stairs. No deficiencies observed.	
C2020	Stair Finishes	1981	1997	3	10	RD	08/28/13	Rubber stair tread. No deficiencies observed.	
Interior Finishes									
C3010	Wall Finishes	1981	1997	3	7	RD	08/28/13	Painted gypsum wall board. Isolated damage to be repaired and painted with normal maintenance. (Less than \$2,000.)	
C3020	Floor Finishes	1981	1997	3	8	RD	08/28/13	See "Slab on Grade" section above. Carpet. Carpet worn but functional.	
C3030	Ceiling Finishes	1981	1997	3	18	RD	08/28/13	Acoustical ceiling in office, Limited isolated tile replacement needed. (Less than \$2,000.)	
D Services				3.4					
Vertical Transportation									
D1010	Elevators and Lifts	1981	1981	5	0	DCS	08/28/13	No elevator to second floor. Install elevator.	
D1090	Other Conveying Systems	1981	1981	3	10	DCS	08/28/13	Roof hatch and ladder. No hoists or cranes in shop. Roof access is in fair condition. Opportunity for hoists and/or cranes.	

Facility Summary

City of Redmond
Trinity Building Site
Trinity Building

18104 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
D Services				3.4			
Plumbing							
D2010	Plumbing Fixtures	1981	1981	4	5	DCS 08/28/13	Porcelain water closets, urinals, and lavatories in men's and women's with chrome trim. Stainless steel sinks at coffee bars. Aged by largely operable with some trim issues. Signs of occasional flushing fixture back-ups.
D2020	Domestic Water Distribution	1981	1981	3	10	DCS 08/28/13	City water. Copper distribution piping. Electric domestic hot water heaters, A.O. Smith 40-gallong, 1997. Hose bibs outside and inside. Domestic hot water piping is not insulated. Domestic hot water heater not installed per code.
D2030	Sanitary Waste	1981	1981	4	5	DCS 08/28/13	City sewer with visible ABS drain, waste, and vent (DW&V) piping, Hidden materials unknown. Signs of flushing fixture drainage problems. Investigate and repair or replace as needed.
D2040	Rain Water Drainage	1981	1981	4	3	DCS 08/28/13	Roof drains via scupper boxes and gutters and downspouts down to site storm drain system. Ponding at perimeter, especially south. Scupper opening, not protected, small and quickly blocked by pine tree needles. PVC downspout subject to vehicular damage where exposed and ultraviolet (UV) damage to south. Several storm sewer connections failed.
D2090	Other Plumbing Systems	1981	1997	3	10	DCS 08/28/13	Copper compressed air distribution loop with valved stubs, no drops, no air compressor. Piping is in fair to good condition. Air compressor shed outside north wall is empty (no compressor). Opportunity to install compressor and drops to active shop and maintenance areas.
HVAC							
D3010	Energy Supply	1981	1997	3	25	DCS 08/28/13	Natural gas supplied by Puget Sound Energy via

Facility Summary

City of Redmond
Trinity Building Site
Trinity Building

18104 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.4			
HVAC						
D3010 Energy Supply						meter number 1106964 with 1,000-cfh capacity including seismic valve. Steel distribution pipe to three (3) roof top units and three (3) unit heaters. Large natural gas service with opportunity to upgrade to gas domestic hot water and fully heated shop with insulation upgrade.
D3030 Cooling Generating Systems	1981	1997	4	3	DCS 08/28/13	Small ventilation cooling fan for small main electrical, communication, MDF (main distribution frame) room. Negative pressure in electrical room drawn duct and _ into room adversely impacting equipment. Room is warm/hot during warm weather.
D3040 HVAC Distribution Systems	1981	1997	5	0	DCS 08/28/13	Toilet room ceiling exhaust fans. No exhaust service for first floor janitor room or most storage rooms. No shop exhaust. Toilet room exhaust fans are nearing end of life. Ventilation for janitor closet and other storage areas, may not meet code.
D3050 Terminal and Package Units	1981	1997	3	10	DCS 08/28/13	Three (3) Dayton gas-fired vented (to roof) unit heaters for high bay shop. Three (3) roof top unit gas-packs for office areas: large 12.5-ton, medium 8.5-ton, and small 2-ton Trane units with sheet metal and flex duct supply; combination of ducted and open plenum returns. Shop unit heaters for freeze protection semi-heating. See "Energy Supply" section for opportunity to provide comfort heating. While unit heaters and roof top units are 15-years old, little use since late 2000's coupled with good maintenance should extend life.
D3060 Controls and Instrumentation	1981	1997	3	10	DCS 08/28/13	Programmable thermostats. See "Terminal and Packed Units" section for opportunity for semi-zone control using variable volume and temperature (VVT) or Thermafuse

Facility Summary

City of Redmond
Trinity Building Site
Trinity Building

18104 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
D Services			3.4			
HVAC						
D3060 Controls and Instrumentation						technology. Opportunity to upgrade to DDC for additional building automation and remote monitoring.
D3090 Other HVAC Systems and Equipment	1981	1997	3	7	DCS 08/28/13	Hole(s) in high bay roll-up door(s) for vehicle engine exhaust. No industrial equipment. Former paint booth at center north was removed by previous tenant. Opportunity to install vehicle engine exhaust and industrial ventilation as needed to support program changes.
Fire Protection						
D4010 Fire Protection Sprinkler Systems	1981	1981	5	0	DCS 08/28/13	No fire sprinkler. Install fire sprinkler.
D4030 Fire Protection Specialties	1981	1997	3	15	DCS 08/28/13	Fire extinguishers on wall in shop area and in cabinets in office area. Inspections current.
Electrical						
D5010 Electrical Service and Distribution	1981	1981	3	8	RA 08/28/13	Building electrical system is 480/277V 4-wire with five (5) main service disconnect switches. Each disconnect feeds directly to the panel. Electrical room is small and full of equipment. Service equipment and branch panels and transformers are old, over 32 years old, and outdated; should be replaced in future building planning.
D5020 Lighting and Branch Wiring	1981	1981	3	8	RA 08/28/13	Building interior lighting is the fluorescent 2x4 parabolic fixtures in the office wing, and high intensity discharge (HID) high bay fixtures in the open bays. Building exterior lights are HID wall packs and roof flood lights. All lighting is in

Facility Summary

City of Redmond
Trinity Building Site
Trinity Building

18104 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components									
Systems		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments		
D Services				3.4					
Electrical									
D5020	Lighting and Branch Wiring							working condition. No automatic occupancy controls. Branch wiring and devices are in new, good condition in all office areas on first and second floors. Branch wiring and devices are in older condition, 1981, and probably should be replaced in future building planning. All the high intensity discharge (HID) lighting in the warehouse bays are over 30 years old; the fixtures are high bay 400w, not energy efficient, and should be replaced in future building planning.	
D5030	Low Voltage Communication Security and Fire Alarm								
	1981	1981	3	6	RA	08/28/13	Building has fire alarm system, control panel is Silent Knight #5207, located in electrical room. Devices consist of smoke detectors, heat detectors, and horn strobes. Building has a small access control and card readers at exit doors. Fire alarm system is in working condition at over 30 years, but should consider an upgrade with future building planning. Building access system is working well; Altronix system. Building has data/voice, Cat-5E system, which is in good condition.		
D5090	Other Electrical Systems								
	1981	1981	3	5	RA	08/28/13	Building has no generator. Emergency battery backup pack wall fixtures are used. Emergency battery backup wall fixtures are located at main stairway and exit doors, are in fair condition and marginal quantities.		
E Equipment and Furnishings				3.0					
Equipment									
E1020	Institutional Equipment								
	1981	1997	3	10	RD	08/28/13	Motorized training screen. No deficiencies observed.		
E1030	Vehicular Equipment								

Facility Summary

City of Redmond
Trinity Building Site
Trinity Building

18104 NE 76th Street
Redmond, WA 98052

Facility Components

Facility Components		Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems							
E Equipment and Furnishings				3.0			
Equipment							
E1030	Vehicular Equipment						
		1981	1981	3	8	RD 08/28/13	Motorized overhead doors with auto-open in-floor sensors at exit door to east.
							No deficiencies observed or reported.
Furnishings							
E2010	Fixed Furnishings						
		1981	1997	3	15	RD 08/28/13	Window shades.
							No deficiencies observed.
E2020	Moveable Furnishings (Capital Funded Only)						
		1981	1997	3	15	RD 08/28/13	Limited tables and chairs.
							Some damaged. Replace as needed. (Less than \$2,000.)

Facility Summary

City of Redmond

Trinity Building Site

Trinity Building Infrastructure

18104 NE 76th Street
Redmond, WA 98052

Facility Condition Summary

The Trinity Building is located near the southeast corner of the City of Redmond Maintenance Operations Center site, along the north side of NE 76th Street. The building has asphalt parking areas along the south and west sides. The asphalt access road on the east side of the building is shared with Genie Lift Company. There are mature trees along the south side of the site and the south side of the building. There is active construction underway on the westernmost 40' of the site, for the "MOC Decant Facility Improvements" project. This area is currently an open excavation for future decant and bio-retention facilities. Excavated material is stockpiled in the south parking lot. The building is served by City of Redmond utilities.

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2010 Roadways	1981	1981	4	2	MK 08/27/13	Access road, 20-feet wide, along east side of building is shared with Genie Lift Company. Asphalt drive at northeast corner at building. Asphalt is in poor condition with alligatoring, cracking, and failures. Concrete driveway apron at NE 76th is also significantly cracked. Assume responsibility for half of drive repair cost only.
G2020 Parking Lots	1981	1981	3	5	MK 08/27/13	Asphalt parking lots on west and south side of building are worn and cracking. There is a concrete slab on a portion of the west lot, also cracked and worn. Pavement markings are faded. Asphalt lot on west side is in fair to poor condition, with cracking and spalling. Asphalt lot on south side is in fair condition, with some cracking and failure along the construction joints. Recommend new asphalt overlay and new curbs. Note the extent of repairs will depend on the restoration associated with the Decant Facility construction that is currently underway, as some pavement repair may occur under contract.
G2030 Pedestrian Paving	1981	1981	2	10	MK 08/27/13	Concrete entry sidewalk on east side of building, and a small concrete landing by south entry door.

Facility Summary

City of Redmond

Trinity Building Site

Trinity Building Infrastructure

18104 NE 76th Street
Redmond, WA 98052

Facility Components

Systems	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
G Sitework						
Site Improvements						
G2030 Pedestrian Paving						Walks are in good condition.
G2050 Landscaping	1981	1981	3	8	MK 08/27/13	Site has mature trees on south side of building, and along south side of parking lot. Groundcover is generally grass and woodchips. Trees appear to be in fair condition, suitable for current use of the site. Trees adjacent to building should be trimmed to reduce fouling of roof surfaces, especially roof drains (less than \$2,000).
Site Civil / Mechanical Utilities						
G3010 Water Supply	1981	1981	3	13	MK 08/27/13	Water service to building provided by City of Redmond system. No known issues.
G3020 Sanitary Sewer	1981	1981	3	18	MK 08/27/13	Sanitary sewer service to building provided by City of Redmond system. No known issues.
G3060 Fuel Distribution	1981	1981	3	8	MK 08/27/13	Natural gas meter with seismic valve on east side of the building. No known issues.
Site Electrical utilities						
G4010 Electrical Distribution	1981	1981	3	8	MK 08/27/13	Underground electric service to the building, 225-kva transformer on the south side of the building. No known issues.
G4020 Site Lighting	1981	1981	3	10	MK 08/27/13	Wall lights on exterior perimeter walls of the building. Three (3) newer double light fixtures on the roof are directed to the site areas below.

Facility Summary

City of Redmond	
Trinity Building Site	18104 NE 76th Street
Trinity Building Infrastructure	Redmond, WA 98052

Facility Components	Original System Date	Last Major System Renew.	Cond. Scores	Subsystem Remain. Useful Life - Yrs	Surveyor/ Survey Date	Comments
Systems						

G Sitework

- Site Electrical utilities
- G4020 Site Lighting

No known issues.

Deficiency Repair Cost Markups By System

2013 - 2018

City of Redmond

Site: Trinity Building Site

Facility	System	Direct Construction Cost	Contingency 30%	Contractor's OH & P 20%	Project Soft Cost 50%	Total Project Cost	Total Project Cost (Present Value)
Trinity Building	Foundations	\$5,000	\$1,500	\$1,300	\$3,900	\$11,700	\$11,045
	Superstructure	\$3,000	\$900	\$780	\$2,340	\$7,020	\$6,887
	Exterior Closure	\$10,600	\$3,180	\$2,756	\$8,268	\$24,804	\$23,868
	Roofing	\$11,000	\$3,300	\$2,860	\$8,580	\$25,740	\$24,469
	Vertical Transportation	\$75,000	\$22,500	\$19,500	\$58,500	\$175,500	\$175,500
	Plumbing	\$24,000	\$7,200	\$6,240	\$18,720	\$56,160	\$51,845
	HVAC	\$39,000	\$11,700	\$10,140	\$30,420	\$91,260	\$89,746
	Fire Protection	\$118,300	\$35,490	\$30,758	\$92,274	\$276,822	\$276,822
	Facility Total	\$285,900	\$85,770	\$74,334	\$223,002	\$669,006	\$660,182
Trinity Building Infrastructure	Site Improvements	\$77,500	\$23,250	\$20,150	\$60,450	\$181,350	\$166,996
	Facility Total	\$77,500	\$23,250	\$20,150	\$60,450	\$181,350	\$166,996
	Site Total	\$363,400	\$109,020	\$94,484	\$283,452	\$850,356	\$827,178

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond
Site: Trinity Building Site

Total Observed Deficiency Repair Direct Cost : \$363,400
Total Observed Deficiency Repair Direct Cost (Present Value): \$353,495

Material		Cond.	Material Useful Life	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
			Survey Year						
Facility: Trinity Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$5,000
System: Foundations						Total System Deficiency Repair Cost (Present Value):			\$4,720
Slab On Grade									
Concrete Slab	4	3	2013	Excessive cracking together with broken joints in concrete panels. Structural steel separating from wall at southwest corner.	Investigate differential movement and structural integrity.	1	\$5,000.00	ea	\$5,000
Facility: Trinity Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$3,000
System: Superstructure						Total System Deficiency Repair Cost (Present Value):			\$2,943
Roof Construction									
Metal Gutter	4	1	2013	Metal gutter at north wall is leaking and water is staining wall. Scuppers at south wall are clogged with debris and have no screens.	Clean and screen scuppers. Replace gutter and slope to drain.	200	\$15.00	lf	\$3,000
Facility: Trinity Building						Total System Deficiency Repair Cost (Undiscounted/Unescalated):			\$10,600
System: Exterior Closure						Total System Deficiency Repair Cost (Present Value):			\$10,200
Exterior Windows									
Window Film	4	2	2013	Shading film on interior side of windows is coming off/damaged.	Remove film. (Opportunity for exterior shade.)	40	\$85.00	ea	\$3,400
Exterior Doors									
Hollow Metal Doors	4	2	2013	Hollow metal doors in used and worn condition. Paint is oxidized; doors show damage and rust.	Clean, repair, replace hardware as needed, and paint.	8	\$900.00	ea	\$7,200

Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Trinity Building Site

Total Observed Deficiency Repair Direct Cost : **\$363,400**
Total Observed Deficiency Repair Direct Cost (Present Value): **\$353,495**

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Trinity Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$11,000
System: Roofing			Total System Deficiency Repair Cost (Present Value):					\$10,457
Roof Coverings								
Snow Coat	2	1 2013	2013 snow coating has pulled apart over existing cracks in roof.	Recoat areas where cracking shows.	1	\$2,000.00	ls	\$2,000
Insulation	4	3 2013	Second floor roof insulation is inconsistent. Shop ceiling at southeast is missing insulation at past roof leak.	Remove roofing. Replace missing insulation and vapor barrier. Reroof with new.	1,000	\$9.00	sf	\$9,000
Facility: Trinity Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$75,000
System: Vertical Transportation			Total System Deficiency Repair Cost (Present Value):					\$75,000
Elevators and Lifts								
Elevator	5	0 2013	No elevator to second floor.	Install two-stop hydraulic passenger elevator.	1	\$75,000.00	ea	\$75,000
Facility: Trinity Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$24,000
System: Plumbing			Total System Deficiency Repair Cost (Present Value):					\$22,156
Plumbing Fixtures								
Plumbing Fixtures	4	5 2013	Water closets, urinals, sinks, and trim are aged and worn.	Repair or replace as needed.	1	\$7,000.00	ls	\$7,000
Domestic Water Distribution								
Domestic Hot Water Heater	4	5 2013	Domestic hot water heater is approaching end of life, is not code compliant, and piping is not insulated.	Schedule domestic hot water heater replacement, bring up to code, and insulate pipe.	1	\$5,000.00	ls	\$5,000
Sanitary Waste								

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Trinity Building Site

Total Observed Deficiency Repair Direct Cost :

\$363,400

Total Observed Deficiency Repair Direct Cost (Present Value):

\$353,495

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Drain, Waste, and Vent	4	5 2013	Signs of water drainage issues.	Investigate and repair/replace as needed.	1	\$2,000.00	ls	\$2,000
Rain Water Drainage Roof Drains	4	3 2013	Ponding at south side. Blocked scupper openings. PVC downspouts. Some downspouts not connected.	Add new scuppers and downspouts at most heavily ponded areas. Enlarge scupper opening and add overflow roof drain-type scupper boxes. Replace PVC downspouts with metal downspouts in vehicle traffic area and south façade.	10	\$1,000.00	ea	\$10,000
Facility: Trinity Building System: HVAC Cooling Generating Systems Cooling HVAC Distribution Systems General Exhaust Ventilation Total System Deficiency Repair Cost (Undiscounted/Unescalated): Total System Deficiency Repair Cost (Present Value): \$39,000 \$38,353								
Cooling	4	3 2013	Ventilate cooling only for main electrical room with communications equipment, drawing dust and dirt in space.	Install dedicated split direct expansion (DX) cooling system.	1	\$5,000.00	ea	\$5,000
General Exhaust	4	5 2013	Toilet room ceiling fans approaching end of life. Little or no ventilation for janitor closet, kitchenette, and storage areas.	Schedule toilet room exhaust fans for replacement. Provide code minimum exhaust/ventilation for janitor, kitchenette, and storage room.	8	\$500.00	ea	\$4,000
Ventilation	5	0 2013	No ventilation or exhaust for high bay shop.	Provide code minimum ventilation and exhaust.	10,000	\$3.00	sf	\$30,000

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Detailed Assessment - Observed Deficiencies 2013 - 2018

City of Redmond

Site: Trinity Building Site

Total Observed Deficiency Repair Direct Cost : \$363,400

Total Observed Deficiency Repair Direct Cost (Present Value): \$353,495

Material	Cond.	Material Useful Life Survey Year	Deficiency Condition Notes	Action	Qty	Unit Cost	Unit	Direct Construction Cost
Facility: Trinity Building			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$118,300
System: Fire Protection			Total System Deficiency Repair Cost (Present Value):					\$118,300
Fire Protection Sprinkler Systems								
Fire Sprinkler System	5	0	No fire sprinkler.	Install dry pipe in shop and wet pipe sprinkler in office area with stand pipe.	18,200	\$6.50	sf	\$118,300
		2013						
Facility: Trinity Building Infrastructure			Total System Deficiency Repair Cost (Undiscounted/Unescalated):					\$77,500
System: Site Improvements			Total System Deficiency Repair Cost (Present Value):					\$71,366
Roadways								
Roadways	4	2	Asphalt access road is in poor condition with alligating, cracking, and failures. Concrete driveway apron is also significantly cracked. Both should be replaced. (Assume responsibility for half of drive repair cost only.)	Replace asphalt drive and concrete apron. Pavement section must be suitable for truck loading, minimum 4-inch Class B asphalt on 6-inch base.	300	\$60.00	sy	\$18,000
		2013	Asphalt access road along east side of building, including concrete apron at NE 76th Street.					
Parking Lots								
Parking Lots	4	5	Asphalt lot on west side is in fair to poor condition, with cracking and spalling. Asphalt lot on south side is in fair condition, with some cracking and failures along the construction joints.	Recommend remove and replace existing concrete curbs. Limited replacement of failed pavement sections, and new asphalt overlay (1.5-inches) over entire lot. New pavement markings.	1,700	\$35.00	sy	\$59,500
		2013	Asphalt parking lots along west and south sides of building.					

Note: Cost estimates shown are direct construction costs.

Print Date: 03/10/14

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Opportunity Summary By Subsystem

City of Redmond
Site: Trinity Building Site

Total Site Opportunity Cost: \$371,550

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
Facility: Trinity Building						
System: Exterior Closure	Total Cost: \$30,000					
B2020	Exterior Windows					
	There has been an obvious effort to control solar gain.	Install an exterior shade awning above both rows of windows on the south elevation.	150.00	\$200.00	If	\$30,000
Facility: Trinity Building						
System: Vertical Transportation	Total Cost: \$600					
D1090	Other Conveying Systems					
	High bay space functionality may be improved with hoists and/or lifts.	Install 2-ton overhead hoists.	2.00	\$300.00	ea	\$600
Facility: Trinity Building						
System: Plumbing	Total Cost: \$20,000					
D2090	Other Plumbing Systems					
	Existing compressed air distribution loop is abandoned in place.	Install 10-hp 100-gallon ventilation air compressor, refrigerated air dryer, and twelve (12) pressure regulated drops with 1/2-inch quick disconnects.	1.00	\$20,000.00	ls	\$20,000
Facility: Trinity Building						
System: HVAC	Total Cost: \$116,600					
D3010	Energy Supply					
	Domestic hot water is electric and approaching end of life. Replacement can be upgraded to high efficiency gas.	Install new high efficiency gas-fired domestic hot water heater and recirculation pump.	1.00	\$7,500.00	ls	\$7,500
	High bay shop space walls are not insulated. Shop is semi-heated only.	Install wall insulation per current energy code to improve space comfort and energy efficiency.	10,000.00	\$8.00	sf	\$80,000
D3060	Controls and Instrumentation					
	Current thermostats provide no integrated control or remote monitoring.	Opportunity to upgrade to DDC systems for optimal control and remote monitoring.	18,200.00	\$0.50	sf	\$9,100
D3090	Other HVAC Systems and Equipment					

Opportunity Summary By Subsystem

City of Redmond
Site: Trinity Building Site

Total Site Opportunity Cost: \$371,550

Subsystem	Opportunity	Action	Qty	Unit Cost	Unit	Cost
	Previous tenant employed industrial ventilator to improve high bay shop, indoor air quality, and occupant health, well being, and productivity.	Study, design, and install industrial ventilators, specifically vehicle engine exhaust to support current operation.	2.00	\$10,000.00	ea	\$20,000
Facility:	Trinity Building					
System:	Electrical	Total Cost: \$204,350				
D5010	Electrical Service and Distribution					
	Building electrical service and panels are old and outdated.	Replace existing electrical service and distribution.	18,200.00	\$4.50	ea	\$81,900
D5020	Lighting and Branch Wiring					
	Warehouse open bays lighting fixtures are old, outdated, and approaching end of life.	Upgrade existing high intensity discharge (HID) lights to fluorescent high bay fixtures with occupancy sensors and new branch wiring.	45.00	\$800.00	ea	\$36,000
D5030	Low Voltage Communication Security and Fire Alarm					
	Building has no security alarm system. Add security alarm system with future building planning.	Provide new addressable security system.	18,200.00	\$2.00	sf	\$36,400
	Upgrade existing fire alarm system with future building planning.	Provide new addressable fire alarm system.	18,200.00	\$2.75	sf	\$50,050

V. APPENDIX

5.1 Facility List

5.2 FCA Project Team

5.3 FCA Terminology

5.4 FCA O&M Workshop Wall Sheets

5.5 FCA Survey Forms & Methodology

5.6. MENG Analysis FCA *Database*

5.7. Cost Model & Cost Estimating

5.8. Renewal Budget by Facility by Year

5.9. Renewal Budget by Facility by Subsystem by Year

6.0. Facility Survey Highlights

6.1 Infrared Electrical

6.2 Infrared Envelope

6.3 Redmond Facilities Map

5.1 List of Facilities

Site/Bldg (number)	Site/Bldg Name	Abbreviation	Address (please verify all)	Survey Date (date)	Site Purchased (yr)	Original Construction (year)	Last Renovation (year)	Site Area (acres or ksf)	Bldg Area (sf)	Assign - able (%)	Assign - able (sf)	Capital Funding (source)	Fuel Source (type)	Historic (Y/N/M)	Life Adj (factor)	Stories (qty)	IBC Const (type)	Structure (type)	Structure (class)	Last Survey (score)	Current Survey (score)	Pri IBC Occ (type)	Sec IBC Occ (type)	Cost Model (type)	Cost (\$/sf)	CRV (\$)	Department	Comments
1	Redmond Municipal Campus	RMC	Unknown	9/30/2013	Unknown	Unknown	none	500,000	n/a	n/a	n/a	Unknown	n/a	n/a	100%	n/a	n/a	n/a	n/a	n/a	2	n/a	n/a	Large Site	\$ 5	\$ 2,500,000	Admin/Other	Site; includes PSB & RSC sub-site
1.1	Redmond City Hall	RCH	15670 NE 85th St Redmond, WA 98052	9/30/2013	n/a	2005	none	RMC	107,212	80%	85,770	DBOM	Gas	N	100%	4	TBD	Unknown	Medium	n/a	1.7	B	A-3	Admin Mid-rise	\$ 563	\$ 60,362,500	Admin/Other	Wright Runstad DBOM
1.2	Municipal Campus Parking Garage	CCPG	Unknown	9/30/2013	n/a	2005	none	RMC	90000	60%	54,000	DBOM	Elec	N	110%	3	TBD	Reinf Cncrt	Heavy	n/a	2.6	S-2	n/a	Pkng Garage	\$ 91	\$ 8,199,000	Admin/Other	On City Hall site; also WR DBOM
2	PSB & RSC Site	Site	Unknown	8/19/2013	Unknown	Unknown	none	315,000	n/a	n/a	n/a	Unknown	n/a	n/a	100%	n/a	n/a	n/a	n/a	n/a	2.5	n/a	n/a	Medium site	\$ 5	\$ 1,575,000	Police	Sub-part of City Muni Campus site?
2.1	Public Safety Building	PSB	8701 160th Ave NE	8/18/2013	n/a	1990	none	PSB & RSC	94,975	85%	80,729	City	Gas	N	95%	1+2+Mezz	TBD	Reinf Cncrt	Heavy	n/a	2.7	B	I-3	Pol Sta w/ Pkg Grg	\$ 550	\$ 52,241,949	Police	Poor condition for age; several serious issues
2.1.1	North Police Garage	NPG	Unknown	8/18/2013	n/a	Newer	none	PSB & RSC	1,250	95%	1,188	Unknown	Gas	N	100%	1	TBD	TBD	Medium	n/a	2.0	S-1	n/a	Maintenance	\$ 301	\$ 376,188	Police	
2.1.3	South Police Garage	SPG	Unknown	8/18/2013	n/a	Newer	none	PSB & RSC	1,000	95%	950	Unknown	Gas	N	100%	1	TBD	TBD	Medium	n/a	2.0	S-1	n/a	Maintenance	\$ 301	\$ 300,950	Police	
2.2	Redmond Senior Center	SC	8703 160th Ave NE	8/20/2013	n/a	1990	none	PSB & RSC	22,000	80%	17,600	Unknown	Gas	N	110%	1	TBD	Wd Frm	Medium	n/a	3.0	A-3	B	Civic Center	\$ 300	\$ 6,600,000	Parks	Good condition for age
3	Sammamish River Business Park Site	SRBP	15503 NE 90th St	8/21/2013	Unknown	1980	none	75,000	n/a	n/a	n/a	Unknown	n/a	n/a	100%	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	Small Site	\$ 5	\$ 375,000	Admin/Other	
3.1	Sammamish River Business Park Bldg 1	SRBP1	15503 NE 90th St	8/21/2013	n/a	1980	none	SRBP	17,450	95%	16,578	Unknown	Gas	N	100%	1	TBD	Reinf CMU	Medium	n/a	3.5	S-2	B	Maintenance	\$ 301	\$ 5,251,578	Admin/Other	Purchased; no Dwgs.
3.2	Sammamish River Business Park Bldg 2	SRBP2	15523 NE 90th St	8/21/2013	n/a	1980	none	SRBP	17,450	95%	16,578	Unknown	Gas	N	100%	1	TBD	Reinf CMU	Medium	n/a	3.5	S-2	B	Maintenance	\$ 301	\$ 5,251,578	Admin/Other	Purchased; no Dwgs.
4	Old Redmond School House Community Center	CC	16600 NE 80th St	8/22/2013	Leased	1922	1980	124,000	46,000	75%	34,500	Unknown	Gas	Y	100%	2 + PB	TBD	Brick	Medium	n/a	3.0	A-3	A-4	Community Center	\$ 421	\$ 19,361,400	Parks	Was "Old School/Comm Cntr"
5	Old Fire House Teen Center	TC	16510 NE 79th St	8/22/2013	Unknown	1952	2000	40,000	8,000	85%	6,800	Unknown	Gas	M	100%	1 + HT	TBD	Masonry	Heavy	n/a	3.4	A-3	B	Community Center	\$ 421	\$ 3,367,200	Parks	Was "Old Fire Sta/Teen Cntr"
6	Redmond Pool	Pool	17535 NE 104th St	8/29/2013	Unknown	1970	2010	160,000	12,554	90%	11,299	Unknown	Gas	N	100%	1 + PB	TBD	Reinf Cncrt	Heavy	n/a	3.0	A-3	n/a	Pool Bldg (new)	\$ 478	\$ 6,004,955	Parks	Structural integrity concern at east wall
7	Public Works Maintenance & Operations Center	MOC	Unknown	8/26/2013	Unknown	Unknown	none	331,056	n/a	n/a	n/a	Unknown	n/a	n/a	80%	n/a	n/a	n/a	n/a	n/a	3.5	n/a	n/a	Large Site	\$ 5	\$ 1,655,280	Public Works	Site
7.1	MOC Main Building (Bldg 1)	Bldg 1	18080 NE 76th St	8/26/2013	n/a	1977	1998	MOC	11,700	85%	9,945	Unknown	Gas	N	100%	1 + Mezz	TBD	Wd Frm	Medium	n/a	3.2	S-1	B	Maintenance Shop	\$ 323	\$ 3,783,078	Public Works	Originally all shops; now mix of shop & office; 1 ksf wash rack
7.3	Street Department Modular (Bldg 3)	SDM	18080 NE 76th St	8/26/2013	n/a	1998	none	MOC	1,850	90%	1,665	Unknown	Elec	N	100%	1	TBD	Wd Frm	Light	n/a	3.1	B	n/a	Office	\$ 443	\$ 819,106	Public Works	Two-module (double-wide) on crawlspace foundation
7.5	Central Stores Warehouse (Bldg 5)	CSW	18080 NE 76th St	8/26/2013	n/a	1988	none	MOC	4,500	95%	4,275	Unknown	Elec	N	100%	2	TBD	Metal	Light	n/a	3.2	S-2	B	Warehouse-Mezz	\$ 255	\$ 1,146,510	Public Works	Semi and non-heated space
7.8	Park Operations Center (Bldg 8)	POC	18120 NE 76th St	8/27/2013	n/a	1970	1998	MOC	8,202	85%	6,972	Unknown	Gas	N	100%	1.5	TBD	Wd & Mtl Fm	Light	n/a	3.0	B	S-2	Maintenance	\$ 301	\$ 2,468,392	Public Works	City purchased from Hos Brothers Hauling
7.11A	Decant Office (Bldg 11A)	Decant	18100 NE 76th St	8/27/2013	n/a	1998	none	MOC	500	50%	250	Unknown	Elec	N	90%	1	TBD	Wd Frm	Light	n/a	3.1	B	n/a	Office	\$ 443	\$ 221,380	Public Works	Office, laundry, and mechanical/electrical room
7.11B	Decant Structure (Bldg 11B)	Decant	18100 NE 76th St	8/27/2013	n/a	1998	2013	MOC	3,000	80%	2,400	Unknown	Elec	N	70%	1+	TBD	Wd Frm	Medium	n/a	3.1	U	n/a	Warehouse (weak fit)	\$ 255	\$ 764,340	Public Works	Material bins, settling, & OWS; expansion underway
8	Trinity Building	Trinity	18104 NE 76th St	8/28/2013	Unknown	1981	1996	45,000	18,200	90%	16,380	Unknown	Gas	N	100%	1.5	TBD	Tilt-up Conc	Medium	n/a	3.1	S-2	B	Maintenance Shop	\$ 323	\$ 5,884,788	Public Works	Purchased, no Dwgs. Has own parking.
11	Fire Station 11 Site	FS-11 Site	8450 161st Ave NE	9/3/2013	Unknown	1981	n/a	63,738	n/a	n/a	n/a	Unknown	n/a	n/a	85%	n/a	n/a	n/a	n/a	n/a	3	n/a	n/a	Small Site	\$ 5	\$ 318,690	Fire	Site
11.1	Fire Station 11	FS-11	8450 161st Ave NE	9/3/2013	n/a	1981	2000	FS-11 Site	23,800	80%	19,040	Unknown	Gas	N	85%	1.5	TBD	Wd Frm & Brick	Medium	n/a	3.1	B	S-1	Firesta; Mezz & HT	\$ 454	\$ 10,798,060	Fire	
11.2	Old Medic One Bldg	OMOB	8440 161st Ave NE	9/3/2013	n/a	1985	2001	FS-11 Site	1,916	90%	1,724	Unknown	Elec	N	90%	1	TBD	Wd Frm	Light	n/a	3.1	S-2	B	Maintenance	\$ 301	\$ 576,620	Fire	Was "Old Medic One Bldg"
12	Fire Station 12	FS-12	4211 148th Ave NE	9/4/2013	Unknown	1980	1999	24,000	7,050	80%	5,640	Unknown	Gas	N	85%	1 + Mezz	TBD	CMU & Wood	Medium	n/a	2.9	B	R2/S2	Firesta; no Mezz, HT	\$ 454	\$ 3,198,585	Fire	City has as-builts
13	Fire Station 13	FS-13	8701 208th Ave NE	9/4/2013	Unknown	1972	2009	89,000	6,500	80%	5,200	Unknown	Gas	N	85%	1 + Mezz	TBD	CMU & Wood	Medium	n/a	3.1	B	R2/S2	Firesta; Mezz, no HT	\$ 454	\$ 2,949,050	Fire	Received from KC with no Dwgs
14	Fire Station 14	FS-14	5021 264th Ave NE	9/4/2013	Unknown	1992	2009	129,000	9,500	80%	7,600	Unknown	Gas	N	85%	1 + Mezz	TBD	Wood Frmd	Medium	n/a	2.4	B	R2/S2	Firesta; Mezz, no HT	\$ 454	\$ 4,310,150	Fire	Re-skinned in 2009
16	Fire Station 16 Site	FS-16 Site	6502 185th Ave NE	9/4/2013	Unknown	1996	none	70,000	n/a	n/a	n/a	Unknown	none	n/a	85%	n/a	n/a	n/a	Medium	n/a	2	n/a	n/a	Small Site	\$ 5	\$ 350,000	Fire	Dwgs are on-site for site and both Bldgs
16.1	Fire Station 16	FS-16	6502 185th Ave NE	9/5/2013	n/a	1996	2006	FS-16 Site	9,852	80%	7,882	Unknown	Gas	N	85%	1 + Mezz	TBD	Wood Frmd	Medium	n/a	2.5	B	R2/S2	Firesta; Mezz & HT	\$ 454	\$ 4,469,852	Fire	Re-skinned in 2006
16.2	Maintenance Shop	Shop	6502 185th Ave NE	9/5/2013	n/a	1996	2006	FS-16 Site	5,625	85%	4,781	Unknown	Gas	N	90%	1 + Mezz	TBD	Wood Frmd	Medium	n/a	2.4	F-1	B	Maintenance Shop	\$ 323	\$ 1,818,788	Fire	Re-skinned in 2006
17	Fire Station 17	FS-17	16917 NE 116th St	9/5/2013	Unknown	2012	none	75,000	19,397	80%	15,518	Unknown	Gas	N	85%	2	TBD	CMU & Wood	Medium	n/a	1.2	B	R2/S2	Firesta; 2-stry; HT	\$ 454	\$ 8,800,419	Fire	City has as-builts.
18	Fire Station 18	FS-18	22710 Aldercrest Dr	9/5/2013	Unknown	2005	none	67,000	7,714	80%	6,171	Unknown	Gas	N	85%	1 + Mezz	TBD	Wd Frm	Medium	n/a	1.9	B	R2/S2	Fire Sta; Mezz & HT	\$ 454	\$ 3,499,842	Fire	Received from KC. Dwgs received.

5.2 FCA Project Team

MENG Analysis was contracted to lead the FCA using both in-house as well as sub-consultants for the field assessments. Mike Paul served as the City's Project Manager with the assistance of Tess Wilkinson and field surveys were supported by Tim Fountain and Dale Helgeson for the Fire Department sites. Joel Davis of MENG Analysis served as the FCA Project Manager with Doug Smith of MENG Analysis serving as the Team Leader for the field assessments. John Boatman provided cost estimating support. Eric Meng provided database design and analysis.

5.2.b. Personnel, Disciplines

The project team with contact information follows:

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FCA PRIME-Consultant

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5.3. FCA Terminology

Facility Condition Assessment (FCA): A structured process to document the conditions of site infrastructure and building systems. FCAs are typically performed by a multi-disciplinary team of architects, engineers, construction, and cost specialists. Facility information and condition data should be maintained in a database for ease of updating and reporting. The data should be renewed over time.

Facility Condition Index (FCI): A benchmark used to compare relative condition of facilities within a portfolio of assets; derived by the following formula:

$$\text{FCI} = \frac{\text{Backlog of Maintenance and Repair (BMAR)}}{\text{Current Replacement Value (CRV)}}$$

There are a number of different methods used by various organizations to calculate that backlog. For this reason, using FCI's to compare a city's facilities to other organizations is not always appropriate.

This study uses a parametric method that calculates BMAR based on the assessed condition scores. The statistical basis is a study conducted by NASA on over 10,000 surveyed facilities that evaluated the backlog of repair items relative to qualitative condition scores 1 through 5. The parametric backlog for each system is calculated based on a statistical theoretical percentage of that system that would need repair or replacement for each of the qualitative condition scores. The costs of those systems are the facility use cost models customized for Redmond.

Life Cycle Renewal Model: A theoretical forecast of when building systems will exceed their typical lifespan and funding will be required for renewals.

Parametric Costs: Parametric cost estimating is a technique that uses statistical relationships between historical cost data and other program variables such as system condition or age. Historical cost data is typically used at a high level (e.g., cost per square foot) and often represent conceptual, order-of-magnitude costs for initial planning or discussion purposes.

Remaining Useful Life: An estimate of the years that a facility system may remain serviceable or in operation before failure; which would then require system renewal or replacement.

Subsystem: The term "subsystem" in this report refers to a UniFormat Level 3 building systems category (e.g., B3010 - Roof Coverings; or B3020 – Roof Opening; or B3030 – Projections).

System: The term "system" in this report refers to a UniFormat Level 2 building system category (e.g., B3000 – Roofing)

The following terms are used in the MENG Analysis FCA Database:
(See also the database user's manual for more specific definitions.)

Last Major System Renewal: The year in which a system was last renewed (substantially repaired or replaced).

Original System Date: The year a system was originally constructed/installed.

Subsystem Assessed Condition Score: The field surveyors' assessment of condition assigned to each facility subsystem. The rating uses a scale of 1 through 5, where 1=excellent, 2=good, 3=fair, 4=poor, 5=unacceptable. Different subsystem % of CRV's are included in the database for each of the different facility use types (e.g. Maintenance shops vs. police station Vs fire station, etc.)

BMAR (backlog of maintenance and repair): This is an estimated amount that would need to be spent to bring the facility up to good condition.

Subsystem Normal Life: Industry standard subsystem life between renewals or replacement cycles.

System Coverage: The amount of area in a facility containing a specific system, expressed as percent of building or site size.

Certain FCA terms are also expressed as formulas in the MENG Analysis FCA Database, as follows:

Adjusted Current Replacement Value (CRV) (\$/SF) = Base CRV * Geographic Adjustment Factor * Construction Type Adjustment Factor * Gross Square Footage Adjustment Factor

Base CRV: is the current replacement cost of the facility, including construction and project cost markups. It is contained in the CRV models for each facility use type. That base CRV is factored by geographic, size, and type of construction specific to each facility to attain the facility specific CRV.

Current Replacement Value (CRV) = Adjusted CRV * Gross Square Footage

Facility Condition Index (FCI) =

$$\text{FCI} = \frac{\text{Backlog of Maintenance and Repair (BMAR)}}{\text{Current Replacement Value (CRV)}}$$

Renewal Budget (for Infrastructure) = [Site Area]*[System Coverage]*[Infrastructure Unit Cost]*[Subsystem Renewal Factor]

Renewal Budget (for Building) = ([Facility Size Gross]*[System Coverage]*[Subsystem Unit Cost]*[Subsystem Renewal Factor])

Subsystem Age = Age of system in years since last major system renewal = Year of Survey – Year of Last Major System Renewal

5.4 FCA O&M Workshop Wall Sheets

Op: Future MOC Main Bldgs.

Was officer & Manuf; City
bought 2009 → Storage USE

Site:

Trinity

Site Size (acres):

23 Acres 0.85 Ac

Facility:

Trinity

Bldg Size (sf):

18,200

Workshop Date:

8/13/13

Original Construction (yr):

1981

Major Renovation (yr):

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).	1981		SOG
Basements A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.	—		None 1996?
Super-structure B10	B1010 - Floor construction. B1020 - Roof construction.	1981	1996	Roof replaced after snow collapse - Glulam beams; flat
Exterior Closure B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.	1981		- Concrete tilt-up - Partial insulation (check)
Roofing B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.	1981	1996	- Membrane; recoated in 2013 • leaks near sewers
Interior Construction C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).	1981		Office 2nd Floor
Staircases C20	C2010 - Stair construction. C2020 - Stair finishes.	1981		Two (?) sets → OK
Interior Finishes C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.	1981		Carpet old
Vertical Transport D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.	1981		Op: Add Elev to 2nd Flr
Plumbing D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).	1981		2 TR'S; 2 TR'S down; Kitchen
HVAC D30	D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.	1981	1996	- RTU's @ Offices → work - Gas-fired UHS for shop
Fire Protection D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.	1981		- No fire sprinkler - Hse Ext.
Electrical D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.	1981		- Partial Pro-watch - No Stby Power
Equipment E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.	—		- Air compressor?
Furnishings E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).	1981		- Minimal Furnishes - Cabinets/Counter Original (dated)
Special Construction F10	F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.	—		None
Site Improvements G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.	1981		- Paving aging
Site Wet Utilities G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.	↓		- Storm water drainage issue - Lift station @ SE corner
Site Dry Utilities G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.	↓		
Other Site Construction G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).	↓		

Trinity
Bldg 8 - Parks
Bldg 9 - Parks Storage
Bldg 10 - Fuel Island

Bldg 11 - Decant
O and M Workshop Poster
Bldg 1 - (Main Bldg)
Bldg 2 - Storage
Bldg 3 - Street Modular

Bldg 7 (Gone) Covered Storage
Facility Condition Assessment
Bldg 4 - Storage
Bldg 5 - Warehouse
Bldg 6 - Covered Storage

Site:

MOC

Site Size (acres):

7.6 acres (includes Parks & others)

Facility:

Bldg 1 one-story

Bldg Size (sf):

11,700 (excluding 1 ksf wash rack)

Workshop Date:

8/13/13

Original Construction (yr):

1977

Major Renovation (yr):

1998 Roof-over

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations	A10 A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).	1977		- Footer & stem w/ SOG - - Patchwork in shop
Basements	A20 A2020 - Structural walls, water proofing, drainage, exterior surfaces.	—		None
Super-structure	B10 B1010 - Floor construction. B1020 - Roof construction.	1977	1998	- Mezzanine, small, wood - Wood deck marginal - Roof-over, wood, over Admin
Exterior Closure	B20 B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.	1977		- East wall water leakage - Single pane windows - Roll-up doors original
Roofing	B30 B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.	1977	1998	- Torch down roof
Interior Construction	C10 C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).	1977		- Walls & doors have moved (TI's) - 1998 ladies lounge & women's TR
Staircases	C20 C2010 - Stair construction. C2020 - Stair finishes.	1977		- Wood to mezz - Handrails - Concrete steps to admin in & out
Interior Finishes	C30 C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.	1977	2012/3	Carpet replacement (offices)
Vertical Transport	D10 D1010 - Elevators & lifts. D1090 - Other conveying systems.	—		None Op: overhead lift in shop (E1020)
Plumbing	D20 D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).	1977		Op: Need more - DHW new ? (1915?) - Aging - sinks too small - Propane for vehicle fueling & equipment/tools
HVAC	D30 D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.	1977	2013	2 of 3 RTU replacements
Fire Protection	D40 D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.	1977		Op: Add sprinkler (now currently) - ATS old - Wiring not documented/code issues
Electrical	D50 D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.	250KV New Generator 1977	1998 2012	- Pro-watch security system - Max'd-out - Issues from TI's Op: Add capacity
Equipment	E10 E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.	1977	2005 2011	New vehicle lift; only 1 original - Shop equip New appliances in kitchen (ref)
Furnishings	E20 E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).	1977		Mix of older & newer 1) Middle 2) West side
Special Construction	F10 F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.	1977		None Wash rack, pressure wash, water recycle
Site Improvements	G20 G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.	1977	1998	- Cracking entry Gravel => 1998 Paved - Access control area issues (failing)
Site Wet Utilities	G30 G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			- Storm water vaults & two pump stations - NG old => alarms to occur 1x/2x/yr - NG OK Op: future NG vehicle fleet
Site Dry Utilities	G40 G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			None No issues
Other Site Construction	G90 G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).		08 09	- Lack of waste oil storage (temporary secondary containment) - Hagmat shed => need opportunity

- Abandoned UST (waste oil)
- Not ADA compliant

- Opportunity for full kitchen with oven/stove, etc.

Site: MOC Site Size (acres): 7.6 acre (MOC)
 Facility: Bldg 3 - Street Dept Bldg Size (sf): 1000 sf
 Workshop Date: 8/13/13 Bldg Original Construction (yr): 1998 Major Renovation (yr): none

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations	A10 A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).	1998		On blocks? Floor "wavy"
Basements	A20 A2020 - Structural walls, water proofing, drainage, exterior surfaces.	1998		Crawl space formed by skit
Super-structure	B10 B1010 - Floor construction. B1020 - Roof construction.	1998		Floor "wavy"; soft spots in floor Roof OK - Deck w/wood roof
Exterior Closure	B20 B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.	1998		- Metal panel - Cat door - Some hardware corrosion
Roofing	B30 B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.	1998		- Flat roof OK
Interior Construction	C10 C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).	1998	2011	Remodel
Staircases	C20 C2010 - Stair construction. C2020 - Stair finishes.	1998		None outside OK
Interior Finishes	C30 C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.	1998	2011	Remodel
Vertical Transport	D10 D1010 - Elevators & lifts. D1090 - Other conveying systems.	—		None
Plumbing	D20 D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).	1998		Men's & Women's; Kitchette all OK Gutter & DS
HVAC	D30 D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.	1998	2012?	One (1) RTU; teen recently repaired
Fire Protection	D40 D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.	1998		No sprinkler; has Fire Ext.
Electrical	D50 D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.	1998		- Op: Add to stby generator - Missing fire alarm
Equipment	E10 E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.	1998		- Office equipment only
Furnishings	E20 E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).	1998	2011	Kitchen cabinets => worn Furniture updated (partial)
Special Construction	F10 F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.	—		None
Site Improvements	G20 G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.	1977		MOC Bldg 1
Site Wet Utilities	G30 G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.	↓		↓
Site Dry Utilities	G40 G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.	↓		↓
Other Site Construction	G90 G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).	↓		↓

Site:

MOC

Facility:

Bldg 5 - Warehouse

Site Size (acres):

7.6 Acres (MOC)

Bldg Size (sf):

4,500 sf incl 2nd Floor (75% footprint)

Workshop Date:

8/13/13

Original Construction (yr):

1988

Major Renovation (yr):

Added offices 1988

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).	1988		Footings, SOG no issues
Basements A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.	—		None
Super-structure B10	B1010 - Floor construction. B1020 - Roof construction.	1988		2nd Floor ~~OK~~ Weak (spongy)
Exterior Closure B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.	1988		- Metal siding - Not insulated
Roofing B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.	1988		Roof OK Gutter issues - metal fascia blocks access
Interior Construction C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).	1988		
Staircases C20	C2010 - Stair construction. C2020 - Stair finishes.	1988		Two (2) staircases - wood Location? - Hand rail issues, - Not wide enough
Interior Finishes C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.	1988		Minimal (Plywood); Plastic doors strip
Vertical Transport D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.	—		None (hatch/opening)
Plumbing D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).	1988		One (1) toilet room
HVAC D30	D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.	1988		Elec resistance heat (not gas)
Fire Protection D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.	1988		No sprinkler; have extinguishers
Electrical D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.	1988		OK Pro-watch security Server Room/no AC? (check)
Equipment E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.	—		None?
Furnishings E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).	1988		Shelving; old
Special Construction F10	F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.	?		- Hazmat Storage?
Site Improvements G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.	1977		MOC Fenced area for parts storage 1988
Site Wet Utilities G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.	↓		↓
Site Dry Utilities G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.	↓		↓
Other Site Construction G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).	↓		↓

Site: MOC Site Size (acres): 8.76 Ac
 Facility: Decant Bldg Size (sf): 3000 sf decant; 500 sf office
 Workshop Date: 8/13/13 Original Construction (yr): 1998 Major Renovation (yr): 2013 expansion

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects) (under construction)
Foundations A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).	1998		Walls damaged by loader => repaired under 2013 work
Basements A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.	—		None
Super-structure B10	B1010 - Floor construction. B1020 - Roof construction.	1998		
Exterior Closure B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.	1998		Double glazed office windows
Roofing B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.	1998		
Interior Construction C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).	1998		Office
Staircases C20	C2010 - Stair construction. C2020 - Stair finishes.	—		None
Interior Finishes C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.	1998		Office
Vertical Transport D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.	—		None
Plumbing D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).	1998	2011	Washer & dryer added (pressure washer moved to Bldg 1) - Deicing tank outside office
HVAC D30	D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.	1998		Electric heat - office
Fire Protection D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.	—		None
Electrical D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.	1998		
Equipment E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.	—		
Furnishings E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).	?		Any?
Special Construction F10	F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.	—		Non
Site Improvements G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.	1997	1998	MPC
Site Wet Utilities G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.	↓	↓	↓
Site Dry Utilities G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.	↓	↓	↓
Other Site Construction G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).	↓	↓	↓

Under sized => damage to walls (too much material)
 Under sized for water as well (decant process)

One of the City's Best Bldgs

Bought in 1995/6 from Hos Brothers (Hauling)

Site:

MOC

Site Size (acres):

MOC Campus

Facility:

Park Ops Cntr

Bldg Size (sf):

8,202 sf

Workshop Date:

8/14/13

Original Construction (yr): 1970's

Major Renovation (yr):

1998

Added
• Multiple
• Locker room

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			SOG OK
Basements A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.			None
Super-structure B10	B1010 - Floor construction. B1020 - Roof construction.			2nd Floor Loft area - 1999
Exterior Closure B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.	1998		Double glazed windows Metal siding
Roofing B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.	1998		Standing seam metal roof
Interior Construction C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).	1998		Renovation (TI)
Staircases C20	C2010 - Stair construction. C2020 - Stair finishes.			- Stair to 2nd floor OK - Small stair to Loft OK
Interior Finishes C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.			- GWB in office - Shop GWS - CARPET - OSB in general - Ceiling & Floor OK
Vertical Transport D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.	1998		One (1) two-stop => works great!
Plumbing D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).	1998		~~Good~~ Copper pipe pin-hole leaks (2X's)
HVAC D30	D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.	1998		VUT => Comfort issues
Fire Protection D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.	1998		Fire sprinklers => OK
Electrical D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.			Stby Generator Unusual light above Mostly OK Admin on 2nd floor => OK
Equipment E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.			Washer & Dryer OK Wood shops => OK (dust collection OK)
Furnishings E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).	1998		All OK
Special Construction F10	F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			Drying Room
Site Improvements G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			Equipment Wash Rack missing OWS (OP)
Site Wet Utilities G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			
Site Dry Utilities G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).	2005		Added covered storage

2-story + Mezz
x U/G Parking

+ "Baymond" Additions

Evidence 2008
Vehicle Processing 2008

Site: Muni Campus

Site Size (acres):

Facility: Public Safety

Bldg Size (sf):

94,975

(incl U/G Pkgs)

Workshop Date: 8/14/13

Original Construction (yr):

1990

Major Renovation (yr):

(Additions)

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			CIP
Basements A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.			Parking Garage & Gun Range CIP SOG floor
Super-structure B10	B1010 - Floor construction. B1020 - Roof construction.			Concrete on metal pan deck Floor OK Roof Structure (at windows)
Exterior Closure B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.			Water damage; mold found at 1st flr East end suspect other areas South side Main floor & 2nd water infiltration Gutter allow leakage into walls for many years Flat roof recoated Metal Stud lining GLWB on metal stud
Roofing B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.		2013	Three (3) sets concrete → OK
Interior Construction C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			Re-carpet Ceiling Tile ⇒ water damage @ SE corner Re-paint-on-going
Staircases C20	C2010 - Stair construction. C2020 - Stair finishes.			Two (2) elevators; secure elevator at Middle slow
Interior Finishes C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.		2012	Sum Pumps (2 outside, 2 inside) can't keep up Bathrooms; showers had Bad smell Parking garage pipes & drains in winter Insulated in 2004
Vertical Transport D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.			Major issue: Too Hot / Too Cold / Poor Ventilation Fresh air via plenums; 38 HP's (WSHP) Blis replaced Wet pipe fire sprinkler Pre-actn Op: Drop pipe for both data centers
Plumbing D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).			Generators: Two (2): 250 KW original 1990 2012 New 400 KW additional Key card (Pro watch) outdated - CCTV outdated
HVAC D30	D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.		2010 new Blis	Kitchenettes (limited) ⇒ Op: Stove (4-24/7) Dog Kennel in Garage
Fire Protection D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.			Old lockers → need replacement - New Training Room Some new counter in public TR Fixed Finishes
Electrical D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.			Detention fixtures ⇒ aging Interview Rooms out-of-date (does not support video)
Equipment E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.			Concrete at Jail Jail @ U/G Play Concrete cracked @ Jail drive Storm issues in below grade garage
Furnishings E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).			
Special Construction F10	F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			
Site Improvements G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			
Site Wet Utilities G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			
Site Dry Utilities G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			Stby Gen & Cooling Tower Enclosure

Parking Garage lighting Up grade in 2010

Two - Police Computer Room
Entry -
O&M Workshop Level II - Program issues with Layout
Opportunity to do better

Big Issues: 1) Roof leaks/windows
2) HVAC
3) Plumbing Odors

1-Story + hose tower

15 to 20 Ksf?

Site: Old Firehouse
 Facility: Teen Center
 Workshop Date: 8/14/13

Site Size (acres):

Bldg Size (sf):

Original Construction (yr):

Major Renovation (yr):

~~771,978 SF~~
 8,650 SF
 1952

(Seismic
 media room
 handicap FR
 New Floor
 Paint outside)

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).	1952		- Partial Crawl Space - SOG under App Bays
Basements A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.			- None - Tunnel to Kitchen
Super-structure B10	B1010 - Floor construction. B1020 - Roof construction.		2000	Seismic Upgrade Roof OK
Exterior Closure B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.			Hose tower brk w/ stucco => Leaking Original windows (single glazed)
Roofing B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.		2004 2004	Touch down awning @ front
Interior Construction C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			- Door asins, sticking - walls lath & plaster - App Bay CMU Ladder at hose tower - original
Staircases C20	C2010 - Stair construction. C2020 - Stair finishes.			
Interior Finishes C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.		2000 Floor	Paint dated Tile Carpet VOT Rubber floor Ceiling => aged
Vertical Transport D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.	-		None
Plumbing D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).		2000	Kitchen, ADA - Clogging Toilets Older elsewhere
HVAC D30	D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.		2000	media Room (OK) EWH-Offices Gas-fired ceiling ~~Uncomfortable~~ Uncomfortable thru shaft
Fire Protection D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.		1980's?	Sprinkled => OK
Electrical D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.		2000	Upgrade => 200 AMP Panel Added App Bay Upgrade 2011 Offices now 2013
Equipment E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.		2000	Dishwasher, Ref, Stove, Micro
Furnishings E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).		2006 2011	New computer Lab New chairs
Special Construction F10	F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.		2000	Dark Room
Site Improvements G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			Failing: tree root damage New fence 2012 (patio area)
Site Wet Utilities G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.		2000	North area storm improved
Site Dry Utilities G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			Marginal site lighting
Other Site Construction G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			

40-yr Lease started 2000
2-story

Historic Bldg

Site: Old School House

Site Size (acres):

2.76 Acres (some lost to new adjacent school?)

Facility: Community Center

Bldg Size (sf):

41,700 sf ⇒ Dwg 45,400 sf

Workshop Date: 8/14/13

Original Construction (yr):

1922

Major Renovation (yr):

Gym 1950 Addition

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).	1922		Crawl Space
Basements A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.	~~1922~~	1950	Gym Basement for Storage
Super-structure B10	B1010 - Floor construction. B1020 - Roof construction.			Wood floor = OK Roof Structure Wood
Exterior Closure B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.			Attic unfinished, no floor
Roofing B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.			Brick veneer over concrete (heavy const?)
Interior Construction C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			Windows replaced & recorked; windows replaced previously by LUSD
Staircases C20	C2010 - Stair construction. C2020 - Stair finishes.			Roof repairs; no leaks
Interior Finishes C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.			TI work (walls move) ⇒ various doors OK
Vertical Transport D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.			Four (4) stairwells ⇒ ~~concrete~~ wood treks redone 2010; Concrete outside
Plumbing D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).			Most carpet replaced - Front steps need repair
Fire Protection D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.			Some other flooring done ⇒ Main floor area hallways ⇒ aged
Electrical D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.			One (1) Elev One (1) lift to stage } OK
Equipment E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.			Some very old fixtures ⇒ many issues
Furnishings E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).			- Leaks - Blackage - Discolored - Bad Taste
Site Improvements G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			RTU's (office) 2006 Chiller installed for Auditorium, some rooms (112 lower level)
Site Wet Utilities G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			Constant Problems
Site Dry Utilities G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			Sprinkled ⇒ ~~test~~ Added in 2000 Op: Public Address
Other Site Construction G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			Wood System Op: Add Security

Too hot/Too Cold
HVAC
Boilers & Unit Ventilators
(older)

Children's
Fixtures (low)

2004
2010

2005

2004

2004

New Elec Service (behind old Elec Rm) circuit overloads
New lighting in hallways - Breakers Trip - Security issues after loss of power
Commercial Kitchen Hood - 2005 \$0.5M

Sinks in cabinets ⇒ older - Lobby
Closers ⇒ older Redone 2012

Clay Studio/Kilns

Renewed parking & landscape (good)
Re-Striped in 2012

No flooding
Landscape OK

Lighting redone outside 2004

Boiler Room separate
Entry area has flooding issue

Op: Add Parking (currently 80 spaces)

Biggest Issues: 1) HVAC
2) Plumbing

Site: Senior Center Site Size (acres): Muni Campus
 Facility: Senior Center Bldg Size (sf): 22,000 sf
 Workshop Date: 8/14/13 Original Construction (yr): 1990 Major Renovation (yr): n/a

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations	A10 A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			SOG OK
Basements	A20 A2020 - Structural walls, water proofing, drainage, exterior surfaces.			None
Super-structure	B10 B1010 - Floor construction. B1020 - Roof construction.			Mech mezz above stage dressing Rm = OK
Exterior Closure	B20 B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.			wood framed
Roofing	B30 B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.			2009 New doors installed in social hall Ceramic tile & Stucco => leaks; repairs on-going
Interior Construction	C10 C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			2004 Re-roof Torch-down; metal Roof original OK Wood framed; soft spot in Billiard Rm (K. Staff Offices)
Staircases	C20 C2010 - Stair construction. C2020 - Stair finishes.			Ladder (portable) to mezz Loading dock & stairs to north - Aluminum stairs to Rm
Interior Finishes	C30 C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.			2005 Re-carpet + Re-paint on-going
Vertical Transport	D10 D1010 - Elevators & lifts. D1090 - Other conveying systems.			None
Plumbing	D20 D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).			2009 Fixtures original; all OK New DHW Htr Elec 2009
HVAC	D30 D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.			2009 New Boiler (NG) Comfort OK Bathroom odor issues
Fire Protection	D40 D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.			2002 Fire Sprinkler Kitchen Hood Fire suppression Added
Electrical	D50 D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.			2007 No generator Lighting Upgrade (some on-going)
Equipment	E10 E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.			Washer & dryer Full Kitchen => Steamer failing (replacement planned)
Furnishings	E20 E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).			2011 Some Fixed dated (mauve) New chairs 2011 New countertops (granite) (in Toilet Rooms)
Special Construction	F10 F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			
Site Improvements	G20 G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			
Site Wet Utilities	G30 G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			
Site Dry Utilities	G40 G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction	G90 G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			Greenhouse attached - water leakage; glass panels failed (used occasionally; mostly storage)

DDC - Robert Shaw

Two Tennate
- one in each Bld

1) Hardwoods Flooring Co.

2) Computer Repair Comp (Bldg 2)

City uses this area:

1) Facilitie Maint using 2 KSF
Bldg 1 O and M Workshop Poster

Bldg 1

2) PW Signals using 6 KSF
Facility Condition Assessment

3) Nat Resource Lab 1 KSF (Bldg 3)

City Purchased approx 2000

Site:

SRBP

Site Size (acres):

1-2 Acres

- One Story

Facility:

Bldgs 1 & 2

Bldg Size (sf):

17,450 sf each

Workshop Date:

8/14/13

Original Construction (yr):

1980

Major Renovation (yr):

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations	A10 A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			SOG
Basements	A20 A2020 - Structural walls, water proofing, drainage, exterior surfaces.	/		None
Super-structure	B10 B1010 - Floor construction. B1020 - Roof construction.			Mezzanine for storage (not permitted) < 1KSF Roof wood truss; added fire barrier in 2006
Exterior Closure	B20 B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.			CMU Block? - Windows single pane => old but OK No issues - Doors; some sticking - Store front OK
Roofing	B30 B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.			Torch-down flat; no leaks
Interior Construction	C10 C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			Interior doors => sticking Wood stud w/ GWB
Staircases	C20 C2010 - Stair construction. C2020 - Stair finishes.			Bldg 1 wood stair to mezz
Interior Finishes	C30 C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.			Carpet in office; poor in signals
Vertical Transport	D10 D1010 - Elevators & lifts. D1090 - Other conveying systems.	/		None
Plumbing	D20 D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).			Men's & women's original => dated; works
HVAC	D30 D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.			Baseband Electric Gas unit heaters RTD for Bldg 1 Signals
Fire Protection	D40 D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.			Not sprinkled
Electrical	D50 D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.			No generator No security No FA? old FACP w/ heat detectors
Equipment	E10 E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.			None
Furnishings	E20 E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).		2011	Minimal, dated New furniture
Special Construction	F10 F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			None
Site Improvements	G20 G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			No issues
Site Wet Utilities	G30 G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			
Site Dry Utilities	G40 G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction	G90 G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			

- Parking sub-leased to Micro-soft; not enough parking for city staff

Dwgs Exist

KC Pool transferred to City in 2010

Tim reports 19,700 sf

Site:

Hartman Park

Site Size (acres):

Facility:

Pool

Bldg Size (sf):

13,000 (small?)

Workshop Date:

8/14/13

Original Construction (yr):

1970

Major Renovation (yr):

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations	A10 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			SOG
Basements	A20 - Structural walls, water proofing, drainage, exterior surfaces.			Boiler Room
Super-structure	B10 - Floor construction. X B1020 - Roof construction.			Glulam Beams - discolored
Exterior Closure	B20 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.			- Condensation in pool area - Stonefront - Windows leak (air & heat) - Doors sticking
Roofing	B30 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.	1970		Leaks above locker & office areas Torch-down
Interior Construction	C10 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			CMU - OK Some doors sticking; wood
Staircases	C20 - Stair construction. C2020 - Stair finishes.			Metal stairs to basement - OK
Interior Finishes	C30 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.			- Locker room floor stick or too dirty - ACT sassing / rusty frame over pool
Vertical Transport	D10 - Elevators & lifts. D1090 - Other conveying systems.			~~None~~ - Pool lifts (1) (need 2nd in AM)
Plumbing	D20 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).			- DHW heat too long (no recirc) <u>OP</u> - Deck drain not draining (line collapsed)
HVAC	D30 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.	1970	1995 2010	HVAC Renewal (See Dwg) - Too cool in locker room in winter - Boiler turn-up - New E.F.'s
Fire Protection	D40 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.			- No Sprinkler - Fire Ext ✓
Electrical	D50 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.		2010	- Fire Alarm (new FACP in 2013) - Some circuits tripping in office - Old Comm
Equipment	E10 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.		2010	- Pool filters replaced - Diving board corrosion - Pool boiler aging - Old pool piping & pumps
Furnishings	E20 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).		2010	- New benches in locker rooms - locker OK Old bleachers to be replaced 2013/4
Special Construction	F10 - Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			None
Site Improvements	G20 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			Two (2) parking lots define site - one poor - other good (back)
Site Wet Utilities	G30 - Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.		2010	East side new side sewer
Site Dry Utilities	G40 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			- old light fixtures in parking lot - Comm is old
Other Site Construction	G90 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			- Storage shed OK - Patio old, dated, cracking

OMOB From Evergreen Hospital } 2001

Site:

FS 11

Site Size (acres):

?

Facility:

FS 11 & OMOB

Bldg Size (sf):

FS 11 23,800 (verify)

OMOB

1500 SF (verify)

Workshop Date:

8/28/13

(2 Bldgs)

Original Construction (yr):

FS 11 (1981)

Major Renovation (yr):

FS 11 2000

prior to

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENOVATION	Workshop Comments (system types, significant issues, and major projects)
Foundations	A10 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).	1981		*SOG cracks
Basements	A20 - Structural walls, water proofing, drainage, exterior surfaces.	1981		None Nose tower sump
Super-structure	B10 - Floor construction. B1020 - Roof construction.			Mezz OK; west-end plywood soft Flat roof
Exterior Closure	B20 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.			Brick OK
Roofing	B30 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.			Roof leaks (sealing recently partly done)
Interior Construction	C10 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			Some doors sticking / don't latch
Staircases	C20 - Stair construction. C2020 - Stair finishes.			Metal stairs to Mezz OK
Interior Finishes	C30 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.			SOG cracking (see above) Carpet in Qtrs poor; Admin OK
Vertical Transport	D10 - Elevators & lifts. D1090 - Other conveying systems.	1981		Man lift to 8th Mezz; problems
Plumbing	D20 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).	1981		OWS Ap Bay drains; drains constant problem (blocking up) Fixtures worn/old
HVAC	D30 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.	1981	2000	Worst control system (per contractor!) (Simplex) Discomfort throughout (both heating/cooling)
Fire Protection	D40 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.	1981		Wet; OK
Electrical	D50 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.	1981		- Ap Bay chargers trip breaker - - kitchen trip breakers - Generator OK
Equipment	E10 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.	1981		Dryers - vent run too long SCUBA fill - older Extractor: older
Furnishings	E20 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).	1981		Casework Poor Kitchen Vehicle Por
Special Construction	F10 - Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.	1981		Nose Tower
Site Improvements	G20 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			Foyer bricks loose, missing Aprons cracking
Site Wet Utilities	G30 - Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			Storm issues courtyard & foyer
Site Dry Utilities	G40 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction	G90 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			Training Props

OMOB: 1) One Bay

2) Office

3) Kitchen

4) Meeting Room

- ① Rat infestation (crawl space)
② Old; poor insulation
③ Diesel Generator => Propane
④ Roof / tree problem

Site:

FS 12

Site Size (acres):

Gated access
?

Facility:

FS 12

Bldg Size (sf):

7000 2 1/2 Bays

Workshop Date:

8/28/13

Original Construction (yr):

Before 1976

Major Renovation (yr):

Move & Expansion 1980

1999?

LEVEL II UNIFORMAT SYSTEM NAME & CODE		INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations	A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			SOG Cracks inside & outside
Basements	A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.			
Super-structure	B10	B1010 - Floor construction. B1020 - Roof construction.			Maze work
Exterior Closure	B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.			
Roofing	B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.			Flat roof → leaks; cleaning
Interior Construction	C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			
Staircases	C20	C2010 - Stair construction. C2020 - Stair finishes.			One stair
Interior Finishes	C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.			Carpet worn Water damage
Vertical Transport	D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.			None
Plumbing	D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).			OK
HVAC	D30	D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.			Major issues (too hot / too cold)
Fire Protection	D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.			check sprinkled
Electrical	D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.			Ap Bay overloaded from Pkg Chargers & emerg GENSET
Equipment	E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.			
Furnishings	E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).			Dated / Kitchen work
Special Construction	F10	F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			
Site Improvements	G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			Aprons cracking Turning radius issue; curb damage
Site Wet Utilities	G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			
Site Dry Utilities	G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction	G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			

Site: 2 Bay FS-13 Site Size (acres): ?
 Facility: FS-13 Bldg Size (sf): 6,500 sf
 Workshop Date: 8/28/13 Original Construction (yr): 1977 Major Renovation (yr): 2009

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			SOG cracking in bay Front Ramp damage
Basements A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.			
Super-structure B10	B1010 - Floor construction. B1020 - Roof construction.			*Roof bales spongy (some plywood replaced) - dangerous @ soft spots
Exterior Closure B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.		2009 OK	
Roofing B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.			
Interior Construction C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			
Staircases C20	C2010 - Stair construction. C2020 - Stair finishes.			Pull-down to meet marginal
Interior Finishes C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.	1972	2009	New carpet
Vertical Transport D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.			
Plumbing D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).			Issues - on septic *Odors in Ap Bay (sewer gas) OWS bad
HVAC D30	D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.	1972	?	OK Reason in Ap Bay (old and OK)
Fire Protection D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.			
Electrical D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.	1972		Ap Bay charger issue
Equipment E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.			
Furnishings E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).	1972	2009	New cabinets
Special Construction F10	F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			
Site Improvements G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			Front Apron (ramp) damage
Site Wet Utilities G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			*Site Septic system - RD connection? Wetland adjacent alarm when rain
Site Dry Utilities G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			

Formerly King County

Site:

FS14
FS14
8/28/13

Site Size (acres):

2.9 Acres

Facility:

Bldg Size (sf):

9,500 sf 2 1/2 Bays

Workshop Date:

Original Construction (yr):

1991

Major Renovation (yr): 2009

LEVEL II UNIFORMAT SYSTEM NAME & CODE		INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations	A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			
Basements	A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.			
Super-structure	B10	B1010 - Floor construction. B1020 - Roof construction.			
Exterior Closure	B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.		2009	Siding replaced Windows "
Roofing	B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.		2009	New roof
Interior Construction	C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			
Staircases	C20	C2010 - Stair construction. C2020 - Stair finishes.			
Interior Finishes	C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.			
Vertical Transport	D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.			
Plumbing	D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).	1991	2009	New DHW Htr ~~Hot Water in 2011~~
HVAC	D30	D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.	1991	2009	New HVAC Units; some issues => retrofit to Dorm Room Area
Fire Protection	D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.	1991		Dry & Wet (dry comp updated 2013) - pipe freeze damage in 2011 (fixed)
Electrical	D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.	1991		AP Bay charger issue Emerg Gen is Natural Gas inside station
Equipment	E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.	1991		Laundry OK
Furnishings	E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).			
Special Construction	F10	F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			
Site Improvements	G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			Ramps OK
Site Wet Utilities	G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			Septic; mound system Detention Pond => Storm Pond
Site Dry Utilities	G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction	G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			

Site:

FS16 Site

Site Size (acres):

?

Facility:

FS16 & Shop (Bldgs)

Bldg Size (sf):

Verify

2 1/2 Bay

Workshop Date:

8/28/13

Original Construction (yr):

1996

Major Renovation (yr):

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations	A10 A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			Ap Bas damage from Ladder Truck (heav 70,600 lbs)
Basements	A20 A2020 - Structural walls, water proofing, drainage, exterior surfaces.			None
Super-structure	B10 B1010 - Floor construction. B1020 - Roof construction.			Mezz for storage Hose wash tower
Exterior Closure	B20 B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.		2006	New siding installed backwards in 1996
Roofing	B30 B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.		2006	New roof; flat
Interior Construction	C10 C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			
Staircases	C20 C2010 - Stair construction. C2020 - Stair finishes.			metal
Interior Finishes	C30 C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.		2006	Carpet worn
Vertical Transport	D10 D1010 - Elevators & lifts. D1090 - Other conveying systems.			None
Plumbing	D20 D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).			Backups & Bunker Tankless DHW Htr => constant issues
HVAC	D30 D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.			Some furnace issues
Fire Protection	D40 D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.			Sprinkler OK
Electrical	D50 D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.			Diesel Gen => Oil leak?
Equipment	E10 E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.			Bunker Gen Sxtractor issue
Furnishings	E20 E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).			
Special Construction	F10 F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			
Site Improvements	G20 G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			Storm drain issue; water in kitchen area
Site Wet Utilities	G30 G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			
Site Dry Utilities	G40 G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction	G90 G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			

Shop: - 2 1/2 Bay S (90%)
 - Tools/Parts
 - Office
 - Toilet Run

- Can lift
 - Mobile lift
 - Issues:

1) Energy Gen (diesel)
 2) ~~SOG~~
 3) Pest Pit (Areflans)
 Pump

Page 1 of 1

- Training room upstairs
- Two story

Just part warranty
- Just

LEED Hqs ?

Site: ES-17

Site Size (acres): ?

Facility: ES-17

Bldg Size (sf): 16,799 sf

Workshop Date: 8/28/13

Original Construction (yr): 2012 Major Renovation (yr):

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations A10	A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			
Basements A20	A2020 - Structural walls, water proofing, drainage, exterior surfaces.			
Super-structure B10	B1010 - Floor construction. B1020 - Roof construction.			
Exterior Closure B20	B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.			
Roofing B30	B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.			
Interior Construction C10	C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			
Staircases C20	C2010 - Stair construction. C2020 - Stair finishes.			
Interior Finishes C30	C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.			
Vertical Transport D10	D1010 - Elevators & lifts. D1090 - Other conveying systems.	2012		Elev OK
Plumbing D20	D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).			
HVAC D30	D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.			DDC controls => did not get computer to interface
Fire Protection D40	D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.			
Electrical D50	D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.			Ap Bay card issue (fixed 70 A vs 30 A fixed)
Equipment E10	E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.			Dishwasher issue / tripped breaker
Furnishings E20	E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).			
Special Construction F10	F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			
Site Improvements G20	G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			Security Gate => issues
Site Wet Utilities G30	G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			Water Tank in back; pump issues
Site Dry Utilities G40	G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction G90	G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			

1-story

Site:

FS-18

Site Size (acres):

Facility:

FS-18

Bldg Size (sf):

6,900 sf 2 1/2 Bay

Workshop Date:

8/28/13

Original Construction (yr):

2005

Major Renovation (yr):

LEVEL II UNIFORMAT SYSTEM NAME & CODE	INCLUDES	YEAR OF ORIGINAL CONSTRUCTION	YEAR OF LAST MAJOR RENEWAL	Workshop Comments (system types, significant issues, and major projects)
Foundations	A10 A1010 - Standard foundations. A1020 - Special foundations. A1030 - Slab-on-grade (SOG).			
Basements	A20 A2020 - Structural walls, water proofing, drainage, exterior surfaces.			
Super-structure	B10 B1010 - Floor construction. B1020 - Roof construction.			Small Mezz (HUSC & DREW HCU)
Exterior Closure	B20 B2010 - Exterior walls. B2020 - Exterior windows. B2030 - Exterior doors.			Weatherstripping Ap Bay Doors - work from clearance too close; big sprys in u
Roofing	B30 B3010 - Roof coverings. B3020 - Roof openings. B3030 - Roof projections.			Stairway separating Pithead Rest Plastic rain chain / Fittings Gutter overwhelmed; ORD side of Bldg
Interior Construction	C10 C1010 - Partitions (fixed & moveable). C1020 - Interior doors. C1030 - Fittings (specialties).			
Staircases	C20 C2010 - Stair construction. C2020 - Stair finishes.			No Stair to Mezz (using Genie lift) (rolling ladder)
Interior Finishes	C30 C3010 - Wall finishes. C3020 - Floor finishes. C3030 - Ceiling finishes.			
Vertical Transport	D10 D1010 - Elevators & lifts. D1090 - Other conveying systems.			
Plumbing	D20 D2010 - Fixtures. D2020 - Water distribution. D2030 - Sanitary waste. D2040 Rain water drainage. D2090 - Other (special).			DHW => not enough / intermittent Toilet separate from wall
HVAC	D30 D3010 - Energy supply. D3020 - Heating. D3030 - Cooling. D3040 - Dist. D3050 - Terminal & Pkgd. D3060 - Controls. D3090 - Other HVAC.			OK
Fire Protection	D40 D4010 - Fire protection sprinkler. D4020 - Stand-pipe & hose systems. D4030 - Fire protection specialties. D4090 - Special fire protection.			
Electrical	D50 D5010 - Electrical service & dist. D5020 - Lighting & branch wiring. D5030 - Low voltage (comm, security & safety). D5090 - Other.			Tone Alarm => gas easily reset via
Equipment	E10 E1010 - Commercial (laundry, office). E1020 - Institutional (lab, AV). E1030 - Vehicular (lifts, parking, dock). E1090 - Other.			Ice Maker in Kitchen => leaking on floor => repaired? 2006-2007
Furnishings	E20 E2010 - Fixed furnishings (art, casework, window treatments, floor mats, seating). E2020 - Moveable furnishings (tables, chairs, shelves).			
Special Construction	F10 F1010 Special structures. F1020 Integrated const. F1030 Special const. F1040 Special facilities. F1050 Special controls & inst.			
Site Improvements	G20 G2010 - Roadways. G2020 - Parking lots. G2030 - Pedestrian paving. G2040 - Site development. G2050 - Landscaping.			
Site Wet Utilities	G30 G3010 Water supply. G3020 Sanitary sewer. G3030 Storm sewer. G3040 Heating distribution. G3050 Cooling distribution. G3060 Fuel dist.			
Site Dry Utilities	G40 G4010 - Site electrical distribution. G4020 - Site lighting. G4030 - Site communications & security.			
Other Site Construction	G90 G9010 - Service & pedestrian tunnels (including utilidors). G9090 - Other site systems (outbuildings, yard racks, etc.).			

Deer Deer & Bear visits

5.5. FCA Survey Forms & Methodology

5.5.a Condition Survey Form Development

Survey forms were developed for the facility condition assessments based on the UniFormat Level 3. All Level 3 subsystems are described with evaluation criteria. The evaluation criteria descriptions clearly explain what elements were included and excluded from each Level 3 subsystem.

Each survey form is accompanied by a deficiency report form that is completed when Observed Deficiencies (ODs) are noted. This Observed Deficiency form notes the problem and the recommended action to correct the deficiency. Raw construction costs (i.e., labor and materials) for facility component replacements or repairs are estimated.

Additionally, Opportunity forms are provided to document options that may improve facility performance and that may not necessarily be condition related improvements.

5.5.b Sample Condition Scoring Criteria

The following section provides six (6) examples of the condition scoring definitions that were used during the condition surveys.

Roof Construction B1020	Roof structural frame, structural interior walls supporting roof, roof decks, slabs and sheathing, canopies. Excludes insulation and roofing. 1- Excellent: New; Structure is sound and stable; no evidence of cracking, deflection or separation of framing members. Preventative inspection. 2 - Good: Structure is sound and stable; no evidence of cracking, deflection or separation of framing members. Minor preventative maintenance: rust proofing and / or sealants and tightening of connections. 3 - Fair: Minor surface cracking or separation of framing members. Preventative maintenance and minor restorative repairs of isolated items. 4 - Poor: Structural damage evident; Twisting, cracking, or separation of structural members affecting surrounding finishes or moisture intrusion. Restorative repairs. 5 - Unsatisfactory: Structurally deficient or damaged beyond repair; major damage to surrounding finishes; jeopardizing occupancy. Replacement.
Exterior Windows B2020	Screens, storm windows, exterior louvers, frame, trim, sills, caulking, flashing. Excludes window shades and treatments. 1 -Excellent: New; doors operating smoothly; no finish degradation. Preventative inspection. 2 - Good: Functioning smoothly; no finish degradation. Secure hardware and emergency exiting. Minor preventative maintenance. 3 - Fair: Worn but functional; requires paint or resealing; glass or hardware damage only in isolated doors. Preventative maintenance and minor restorative repairs of isolated items. 4 - Poor: Damaged or deficient hardware, glass, trim or seals; water intrusion. Restorative repairs. 5 - Unsatisfactory: Extensive damage, deficient beyond repair; Hardware not operating, moisture intrusion. Replacement.
Exterior Wall Finishes B2040	Exterior wall - exterior applied finishes 1 - Excellent: New; no finish degradation. Preventative inspection. 2 - Good: no cracking or moisture intrusion. Minor finish degradation. Minor preventative maintenance. Cleaning. 3 - Fair: Minor undamaged but requires sealing. Preventative maintenance and minor restorative repairs of isolated items. 4 - Poor: Restorative repairs. 5 - Unsatisfactory: Damaged beyond repair, Replacement.

Plumbing Fixtures D2010	Water closets, urinals, lavatories, sink, showers, bathtubs, drinking fountains. Excludes hot water heaters. 1 – Excellent: New; All fixtures operating well. Preventative inspection. 2 – Good: system components operational, free of defect, and of adequate utility service capacity for intended use. Includes water saving features. Minor preventative maintenance. 3 – Fair: Some components worn, fixtures stained. Preventative maintenance and minor restorative repairs of isolated items. 4 – Poor: Many components damaged; limited parts; leaking valves, rust and corrosion. Operating parts > 30 years old. Restoration repairs. 5 – Unsatisfactory: Many fixtures not operational. Rust, corrosion, and mineral deposits. Leaks causing damage to other finishes and components. Replacement.
Heat Generating Systems D3020	Boilers, piping and fittings adjacent to boilers, primary pumps, auxiliary equipment, equipment and piping insulation. 1 - Excellent: New. Preventative inspection. 2 - Good: System is fully operational, suitable capacity, efficient utility utilization, integrated energy management controls. Minor preventative maintenance. 3 - Fair: Equipment worn but reliable, older energy controls; Preventative maintenance and minor restorative repairs of isolated items. 4 - Poor: Equipment marginal/hard to obtain parts, insulated ext. ductwork, no energy controls. > 40 years old. Restorative repairs. 5 - Unsatisfactory: System non-functional or seriously deficient, Not delivering supply to required spaces. Replacement.

Distribution Systems D3040	Supply & return air systems, ventilation & exhaust systems, steam, hot water & chilled water distribution, terminal devices, heat recovery equipment, auxiliary equipment such as secondary pumps, and heat exchangers, piping, duct & equipment insulation. 1 - Excellent: New. Preventative inspection. 2 - Good: System is fully operational, suitable capacity, efficient utility utilization, integrated energy management controls. Good insulation. Minor preventative maintenance. 3 - Fair: Equipment worn but reliable, older energy controls; Insulation. Some joints/ sealants loose. Preventative maintenance and minor restorative repairs of isolated items. 4 - Poor: Equipment marginal/hard to obtain parts, no energy controls; Many grilles missing or loose. Air leaks and unbalance. Restorative repair 5 - Unsatisfactory: Non-functional or seriously deficient. Grilles corroded, missing. Replacement.

5.5.c Facility Survey Methodology

The general methodology for recording the City of Redmond FCA surveys started with an initial familiarization tour of the City's facilities for an initial scope assessment. Site and floor plan drawings were reviewed in advance of the FCA surveys. Information was gathered during two separate half-day pre-survey workshop with City staff. This was followed by on-site field surveys of architectural, site/civil, mechanical and electrical systems for each facility building and site infrastructure. The facility surveys were facilitated by an FCA Team Leader to maintain consistency in evaluation and on-going training with survey forms, condition ratings and system categorization. Following each facility walk-through, the FCA Team completed condition survey, observed deficiency, and opportunity forms.

Each team member used survey forms to document the apparent facility conditions including:

- i. Describing the nature of facility systems per UniFormat;
- ii. Determining the overall condition score and useful remaining life of each system;
- iii. Identifying major maintenance deficiencies greater than \$2,000 that are likely to be required for immediate major maintenance repairs (i.e., 2013), plus the next five (5) years period (i.e., 2014-2018);
- iv. Documenting specific deficiencies of systems with narrative as well as budgetary level cost estimates to repair or replace deficiencies;
- v. Documenting Opportunities for system or facility performance improvements.

5.6. MENG Analysis FCA Database

The City of Redmond survey data is organized and stored in a MS Access relational database, called the *Facilities Database*, which was developed by MENG Analysis for documenting facility condition data. The Database consists of two files: a "Front End" file provides user interface for data entry and reporting and this is linked to a "Back-End" file containing all of the data tables. Data entry forms make it easy to enter/ edit facility information and the pre-formatted reports present data in a user friendly and intuitive format. Data residing in the Back-End file is organized in tables. The queries that have been developed are also used to provide data for reports that serve a reporting dashboard. For this project, MENG Analysis utilized **Tableau** as the reporting dashboard, which facilitates the reporting of data in both table and graph formats. These queries can also be used to generate customized reports.

Training Manual: A MENG Analysis FCA Database training manual and instructional sessions will be provided to the City of Redmond to support the maintenance and associated updates of conditions of facilities over time.

5.7.1. Cost Models

The cost models developed for the City of Redmond identify general facility use types that were included in the facility condition assessment scope of work. Therefore the application of the cost model's facility use types to other new types of facilities is not recommended.

5.7.2. Cost Estimating

This report section discusses the basis of cost estimating that was utilized both to develop conceptual cost estimates for Observed Deficiencies during the facility condition surveys as well as the replacement costs that are used as factors in the Predicted Renewals.

5.7.2.a. Estimating Methodology

The MENG Analysis team uses the UniFormat II system to organize cost estimates. Depending upon the condition and type of system, cost estimates are based upon square foot area (SF), lineal feet (LF), and lump-sum (LS) quantity factors.

For the cost estimating of Observed Deficiencies of building systems, the FCA survey team estimated costs for system repairs or replacements. A proprietary cost model was used for the cost estimating that is used to support the PR costs of building systems. This model is updated on a yearly basis and adjusted to the specific geographical region. It uses a UniFormat II breakdown for building systems and also provides an overall building cost per square foot (\$/SF) for various building types. The team refined SF costs for structural, mechanical, plumbing and electrical sub-systems to reflect the systems typically found in City of Redmond facilities. Specific analysis of similar projects that have been estimated and managed by the team were also referenced against the modeled costs for additional verification of recent costs. Once the basic cost

model was established to represent a strong correlation with City of Redmond facilities, the team went through several iterations of independent peer reviews by local cost estimating professionals.

5.7.2.b. Estimating Accuracy

Cost estimates made using square foot costs can anticipate 10% to 15% accuracy.¹ Cost estimates that were developed for ODs do consider impacts to related building systems. For example, costs for the demolition and replacement/refinishing of interior walls are considered and included when replacing water piping. Therefore, these cost estimates also include, but do not delineate contingency costs to address reasonable, unforeseen conditions.

5.7.2.c. Estimating Limitations

The cost estimating for the Observed Deficiencies and the cost model used for Predicted Renewals should both be considered useful for City project planning purposes. These costs provide planners with a good order-of-magnitude understanding of potential costs. Moving to the next level of accuracy for budgeting actual projects, additional analysis of each specific system deficiency and related systems is recommended. Costs are developed to reflect each system replacement or repair and as such do not make any assumptions relative to project packaging. For example, one should assume that aggregating multiple system deficiencies into a single project, either within a given facility or system-wide, would result in lower costs due to economy of scale.

¹ *Successful Estimating Methods: From Concept to Bid* by John D. Bledsoe

5.8. Renewal Budget by Facility by Year

Renewal Budget By Facility By Year

Facility	BudgetYear																			Grand Total
	2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031	2032		
Central Stores Warehouse Building 5 Building	7,865	7,728	12,437				89,601	65,001		17,341	2,767	16,107		98,704					317,553	
City Hall Building						838,369	1,685,095	3,881,660	0	624,436	654,375	777,913	25,737		1,103,272	905,820			10,496,676	
Decant Facility Building 11 Building	0	11,725	0			1,986	124,826	77,413	0	27,420	90,230	4,676		60,823					399,098	
Fire Station 11 Building	332,486	526,883	472,553	514,863	489,207		288,576	381,983		1,042,736	642,368		814,320						5,505,974	
Fire Station 11 Infrastructure						8,558		138,468		158,347	55,636	20,634	13,045			42,170			436,858	
Fire Station 12 Building	5,895	82,841	368,191	158,322		42,739	23,175	125,381	2,692	145,907	74,263		86,565						1,115,970	
Fire Station 12 Infrastructure			21,189			3,222	2,865	58,526		56,905	20,950	7,770							171,426	
Fire Station 13 Building	45,374	129,789	339,812	145,970		70,901	93,086	135,885		196,005	40,405		378	112,252					1,309,856	
Fire Station 13 Infrastructure							2,125	110,073		271,522	77,688	28,812				113,843			604,063	
Fire Station 14 Building		33,531	239,555			175,724	166,458	158,114		160,265	58,991	179,246	219,443			10,029		22,274	1,423,631	
Fire Station 14 Infrastructure							15,397	174,304		481,243	112,604	41,762				119,963			945,272	
Fire Station 16 Building	8,238	196,721	91,469			107,465	438,511	242,297	0	492,165	61,241	27,912							1,666,019	
Fire Station 16 Infrastructure						9,398	8,355	205,515		142,183	61,103	22,661							449,215	
Fire Station 16 Shop Building	129	43,124	12,501	23,545	0	81,892	32,989	93,980	0	169,571	37,324		142,377						637,433	
Fire Station 17 Building	0					116,511		436			130,297		33,331	0		81,121		71,147	432,842	
Fire Station 17 Infrastructure											8,972					20,124			29,097	
Fire Station 18 Building	0					105,458	90,629	27,651		177,309	33,306	22,059	273,542			113,780		38,588	882,322	
Fire Station 18 Infrastructure													6,857			156,037			162,893	
Hartman Park Infrastructure			433,377				19,097	272,703		324,989	139,664	51,797							1,241,627	
Hartman Park Swimming Pool Building	213,779	160,098	902,919	84,973		4,500	105,228	34,268	0	138,005			567,993	195,179					2,406,942	
Maintenance Operations Center Building 1 Building	0	57,540	429,590		0	117,937	351,760	88,713	53	135,692	73,146	68,452		89,341			51,508		1,463,733	
Maintenance Operations Center Infrastructure						44,441		1,178,794		747,320	288,930	107,156	6,775			107,966			2,481,381	
Municipal Campus Infrastructure			441,429				119,353	740,232		1,015,590	436,450	161,867				134,162			3,049,083	
Municipal Campus Parking Garage Building			0	1,902	576,435	0	108,436	183,018	2,734	123,983	1,644	3,871	9,965						1,011,989	
Old Fire House Teen Center Building	140,580		367,243	169,336		204,430	436,540	200,966	0	171,804		60,032		96,040					1,846,971	
Old Fire House Teen Center Infrastructure							14,322	67,735		108,437	34,916	12,949				26,465			264,825	
Old Medic One Building	0	5,684	19,313		0	7,925	59,917	35,579		34,713	19,646	10,182		13,289					206,248	
Old Redmond School House Community Center Building		735,208	321,138	194,081			1,788,442	1,606,467	1,026	1,805,877	492,795	215,903	236,360	427,229		61,156			7,885,682	
Old Redmond School House Community Center Infrastr						16,649		170,377		251,866	108,240	40,143	38,068			149,451			774,794	
Parks Operations Center Building 8 Building	0	40,711	148,811			41,721	253,466	72,805	61	161,319	93,447	40,041	26,421	63,210					942,012	
Police Garage North Building	0					594	125			78	0	57	3,998			2,821		103	7,776	
Police Garage South Building	0					475	100			62	0	45	3,199			2,257		82	6,220	
Public Safety Building	0	862,308	1,412,689	367,347		796,977	4,893,283	1,255,837	507,931	1,533,480	1,344,326	6,815	0	1,008,686		1,948,549			15,938,228	

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility. The data is filtered on Subsystem and SubsystemType. The Subsystem filter keeps 67 of 67 members. The SubsystemType filter keeps Building and Infrastructure. The view is filtered on BudgetYear and Facility. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members.

Renewal Budget By Facility By Year

Facility	Budget/Year																			
	2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031	2032	Grand Total	
Sammamish River Business Park Building 1	226,686	85,818	1,295,930	68,459			49,057	151,522		48,558	50,399	102,093		133,248					2,211,770	
Sammamish River Business Park Building 2	226,686	85,818	1,295,930	68,459			49,057	247,237		48,558	50,399	102,093		133,248					2,307,485	
Sammamish River Business Park Infrastructure			163,330			10,070	8,952			152,339	65,468	24,280							424,437	
Senior Center Building		8,525	269,346			133,708	1,107,707	848,695		772,181	340,746	140,891		225,397					3,847,195	
Street Department Modular Building 3 Building	11,187	25,615	21,743	3,809			32,131	67,505		28,839	42,286	6,229	25,640	28,934					293,918	
Trinity Building	11,151		71,436		0	388,280	353,916	341,639	0	194,656	92,018	73,183	368,652	146,150					2,041,082	
Trinity Building Infrastructure			9,217					87,837		106,698	9,579	14,568	921						228,820	
Grand Total	1,230,057	3,099,667	9,161,149	1,801,065	1,065,642	3,329,929	12,812,576	13,528,614	514,498	12,068,398	5,846,618	2,392,201	2,903,583	2,831,731	1,103,272	3,995,713	51,508	132,195	77,868,414	

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility. The data is filtered on Subsystem and SubsystemType. The Subsystem filter keeps 67 of 67 members. The SubsystemType filter keeps Building and Infrastructure. The view is filtered on BudgetYear and Facility. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members.

5.9. Renewal Budget by Facility by Subsystem by Year

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Central Stores Warehouse Building 5 Building	Lighting and Branch Wiring								56,175									
	Roof Coverings							51,431										
	Low Voltage Communication Security and Fire Alarm							13,747										
	Exterior Walls														98,704			
	Terminal and Package Units		6,078															
	Floor Finishes							2,194										
	Controls and Instrumentation		1,650															
	Wall Finishes							22,229										
	Other Electrical Systems	7,865																
	Ceiling Finishes								2,185									
	Exterior Windows											1,827						
	Plumbing Fixtures										4,712							
	Sanitary Waste										818							
	Exterior Doors												13,356					
	Interior Doors										8,426							
	Domestic Water Distribution											941						
	Fire Protection Sprinkler Systems	0																
	Fixed Furnishings								5,996									
	Rain Water Drainage			12,437														
	Fittings								645									
	Partitions												2,751					
	Fire Protection Specialties								0									
	Roof Openings										3,385							
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems	0																
City Hall Building	Lighting and Branch Wiring								1,851,801									
	Roof Coverings																788,508	

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Central Stores Warehouse Building 5 Building	Lighting and Branch Wiring		56,175
	Roof Coverings		51,431
	Low Voltage Communication Security and Fire Alarm		13,747
	Exterior Walls		98,704
	Terminal and Package Units		6,078
	Floor Finishes		2,194
	Controls and Instrumentation		1,650
	Wall Finishes		22,229
	Other Electrical Systems		7,865
	Ceiling Finishes		2,185
	Exterior Windows		1,827
	Plumbing Fixtures		4,712
	Sanitary Waste		818
	Exterior Doors		13,356
	Interior Doors		8,426
	Domestic Water Distribution		941
	Fire Protection Sprinkler Systems		0
	Fixed Furnishings		5,996
	Rain Water Drainage		12,437
	Fittings		645
	Partitions		2,751
	Fire Protection Specialties		0
	Roof Openings		3,385
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
City Hall Building	Lighting and Branch Wiring		1,851,801
	Roof Coverings		788,508

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
City Hall Building	Low Voltage Communication Security and Fire Alarm							1,648,088										
	Terminal and Package Units						276,662											
	Floor Finishes															1,103,272		
	Controls and Instrumentation											654,375						
	Wall Finishes												777,913					
	Other Electrical Systems						561,707											
	Plumbing Fixtures										277,950							
	Sanitary Waste										346,486							
	Cooling Generating Systems								1,159,354									
	Heat Generating Systems								870,505									
	Other Plumbing Systems							37,008										
	Institutional Equipment																0	
	Commercial Equipment																45,427	
	Other HVAC Systems and Equipment													25,737				
	Vehicular Equipment																0	
	Fire Protection Specialties																71,884	
	Stair Finishes								0									
	Other Conveying Systems									0								
Decant Facility Building 11 Building	Lighting and Branch Wiring								70,572									
	Roof Coverings							58,856										
	Low Voltage Communication Security and Fire Alarm							62,862										
	Exterior Walls														60,823			
	Terminal and Package Units		10,769															
	Controls and Instrumentation						1,986											
	Wall Finishes		956															
	Other Electrical Systems											19,033						
	Ceiling Finishes								6,433									

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
City Hall Building	Low Voltage Communication Security and Fire Alarm		1,648,088
	Terminal and Package Units		276,662
	Floor Finishes		1,103,272
	Controls and Instrumentation		654,375
	Wall Finishes		777,913
	Other Electrical Systems		561,707
	Plumbing Fixtures		277,950
	Sanitary Waste		346,486
	Cooling Generating Systems		1,159,354
	Heat Generating Systems		870,505
	Other Plumbing Systems		37,008
	Institutional Equipment		0
	Commercial Equipment		45,427
	Other HVAC Systems and Equipment		25,737
	Vehicular Equipment		0
	Fire Protection Specialties		71,884
	Stair Finishes		0
	Other Conveying Systems		0
Decant Facility Building 11 Building	Lighting and Branch Wiring		70,572
	Roof Coverings		58,856
	Low Voltage Communication Security and Fire Alarm		62,862
	Exterior Walls		60,823
	Terminal and Package Units		10,769
	Controls and Instrumentation		1,986
	Wall Finishes		956
	Other Electrical Systems		19,033
	Ceiling Finishes		6,433

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Decant Facility Building 11 Building	Exterior Windows											54,255						
	Plumbing Fixtures										2,878							
	Sanitary Waste										14,392							
	Exterior Doors												3,367					
	Domestic Water Distribution											16,942						
	Fire Protection Sprinkler Systems	0																
	Rain Water Drainage										8,635							
	Partitions												1,310					
	Other Plumbing Systems							3,108										
	Energy Supply										1,514							
	Commercial Equipment							0										
	Fire Protection Specialties								407									
	Special Facilities									0								
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems			0														
Fire Station 11 Building	Lighting and Branch Wiring								368,893									
	Roof Coverings													530,147				
	Low Voltage Communication Security and Fire Alarm													281,508				
	Exterior Walls					489,207												
	Terminal and Package Units		376,783															
	Floor Finishes	219,460																
	Controls and Instrumentation		150,100															
	Wall Finishes							73,580										
	Other Electrical Systems											98,988						
	HVAC Distribution Systems										264,084							
	Ceiling Finishes			149,245														
	Exterior Windows											400,865						

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Decant Facility Building 11 Building	Exterior Windows		54,255
	Plumbing Fixtures		2,878
	Sanitary Waste		14,392
	Exterior Doors		3,367
	Domestic Water Distribution		16,942
	Fire Protection Sprinkler Systems		0
	Rain Water Drainage		8,635
	Partitions		1,310
	Other Plumbing Systems		3,108
	Energy Supply		1,514
	Commercial Equipment		0
	Fire Protection Specialties		407
	Special Facilities		0
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
Fire Station 11 Building	Lighting and Branch Wiring		368,893
	Roof Coverings		530,147
	Low Voltage Communication Security and Fire Alarm		281,508
	Exterior Walls		489,207
	Terminal and Package Units		376,783
	Floor Finishes		219,460
	Controls and Instrumentation		150,100
	Wall Finishes		73,580
	Other Electrical Systems		98,988
	HVAC Distribution Systems		264,084
	Ceiling Finishes		149,245
	Exterior Windows		400,865

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Fire Station 11 Building	Plumbing Fixtures										145,282							
	Sanitary Waste										115,939							
	Electrical Service and Distribution										304,161							
	Cooling Generating Systems	95,851																
	Exterior Doors				514,863													
	Domestic Water Distribution											142,515						
	Fire Protection Sprinkler Systems										72,999							
	Fixed Furnishings			225,370														
	Rain Water Drainage										87,312							
	Fittings			97,938														
	Elevators and Lifts	14,139																
	Other Plumbing Systems							46,374										
	Slab On Grade							141,183										
	Energy Supply										52,960							
	Commercial Equipment													2,664				
	Other HVAC Systems and Equipment							27,438										
	Vehicular Equipment													0				
	Fire Protection Specialties								13,090									
	Roof Openings			0														
	Projections			0														
	Other Fire Protection Systems	3,036																
Fire Station 11 Infrastructure	Electrical Distribution										113,917							
	Site Lighting								58,496									
	Site Development																42,170	
	Roadways								38,775									
	Storm Sewer											42,069						
	Landscaping										28,884							

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Fire Station 11 Building	Plumbing Fixtures		145,282
	Sanitary Waste		115,939
	Electrical Service and Distribution		304,161
	Cooling Generating Systems		95,851
	Exterior Doors		514,863
	Domestic Water Distribution		142,515
	Fire Protection Sprinkler Systems		72,999
	Fixed Furnishings		225,370
	Rain Water Drainage		87,312
	Fittings		97,938
	Elevators and Lifts		14,139
	Other Plumbing Systems		46,374
	Slab On Grade		141,183
	Energy Supply		52,960
	Commercial Equipment		2,664
	Other HVAC Systems and Equipment		27,438
	Vehicular Equipment		0
	Fire Protection Specialties		13,090
	Roof Openings		0
	Projections		0
	Other Fire Protection Systems		3,036
Fire Station 11 Infrastructure	Electrical Distribution		113,917
	Site Lighting		58,496
	Site Development		42,170
	Roadways		38,775
	Storm Sewer		42,069
	Landscaping		28,884

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Fire Station 11 Infrastructure	Parking Lots								41,197									
	Sanitary Sewer												20,634					
	Fuel Distribution										15,546							
	Water Supply											13,567						
	Pedestrian Paving													13,045				
	Site Communications and Security						8,558											
Fire Station 12 Building	Lighting and Branch Wiring								113,436									
	Roof Coverings			205,339														
	Low Voltage Communication Security and Fire Alarm													86,565				
	Terminal and Package Units		57,931															
	Floor Finishes			64,938														
	Controls and Instrumentation						42,739											
	Wall Finishes		24,910															
	Other Electrical Systems											30,439						
	HVAC Distribution Systems			47,356														
	Ceiling Finishes			13,768														
	Plumbing Fixtures										44,674							
	Sanitary Waste										35,651							
	Cooling Generating Systems	5,895																
	Exterior Doors				158,322													
	Interior Doors			36,790														
	Domestic Water Distribution											43,823						
	Fire Protection Sprinkler Systems										22,447							
	Fixed Furnishings								9,262									
	Rain Water Drainage										26,849							
	Fittings								2,683									
	Other Equipment													0				

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Fire Station 11 Infrastructure	Parking Lots		41,197
	Sanitary Sewer		20,634
	Fuel Distribution		15,546
	Water Supply		13,567
	Pedestrian Paving		13,045
	Site Communications and Security		8,558
Fire Station 12 Building	Lighting and Branch Wiring		113,436
	Roof Coverings		205,339
	Low Voltage Communication Security and Fire Alarm		86,565
	Terminal and Package Units		57,931
	Floor Finishes		64,938
	Controls and Instrumentation		42,739
	Wall Finishes		24,910
	Other Electrical Systems		30,439
	HVAC Distribution Systems		47,356
	Ceiling Finishes		13,768
	Plumbing Fixtures		44,674
	Sanitary Waste		35,651
	Cooling Generating Systems		5,895
	Exterior Doors		158,322
	Interior Doors		36,790
	Domestic Water Distribution		43,823
	Fire Protection Sprinkler Systems		22,447
	Fixed Furnishings		9,262
	Rain Water Drainage		26,849
	Fittings		2,683
	Other Equipment		0

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Fire Station 12 Building	Other Plumbing Systems							14,260										
	Energy Supply										16,286							
	Commercial Equipment							478										
	Other HVAC Systems and Equipment							8,437										
	Roof Openings			0														
	Stand-Pipe and Hose Systems									2,692								
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems	0																
Fire Station 12 Infrastructure	Electrical Distribution										42,894							
	Site Lighting								22,026									
	Site Development			21,189														
	Roadways								36,500									
	Storm Sewer											15,841						
	Landscaping										8,157							
	Sanitary Sewer												7,770					
	Fuel Distribution										5,854							
	Water Supply											5,109						
	Pedestrian Paving							2,865										
	Site Communications and Security						3,222											
Fire Station 13 Building	Lighting and Branch Wiring								104,586									
	Roof Coverings			189,319														
	Low Voltage Communication Security and Fire Alarm							93,086										
	Exterior Walls														112,252			
	Terminal and Package Units		106,823															
	Floor Finishes			59,872														
	Controls and Instrumentation						39,404											
	Wall Finishes		22,966															

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Fire Station 12 Building	Other Plumbing Systems		14,260
	Energy Supply		16,286
	Commercial Equipment		478
	Other HVAC Systems and Equipment		8,437
	Roof Openings		0
	Stand-Pipe and Hose Systems		2,692
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
Fire Station 12 Infrastructure	Electrical Distribution		42,894
	Site Lighting		22,026
	Site Development		21,189
	Roadways		36,500
	Storm Sewer		15,841
	Landscaping		8,157
	Sanitary Sewer		7,770
	Fuel Distribution		5,854
	Water Supply		5,109
	Pedestrian Paving		2,865
	Site Communications and Security		3,222
Fire Station 13 Building	Lighting and Branch Wiring		104,586
	Roof Coverings		189,319
	Low Voltage Communication Security and Fire Alarm		93,086
	Exterior Walls		112,252
	Terminal and Package Units		106,823
	Floor Finishes		59,872
	Controls and Instrumentation		39,404
	Wall Finishes		22,966

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Fire Station 13 Building	Other Electrical Systems						31,496											
	HVAC Distribution Systems	45,374																
	Plumbing Fixtures										41,190							
	Sanitary Waste										32,871							
	Electrical Service and Distribution										86,234							
	Cooling Generating Systems			5,229														
	Exterior Doors				145,970													
	Interior Doors			33,919														
	Domestic Water Distribution											40,405						
	Fire Protection Sprinkler Systems										20,696							
	Fixed Furnishings								2,847									
	Rain Water Drainage			28,871														
	Fittings								24,741									
	Other Plumbing Systems			14,199														
	Energy Supply										15,015							
	Commercial Equipment													378				
	Other HVAC Systems and Equipment			8,401														
	Fire Protection Specialties								3,711									
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems			0														
Fire Station 13 Infrastructure	Electrical Distribution										159,067							
	Site Lighting								81,680									
	Roadways																113,843	
	Storm Sewer											58,743						
	Landscaping										90,747							
	Sanitary Sewer												28,812					
	Fuel Distribution										21,708							

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Fire Station 13 Building	Other Electrical Systems		31,496
	HVAC Distribution Systems		45,374
	Plumbing Fixtures		41,190
	Sanitary Waste		32,871
	Electrical Service and Distribution		86,234
	Cooling Generating Systems		5,229
	Exterior Doors		145,970
	Interior Doors		33,919
	Domestic Water Distribution		40,405
	Fire Protection Sprinkler Systems		20,696
	Fixed Furnishings		2,847
	Rain Water Drainage		28,871
	Fittings		24,741
	Other Plumbing Systems		14,199
	Energy Supply		15,015
	Commercial Equipment		378
	Other HVAC Systems and Equipment		8,401
	Fire Protection Specialties		3,711
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
Fire Station 13 Infrastructure	Electrical Distribution		159,067
	Site Lighting		81,680
	Roadways		113,843
	Storm Sewer		58,743
	Landscaping		90,747
	Sanitary Sewer		28,812
	Fuel Distribution		21,708

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Fire Station 13 Infrastructure	Water Supply											18,945						
	Other Site Systems								28,393									
	Pedestrian Paving							2,125										
Fire Station 14 Building	Lighting and Branch Wiring								152,695									
	Roof Coverings													219,443				
	Low Voltage Communication Security and Fire Alarm							135,905										
	Terminal and Package Units						72,207											
	Floor Finishes			87,414														
	Controls and Instrumentation						57,531											
	Wall Finishes		33,531															
	Other Electrical Systems						45,986											
	HVAC Distribution Systems			63,746														
	Ceiling Finishes																	
	Plumbing Fixtures										60,136							
	Sanitary Waste										47,991							
	Cooling Generating Systems			38,179														
	Exterior Doors												179,246					
	Interior Doors			49,522														
	Domestic Water Distribution											58,991						
	Fire Protection Sprinkler Systems										30,216							
	Fixed Furnishings																6,991	
	Fittings																3,038	
	Other Plumbing Systems							19,196										
	Energy Supply										21,922							
	Commercial Equipment			695														
	Other HVAC Systems and Equipment							11,358										
	Fire Protection Specialties								5,418									

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Fire Station 13 Infrastructure	Water Supply		18,945
	Other Site Systems		28,393
	Pedestrian Paving		2,125
	Lighting and Branch Wiring		152,695
	Roof Coverings		219,443
	Low Voltage Communication Security and Fire Alarm		135,905
	Terminal and Package Units		72,207
	Floor Finishes		87,414
	Controls and Instrumentation		57,531
	Wall Finishes		33,531
	Other Electrical Systems		45,986
	HVAC Distribution Systems		63,746
	Ceiling Finishes	22,274	22,274
	Plumbing Fixtures		60,136
	Sanitary Waste		47,991
	Cooling Generating Systems		38,179
	Exterior Doors		179,246
	Interior Doors		49,522
Fire Station 14 Building	Domestic Water Distribution		58,991
	Fire Protection Sprinkler Systems		30,216
	Fixed Furnishings		6,991
	Fittings		3,038
	Other Plumbing Systems		19,196
	Energy Supply		21,922
	Commercial Equipment		695
	Other HVAC Systems and Equipment		11,358
	Fire Protection Specialties		5,418

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Fire Station 14 Building	Moveable Furnishings (Capital Funded Only)								0									
Fire Station 14 Infrastructure	Electrical Distribution										230,558							
	Site Lighting								118,390									
	Site Development																85,349	
	Roadways								39,238									
	Storm Sewer											85,145						
	Landscaping										219,220							
	Parking Lots								16,676									
	Sanitary Sewer												41,762					
	Fuel Distribution										31,464							
	Water Supply											27,459						
	Other Site Systems																34,614	
	Pedestrian Paving							15,397										
Fire Station 16 Building	Lighting and Branch Wiring								158,520									
	Roof Coverings							265,704										
	Low Voltage Communication Security and Fire Alarm							141,089										
	Terminal and Package Units		161,911															
	Floor Finishes			90,748														
	Controls and Instrumentation						59,725											
	Wall Finishes		34,810															
	Other Electrical Systems						47,740											
	HVAC Distribution Systems										113,482							
	Ceiling Finishes								57,144									
	Plumbing Fixtures										62,430							
	Sanitary Waste										49,822							
	Electrical Service and Distribution										130,704							
Fire Station 16 Building	Cooling Generating Systems	8,238																

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Fire Station 14 Building	Moveable Furnishings (Capital Funded Only)		0
Fire Station 14 Infrastructure	Electrical Distribution		230,558
	Site Lighting		118,390
	Site Development		85,349
	Roadways		39,238
	Storm Sewer		85,145
	Landscaping		219,220
	Parking Lots		16,676
	Sanitary Sewer		41,762
	Fuel Distribution		31,464
	Water Supply		27,459
	Other Site Systems		34,614
	Pedestrian Paving		15,397
	Lighting and Branch Wiring		158,520
	Roof Coverings		265,704
Fire Station 16 Building	Low Voltage Communication Security and Fire Alarm		141,089
	Terminal and Package Units		161,911
	Floor Finishes		90,748
	Controls and Instrumentation		59,725
	Wall Finishes		34,810
	Other Electrical Systems		47,740
	HVAC Distribution Systems		113,482
	Ceiling Finishes		57,144
	Plumbing Fixtures		62,430
	Sanitary Waste		49,822
	Electrical Service and Distribution		130,704
	Cooling Generating Systems		8,238

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Fire Station 16 Building	Exterior Doors												27,912					
	Interior Doors										44,080							
	Domestic Water Distribution											61,241						
	Fire Protection Sprinkler Systems										31,369							
	Fixed Furnishings								17,258									
	Rain Water Drainage										37,520							
	Fittings								3,750									
	Other Plumbing Systems							19,928										
	Energy Supply										22,758							
	Commercial Equipment			721														
	Other HVAC Systems and Equipment							11,791										
	Fire Protection Specialties								5,625									
	Stair Finishes									0								
	Other Conveying Systems			0														
Fire Station 16 Infrastructure	Electrical Distribution										125,109							
	Site Lighting								64,243									
	Site Development								55,065									
	Roadways								63,875									
	Storm Sewer											46,203						
	Sanitary Sewer												22,661					
	Fuel Distribution										17,074							
	Water Supply											14,900						
	Other Site Systems								22,332									
	Pedestrian Paving							8,355										
Fire Station 16 Shop Building	Site Communications and Security						9,398											
	Lighting and Branch Wiring								89,107									
	Roof Coverings													114,993				

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Fire Station 16 Building	Exterior Doors		27,912
	Interior Doors		44,080
	Domestic Water Distribution		61,241
	Fire Protection Sprinkler Systems		31,369
	Fixed Furnishings		17,258
	Rain Water Drainage		37,520
	Fittings		3,750
	Other Plumbing Systems		19,928
	Energy Supply		22,758
	Commercial Equipment		721
	Other HVAC Systems and Equipment		11,791
	Fire Protection Specialties		5,625
	Stair Finishes		0
	Other Conveying Systems		0
Fire Station 16 Infrastructure	Electrical Distribution		125,109
	Site Lighting		64,243
	Site Development		55,065
	Roadways		63,875
	Storm Sewer		46,203
	Sanitary Sewer		22,661
	Fuel Distribution		17,074
	Water Supply		14,900
	Other Site Systems		22,332
	Pedestrian Paving		8,355
Fire Station 16 Shop Building	Site Communications and Security		9,398
	Lighting and Branch Wiring		89,107
	Roof Coverings		114,993

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Fire Station 16 Shop Building	Low Voltage Communication Security and Fire Alarm													19,056				
	Terminal and Package Units						48,144											
	Floor Finishes							31,832										
	Controls and Instrumentation		29,361															
	Wall Finishes		13,763															
	Other Electrical Systems						33,747											
	HVAC Distribution Systems										11,479							
	Ceiling Finishes								2,339									
	Exterior Windows											20,082						
	Plumbing Fixtures										13,291							
	Sanitary Waste										49,839							
	Electrical Service and Distribution										53,591							
	Cooling Generating Systems			0														
	Exterior Doors				23,545													
	Interior Doors			12,501														
	Domestic Water Distribution											17,243						
	Fire Protection Sprinkler Systems										37,513							
	Fixed Furnishings								1,671									
	Rain Water Drainage										3,322							
	Fittings								185									
	Other Equipment													0				
	Other Plumbing Systems							1,157										
	Energy Supply										536							
	Other HVAC Systems and Equipment	129																
	Vehicular Equipment													8,328				
	Fire Protection Specialties								677									
	Stair Finishes					0												

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Fire Station 16 Shop Building	Low Voltage Communication Security and Fire Alarm		19,056
	Terminal and Package Units		48,144
	Floor Finishes		31,832
	Controls and Instrumentation		29,361
	Wall Finishes		13,763
	Other Electrical Systems		33,747
	HVAC Distribution Systems		11,479
	Ceiling Finishes		2,339
	Exterior Windows		20,082
	Plumbing Fixtures		13,291
	Sanitary Waste		49,839
	Electrical Service and Distribution		53,591
	Cooling Generating Systems		0
	Exterior Doors		23,545
	Interior Doors		12,501
	Domestic Water Distribution		17,243
	Fire Protection Sprinkler Systems		37,513
	Fixed Furnishings		1,671
	Rain Water Drainage		3,322
	Fittings		185
	Other Equipment		0
	Other Plumbing Systems		1,157
	Energy Supply		536
	Other HVAC Systems and Equipment		129
	Vehicular Equipment		8,328
	Fire Protection Specialties		677
	Stair Finishes		0

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Fire Station 16 Shop Building	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems									0								
Fire Station 17 Building	Terminal and Package Units											130,297						
	Controls and Instrumentation						116,511											
	Other Electrical Systems																	
	Cooling Generating Systems																81,121	
	Other Plumbing Systems													33,331				
	Stair Finishes														0			
	Other Fire Protection Systems								436									
	Other Conveying Systems	0																
	Other Site Systems																20,124	
Fire Station 17 Infrastructure	Site Communications and Security											8,972						
Fire Station 18 Building	Lighting and Branch Wiring																104,393	
	Roof Coverings													178,376				
	Low Voltage Communication Security and Fire Alarm													94,718				
	Terminal and Package Units						58,694											
	Floor Finishes							65,793										
	Controls and Instrumentation						46,765											
	Wall Finishes												22,059					
	Other Electrical Systems											33,306						
	HVAC Distribution Systems										88,855							
	Ceiling Finishes																	
	Cooling Generating Systems								27,651									
	Interior Doors										34,515							
	Fire Protection Sprinkler Systems										24,562							
	Fixed Furnishings																5,683	
	Rain Water Drainage										29,378							

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Fire Station 16 Shop Building	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
Fire Station 17 Building	Terminal and Package Units		130,297
	Controls and Instrumentation		116,511
	Other Electrical Systems	71,147	71,147
	Cooling Generating Systems		81,121
	Other Plumbing Systems		33,331
	Stair Finishes		0
	Other Fire Protection Systems		436
	Other Conveying Systems		0
Fire Station 17 Infrastructure	Other Site Systems		20,124
	Site Communications and Security		8,972
Fire Station 18 Building	Lighting and Branch Wiring		104,393
	Roof Coverings		178,376
	Low Voltage Communication Security and Fire Alarm		94,718
	Terminal and Package Units		58,694
	Floor Finishes		65,793
	Controls and Instrumentation		46,765
	Wall Finishes		22,059
	Other Electrical Systems		33,306
	HVAC Distribution Systems		88,855
	Ceiling Finishes	36,212	36,212
	Cooling Generating Systems		27,651
	Interior Doors		34,515
	Fire Protection Sprinkler Systems		24,562
	Fixed Furnishings		5,683
	Rain Water Drainage		29,378

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Fire Station 18 Building	Fittings																	
	Other Equipment													0				
	Other Plumbing Systems							15,603										
	Commercial Equipment													448				
	Other HVAC Systems and Equipment							9,232										
	Fire Protection Specialties																3,704	
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems	0																
Fire Station 18 Infrastructure	Site Lighting																51,717	
	Site Development																44,329	
	Roadways																59,991	
	Pedestrian Paving													6,857				
Hartman Park Infrastructure	Electrical Distribution										285,963							
	Site Lighting								146,840									
	Site Development								125,863									
	Storm Sewer											105,606						
	Landscaping			232,556														
	Parking Lots			116,066														
	Sanitary Sewer												51,797					
	Fuel Distribution										39,026							
	Water Supply											34,058						
	Other Site Systems			57,288														
	Pedestrian Paving							19,097										
	Heating Distribution			27,467														
Hartman Park Swimming Pool Building	Lighting and Branch Wiring			546,570														
	Roof Coverings	213,513																
	Exterior Walls														195,179			

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Fire Station 18 Building	Fittings	2,376	2,376
	Other Equipment		0
	Other Plumbing Systems		15,603
	Commercial Equipment		448
	Other HVAC Systems and Equipment		9,232
	Fire Protection Specialties		3,704
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
Fire Station 18 Infrastructure	Site Lighting		51,717
	Site Development		44,329
	Roadways		59,991
	Pedestrian Paving		6,857
Hartman Park Infrastructure	Electrical Distribution		285,963
	Site Lighting		146,840
	Site Development		125,863
	Storm Sewer		105,606
	Landscaping		232,556
	Parking Lots		116,066
	Sanitary Sewer		51,797
	Fuel Distribution		39,026
	Water Supply		34,058
	Other Site Systems		57,288
	Pedestrian Paving		19,097
	Heating Distribution		27,467
Hartman Park Swimming Pool Building	Lighting and Branch Wiring		546,570
	Roof Coverings		213,513
	Exterior Walls		195,179

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Hartman Park Swimming Pool Building	Terminal and Package Units		75,879															
	Floor Finishes			136,681														
	Controls and Instrumentation		84,219															
	Wall Finishes							12,460										
	Other Electrical Systems						4,500											
	HVAC Distribution Systems			48,631														
	Ceiling Finishes			29,293														
	Exterior Windows				13,076													
	Plumbing Fixtures										138,005							
	Sanitary Waste			55,878														
	Electrical Service and Distribution			40,048														
	Cooling Generating Systems								0									
	Exterior Doors				1,369													
	Interior Doors			27,080														
	Domestic Water Distribution				70,527													
	Fire Protection Sprinkler Systems	0																
	Heat Generating Systems								32,966									
	Fixed Furnishings	159																
	Rain Water Drainage			5,149														
	Fittings								1,302									
	Other Equipment													567,993				
	Other Plumbing Systems			13,588														
	Slab On Grade							92,768										
	Institutional Equipment							0										
	Commercial Equipment	107																
	Fire Protection Specialties								0									
	Roof Openings			0														

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Hartman Park Swimming Pool Building	Terminal and Package Units		75,879
	Floor Finishes		136,681
	Controls and Instrumentation		84,219
	Wall Finishes		12,460
	Other Electrical Systems		4,500
	HVAC Distribution Systems		48,631
	Ceiling Finishes		29,293
	Exterior Windows		13,076
	Plumbing Fixtures		138,005
	Sanitary Waste		55,878
	Electrical Service and Distribution		40,048
	Cooling Generating Systems		0
	Exterior Doors		1,369
	Interior Doors		27,080
	Domestic Water Distribution		70,527
	Fire Protection Sprinkler Systems		0
	Heat Generating Systems		32,966
	Fixed Furnishings		159
	Rain Water Drainage		5,149
	Fittings		1,302
	Other Equipment		567,993
	Other Plumbing Systems		13,588
	Slab On Grade		92,768
	Institutional Equipment		0
	Commercial Equipment		107
	Fire Protection Specialties		0
	Roof Openings		0

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Facility Hartman Park Swimming Pool Building	Projections										0							
	Special Facilities									0								
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems									0								
	Lighting and Branch Wiring			195,986														
	Roof Coverings							262,836										
	Low Voltage Communication Security and Fire Alarm							43,554										
	Exterior Walls														89,341			
	Terminal and Package Units						117,937											
	Floor Finishes			67,370														
	Controls and Instrumentation		57,540															
	Wall Finishes							32,666										
	Other Electrical Systems																	51,508
	HVAC Distribution Systems			13,119														
	Ceiling Finishes								55,007									
	Exterior Windows											39,355						
	Plumbing Fixtures			30,378														
	Sanitary Waste			113,917														
	Electrical Service and Distribution									105,024								
	Cooling Generating Systems			0														
	Exterior Doors												38,808					
	Interior Doors									21,005								
	Domestic Water Distribution											33,791						
Maintenance Operations Center Building 1 Building	Fire Protection Sprinkler Systems	0																
	Heat Generating Systems								5,457									
	Fixed Furnishings								19,646									
	Rain Water Drainage			7,595														

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Hartman Park Swimming Pool Building	Projections		0
	Special Facilities		0
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
	Lighting and Branch Wiring		195,986
	Roof Coverings		262,836
	Low Voltage Communication Security and Fire Alarm		43,554
	Exterior Walls		89,341
	Terminal and Package Units		117,937
	Floor Finishes		67,370
	Controls and Instrumentation		57,540
	Wall Finishes		32,666
	Other Electrical Systems		51,508
	HVAC Distribution Systems		13,119
	Ceiling Finishes		55,007
	Exterior Windows		39,355
	Plumbing Fixtures		30,378
	Sanitary Waste		113,917
	Electrical Service and Distribution		105,024
	Cooling Generating Systems		0
	Exterior Doors		38,808
	Interior Doors		21,005
	Domestic Water Distribution		33,791
	Fire Protection Sprinkler Systems		0
Maintenance Operations Center Building 1 Building	Heat Generating Systems		5,457
	Fixed Furnishings		19,646
	Rain Water Drainage		7,595

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Facility Maintenance Operations Center Building 1 Building	Fittings								7,276									
	Other Equipment							0										
	Partitions												29,644					
	Other Plumbing Systems			1,225														
	Energy Supply										1,050							
	Institutional Equipment							10,889										
	Commercial Equipment							680										
	Other HVAC Systems and Equipment							1,134										
	Vehicular Equipment							0										
	Fire Protection Specialties								1,327									
	Stair Finishes					0												
	Roof Openings										8,402							
	Projections										210							
	Special Construction Systems									32								
	Integrated Construction									21								
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems	0																
Maintenance Operations Center Infrastructure	Electrical Distribution										591,587							
	Site Lighting								303,776									
	Site Development								260,379									
	Roadways								604,079									
	Storm Sewer											218,473						
	Landscaping										74,999							
	Parking Lots																107,966	
	Sanitary Sewer												107,156					
	Fuel Distribution										80,734							
	Water Supply											70,457						

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Maintenance Operations Center Building 1 Building	Fittings		7,276
	Other Equipment		0
	Partitions		29,644
	Other Plumbing Systems		1,225
	Energy Supply		1,050
	Institutional Equipment		10,889
	Commercial Equipment		680
	Other HVAC Systems and Equipment		1,134
	Vehicular Equipment		0
	Fire Protection Specialties		1,327
	Stair Finishes		0
	Roof Openings		8,402
	Projections		210
	Special Construction Systems		32
	Integrated Construction		21
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
Maintenance Operations Center Infrastructure	Electrical Distribution		591,587
	Site Lighting		303,776
	Site Development		260,379
	Roadways		604,079
	Storm Sewer		218,473
	Landscaping		74,999
	Parking Lots		107,966
	Sanitary Sewer		107,156
	Fuel Distribution		80,734
	Water Supply		70,457

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Facility Maintenance Operations Center Infrastructure	Other Site Systems								10,560									
	Pedestrian Paving													6,775				
	Site Communications and Security						44,441											
Municipal Campus Infrastructure	Electrical Distribution										893,635							
	Site Lighting								458,875									
	Site Development			441,429														
	Roadways								152,084									
	Storm Sewer											330,019						
	Parking Lots								129,272									
	Sanitary Sewer												161,867					
	Fuel Distribution										121,955							
	Water Supply											106,431						
	Other Site Systems																134,162	
	Pedestrian Paving							119,353										
Municipal Campus Parking Garage Building	Lighting and Branch Wiring								181,160									
	Roof Coverings													9,965				
	Low Voltage Communication Security and Fire Alarm							100,648										
	Exterior Walls					576,435												
	Terminal and Package Units						0											
	Controls and Instrumentation						0											
	Wall Finishes							454										
	Sanitary Waste										6,258							
	Electrical Service and Distribution										97,219							
	Cooling Generating Systems								0									
	Exterior Doors												3,871					
	Domestic Water Distribution											1,644						
	Fire Protection Sprinkler Systems										15,645							

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Facility Maintenance Operations Center Infrastructure	Other Site Systems		10,560
	Pedestrian Paving		6,775
	Site Communications and Security		44,441
Municipal Campus Infrastructure	Electrical Distribution		893,635
	Site Lighting		458,875
	Site Development		441,429
	Roadways		152,084
	Storm Sewer		330,019
	Parking Lots		129,272
	Sanitary Sewer		161,867
	Fuel Distribution		121,955
	Water Supply		106,431
	Other Site Systems		134,162
	Pedestrian Paving		119,353
	Lighting and Branch Wiring		181,160
	Roof Coverings		9,965
Municipal Campus Parking Garage Building	Low Voltage Communication Security and Fire Alarm		100,648
	Exterior Walls		576,435
	Terminal and Package Units		0
	Controls and Instrumentation		0
	Wall Finishes		454
	Sanitary Waste		6,258
	Electrical Service and Distribution		97,219
	Cooling Generating Systems		0
	Exterior Doors		3,871
	Domestic Water Distribution		1,644
	Fire Protection Sprinkler Systems		15,645

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Municipal Campus Parking Garage Building	Rain Water Drainage										4,861							
	Partitions				1,902													
	Vehicular Equipment													0				
	Fire Protection Specialties								1,858									
	Stand-Pipe and Hose Systems									2,734								
	Projections			0														
	Stair Construction							7,334										
Old Fire House Teen Center Building	Lighting and Branch Wiring								166,276									
	Roof Coverings							201,230										
	Low Voltage Communication Security and Fire Alarm							53,378										
	Exterior Walls														96,040			
	Terminal and Package Units						160,106											
	Floor Finishes							120,005										
	Controls and Instrumentation						40,961											
	Wall Finishes							61,591										
	Other Electrical Systems						3,364											
	HVAC Distribution Systems	113,698																
	Ceiling Finishes			136,991														
	Exterior Windows				125,708													
	Plumbing Fixtures			72,190														
	Sanitary Waste			37,877														
	Electrical Service and Distribution										98,785							
	Cooling Generating Systems	19,064																
	Exterior Doors												28,746					
	Interior Doors			98,278														
	Domestic Water Distribution				43,628													
	Fire Protection Sprinkler Systems										55,220							

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Municipal Campus Parking Garage Building	Rain Water Drainage		4,861
	Partitions		1,902
	Vehicular Equipment		0
	Fire Protection Specialties		1,858
	Stand-Pipe and Hose Systems		2,734
	Projections		0
	Stair Construction		7,334
Old Fire House Teen Center Building	Lighting and Branch Wiring		166,276
	Roof Coverings		201,230
	Low Voltage Communication Security and Fire Alarm		53,378
	Exterior Walls		96,040
	Terminal and Package Units		160,106
	Floor Finishes		120,005
	Controls and Instrumentation		40,961
	Wall Finishes		61,591
	Other Electrical Systems		3,364
	HVAC Distribution Systems		113,698
	Ceiling Finishes		136,991
	Exterior Windows		125,708
	Plumbing Fixtures		72,190
	Sanitary Waste		37,877
	Electrical Service and Distribution		98,785
	Cooling Generating Systems		19,064
	Exterior Doors		28,746
	Interior Doors		98,278
	Domestic Water Distribution		43,628
	Fire Protection Sprinkler Systems		55,220

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Old Fire House Teen Center Building	Fixed Furnishings								2,939									
	Rain Water Drainage			21,908														
	Fittings								31,750									
	Partitions												31,286					
	Other Plumbing Systems	7,818																
	Energy Supply										15,615							
	Institutional Equipment							337										
	Fire Protection Specialties								0									
	Roof Openings										1,357							
	Projections										826							
	Special Construction Systems									0								
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems	0																
	Special Structures												0					
Old Fire House Teen Center Infrastructure	Electrical Distribution										71,491							
	Site Lighting								36,710									
	Site Development																26,465	
	Storm Sewer											26,402						
	Landscaping										27,190							
	Parking Lots								31,025									
	Sanitary Sewer												12,949					
	Fuel Distribution										9,756							
	Water Supply											8,514						
	Pedestrian Paving							14,322										
Old Medic One Building	Lighting and Branch Wiring								25,976									
	Roof Coverings							39,097										
	Low Voltage Communication Security and Fire Alarm							6,479										

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Old Fire House Teen Center Building	Fixed Furnishings		2,939
	Rain Water Drainage		21,908
	Fittings		31,750
	Partitions		31,286
	Other Plumbing Systems		7,818
	Energy Supply		15,615
	Institutional Equipment		337
	Fire Protection Specialties		0
	Roof Openings		1,357
	Projections		826
	Special Construction Systems		0
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
	Special Structures		0
Old Fire House Teen Center Infrastructure	Electrical Distribution		71,491
	Site Lighting		36,710
	Site Development		26,465
	Storm Sewer		26,402
	Landscaping		27,190
	Parking Lots		31,025
	Sanitary Sewer		12,949
	Fuel Distribution		9,756
	Water Supply		8,514
	Pedestrian Paving		14,322
Old Medic One Building	Lighting and Branch Wiring		25,976
	Roof Coverings		39,097
	Low Voltage Communication Security and Fire Alarm		6,479

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Old Medic One Building	Exterior Walls														13,289			
	Terminal and Package Units		5,684															
	Floor Finishes							9,279										
	Controls and Instrumentation						7,925											
	Wall Finishes							4,859										
	Other Electrical Systems											8,766						
	HVAC Distribution Systems			2,732														
	Ceiling Finishes								8,865									
	Exterior Windows											5,854						
	Plumbing Fixtures			4,518														
	Sanitary Waste										14,529							
	Electrical Service and Distribution										15,622							
	Cooling Generating Systems								0									
	Exterior Doors												5,773					
	Interior Doors										3,125							
	Domestic Water Distribution											5,026						
	Fire Protection Sprinkler Systems	0																
	Fixed Furnishings			10,933														
	Rain Water Drainage			1,130														
	Fittings								541									
	Partitions												4,409					
	Energy Supply										156							
	Commercial Equipment							203										
	Vehicular Equipment							0										
	Fire Protection Specialties								198									
	Stair Finishes					0												
	Roof Openings										1,250							

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Old Medic One Building	Exterior Walls		13,289
	Terminal and Package Units		5,684
	Floor Finishes		9,279
	Controls and Instrumentation		7,925
	Wall Finishes		4,859
	Other Electrical Systems		8,766
	HVAC Distribution Systems		2,732
	Ceiling Finishes		8,865
	Exterior Windows		5,854
	Plumbing Fixtures		4,518
	Sanitary Waste		14,529
	Electrical Service and Distribution		15,622
	Cooling Generating Systems		0
	Exterior Doors		5,773
	Interior Doors		3,125
	Domestic Water Distribution		5,026
	Fire Protection Sprinkler Systems		0
	Fixed Furnishings		10,933
	Rain Water Drainage		1,130
	Fittings		541
	Partitions		4,409
	Energy Supply		156
	Commercial Equipment		203
	Vehicular Equipment		0
	Fire Protection Specialties		198
	Stair Finishes		0
	Roof Openings		1,250

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Old Medic One Building	Projections										31							
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems	0																
Old Redmond School House Community Center Building	Lighting and Branch Wiring								739,677									
	Roof Coverings							895,163										
	Low Voltage Communication Security and Fire Alarm													203,593				
	Exterior Walls														427,229			
	Terminal and Package Units		538,425															
	Floor Finishes							533,836										
	Controls and Instrumentation		196,783															
	Wall Finishes							273,985										
	Other Electrical Systems											13,332						
	HVAC Distribution Systems										417,294							
	Ceiling Finishes								542,987									
	Exterior Windows											479,463						
	Plumbing Fixtures			321,138														
	Sanitary Waste										144,468							
	Electrical Service and Distribution										439,443							
	Cooling Generating Systems																61,156	
	Exterior Doors												76,726					
	Interior Doors										374,843							
	Domestic Water Distribution				194,081													
	Fire Protection Sprinkler Systems										245,645							
	Heat Generating Systems								212,905									
	Fixed Furnishings								26,155									
	Rain Water Drainage										83,559							
	Fittings								84,743									

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Old Medic One Building	Projections		31
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
	Lighting and Branch Wiring		739,677
	Roof Coverings		895,163
	Low Voltage Communication Security and Fire Alarm		203,593
	Exterior Walls		427,229
	Terminal and Package Units		538,425
	Floor Finishes		533,836
	Controls and Instrumentation		196,783
	Wall Finishes		273,985
	Other Electrical Systems		13,332
	HVAC Distribution Systems		417,294
	Ceiling Finishes		542,987
	Exterior Windows		479,463
	Plumbing Fixtures		321,138
	Sanitary Waste		144,468
	Electrical Service and Distribution		439,443
	Cooling Generating Systems		61,156
	Exterior Doors		76,726
	Interior Doors		374,843
	Domestic Water Distribution		194,081
Old Redmond School House Community Center Building	Fire Protection Sprinkler Systems		245,645
	Heat Generating Systems		212,905
	Fixed Furnishings		26,155
	Rain Water Drainage		83,559
	Fittings		84,743

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Old Redmond School House Community Center Building	Elevators and Lifts									0								
	Partitions												139,178					
	Other Plumbing Systems													26,568				
	Energy Supply										69,466							
	Commercial Equipment							85,458										
	Other HVAC Systems and Equipment													6,199				
	Vehicular Equipment							0										
	Fire Protection Specialties								0									
	Stair Finishes									1,026								
	Roof Openings										5,437							
	Projections										25,722							
	Other Fire Protection Systems																0	
	Special Construction Systems									0								
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems									0								
Old Redmond School House Community Center Infrastr 8 Building	Electrical Distribution										221,622							
	Site Lighting								113,801									
	Site Development																82,041	
	Roadways								56,575									
	Storm Sewer											81,845						
	Parking Lots																67,410	
	Sanitary Sewer												40,143					
	Fuel Distribution										30,245							
	Water Supply											26,395						
	Pedestrian Paving													38,068				
	Site Communications and Security						16,649											
Parks Operations Center Building 8 Building	Lighting and Branch Wiring			138,664														

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Old Redmond School House Community Center Building	Elevators and Lifts		0
	Partitions		139,178
	Other Plumbing Systems		26,568
	Energy Supply		69,466
	Commercial Equipment		85,458
	Other HVAC Systems and Equipment		6,199
	Vehicular Equipment		0
	Fire Protection Specialties		0
	Stair Finishes		1,026
	Roof Openings		5,437
	Projections		25,722
	Other Fire Protection Systems		0
	Special Construction Systems		0
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
Old Redmond School House Community Center Infrastr	Electrical Distribution		221,622
	Site Lighting		113,801
	Site Development		82,041
	Roadways		56,575
	Storm Sewer		81,845
	Parking Lots		67,410
	Sanitary Sewer		40,143
	Fuel Distribution		30,245
	Water Supply		26,395
	Pedestrian Paving		38,068
	Site Communications and Security		16,649
Parks Operations Center Building 8 Building	Lighting and Branch Wiring		138,664

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Parks Operations Center Building 8 Building	Roof Coverings							185,962										
	Low Voltage Communication Security and Fire Alarm													26,421				
	Exterior Walls														63,210			
	Terminal and Package Units						41,721											
	Floor Finishes							44,136										
	Controls and Instrumentation		40,711															
	Wall Finishes							23,111										
	Other Electrical Systems											41,694						
	HVAC Distribution Systems			9,282														
	Ceiling Finishes								38,919									
	Exterior Windows											27,845						
	Plumbing Fixtures										18,428							
	Sanitary Waste										69,105							
	Cooling Generating Systems			0														
	Exterior Doors												27,457					
	Interior Doors										14,862							
	Domestic Water Distribution											23,908						
	Fire Protection Sprinkler Systems										52,014							
	Fixed Furnishings								27,799									
	Rain Water Drainage										4,607							
	Fittings								5,148									
	Other Equipment							0										
	Elevators and Lifts									0								
	Partitions												12,584					
	Other Plumbing Systems							161										
	Energy Supply										743							
	Commercial Equipment							96										

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
	Roof Coverings		185,962
	Low Voltage Communication Security and Fire Alarm		26,421
	Exterior Walls		63,210
	Terminal and Package Units		41,721
	Floor Finishes		44,136
	Controls and Instrumentation		40,711
	Wall Finishes		23,111
	Other Electrical Systems		41,694
	HVAC Distribution Systems		9,282
	Ceiling Finishes		38,919
	Exterior Windows		27,845
	Plumbing Fixtures		18,428
	Sanitary Waste		69,105
	Cooling Generating Systems		0
	Exterior Doors		27,457
	Interior Doors		14,862
	Domestic Water Distribution		23,908
	Fire Protection Sprinkler Systems		52,014
	Fixed Furnishings		27,799
	Rain Water Drainage		4,607
Parks Operations Center Building 8 Building	Fittings		5,148
	Other Equipment		0
	Elevators and Lifts		0
	Partitions		12,584
	Other Plumbing Systems		161
	Energy Supply		743
	Commercial Equipment		96

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Facility Parks Operations Center Building 8 Building	Other HVAC Systems and Equipment			866														
	Vehicular Equipment							0										
	Fire Protection Specialties								939									
	Stair Finishes									0								
	Roof Openings										1,486							
	Projections										74							
	Special Facilities									61								
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems	0																
Police Garage North Building	Lighting and Branch Wiring																2,133	
	Roof Coverings													2,790				
	Low Voltage Communication Security and Fire Alarm													1,208				
	Terminal and Package Units											0						
	Floor Finishes							100										
	Controls and Instrumentation											0						
	Wall Finishes												57					
	Other Electrical Systems						594											
	Ceiling Finishes																	
	Plumbing Fixtures										78							
	Fittings																666	
	Other Equipment							0										
	Other Plumbing Systems							25										
	Institutional Equipment													0				
	Other HVAC Systems and Equipment													0				
	Fire Protection Specialties																22	
	Other Conveying Systems	0																
Police Garage South Building	Lighting and Branch Wiring																1,706	

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Parks Operations Center Building 8 Building	Other HVAC Systems and Equipment		866
	Vehicular Equipment		0
	Fire Protection Specialties		939
	Stair Finishes		0
	Roof Openings		1,486
	Projections		74
	Special Facilities		61
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
	Lighting and Branch Wiring		2,133
	Roof Coverings		2,790
	Low Voltage Communication Security and Fire Alarm		1,208
	Terminal and Package Units		0
	Floor Finishes		100
	Controls and Instrumentation		0
	Wall Finishes		57
	Other Electrical Systems		594
Police Garage North Building	Ceiling Finishes	103	103
	Plumbing Fixtures		78
	Fittings		666
	Other Equipment		0
	Other Plumbing Systems		25
	Institutional Equipment		0
	Other HVAC Systems and Equipment		0
	Fire Protection Specialties		22
	Other Conveying Systems		0
Police Garage South Building	Lighting and Branch Wiring		1,706

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Police Garage South Building	Roof Coverings													2,232				
	Low Voltage Communication Security and Fire Alarm													966				
	Terminal and Package Units											0						
	Floor Finishes							80										
	Controls and Instrumentation											0						
	Wall Finishes												45					
	Other Electrical Systems						475											
	Ceiling Finishes																	
	Plumbing Fixtures										62							
	Fittings																533	
	Other Plumbing Systems							20										
	Institutional Equipment													0				
	Other HVAC Systems and Equipment							0										
	Fire Protection Specialties																18	
	Other Conveying Systems	0																
Public Safety Building	Lighting and Branch Wiring																1,948,549	
	Roof Coverings							2,104,474										
	Low Voltage Communication Security and Fire Alarm							1,840,120										
	Exterior Walls														941,970			
	Terminal and Package Units						796,977											
	Controls and Instrumentation		862,308															
	Wall Finishes							734,979										
	Other Electrical Systems											894,379						
	HVAC Distribution Systems			808,749														
	Ceiling Finishes								709,537									
	Exterior Windows											449,947						
	Plumbing Fixtures										589,431							

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Police Garage South Building	Roof Coverings		2,232
	Low Voltage Communication Security and Fire Alarm		966
	Terminal and Package Units		0
	Floor Finishes		80
	Controls and Instrumentation		0
	Wall Finishes		45
	Other Electrical Systems		475
	Ceiling Finishes	82	82
	Plumbing Fixtures		62
	Fittings		533
	Other Plumbing Systems		20
	Institutional Equipment		0
	Other HVAC Systems and Equipment		0
	Fire Protection Specialties		18
	Other Conveying Systems		0
Public Safety Building	Lighting and Branch Wiring		1,948,549
	Roof Coverings		2,104,474
	Low Voltage Communication Security and Fire Alarm		1,840,120
	Exterior Walls		941,970
	Terminal and Package Units		796,977
	Controls and Instrumentation		862,308
	Wall Finishes		734,979
	Other Electrical Systems		894,379
	HVAC Distribution Systems		808,749
	Ceiling Finishes		709,537
	Exterior Windows		449,947
	Plumbing Fixtures		589,431

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Public Safety Building	Sanitary Waste			342,355														
	Cooling Generating Systems			31,469														
	Exterior Doors												6,815					
	Interior Doors										352,033							
	Domestic Water Distribution				367,347													
	Fire Protection Sprinkler Systems										585,721							
	Fixed Furnishings								276,421									
	Rain Water Drainage			228,149														
	Fittings								269,879									
	Elevators and Lifts									472,174								
	Other Plumbing Systems			1,967														
	Energy Supply										6,295							
	Institutional Equipment							173,522										
	Commercial Equipment													0				
	Other HVAC Systems and Equipment							3,036										
	Vehicular Equipment							37,152										
	Fire Protection Specialties								0									
	Stair Finishes														66,716			
	Stand-Pipe and Hose Systems									35,757								
	Other Fire Protection Systems	0																
	Special Facilities									0								
	Other Conveying Systems	0																
	Special Controls and Instrumentation											0						
	Special Structures												0					
Sammamish River Business Park Building 1	Lighting and Branch Wiring			292,304														
	Roof Coverings			423,354														
	Low Voltage Communication Security and Fire Alarm			70,153														

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Public Safety Building	Sanitary Waste		342,355
	Cooling Generating Systems		31,469
	Exterior Doors		6,815
	Interior Doors		352,033
	Domestic Water Distribution		367,347
	Fire Protection Sprinkler Systems		585,721
	Fixed Furnishings		276,421
	Rain Water Drainage		228,149
	Fittings		269,879
	Elevators and Lifts		472,174
	Other Plumbing Systems		1,967
	Energy Supply		6,295
	Institutional Equipment		173,522
	Commercial Equipment		0
	Other HVAC Systems and Equipment		3,036
	Vehicular Equipment		37,152
	Fire Protection Specialties		0
	Stair Finishes		66,716
	Stand-Pipe and Hose Systems		35,757
	Other Fire Protection Systems		0
	Special Facilities		0
	Other Conveying Systems		0
	Special Controls and Instrumentation		0
	Special Structures		0
Sammamish River Business Park Building 1	Lighting and Branch Wiring		292,304
	Roof Coverings		423,354
	Low Voltage Communication Security and Fire Alarm		70,153

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Sammamish River Business Park Building 1	Exterior Walls														133,248			
	Terminal and Package Units	96,825																
	Floor Finishes			100,480														
	Controls and Instrumentation		85,818															
	Wall Finishes							48,719										
	Other Electrical Systems	108,597																
	HVAC Distribution Systems			11,740														
	Celling Finishes								41,021									
	Exterior Windows				68,459													
	Plumbing Fixtures			45,307														
	Sanitary Waste			169,902														
	Electrical Service and Distribution			182,691														
	Cooling Generating Systems			0														
	Exterior Doors												57,879					
	Interior Doors										31,328							
	Domestic Water Distribution											50,399						
	Fire Protection Sprinkler Systems	0																
	Fixed Furnishings								97,669									
	Rain Water Drainage	11,771																
	Fittings								10,852									
	Partitions												44,214					
	Other Plumbing Systems							338										
	Energy Supply										1,566							
	Fire Protection Specialties								1,980									
	Roof Openings										12,531							
	Projections										3,133							
	Other Fire Protection Systems	9,493																

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Sammamish River Business Park Building 1	Exterior Walls		133,248
	Terminal and Package Units		96,825
	Floor Finishes		100,480
	Controls and Instrumentation		85,818
	Wall Finishes		48,719
	Other Electrical Systems		108,597
	HVAC Distribution Systems		11,740
	Ceiling Finishes		41,021
	Exterior Windows		68,459
	Plumbing Fixtures		45,307
	Sanitary Waste		169,902
	Electrical Service and Distribution		182,691
	Cooling Generating Systems		0
	Exterior Doors		57,879
	Interior Doors		31,328
	Domestic Water Distribution		50,399
	Fire Protection Sprinkler Systems		0
	Fixed Furnishings		97,669
	Rain Water Drainage		11,771
	Fittings		10,852
	Partitions		44,214
	Other Plumbing Systems		338
	Energy Supply		1,566
	Fire Protection Specialties		1,980
	Roof Openings		12,531
	Projections		3,133
	Other Fire Protection Systems		9,493

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Facility Sammanish River Business Park Building 1	Stair Construction							0										
	Other Conveying Systems	0																
	Lighting and Branch Wiring			292,304														
	Roof Coverings			423,354														
	Low Voltage Communication Security and Fire Alarm			70,153														
	Exterior Walls														133,248			
	Terminal and Package Units	96,825																
	Floor Finishes			100,480														
	Controls and Instrumentation		85,818															
	Wall Finishes							48,719										
	Other Electrical Systems	108,597																
	HVAC Distribution Systems			11,740														
	Ceiling Finishes								136,736									
	Exterior Windows				68,459													
	Plumbing Fixtures			45,307														
	Sanitary Waste			169,902														
	Electrical Service and Distribution			182,691														
	Cooling Generating Systems			0														
	Exterior Doors												57,879					
	Interior Doors										31,328							
	Domestic Water Distribution											50,399						
	Fire Protection Sprinkler Systems	0																
	Fixed Furnishings								97,669									
	Rain Water Drainage	11,771																
	Fittings								10,852									
	Partitions												44,214					
	Other Plumbing Systems							338										
Facility Sammanish River Business Park Building 2																		

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Sammamish River Business Park Building 1	Stair Construction		0
	Other Conveying Systems		0
Sammamish River Business Park Building 2	Lighting and Branch Wiring		292,304
	Roof Coverings		423,354
	Low Voltage Communication Security and Fire Alarm		70,153
	Exterior Walls		133,248
	Terminal and Package Units		96,825
	Floor Finishes		100,480
	Controls and Instrumentation		85,818
	Wall Finishes		48,719
	Other Electrical Systems		108,597
	HVAC Distribution Systems		11,740
	Ceiling Finishes		136,736
	Exterior Windows		68,459
	Plumbing Fixtures		45,307
	Sanitary Waste		169,902
	Electrical Service and Distribution		182,691
	Cooling Generating Systems		0
	Exterior Doors		57,879
	Interior Doors		31,328
	Domestic Water Distribution		50,399
	Fire Protection Sprinkler Systems		0
	Fixed Furnishings		97,669
	Rain Water Drainage		11,771
	Fittings		10,852
	Partitions		44,214
	Other Plumbing Systems		338

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Sammamish River Business Park Building 2	Energy Supply										1,566							
	Fire Protection Specialties								1,980									
	Roof Openings										12,531							
	Projections										3,133							
	Other Fire Protection Systems	9,493																
	Stair Construction							0										
	Other Conveying Systems	0																
Sammamish River Business Park Infrastructure	Electrical Distribution										134,045							
	Site Lighting			77,250														
	Storm Sewer											49,503						
	Landscaping			9,911														
	Parking Lots			76,169														
	Sanitary Sewer												24,280					
	Fuel Distribution										18,293							
	Water Supply											15,965						
	Pedestrian Paving							8,952										
	Site Communications and Security						10,070											
Senior Center Building	Lighting and Branch Wiring								390,236									
	Roof Coverings							472,268										
	Low Voltage Communication Security and Fire Alarm							125,276										
	Exterior Walls														225,397			
	Terminal and Package Units						37,575											
	Floor Finishes							281,640										
	Controls and Instrumentation						96,132											
	Wall Finishes							144,548										
	Other Electrical Systems		8,525															
	HVAC Distribution Systems										220,156							

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Sammamish River Business Park Building 2	Energy Supply		1,566
	Fire Protection Specialties		1,980
	Roof Openings		12,531
	Projections		3,133
	Other Fire Protection Systems		9,493
	Stair Construction		0
	Other Conveying Systems		0
Sammamish River Business Park Infrastructure	Electrical Distribution		134,045
	Site Lighting		77,250
	Storm Sewer		49,503
	Landscaping		9,911
	Parking Lots		76,169
	Sanitary Sewer		24,280
	Fuel Distribution		18,293
	Water Supply		15,965
	Pedestrian Paving		8,952
	Site Communications and Security		10,070
Senior Center Building	Lighting and Branch Wiring		390,236
	Roof Coverings		472,268
	Low Voltage Communication Security and Fire Alarm		125,276
	Exterior Walls		225,397
	Terminal and Package Units		37,575
	Floor Finishes		281,640
	Controls and Instrumentation		96,132
	Wall Finishes		144,548
	Other Electrical Systems		8,525
	HVAC Distribution Systems		220,156

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Senior Center Building	Ceiling Finishes								257,822									
	Exterior Windows											252,954						
	Plumbing Fixtures										145,265							
	Sanitary Waste										76,218							
	Cooling Generating Systems			172,213														
	Exterior Doors												67,464					
	Interior Doors										197,759							
	Domestic Water Distribution											87,792						
	Fire Protection Sprinkler Systems										129,597							
	Heat Generating Systems								112,324									
	Fixed Furnishings								13,799									
	Rain Water Drainage			51,416														
	Fittings								74,514									
	Other Equipment							23,059										
	Partitions												73,427					
	Institutional Equipment							15,831										
	Commercial Equipment							45,085										
	Other HVAC Systems and Equipment			41,195														
	Vehicular Equipment							0										
	Fire Protection Specialties								0									
	Roof Openings										3,187							
	Projections			4,522														
	Other Fire Protection Systems								0									
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems			0														
	Special Controls and Instrumentation											0						
Street Department Modular Building 3 Building	Lighting and Branch Wiring								33,572									

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Senior Center Building	Ceiling Finishes		257,822
	Exterior Windows		252,954
	Plumbing Fixtures		145,265
	Sanitary Waste		76,218
	Cooling Generating Systems		172,213
	Exterior Doors		67,464
	Interior Doors		197,759
	Domestic Water Distribution		87,792
	Fire Protection Sprinkler Systems		129,597
	Heat Generating Systems		112,324
	Fixed Furnishings		13,799
	Rain Water Drainage		51,416
	Fittings		74,514
	Other Equipment		23,059
	Partitions		73,427
	Institutional Equipment		15,831
	Commercial Equipment		45,085
	Other HVAC Systems and Equipment		41,195
	Vehicular Equipment		0
	Fire Protection Specialties		0
	Roof Openings		3,187
	Projections		4,522
	Other Fire Protection Systems		0
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
	Special Controls and Instrumentation		0
Street Department Modular Building 3 Building	Lighting and Branch Wiring		33,572

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Street Department Modular Building 3 Building	Roof Coverings							27,999										
	Low Voltage Communication Security and Fire Alarm													25,640				
	Exterior Walls														28,934			
	Terminal and Package Units		25,615															
	Floor Finishes			15,255														
	Controls and Instrumentation											8,417						
	Wall Finishes							4,132										
	Other Electrical Systems	11,187																
	HVAC Distribution Systems			5,234														
	Ceiling Finishes								30,604									
	Exterior Windows											25,810						
	Plumbing Fixtures										6,846							
	Sanitary Waste										6,846							
	Cooling Generating Systems			1,254														
	Exterior Doors				3,809													
	Interior Doors										11,039							
	Domestic Water Distribution											8,059						
	Fire Protection Sprinkler Systems	0																
	Fixed Furnishings								1,583									
	Rain Water Drainage										4,108							
	Fittings								776									
	Other Equipment							0										
	Partitions												6,229					
	Commercial Equipment							0										
	Fire Protection Specialties								969									
	Roof Openings										0							
	Projections										0							

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Street Department Modular Building 3 Building	Roof Coverings		27,999
	Low Voltage Communication Security and Fire Alarm		25,640
	Exterior Walls		28,934
	Terminal and Package Units		25,615
	Floor Finishes		15,255
	Controls and Instrumentation		8,417
	Wall Finishes		4,132
	Other Electrical Systems		11,187
	HVAC Distribution Systems		5,234
	Ceiling Finishes		30,604
	Exterior Windows		25,810
	Plumbing Fixtures		6,846
	Sanitary Waste		6,846
	Cooling Generating Systems		1,254
	Exterior Doors		3,809
	Interior Doors		11,039
	Domestic Water Distribution		8,059
	Fire Protection Sprinkler Systems		0
	Fixed Furnishings		1,583
	Rain Water Drainage		4,108
	Fittings		776
	Other Equipment		0
	Partitions		6,229
	Commercial Equipment		0
	Fire Protection Specialties		969
	Roof Openings		0
	Projections		0

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Facility Street Department Modular Building 3 Building	Moveable Furnishings (Capital Funded Only)								0									
	Lighting and Branch Wiring								285,668									
Trinity Building	Roof Coverings													368,652				
	Low Voltage Communication Security and Fire Alarm							71,249										
	Exterior Walls														146,150			
	Terminal and Package Units						192,929											
	Floor Finishes							102,049										
	Controls and Instrumentation						87,159											
	Wall Finishes							53,437										
	Other Electrical Systems						108,192											
	HVAC Distribution Systems	11,151																
	Ceiling Finishes								29,995									
	Exterior Windows											64,379						
	Plumbing Fixtures			12,424														
	Sanitary Waste			46,588														
	Electrical Service and Distribution										171,805							
	Cooling Generating Systems			0														
	Exterior Doors												63,484					
	Interior Doors										6,872							
	Domestic Water Distribution											27,639						
	Fire Protection Sprinkler Systems	0																
	Fixed Furnishings								21,425									
	Rain Water Drainage			12,424														
	Fittings								2,381									
	Elevators and Lifts	0																
	Partitions												9,699					
	Other Plumbing Systems							2,783										

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Street Department Modular Building 3 Building	Moveable Furnishings (Capital Funded Only)		0
Trinity Building	Lighting and Branch Wiring		285,668
	Roof Coverings		368,652
	Low Voltage Communication Security and Fire Alarm		71,249
	Exterior Walls		146,150
	Terminal and Package Units		192,929
	Floor Finishes		102,049
	Controls and Instrumentation		87,159
	Wall Finishes		53,437
	Other Electrical Systems		108,192
	HVAC Distribution Systems		11,151
	Ceiling Finishes		29,995
	Exterior Windows		64,379
	Plumbing Fixtures		12,424
	Sanitary Waste		46,588
	Electrical Service and Distribution		171,805
	Cooling Generating Systems		0
	Exterior Doors		63,484
	Interior Doors		6,872
	Domestic Water Distribution		27,639
	Fire Protection Sprinkler Systems		0
	Fixed Furnishings		21,425
	Rain Water Drainage		12,424
	Fittings		2,381
	Elevators and Lifts		0
	Partitions		9,699
	Other Plumbing Systems		2,783

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear																
		2013	2014	2015	2016	2017	2018	2019	2021	2022	2023	2024	2025	2027	2028	2029	2030	2031
Trinity Building	Energy Supply										1,718							
	Institutional Equipment							17,812										
	Other HVAC Systems and Equipment							2,783										
	Vehicular Equipment							103,803										
	Fire Protection Specialties								2,171									
	Stair Finishes					0												
	Roof Openings										13,745							
	Projections										516							
	Moveable Furnishings (Capital Funded Only)								0									
	Other Conveying Systems									0								
Trinity Building Infrastructure	Electrical Distribution										80,427							
	Site Lighting								41,299									
	Roadways			9,217														
	Landscaping										15,295							
	Parking Lots								46,538									
	Sanitary Sewer												14,568					
	Fuel Distribution										10,976							
	Water Supply											9,579						
	Pedestrian Paving													921				
Grand Total		1,230,057	3,099,667	9,161,149	1,801,065	1,065,642	3,329,929	12,812,576	13,528,614	514,498	12,068,398	5,846,618	2,392,201	2,903,583	2,831,731	1,103,272	3,995,713	51,508

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

Renewal Budget By Facility By Subsystem by Year

Facility	Subsystem	BudgetYear	
		2032	Grand Total
Trinity Building	Energy Supply		1,718
	Institutional Equipment		17,812
	Other HVAC Systems and Equipment		2,783
	Vehicular Equipment		103,803
	Fire Protection Specialties		2,171
	Stair Finishes		0
	Roof Openings		13,745
	Projections		516
	Moveable Furnishings (Capital Funded Only)		0
	Other Conveying Systems		0
Trinity Building Infrastructure	Electrical Distribution		80,427
	Site Lighting		41,299
	Roadways		9,217
	Landscaping		15,295
	Parking Lots		46,538
	Sanitary Sewer		14,568
	Fuel Distribution		10,976
	Water Supply		9,579
	Pedestrian Paving		921
Grand Total		132,195	77,868,414

Sum of Renewal Budget Present Value broken down by BudgetYear vs. Facility and Subsystem. The data is filtered on SubsystemType, which keeps Building and Infrastructure. The view is filtered on BudgetYear, Facility and Subsystem. The BudgetYear filter has multiple members selected. The Facility filter keeps 40 of 40 members. The Subsystem filter keeps 67 of 67 members.

6.0. City of Redmond FCA 2013**Field Survey Highlights**

This field survey highlights section includes: 1) Major issues and opportunities, and 2) Additional work to extend the usefulness of the FCA process; both at selected facilities, and from an overall portfolio perspective. In the broader context additional or enhanced FCA work may be better characterized as "Asset Preservation".

Facility	Major Issues	Big Opportunities	Additional FCA Work
OVERALL			
Muni-campus	No master plan	Sustainability master plan for the Muni-campus.	Draft sustainability plan; incorporate into master plan.
Parks Department	Master plan under development	Use this FCA to inform the Parks master plan.	Already underway.
M&O Department	Several permanent and powered/heater buildings at MOC not surveyed	Extend life by including in FCA program.	Survey additional buildings at MOC; about 3 or 4 permanent buildings/structures .
FCA Prioritization	2013 FCA Report "ODs" and "PRs" not prioritized	Prioritize to most cost-effectively maintain function of the City's most important facilities and systems.	Develop criteria, prioritize ODs and PRs, issue 2013 FCA Report supplement.
Routine Maintenance	Usually reactive	Use CMMS to become proactive.	Draft CMMS Plan; inventory major equipment; implement Plan.
Major Maintenance	Usually reactive	Use FCA database to become proactive.	Deploy FCA Database and update annually.
Landscape Maintenance	Overgrown/overhanging trees complicating roof drainage and shortening roof lives.	Replace with drought-tolerant, low-height trees & shrubs.	Landscape Assessment

FACILITY CONDITION ASSESSMENT REPORT

Facility	Major Issues	Big Opportunities	Additional FCA Work
Housekeeping	Chronic rat infestations at some facilities suggest housekeeping issues.	Consider IPM approach to pest management.	Conduct IPM Assessment
Energy	Widely varying performance (ranging from poor to good)	Conduct energy audits and PSE-incentivized ECM retrofits.	Energy Audits; refer to recently completed IR survey for near term envelope repairs.
Thermal Envelopes	Variety of visible and non-visible damage and sub-par weather and thermal envelopes	Conduct infrared thermography (IR) for all facilities and repair or upgrade as appropriate.	Expand IR survey from Muni-campus buildings to all City buildings.
Electrical Panels	Older panels outdated; past useful life; some panels/circuits may be at max capacity and/or overloaded.	Conduct IR for all electrical panels.	Already completed as a 2013 FCA additional service – see report for action items.
Water	Unknown performance	Conduct water audits and water & sewer utility-incentivized retrofits. Sites on septic may benefit most from water efficient fixtures.	Water Audits
MEP Systems	Many mid-life buildings have MEP systems at end of life	Upgrade to more comfortable, more efficient equipment & systems. Multi-facility bid packages. Leverage new Maintenance staff HVAC expertise.	MEP Renewal Plan

FACILITY CONDITION ASSESSMENT REPORT

Facility	Major Issues	Big Opportunities	Additional FCA Work
Low Voltage Systems	Many facilities have little or no security system; some have no fire alarm.	Opportunity to improve safety and security with new low voltage systems.	Safety & Security Cost/Benefit Analysis
Thermal Comfort	Discomfort complaint at many facilities	Survey occupants and plan upgrades.	Thermal Comfort Surveys
Indoor Air Quality	Unknown performance	Conduct IAQ survey and target upgrades.	IAQ Assessment
Program	Low utilization of some facilities	Conduct program audit; sell/lease low-use assets	Program Assessment
Owner Project Requirements	No OPR for new or major capital projects. Widely varying system types and quality between facilities.	Develop master OPR and related master specs	Draft Master OPR
ADA	Some older facilities are not compliant	ADA compliance improves customer and staff access.	Conduct ADA Study
Fire Protection	Some older facilities do not have fire sprinkler	Install fire sprinkler to reduce risk/increase safety.	Prioritize.
FIRE			
FS-11 Built 1981; renovated 2000. Fair condition; Score 3.1 CRV = \$11.2M	Minor structural and water damage needs immediate attention. Finishes and HVAC systems nearing end of life.	Upgrade to more comfortable and energy efficiency HVAC, and more durable, low maintenance finishes.	Full energy audit and IR survey.
FS-12 Built 1980;	Located outside City of Redmond. Roof and	Upgrade roof insulation in	Full energy audit and IR survey.

FACILITY CONDITION ASSESSMENT REPORT

Facility	Major Issues	Big Opportunities	Additional FCA Work
renovated 1999. Outside City of Redmond. Fair condition; Score 3.1 CRV = \$3.5M	doors are failing; immediate attention needed. Inadequate electrical receptacles for app bay.	conjunction with reroof. Upgrade HVAC and plumbing to better meet program.	Study relocation of FS-12 functions to within Redmond City Limits.
FS-13 Built 1973; renovated 2009. Fair condition; Score 3.1 CRV = \$3.2M	Water ponding on new roof. Some MEP systems obsolete and/or near end of life. Sanitary lift station may be failing.	Upgrade HVAC and lighting for comfort and efficiency improvements.	Full energy audit and IR survey. Investigate sanitary lift station performance ASAP.
FS-14 Built 1991; renovated 2009. Fair to good condition; Score 2.4 CRV = \$4.7M	Remedial envelope work remains incomplete; removed insulation must be replaced. Electrical circuits lacking and tripping, especially in Ap Bay.	Upgrade HVAC and lighting for comfort and efficiency improvements.	Full energy audit and IR survey. Verify performance of on-site septic system.
FS-16 Built 1996; renovated 2006. Fair to good condition; Score 2.5 CRV = \$4.9M	No HVAC service for some spaces. HVAC equipment nearing end of life, with some code violations. Inadequate electrical receptacles, circuits and lighting in some spaces.	Upgrade HVAC and lighting for comfort and efficiency improvements.	Abbreviated energy audit and IR survey for this recently renovated fire station.
FS-17 Built 2012. Underutilized. Good condition; Score 1.2 CRV = \$9.5M	Roof leaks. Damaged wood door sills. Pump station controls failed. No access to low roof. Dangerous access to high roof equipment. Incompatible DDC software does not allow communication with EMCS.	Best score at 1.2. Best FCI at 2%. Opportunity to build-out this new fire station, and close-down an older station? Harvest rain water to fill cistern in lieu of running well pump.	Program study to better utilize this new station. Abbreviated IR survey for this nearly new fire station to ensure thermal envelope integrity.
FS-18 Built 2002 by King County;	Incorrect name (KC #34) on this relatively new fire station.	Third best score at 1.9. Add ceiling and/or	Simplified energy audit and IR survey for this relatively

FACILITY CONDITION ASSESSMENT REPORT

Facility	Major Issues	Big Opportunities	Additional FCA Work
turned-over to City of Redmond. Good condition; Score 1.9 CRV = \$3.8M	Domestic hot water system is under capacity for staffing. Roof drain plastic "rain chains" are nearly all broken.	ceiling fans to Ap Bay to improve comfort and reduce energy use. Add DDC and connect to EMCS.	new fire station.
Old Medic One (at FS-11) Built 1985 (office); Garage addition 2001. Fair condition; Score 3.1 CRV = \$0.6M	Older part (1985 office area) is heavily worn needing renovation.	Little used building in good structural condition could be renovated and re-purposed.	Simplified energy audit and IR survey for this small building.
Shop (at FS-16) Built 1996; renovated 2006. Serves other Fire Departments (generates revenue). Fair to good condition; Score 2.4 CRV = \$2.0M	Code violation with no roof insulation. No roof access to maintain rooftop equipment. Inadequate shop bay lighting and receptacles.	Upgrade from electric to gas heat, and add DDC controls. Upgrade power and lighting systems; add security system.	Simplified energy audit and IR survey for this shop building.
PARKS			
Hartman Park Pool Built 1970 by KC; turned-over to Redmond in 2010. Should be closed, assessed and demolished or renovated as appropriate. Fair condition; Score 3.0	Third lowest FCI at 23%. Third highest OD cost at \$2.9M. Failing underground ductwork resulting floor and structure instability. Many systems at or near end of life. No fire sprinkler. Pavement is failing. Site lighting at end of life.	Opportunity to demolish and replace with an all new facility located in downtown Redmond. However, basic structure is "heavy duty", if not damaged from settling and/or seismic activity. If renovated,	Immediate full structural assessment. Assess program relative to Parks Master Plan.

FACILITY CONDITION ASSESSMENT REPORT

Facility	Major Issues	Big Opportunities	Additional FCA Work
CRV = \$6.8M		opportunity to fully insulate and upgrade to energy efficient HVAC, lighting, and pool systems.	
Community Center Built 1922; renovated 1980. Leased from LWSD to Redmond. Fair condition; Score 3.0 CRV =	Second highest OD cost at \$2.8M. Outdated mechanical system which does not support current year-round programming; no A/C for most spaces.	With solid structure, opportunity to fully renovate and replace mechanical systems for high efficiency and improved comfort. Recently installed chiller can cool many more spaces with new air-side equipment.	Assess program relative to Parks Master Plan. Full energy audit with IR survey.
Senior Center Built 1990; not renovated. Fair condition; Score 3.0 CRV = \$9.7M	Despite recent work, chronic weather & thermal envelope issues persist, including walls & roofs – see Wetherholt and IR Reports.	MEP systems are nearing end of life; opportunity to upgrade to high-efficiency system, for example ground-source heat pump (GSHP). Make use of greenhouse.	Full energy audit. Correlate Wetherholt and IR reports.
Teen Center Built 1952 as City Hall; renovated 1980 for YMCA; purchase and partial seismic retrofit by City in 2000 Poor to fair	Third lowest condition score at 3.4. Seismic risk at hose tower. "The oldest, darkest, grimmest place for Teens to go in Redmond". Un-insulated envelope with single glazed windows. Piece-meal and aging MEP systems; some non-code compliant.	Demolish hose tower, or seismically retrofit and incorporate unique program. Despite appearances and outdated systems, most	Near-term structural assessment of tower. Assess program relative to Parks Master Plan. Abbreviated energy audit and IR survey for this relatively low-use facility.

FACILITY CONDITION ASSESSMENT REPORT

Facility	Major Issues	Big Opportunities	Additional FCA Work
condition; Score 3.4 CRV = \$4.4M		the structure is "built like a tank" – good candidate for major renovation.	
Park Ops Built 1970; addition & renovation 1998 Fair condition; Score 3.0 CRV = \$2.7M	Wood shop and mezzanine office ventilation not code compliant. Condensing units in awkward locations. MEP systems approaching end of life with numerous comfort complaints.	High-bay shop is under-utilized. Upgrade MEP systems for improved comfort and efficiency. Harvest rain water for pressure wash system.	Full energy audit and IR survey. Indoor air quality study for shop and office areas. Program study for better use of high-bay shop space.
MOC			
Central Stores Warehouse Bldg 5 Built 1988; not renovated. Fair condition; Score 3.1 CRV = \$1.2M	No overflow roof drains. Metal siding damaged from vehicular impact. Dangerous roof access. Non-code compliant stairs. No fire sprinkler.	Bring up to current code including ventilation for occupied spaces.	Abbreviated energy audit and limited IR survey (of fully heated areas). Life/safety study.
Decant Facility Bldg 11 Built 1998; addition 2013. Fair condition; Score 3.1 CRV = \$1.7M	Yard hydrants nearing end of life. No fire sprinkler.	Use existing wash rack in lieu of new wash rack at Park Ops Bldg 8. Upgrade lighting to LED.	None apparent.
MOC Bldg 1 Built 1977; renovated 1998. Fair condition; Score 3.2 CRV = \$3.8M	Piece-meal modifications with unclear code compliance, thermal comfort, and indoor air quality complaints. Most MEP systems at or near end of life. No fire sprinkler.	Upgrade MEP systems for improved comfort and efficiency. Harvest rain water for pressure wash system.	Full energy audit and IR survey. Life/safety code study.
Street Dept Modular Bldg 3	Non-compliance deck. Finishes and HVAC RTU nearing end of life. No	Upgrade RTU to high efficiency unit upon	Abbreviated energy audit and IR survey. Confirm

FACILITY CONDITION ASSESSMENT REPORT

Facility	Major Issues	Big Opportunities	Additional FCA Work
Built 1998; renovated 2011 Fair condition; Score 3.1 CRV = \$0.8M	fire sprinkler.	replacement.	foundation integrity.
Trinity Built 1981; renovated 1997; purchased by City in 2008 Fair condition; Score 3.1 CRV = \$6.3M	Not rated for change of occupancy from low hazard factory to vehicle storage/repair. No elevator to 2 nd floor (ADA issue). Parking lot failing. No fire sprinkler.	Install permanent sun shades on glazed south façade. Insulate high-bay shop/warehouse space and provide proper HVAC. Fully renovate to replace functions at MOC Bldg 1.	Near-term seismic assessment of tilt-up wall structure. Code study for change of use/occupancy. Abbreviated energy audit and IR survey of this currently low-use Bldg.
MUNI CAMPUS			
City Hall Built under DBOM contract in 2005; purchased by City in 2013. Good condition; Score 1.7 CRV = \$60M	Thermal envelope issues – see IR Report. Surprising number of issues for a relatively new facility; for example improper boiler flue exhaust.	Second best score at 1.7. Fourth best FCI at 5%. Surprising number of basic opportunities to improve performance, such as high efficiency boilers, "free cooling", and emergency egress lighting.	Back-check WR action items. Investigate IR Report thermal bridging issues; develop action plan to address.
Parking Garage Built 2005 under DBOM contract; purchased by City in 2013. Fair condition; Score 2.6 CRV = \$8.9M	Possible structural damage. Non-compliant shop and/or storage spaces. Paint is fading, chipped, & damaged. Fire sprinkler is corroding. Light fixtures are yellowed.	Enclose SE stair to reduce weather expose and chronic damage. Install DDC controls. Upgrade to LED lighting. Install EV charging stations.	Fully investigate reports of structural damage/slab cracking.

FACILITY CONDITION ASSESSMENT REPORT

Facility	Major Issues	Big Opportunities	Additional FCA Work
Public Safety Bldg Built 1990. Fair condition; Score 2.7 CRV = \$54M	Highest OD cost at \$3.7M. Chronic south façade water intrusion. Basement flooding. Poor high roof guttering. Many outdated and under-performing systems.	Upgrade thermal envelope and MEP systems in conjunction with major renovation and/or system renewals.	Full energy audit. Comprehensive weather envelope investigation. Follow-up on IR Report. Flooding analysis.
Police Garage North Built 2008. Good condition; Score 2.0 CRV = \$0.1M	No roof access. No floor drain for trash storage enclosure.	Third best FCI at 2.2%. Add deep sink, upgrade electrical service, and add storage racks & lockers.	Abbreviated energy audit (check EUI & ECI and lighting).
Police Garage South Built 2008. Good condition; Score 2.0 CRV = \$0.1M	No roof access.	Second best FCI at 2.1%. Add vehicle exhaust, upgrade electrical service.	Abbreviated energy audit (check EUI & ECI and lighting).
OTHER			
SRBP 1 Built 1980. Purchased by City about 2000. Poor to fair condition; Score 3.5 CRV = 5.7M	Second lowest score at 3.50. Second lowest FCI at 27.0%. Single pane windows. Aging roof with marginal drainage. Unpermitted stairs. No roof access. Outdated and failing MEP systems.	Sell to those who can better renovate and utilize this awkward property. Alternately renovate and bring-up to current code.	Utilization study and/or pre-sale market valuation.
SRBP 2 Built 1980. Purchased by City about 2000. Poor to fair condition; Score 3.5 CRV = \$5.7M	Lowest score at 3.51. Lowest FCI at 27.1%. Similar to SRBP 1, but with more severe roof drainage issues, and more serious code violations.	Sell to those who can better renovate and utilize this awkward property. Alternately renovate and bring-up to current code.	Utilization study and/or pre-sale market valuation.

Notes:

1. CRV = Current replacement value.
2. FCI = Facility condition index = BMAR / CRV (backlog of maintenance & repair/CRV).
3. OD = Observed deficiency (observed in the field by survey team).
4. DBOM = Design, build, own, & maintain.
5. IR = Infrared.
6. Score: 1 = Excellent, 2 = Good, 3 = Fair, 4 = Poor, 5 = Failed.
7. Energy Audit is per ASHRAE standards for commercial building energy audits; "abbreviated" is Level 2, "full" is Level 3. Prior to any site visits for Level 2 or 3, a Level 1 "audit" should be performed to collect and review at least three years of historical energy use data (much of this has already been provided by the City to MENG Analysis).

6.1 Infrared Electrical

Infrared Thermographic Inspection
Of
Selected Electro-Mechanical Equipment

Provided For
City of Redmond Buildings
10/28/2013

Summary:

An Infrared Electrical / Mechanical inspection was performed on 10/28/2013 for City of Redmond Buildings

All of the items inspected are listed in the inventory section of this Thermal Trend report. Any anomalies that were found at the time of the inspection (if any) are documented in the Problem Detail section of this report with their appropriate associated data, i.e. Thermograms, Photos, comments, measurements, etc.. They are also listed in the Prioritized list of problems section, in their order of priority based on the components temperature rise, as compared to a similar reference component of equal type, loading, and environmental influences, at the time of the inspection.

The final decision as to the repair priority of any and all problems in this report rests on the owners, management, and/or facilities engineering teams. Colbert Infrared Services, Inc. and the IR Thermographer assumes no liability directly or indirectly as a result of this inspection or the decisions made as to establishing the priority and timeline of repair decisions made by the owners, management, and/or facilities engineering teams. This inspection is not a guarantee or warranty of any kind.

Executive Overview - for Thermal Items:

Total number of locations in the database:	116
Total number of pieces of equipment in the database:	247
Total number of Items (open and closed covering all inspections) in the database	
Acute Items:	7
Chronic Items:	0
Overall total of all acute and chronic:	7
Current status of Items, acute and chronic	
Total closed Items (covering all inspections):	0
Current total open Items (tested or not tested at the time of this inspection):	7

I hereby certify that the above project was inspected by myself or under my direction and that the enclosed data is the direct result of this inspection.

Fred Colbert

President CIS, Inc.

Certified Level III Infrared Thermographer / Instructor: The Professional Thermographers Association



Professional
Thermographers
Association

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Thermal Item List - Prioritized by Temperature Rise

Site: City of Redmond Buildings

Inspection # 1

Start Date:

Site: City of Redmond Buildings Insp. No. 1 Start Date: Thermal Item # 2 At: Oct 28 2013 1:46PM

Indirect Measurement: No Severity: 3 Repair Status: Problem Status: OPEN 

Route: Sammamish River Business Park Building 1 (NE 154th Ave) \ Suite 15517

Location/Equipment: Panel - A-6

Barcode: 108VCS Asset ID:

Voltage: 120 Rated Load: Wind Speed: 0 Ambient:70.0

IR/Image GUID File : d47d2f05-4347-4dc8-83cb-0cde6d42401f.idn

	Temp	Phase	Load	% of
Component:	140.0			@N/A
Reference:	99.0			@N/A
Delta T:	41.0			@N/A

Comment: Stripped lug on main neutral wire on terminal strip

Site: City of Redmond Buildings Insp. No. 1 Start Date: Thermal Item # 7 At: Oct 30 2013 7:12AM

Indirect Measurement: No Severity: 3 Repair Status: Problem Status: OPEN 

Route: MOC Center (18080 NE 76th Street) \ Building #2 (Storage) \ Sewer Storage

Location/Equipment: Panel - Unmarked

Barcode: 108ZFW Asset ID:

Voltage: 120 Rated Load: 200 Wind Speed: 0 Ambient:51.0

IR/Image GUID File : 9a2dc980-2f7d-4e8b-bb79-9ad3850bc897.idn

	Temp	Phase	Load	% of
Component:	101.0		80Amps	@40.0%
Reference:	77.0	B Phase	93Amps	@46.5%
Delta T:	24.0			@40.0%

Comment: A phase line side wire lug connection on incoming main lines

Site: City of Redmond Buildings Insp. No. 1 Start Date: Thermal Item # 1 At: Oct 28 2013 8:33AM

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: OPEN 

Route: Public Safety Building (8701 160th Ave NE) \ 01 Floor \ 164 Mechanical Room

Location/Equipment: Panel - 1XA4

Barcode: 108VFH Asset ID:

Voltage: 480 Rated Load: 100 Wind Speed: 0 Ambient:70.0

IR/Image GUID File : 4bacbb65-4ebb-4533-b599-3a38cf8e9552.idn

	Temp	Phase	Load	% of
Component:	103.0	B Phase		@N/A
Reference:	82.0			@N/A
Delta T:	21.0			@N/A

Comment: B phase load side wire lug connection on 100amp breaker "Panel 1XB2 (rm 164) via XRMR"

Site: City of Redmond Buildings Insp. No. 1 Start Date: Thermal Item # 4 At: Oct 29 2013 8:53AM

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: OPEN 

Route: Old Redmond Schoolhouse Community Center (16600 NE 80th St) \ 01 Floor \ Auditorium \ Stage

Location/Equipment: Panel - Unmarked

Barcode: 108ZJK Asset ID:

Voltage: 120 Rated Load: 20 Wind Speed: 0 Ambient:70.0

IR/Image GUID File : 58f61881-38b9-4696-bd41-5f5ea13de975.idn

	Temp	Phase	Load	% of
Component:	85.0	N/A	6.6Amps	@33.0%
Reference:	68.0	N/A	8.1Amps	@40.5%
Delta T:	17.0			@33.0%

Comment: Line side bolt to bus connection on Breaker 4A "House Balcony"

Thermal Item List - Prioritized by Temperature Rise

Site: City of Redmond Buildings

Inspection # 1

Start Date:

Site: City of Redmond Buildings Insp. No. 1 Start Date: Thermal Item # 5 At: Oct 29 2013 12:33PM

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: OPEN 

Route: Redmond Pool (17535 NE 104th Street) \ Pool Electrical Room

Location/Equipment: Main Switchboard

Barcode: 108ZHA Asset ID:

Voltage: 480 Rated Load: 100 Wind Speed: 0 Ambient:85.0

IR/Image GUID File : 6e359a0b-c42c-4d1c-820b-eec88a4597a8.idn

	Temp	Phase	Load	% of
Component:	109.0	C Phase	27Amps	@27.0%
Reference:	95.0	A Phase	27Amps	@27.0%
Delta T:	14.0			@27.0%

Comment: C phase load side wire lug connection an breaker "Panel BR"

Site: City of Redmond Buildings Insp. No. 1 Start Date: Thermal Item # 6 At: Oct 29 2013 12:33PM

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: OPEN 

Route: Redmond Pool (17535 NE 104th Street) \ Pool Electrical Room

Location/Equipment: Main Switchboard

Barcode: 108ZHA Asset ID:

Voltage: 480 Rated Load: 100 Wind Speed: 0 Ambient:85.0

IR/Image GUID File : 62a3e164-7aed-4975-954d-dbb10c99df3f.idn

	Temp	Phase	Load	% of
Component:	105.0	A Phase	40Amps	@40.0%
Reference:	95.0	Center phase	40Amps	@40.0%
Delta T:	10.0			@40.0%

Comment: A phase load side wire lug connection on Breaker "Pump"

Site: City of Redmond Buildings Insp. No. 1 Start Date: Thermal Item # 3 At: Oct 28 2013 2:01PM

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: OPEN 

Route: Sammamish River Business Park Building 1 (NE 154th Ave) \ Suite 15503 \ Kitchenette

Location/Equipment: Panel - A-1

Barcode: 108ZKD Asset ID:

Voltage: 120 Rated Load: Wind Speed: 0 Ambient:70.0

IR/Image GUID File : 1c0618dc-7c6d-4538-bdd3-7c806d17107b.idn

	Temp	Phase	Load	% of
Component:	86.0	B Phase		@N/A
Reference:	76.0	A Phase		@N/A
Delta T:	10.0			@N/A

Comment: B phase line side wire lug connection on incoming lines

Thermal Items: Detail Report

Site: City of Redmond Buildings Insp. No. 1 Start Date: 10/28/2013 Thermal Item # 1 At: 10/28/2013 08:33

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: **OPEN** 

Route: Public Safety Building (8701 160th Ave NE) \ 01 Floor \ 164
Mechanical Room

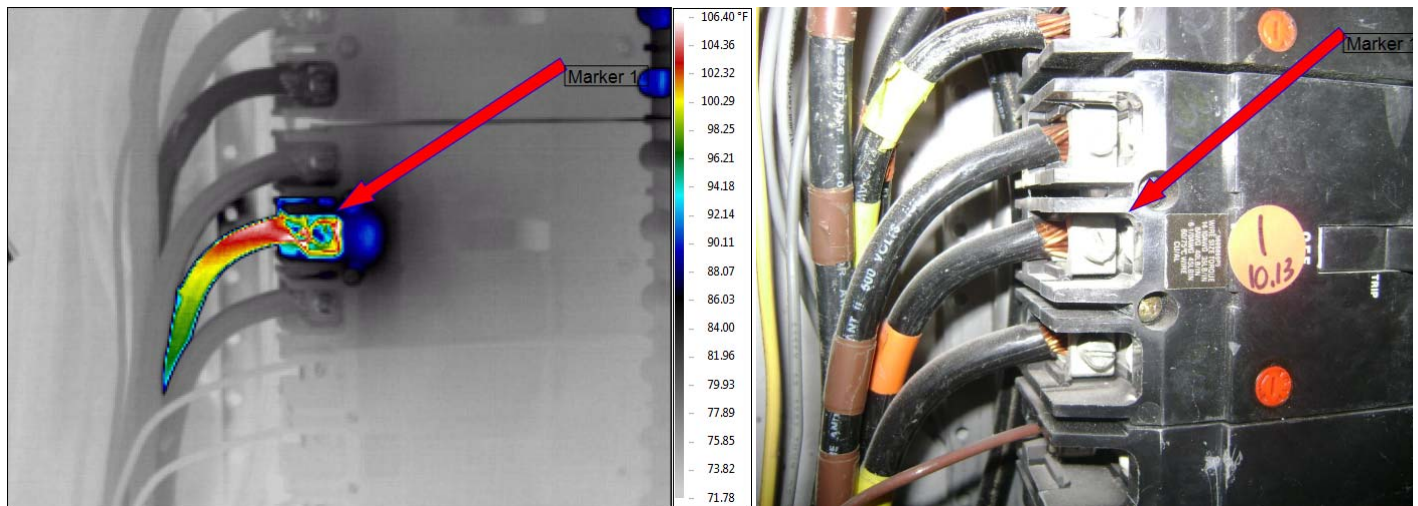
Location/Equipment: Panel - 1XA4

Barcode: 108VFH Asset ID:

Voltage: 480 Rated Load: 100 Wind Speed: 0 Ambient: 70.0

IR/Image GUID File : 4bacbb65-4ebb-4533-b599-3a38cf8e9552.idn

	Temp	Phase	Load	% of
Component:	103.0	B Phase		@N/A
Reference:	82.0			@N/A
Delta T:	21.0			@N/A



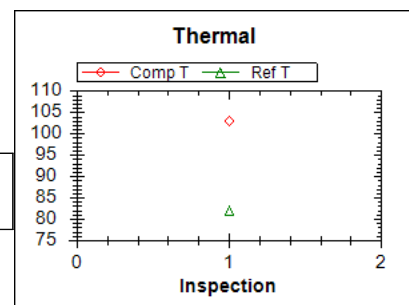
Comment: B phase load side wire lug connection on 100amp breaker "Panel 1XB2 (rm 164) via XRMR"

Probable Cause: Loose or corroded connection

Recommendation: Clean, inspect, and repair or replace as necessary

Historical Sub Report

Insp.#	Prob.#	Date	Comp Temp	Ref. Temp	Temp Rise	Sev. Code	Load	% Load	Wind Spd.	Amb. Temp
1	1	10/28/2013	103.0	82.0	21.0	4		N/A		70.0



Problem Status:	☐ Not repaired	☐ Repair made, but needs IR recheck	☐ Closed
Repair assigned to:	Repair target date:		
Repair assigned by:	Date:		
Repaired by:	Date:		
Type of defect found:			
Corrective action taken:			

Thermal Items: Detail Report

Site: City of Redmond Buildings Insp. No. 1 Start Date: 10/28/2013 Thermal Item # 2 At: 10/28/2013 13:46

Indirect Measurement: No Severity: 3 Repair Status: Problem Status: **OPEN** 

Route: Sammamish River Business Park Building 1 (NE 154th Ave) \ Suite 15517

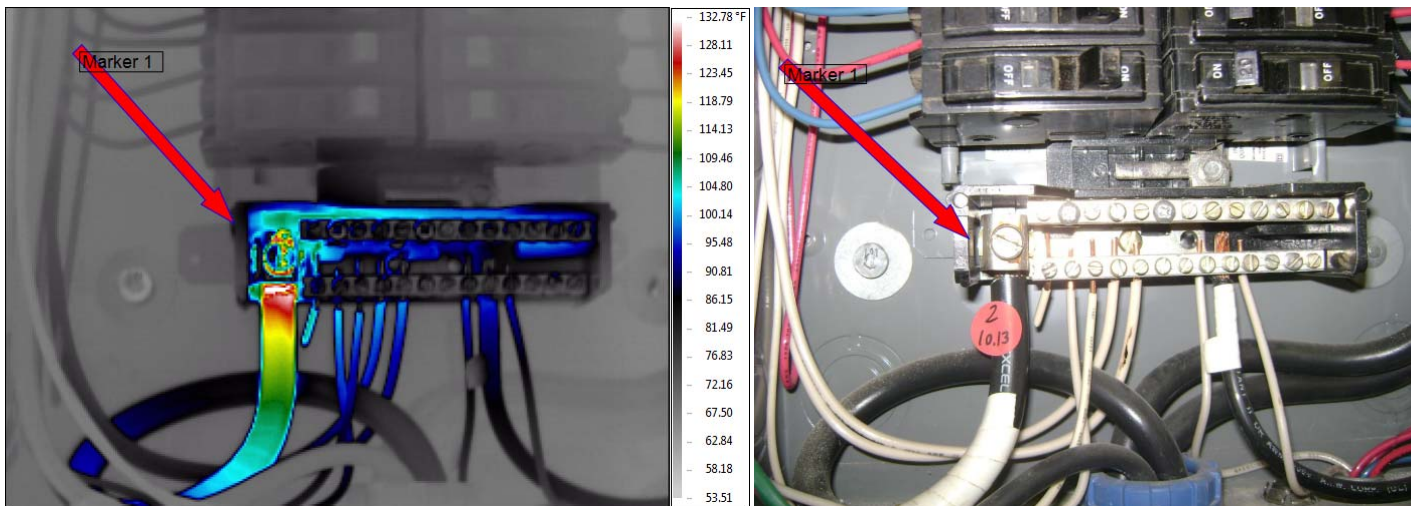
Location/Equipment: Panel - A-6

Barcode: 108VCS Asset ID:

Voltage: 120 Rated Load: Wind Speed: 0 Ambient: 70.0

IR/Image GUID File : d47d2f05-4347-4dc8-83cb-0cde6d42401f.idn

Component:	Temp	Phase	Load	% of
Reference:	140.0			@N/A
Delta T:	99.0			@N/A
	41.0			@N/A



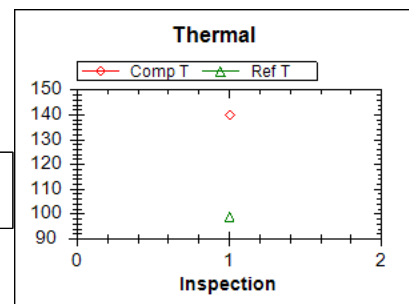
Comment: Stripped lug on main neutral wire on terminal strip

Probable Cause: Loose or corroded connection

Recommendation: Clean, inspect, and repair or replace as necessary

Historical Sub Report

Insp.#	Prob.#	Date	Comp Temp	Ref. Temp	Temp Rise	Sev. Code	Load	% Load	Wind Spd.	Amb. Temp
1	2	10/28/2013	140.0	99.0	41.0	3	N/A			70.0



Problem Status:	☐ Not repaired	☐ Repair made, but needs IR recheck	☐ Closed
Repair assigned to:	Repair target date:		
Repair assigned by:	Date:		
Repaired by:	Date:		
Type of defect found:			
Corrective action taken:			

Thermal Items: Detail Report

Site: City of Redmond Buildings Insp. No. 1 Start Date: 10/28/2013 Thermal Item # 3 At: 10/28/2013 14:01

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: **OPEN** 

Route: Sammamish River Business Park Building 1 (NE 154th Ave) \

Suite 15503 \ Kitchenette

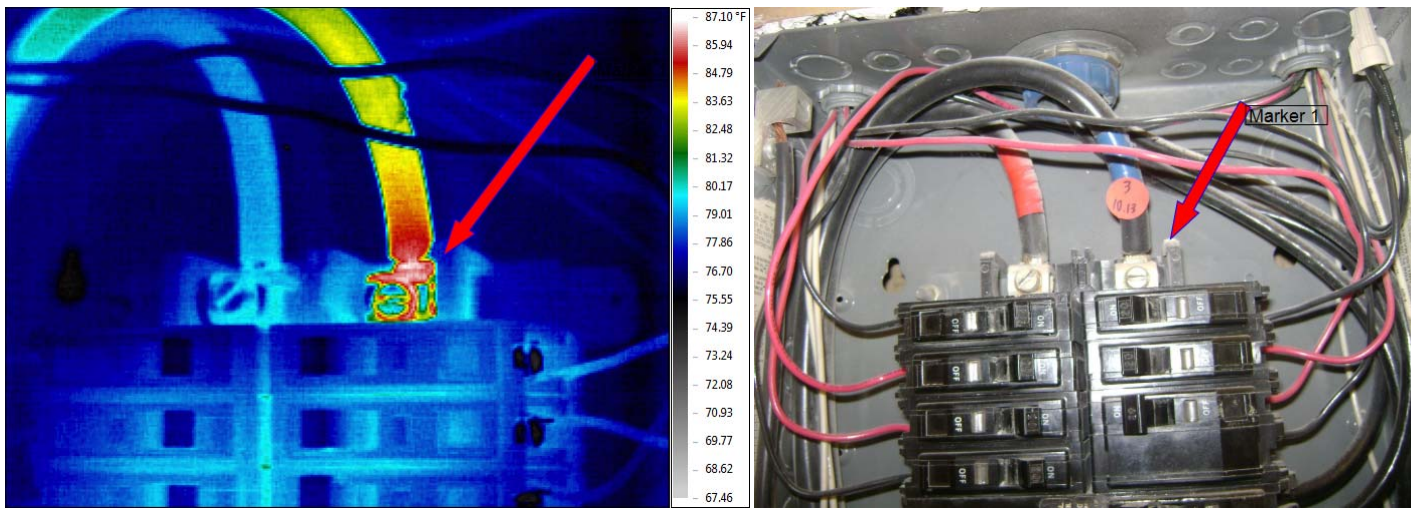
Location/Equipment: Panel - A-1

Barcode: 108ZKD Asset ID:

Voltage: 120 Rated Load: Wind Speed: 0 Ambient: 70.0

IR/Image GUID File : 1c0618dc-7c6d-4538-bdd3-7c806d17107b.idn

	Temp	Phase	Load	% of
Component:	86.0	B Phase		@N/A
Reference:	76.0	A Phase		@N/A
Delta T:	10.0			@N/A



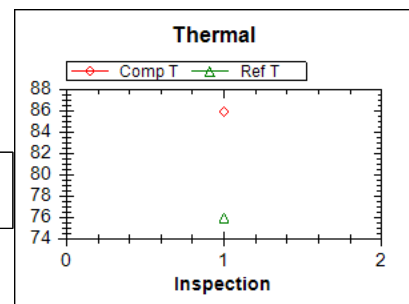
Comment: B phase line side wire lug connection on incoming lines

Probable Cause: Loose or corroded connection

Recommendation: Clean, inspect, and repair or replace as necessary

Historical Sub Report

Insp.#	Prob.#	Date	Comp Temp	Ref. Temp	Temp Rise	Sev. Code	Load	% Load	Wind Spd.	Amb. Temp
1	3	10/28/2013	86.0	76.0	10.0	4		N/A		70.0



Problem Status:	☐ Not repaired	☐ Repair made, but needs IR recheck	☐ Closed
Repair assigned to:	Repair target date:		
Repair assigned by:	Date:		
Repaired by:	Date:		
Type of defect found:			
Corrective action taken:			

Thermal Items: Detail Report

Site: City of Redmond Buildings Insp. No. 1 Start Date: 10/28/2013 Thermal Item # 4 At: 10/29/2013 08:53

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: **OPEN** 

Route: Old Redmond Schoolhouse Community Center (16600 NE 80th St) \ 01 Floor \ Auditorium \ Stage

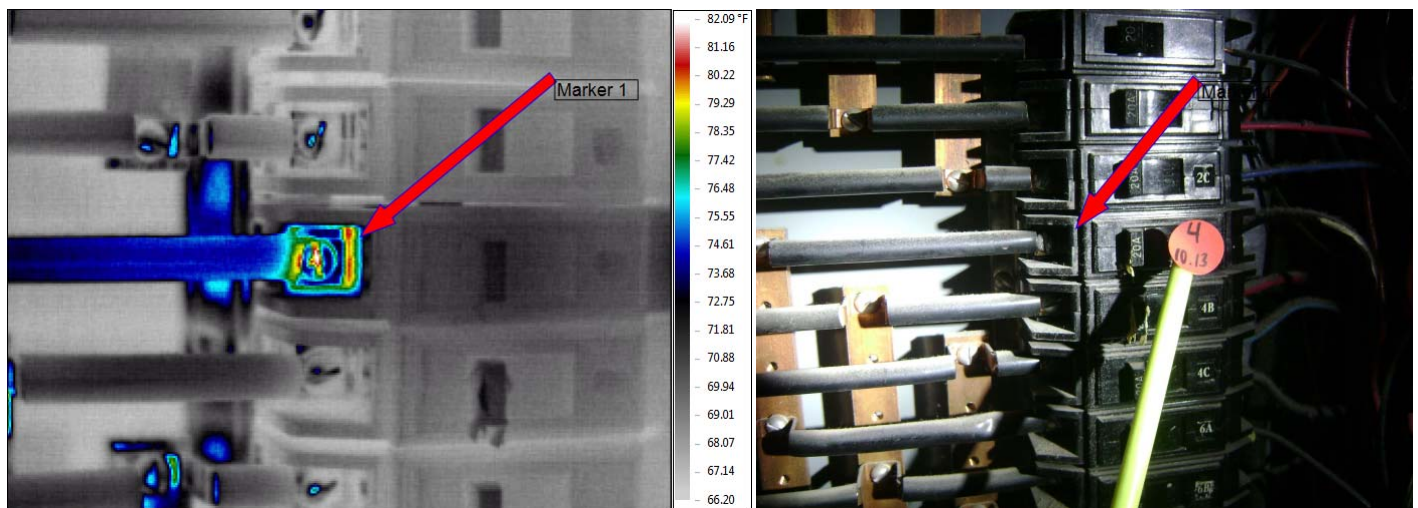
Location/Equipment: Panel - Unmarked

Barcode: 108ZJK Asset ID:

Voltage: 120 Rated Load: 20 Wind Speed: 0 Ambient: 70.0

IR/Image GUID File : 58f61881-38b9-4696-bd41-5f5ea13de975.idn

	Temp	Phase	Load	% of
Component:	85.0	N/A	6.6Amps	@33.0%
Reference:	68.0	N/A	8.1Amps	@40.5%
Delta T:	17.0			@33.0%



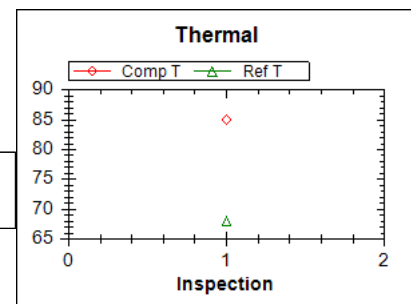
Comment: Line side bolt to bus connection on Breaker 4A "House Balcony"

Probable Cause: Loose or corroded connection

Recommendation: Clean, inspect, and repair or replace as necessary

Historical Sub Report

Insp.#	Prob.#	Date	Comp Temp	Ref. Temp	Temp Rise	Sev. Code	Load	% Load	Wind Spd.	Amb. Temp
1	4	10/29/2013	85.0	68.0	17.0	4	6.6	33.0%		70.0



Problem Status:	☐ Not repaired	☐ Repair made, but needs IR recheck	☐ Closed
Repair assigned to:	Repair target date:		
Repair assigned by:	Date:		
Repaired by:	Date:		
Type of defect found:			
Corrective action taken:			

Thermal Items: Detail Report

Site: City of Redmond Buildings Insp. No. 1 Start Date: 10/28/2013 Thermal Item # 5 At: 10/29/2013 12:33

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: **OPEN** 

Route: Redmond Pool (17535 NE 104th Street) \ Pool Electrical Room

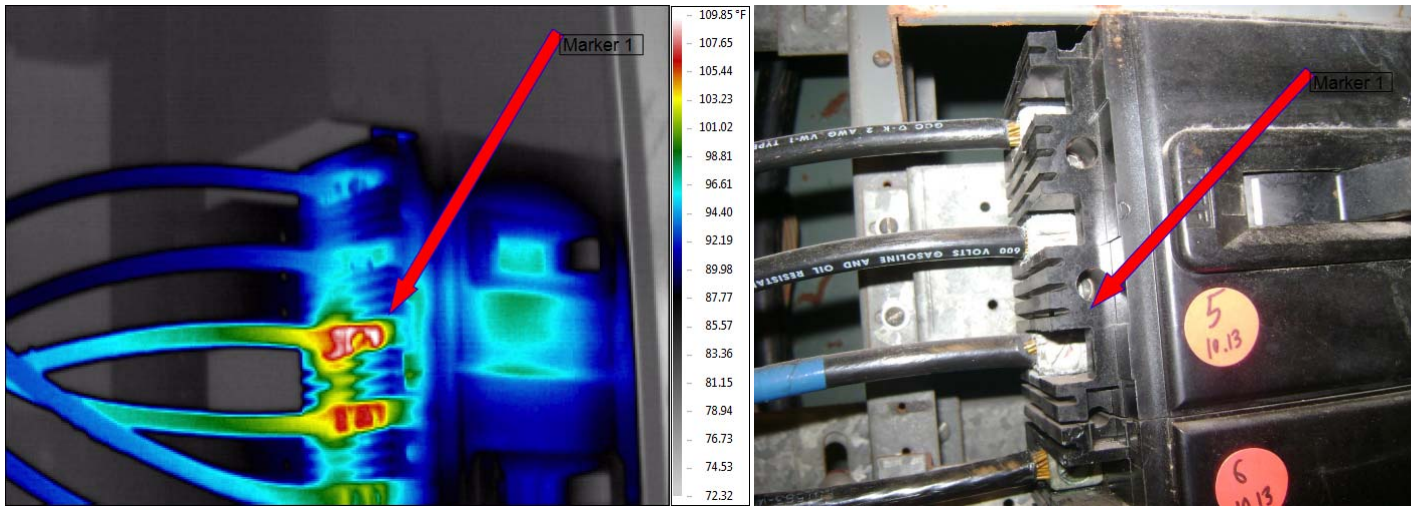
Location/Equipment: Main Switchboard

Barcode: 108ZHA Asset ID:

Voltage: 480 Rated Load: 100 Wind Speed: 0 Ambient: 85.0

IR/Image GUID File : 6e359a0b-c42c-4d1c-820b-eec88a4597a8.idn

	Temp	Phase	Load	% of
Component:	109.0	C Phase	27Amps	@27.0%
Reference:	95.0	A Phase	27Amps	@27.0%
Delta T:	14.0			@27.0%



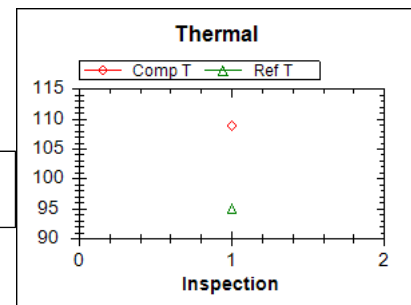
Comment: C phase load side wire lug connection an breaker "Panel BR"

Probable Cause: Loose or corroded connection

Recommendation: Clean, inspect, and repair or replace as necessary

Historical Sub Report

Insp.#	Prob.#	Date	Comp Temp	Ref. Temp	Temp Rise	Sev. Code	Load	% Load	Wind Spd.	Amb. Temp
1	5	10/29/2013	109.0	95.0	14.0	4	27	27.0%		85.0



Problem Status:	☐ Not repaired	☐ Repair made, but needs IR recheck	☐ Closed
Repair assigned to:	Repair target date:		
Repair assigned by:	Date:		
Repaired by:	Date:		
Type of defect found:			
Corrective action taken:			

Thermal Items: Detail Report

Site: City of Redmond Buildings Insp. No. 1 Start Date: 10/28/2013 Thermal Item # 6 At: 10/29/2013 12:33

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: **OPEN** 

Route: Redmond Pool (17535 NE 104th Street) \ Pool Electrical Room

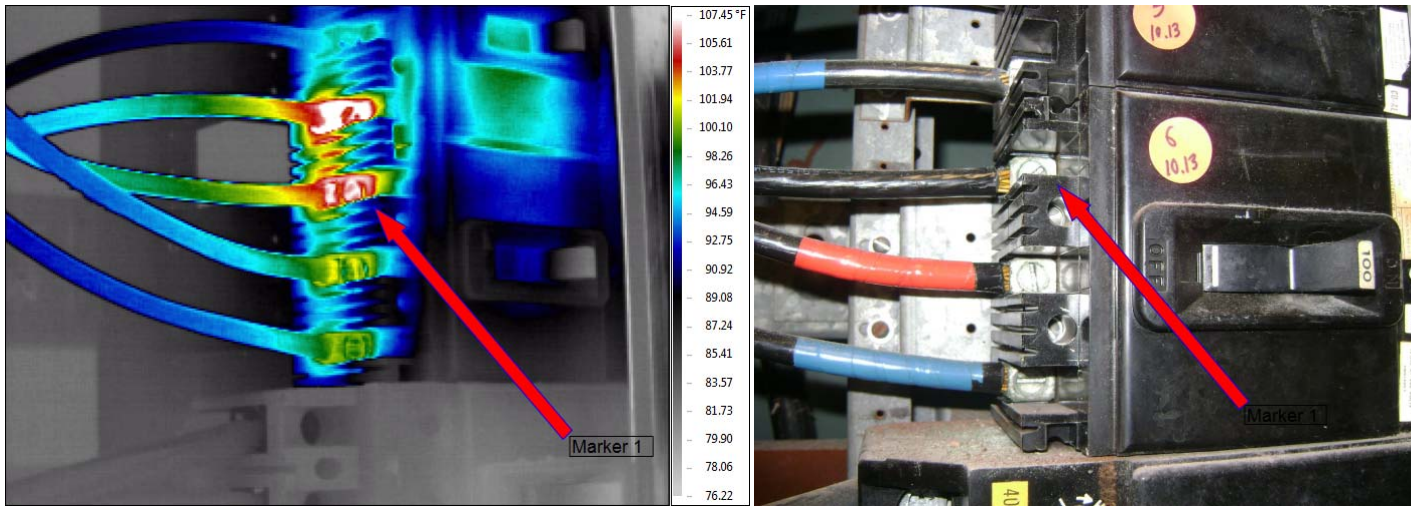
Location/Equipment: Main Switchboard

Barcode: 108ZHA Asset ID:

Voltage: 480 Rated Load: 100 Wind Speed: 0 Ambient: 85.0

IR/Image GUID File : 62a3e164-7aed-4975-954d-dbb10c99df3f.idn

	Temp	Phase	Load	% of
Component:	105.0	A Phase	40Amps@40.0%	
Reference:	95.0	Center phase	40Amps@40.0%	
Delta T:	10.0		@40.0%	



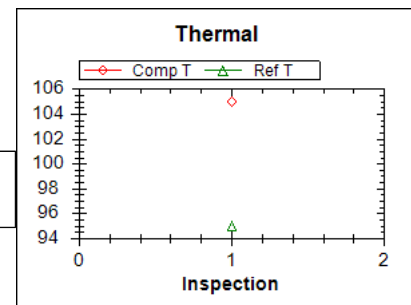
Comment: A phase load side wire lug connection on Breaker "Pump"

Probable Cause: Loose or corroded connection

Recommendation: Clean, inspect, and repair or replace as necessary

Historical Sub Report

Insp.#	Prob.#	Date	Comp Temp	Ref. Temp	Temp Rise	Sev. Code	Load	% Load	Wind Spd.	Amb. Temp
1	6	10/29/2013	105.0	95.0	10.0	4	40	40.0%		85.0



Problem Status:	☐ Not repaired	☐ Repair made, but needs IR recheck	☐ Closed
Repair assigned to:	Repair target date:		
Repair assigned by:	Date:		
Repaired by:	Date:		
Type of defect found:			
Corrective action taken:			

Thermal Items: Detail Report

Site: City of Redmond Buildings Insp. No. 1 Start Date: 10/28/2013 Thermal Item # 7 At: 10/30/2013 07:12

Indirect Measurement: No Severity: 3 Repair Status: Problem Status: **OPEN** 

Route: MOC Center (18080 NE 76th Street) \ Building #2 (Storage) \ Sewer Storage

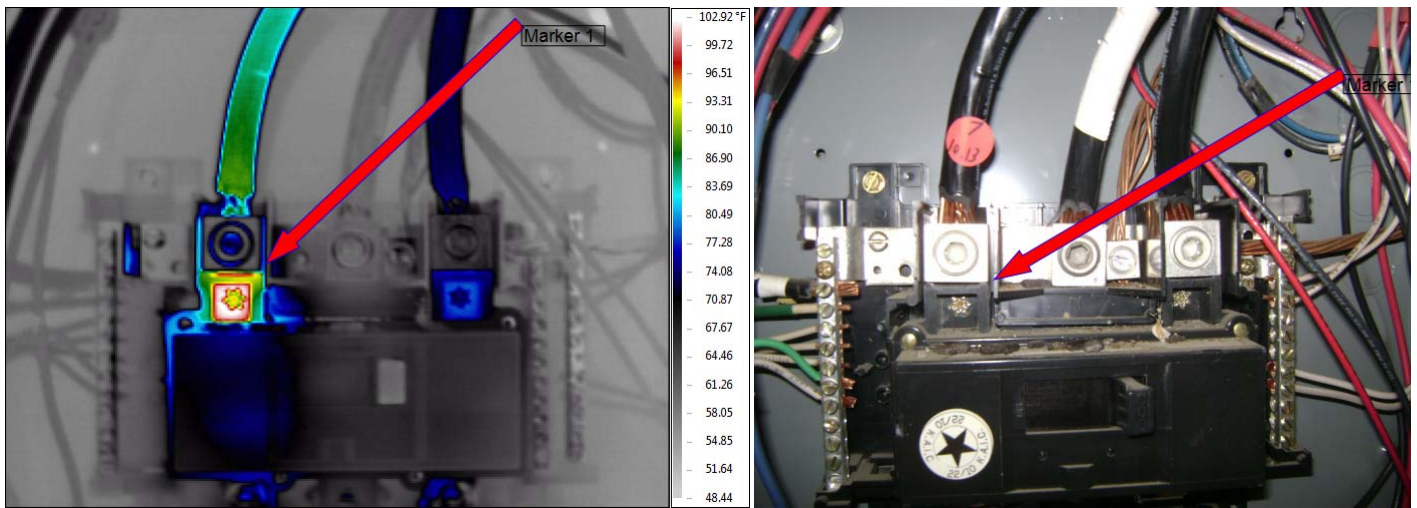
Location/Equipment: Panel - Unmarked

Barcode: 108ZFW Asset ID:

Voltage: 120 Rated Load: 200 Wind Speed: 0 Ambient: 51.0

IR/Image GUID File : 9a2dc980-2f7d-4e8b-bb79-9ad3850bc897.idn

	Temp	Phase	Load	% of
Component:	101.0		80Amps@40.0%	
Reference:	77.0	B Phase	93Amps@46.5%	
Delta T:	24.0		@40.0%	



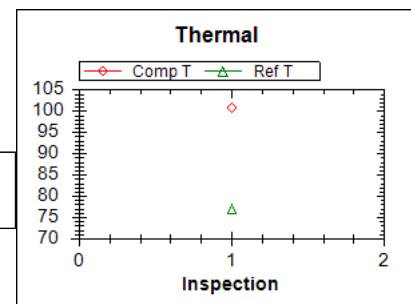
Comment: A phase line side wire lug connection on incoming main lines

Probable Cause: Loose or corroded connection

Recommendation: Clean, inspect, and repair or replace as necessary

Historical Sub Report

Insp.#	Prob.#	Date	Comp Temp	Ref. Temp	Temp Rise	Sev. Code	Load	% Load	Wind Spd.	Amb. Temp
1	7	10/30/2013	101.0	77.0	24.0	3	80	40.0%		51.0



Problem Status:	☐ Not repaired	☐ Repair made, but needs IR recheck	☐ Closed
Repair assigned to:	Repair target date:		
Repair assigned by:	Date:		
Repaired by:	Date:		
Type of defect found:			
Corrective action taken:			

Visual Problem List
Inspection # 1

Site: City of Redmond Buildings

Problem # 1 **Barcode:** 108VD9 **Severity Code:**
Location: Sammamish River Business Park Building 2 (NE 154th Ave) \ Main Electrical Room
Equipment: Main Disconnect
Description: Safety Bypass is broken
Picture: 7c8a0f26-3cfc-4e4c-9ba9-82940595ab78.idn

Problem # 2 **Barcode:** 108ZK9 **Severity Code:**
Location: Old Redmond Schoolhouse Community Center (16600 NE 80th St) \ 01 Floor \ Main Hallway
Equipment: Panel - CP1 (near Room 103)
Description: Main Breaker is broken, exposed metal on C phase of 3-pole 100amp breaker
Picture: ae1718a3-9bc9-4523-b997-336beb96e308.idn

Visual Problem Details Report

Site: City of Redmond Buildings

Problem Status: OPEN 

Severity:

Work Order #:

Location: Sammamish River Business Park Building 2 (NE 154th Ave) \ Main Electrical Room

Equipment: Main Disconnect

IDN File: 7c8a0f26-3cfc-4e4c-9ba9-82940595ab78.idn

Inspection#: 1	Problem#: 1
Prob Date&Time:	10/28/2013 13:39
Barcode:	108VD9
AssetID:	



Description: Safety Bypass is broken

Probable Cause:

Recommendation:

Historical Sub Report

Inspection	Prob#	Date	Sev.Code
1	1	10/28/2013	

Problem Status:	☐ Not repaired	☐ Repair made, but needs IR recheck	☐ Closed
Repair assigned to:	Repair target date:		
Repair assigned by:	Date:		
Repaired by:	Date:		
Type of defect found:			
Corrective action taken:			

Visual Problem Details Report

Site: City of Redmond Buildings

Problem Status: OPEN 

Severity:

Work Order #:

Location: Old Redmond Schoolhouse Community Center
(16600 NE 80th St) \ 01 Floor \ Main Hallway

Equipment: Panel - CP1 (near Room 103)

IDN File: ae1718a3-9bc9-4523-b997-336beb96e308.idn

Inspection#: 1

Problem#: 2

Prob Date&Time:

10/29/2013 07:18

Barcode:

108ZK9

AssetID:



Description: Main Breaker is broken, exposed metal on C phase of 3-pole 100amp breaker

Probable Cause:

Recommendation:

Historical Sub Report

Inspection	Prob#	Date	Sev.Code
1	2	10/29/2013	

Problem Status:	☐ Not repaired	☐ Repair made, but needs IR recheck	☐ Closed
Repair assigned to:	Repair target date:		
Repair assigned by:	Date:		
Repaired by:	Date:		
Type of defect found:			
Corrective action taken:			

Inspection Notes List

Site: City of Redmond Buildings

Inspection # 1

Date:

Inspection Note # 1 Barcode: 108VF9 Asset ID: Severity Code:**Date-Time:** Oct 28 2013 9:31AM**Location:** Public Safety Building (8701 160th Ave NE) \ 02 Floor \ 257 Computer Room**Equipment:** Panel - UPS Section 2**Test Status:** Tested**Description:** Panel missing some screws

Notes:

Inspection Note # 2 Barcode: 108ZJD Asset ID: Severity Code:**Date-Time:** Oct 29 2013 9:16AM**Location:** Old Redmond Schoolhouse Community Center (16600 NE 80th St) \ 02 Floor \ Main Hallway**Equipment:** Panel - E (near Room 206)**Test Status:** Tested**Description:** Panel E needs to have its screws/brackets repaired or replaced

Notes:

Inspection Note # 3 Barcode: 108ZJB Asset ID: Severity Code:**Date-Time:** Oct 29 2013 9:27AM**Location:** Old Redmond Schoolhouse Community Center (16600 NE 80th St) \ 02 Floor \ Main Hallway**Equipment:** Panel - F (near Room 203 & 204)**Test Status:** Tested**Description:** Panel F needs to have its screws/brackets repaired or replaced

Notes:

Inventory Report

Inspection # 1
Date: 10/28/2013
Site: City of Redmond Buildings

Open Problem	Status	Barcode	Location\Equipment
No	Tested		MOC Center (18080 NE 76th Street)
No	Tested		Building #1 (Main Building)
No	Tested		Hallway
No	Tested	108ZFZ	Panel - P2
No	Tested		Lunch Room
No	Tested	108ZG0	Distribution Panel - M
No	Tested	108ZG1	Panel - L
No	Tested	108ZG2	Panel - P1
No	Tested	108ZG3	Panel - Unmarked
No	Tested		Oil Shed (by Garage)
No	Tested	108ZG7	Disconnect - Air Supply
No	Tested	108ZG6	Disconnect - Hydraulic Pump
No	Tested		Wash Rack (by Garage)
No	Tested	108ZG5	Disconnect - CWP 3,5
No	Tested	108ZG4	Disconnect - Panel H/14,16,18
No	Tested		Welding Shop
No	Tested		Contactor - Unmarked (upstairs)
No	Tested	108ZG8	Disconnect - Unmarked (upstairs)
No	Tested	108ZGA	Panel - M1A
No	Tested	108ZG9	Panel - Upstairs (Upstairs)
No	Tested		Building #11A (Decant Office)
No	Tested		Office Laundry Room
No	Tested	108ZFT	Contactor - Brine Tank Pump
No	Tested	108ZFS	Contactor - Decant Lights
No	Tested	108ZFR	Panel - DB
No	Tested		Building #11B (Decant Structure)
No	Tested		South East Wall
No	Tested	108ZFN	Disconnect - Generator
No	Tested	108ZFM	Panel - DDP
No	Tested	108ZFQ	Panel - DE
No	Tested	108ZFP	Transfer Switch
No	Tested		Building #2 (Storage)
No	Tested		Sewer Storage
Yes	Tested	108ZFW	Panel - Unmarked
No	Tested		Street Storage
No	Tested	108ZFX	Panel - 2
No	Tested		Building #3 (Street Department Modular)
No	Tested		Break Room
No	Tested	108ZFY	Panel - Unmarked
No	Tested		Building #4 (Storage)
No	Tested		Water Storage
No	Tested	108ZFV	Panel - A
No	Tested		Building #5 (Central Stores Warehouse)
No	Tested		Shop
No	Tested	108ZFU	Panel - 1
No	Tested		Building #8 (Redmond Park Operations Center)
No	Tested		01 Floor
No	Tested		Elevator Equipment Room
No	Tested	108ZEW	Breaker - Shunt Trip

Inventory Report

Inspection # 1
Date: 10/28/2013
Site: City of Redmond Buildings

Open Problem	Status	Barcode	Location\Equipment
No	Tested		Garage
No	Tested	108ZET	Panel - C
No	Tested	108ZEV	Panel - E (by Elevator Equipment Room)
No	Tested	108ZER	Transformer - F (by Wood Shop)
No	Tested		Hallway
No	Tested		Electrical Closet
No	Tested	108ZEX	Panel - B
No	Tested		Womens Restroom
No	Tested		Electrical Room
No	Tested	108ZF4	Disconnect - Generator
No	Tested	108ZEZ	Disconnect - Panel B
No	Tested	108ZF0	Disconnect - Panel C
No	Tested	108ZEY	Disconnect - Panel D
No	Tested	108ZF3	Disconnect - Panel E
No	Tested	108ZF2	Disconnect - Panel F
No	Tested	108ZF1	Panel - A
No	Tested	108ZF5	Transfer Switch - Panel E
No	Tested		Wood Shop
No	Tested	108ZEU	Panel - F
No	Tested		02 Floor
No	Tested	108ZEQ	Panel - D
No	Tested		Storage Shed
No	Tested	108ZES	Panel - Unmarked
No	Tested		Trinity Building
No	Tested		Electrical Room
No	Tested	108ZFD	Disconnect - H1 Main
No	Tested	108ZFE	Disconnect - H3-Main
No	Tested	108ZF9	Disconnect - L1
No	Tested	108ZFC	Disconnect - Mill NW
No	Tested	108ZFF	Disconnect - Spiral
No	Tested	108ZFB	Disconnect - Transformer L1
No	Tested	108ZF6	Disconnect - Unmarked (outside)
No	Tested	108ZFG	Panel - H1
No	Tested	108ZF8	Panel - L1
No	Tested	108ZF7	Starter - Exhaust Fan Pad Oven (Outside)
No	Tested	108ZFA	Transformer - L1
No	Tested		Garage
No	Tested	108ZFL	Disconnect - Spot Welder
No	Tested	108ZFH	Panel - H-3
No	Tested	108ZFJ	Panel - L-3
No	Tested	108ZFK	Transformer - TF-3
No	Tested		Municipal Garage (8701 160th Ave NE)
No	Tested		102 Elevator Room
No	Tested	108VDT	Breaker - Elevator
No	Tested		Sprinkler Room
No	Tested		109 Electrical Room
No	Tested	108VDW	Disconnect - GD-1
No	Tested	108VDU	Panel - 2GP1
No	Tested	108VDX	Panel - 4GP1



Professional

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Association

Inventory Report

Inspection # 1
Date: 10/28/2013
Site: City of Redmond Buildings

Open Problem	Status	Barcode	Location\Equipment
No	Tested	108VDV	Transformer - TGA
No	Tested		Old Firehouse Teen Center (16510 NE 79 Street)
No	Tested		01 Floor
No	Tested		Fire Alarm Control Room
No	Tested	108ZJ8	Panel - 1
No	Tested	108ZJ9	Panel - MDP
No	Tested		Media Room
No	Tested	108ZJ4	Panel - B
No	Tested		Pool Room
No	Tested	108ZJ5	Breaker - Panel B
No	Tested	108ZJ6	Panel - A
No	Tested		Rubber Room
No	Tested	108ZJ7	Panel - Unmarked
No	Tested		Old Redmond Schoolhouse Community Center (16600 NE 80th St)
No	Tested		01 Floor
No	Tested		101 Fire Sprinkler Room
No	Tested	108ZJU	Disconnect - Sprinkler Compressor
No	Tested		110 Storage
No	Tested	108ZJN	Panel - D
No	Tested	108ZJP	Panel - EM
No	Tested	108ZJQ	Panel - M
No	Tested		111 Electrical Room
No	Tested	108ZJM	Panel - A
No	Tested		170 Arts and Crafts
No	Tested	108ZJR	Contactor Box - Gym Lighting
No	Tested	108ZJT	Disconnect - PNL M (by Kilns)
No	Tested	108ZJS	Panel - H
No	Tested		Auditorium
No	Tested		East Mezzanine
No	Tested	108ZJL	Starter - AHU-1
No	Tested		Stage
Yes	Tested	108ZJK	Panel - Unmarked
No	Tested		West Mezzanine
No	Tested	108ZJJ	Starter - AHU-2
No	Tested		Elevator Machine Room
No	Tested	108ZK7	Breaker - Cab Lights
No	Tested	108ZK5	Breaker - Elevator
No	Tested	108ZK6	Disconnect - Elevator
No	Tested		Main Hallway
No	Tested	108ZK8	Panel - B (near Room 104)
No	Tested		Panel - C (near Room 107)
Yes	Tested	108ZK9	Panel - CP1 (near Room 103)
No	Tested		02 Floor
No	Tested		211 Storage
No	Tested	108ZJC	Panel - CP2
No	Tested		Custodial Room (near room 206)
No	Tested	108ZJH	Contactor - Exhaust Fan 1st Floor Boys
No	Tested	108ZJG	Contactor - Exhaust Fan 1st Floor Girls
No	Tested	108ZJE	Contactor - Exhaust Fan 2nd Floor Girls

Inventory Report

Inspection # 1
Date: 10/28/2013
Site: City of Redmond Buildings

Open Problem	Status	Barcode	Location\Equipment
No	Tested	108ZJF	Contactor - Exhaust Fan Women Lounge
No	Tested		Main Hallway
Yes	Tested	108ZJD	Panel - E (near Room 206)
Yes	Tested	108ZJB	Panel - F (near Room 203 & 204)
No	Tested		Offices
No	Tested	108ZJA	Panel - P1
No	Tested		Basement
No	Tested		Boiler Room
No	Tested	108ZJZ	Contactor - Breaker 10C
No	Tested	108ZJW	Contactor - Feed Pump 2
No	Tested	108ZJV	Contactor - FW Pump 1
No	Tested	108ZK0	Disconnect - CWP-1
No	Tested	108ZK1	Disconnect - CWP-2
No	Tested	108ZJX	Panel - P
No	Tested	108ZJY	Sub Panel - fed by Panel P
No	Tested	108ZK2	VFD - CWP-1
No	Tested	108ZK4	VFD - CWP-2
No	Tested		Public Safety Building (8701 160th Ave NE)
No	Tested		01 Floor
No	Tested		123A Mechanical Electrical Room
No	Tested	108VG8	Distribution Panel - SS4B
No	Tested	108VG5	Panel - 1D2
No	Tested	108VG9	Panel - 1E4
No	Tested	108VG6	Panel - 1F2
No	Tested	108VGB	Panel - 1G2
No	Tested	108VG7	Panel - 1XC4
No	Tested	108VGA	Small Panel - Unmarked
No	Tested	108VGC	Transformer - Unmarked
No	Tested		164 Mechanical Room
No	Tested	108VFQ	ATS (Normal Power)
No	Tested	108VFG	Cabinet - Contactor
No	Tested	108VFN	Contactor - B2A
No	Tested	108VFL	Control Panel - Public Safety Building Standby Generators
No	Tested		Monitoring
No	Tested	108VFS	Disconnect - Unmarked
No	Tested		Main Switchboard
No	Tested	108VFU	Breaker Section
No	Tested	108VFT	Incoming Power
No	Tested	108VFX	Panel - 1A4
No	Tested	108VFY	Panel - 1B2
Yes	Tested	108VFH	Panel - 1XA4
No	Tested	108VFK	Panel - 1XB2
No	Tested	108VFM	Panel - B2A
No	Tested	108VFW	Starter - 1A4
No	Tested	108VFX	Transformer - 1B2
No	Tested	108VFJ	Transformer - fed by 1XA4
No	Tested	108VFP	Transformer - fed to B2A
No	Tested	108VFR	Transformer - Unmarked
No	Tested		Evidence Room

Inventory Report

Inspection # 1

Site: City of Redmond Buildings

Date: 10/28/2013

Open Problem	Status	Barcode	Location\Equipment
No	Tested	108VG3	Panel - 1L2
No	Tested		J105 Door (Jail)
No	Tested	108VG4	Panel - 1H2
No	Tested		02 Floor
No	Tested		200 Mechanical Room
No	Tested	108VEL	Control Panel - Sump Pump Left
No	Tested	108VEM	Control Panel - Sump Pump Right
No	Tested	108VEK	Disconnect - 2H4
No	Tested	108VEC	Disconnect - 31A
No	Tested	108VED	Disconnect - 31B
No	Tested	108VEF	Disconnect - 32A
No	Tested	108VEE	Disconnect - 32B
No	Tested	108VEH	Disconnect - 35A
No	Tested	108VEG	Disconnect - 35B
No	Tested		Elevator Room
No	Tested	108VEB	Breaker - Elevator Cab
No	Tested	108VEA	Panel - 2H4
No	Tested	108VE9	Panel - 2J2
No	Tested	108VEJ	Starter - EF-4
No	Tested		209A Investigations Door
No	Tested	108VEN	Panel - 2E4
No	Tested	108VEP	Panel - 2F2
No	Tested	108VEQ	Panel - 2G2
No	Tested		209B Investigations
No	Tested		Computer Room
No	Tested	108VES	Panel - Non UPS
No	Tested	108VER	Panel - UPS1
No	Tested		249A Door (ECC)
No	Tested	108VFB	Panel - 2XA4
No	Tested	108VFA	Panel - 2XB2
No	Tested		257 Computer Room
No	Tested	108VF8	Panel - Non UPS fed from Panel 2XB2
No	Tested	108VF7	Panel - UPS Section 1
Yes	Tested	108VF9	Panel - UPS Section 2
No	Tested		263 Room (911 Norcom)
No	Tested		261 Room
No	Tested	108VEU	Battery Cabinet - 1
No	Tested	108VEW	Panel - Radio Equipment
No	Tested	108VEV	Switch - Maintenance Bypass
No	Tested	108VET	UPS - 1
No	Tested		295 Stairs No. 6 to Mechanical Mezzanine
No	Tested		302 Elevator Room
No	Tested	108VE8	Breaker - Elevator Cabinet
No	Tested	108VF6	Disconnect - 911 Computer Room Back up Cooling Unit
No	Tested	108VF3	Panel - MX4
No	Tested	108VEZ	Panel - MX5
No	Tested	108VF2	Panel - Unmarked
No	Tested	108VEY	Panel - UPS Transformer Output
No	Tested	108VF1	Starter - 1P-2

Inventory Report

Inspection # 1

Site: City of Redmond Buildings

Date: 10/28/2013

Open Problem	Status	Barcode	Location\Equipment
No	Tested	108VF5	Starter - AHU-1
No	Tested	108VF0	Starter - P-1
No	Tested	108VF4	Starter - Unmarked
No	Tested	108VEX	Transformer - UPS
No	Tested		Garage Level
No	Tested		Sprinkler Room
No	Tested	108VDY	Disconnect - Unmarked
No	Tested		Sump Cage
No	Tested	108VDZ	Control Panel - Sump Pump
No	Tested	108VE0	Disconnect - 1
No	Tested	108VE1	Disconnect - 2
No	Tested	108VE2	Disconnect - 3
No	Tested	108VE3	Disconnect - 4
No	Tested		Wood Shop
No	Tested	108VE4	Control Panel - Sump Pump
No	Tested	108VE7	Disconnect - Center
No	Tested	108VE5	Disconnect - Left
No	Tested	108VE6	Disconnect - Right
No	Tested		North and South Garages and Outside
No	Tested		Backup Generator
No	Tested		Breaker - Strobic Fan
No	Tested	108VFD	Disconnect - Unmarked
No	Tested		Panel - Unmarked
No	Tested	108VFC	Starter - Strobic Fan
No	Tested		SWAT Garage
No	Tested	108VG0	Breaker - Bldg Service
No	Tested	108VFZ	Panel - SVS
No	Tested		Traffic Garage
No	Tested	108VG1	Breaker - Bldg Service
No	Tested	108VG2	Panel - SVN
No	Tested		Redmond Pool (17535 NE 104th Street)
No	Tested		Boiler Room
No	Tested	108ZH4	Contactor - Exhaust Fan
No	Tested	108ZH1	Contactor - Unmarked
No	Tested	108ZGT	Control Panel - Boiler Left
No	Tested	108ZGS	Control Panel - Boiler Right
No	Tested	108ZGX	Control Panel - Mixer
No	Tested	108ZH0	Control Panel - Operator Interface
No	Tested	108ZGZ	Control Panel - Pumps
No	Tested	108ZGV	Disconnect - Building Heat
No	Tested	108ZGU	Disconnect - Domestic Hot Water
No	Tested	108ZH3	Disconnect - Exhaust Fan
No	Tested	108ZGY	Disconnect - Pool Water Heat
No	Tested	108ZH2	Disconnect - Unmarked
No	Tested	108ZGW	Disconnect - Unmarked (by Building Heat Disconnect)
No	Tested		Pool Electrical Room
Yes	Tested	108ZHA	Main Switchboard
No	Tested	108ZH9	Panel - A
No	Tested	108ZH5	Panel - B

Site: City of Redmond Buildings

Inventory Report
Inspection # 1
Date: 10/28/2013

Open Problem	Status	Barcode	Location\Equipment
No	Tested	108ZH7	Panel - C
No	Tested	108ZH6	Panel - Under Water Lights
No	Tested	108ZH8	Panel - Unmarked
No	Tested		Reception
No	Tested		Janitor Closet
No	Tested	108ZHD	Contactor - Unmarked
No	Tested	108ZHB	Panel - Two Vent Units on Roof
No	Tested	108ZHC	Panel - Unmarked
No	Tested	8ZHE	Starter - Unmarked
No	Tested		Redmond Senior Center (8703 160th Ave NE)
No	Tested		105 Mechanical Room
No	Tested	108VDJ	Panel - E
No	Tested	108VDK	Panel - F
No	Tested		109A Store Room
No	Tested	108VDH	Panel - D
No	Tested	108VDG	Panel - D2
No	Tested		Kitchen
No	Tested	108VDF	Panel - K-1
No	Tested	108VDE	Panel - K-2
No	Tested		Main Electrical Room
No	Tested		Main Switchboard
No	Tested	108VDR	Breaker Section 1
No	Tested	108VDQ	Breaker Section 2
No	Tested	108VDS	Main Breaker
No	Tested	108VDN	Panel - A
No	Tested	108VDP	Panel - B
No	Tested		Pump Room
No	Tested	108VDL	Starter - 1
No	Tested	108VDM	Starter - 2
No	Tested		Sammamish River Business Park Building 1 (NE 154th Ave)
No	Tested		Main Electrical Room
No	Tested	108VDO	Disconnect - 15509 Front
No	Tested	108VCZ	Disconnect - Panel A-7
No	Tested	108VCY	Disconnect - Panel A-9
No	Tested	108VCW	Main Disconnect
No	Tested	108VCX	Panel - HA
No	Tested		Suite 15503
No	Tested		Kitchenette
Yes	Tested	108ZKD	Panel - A-1
No	Tested	108ZKC	Panel - A2
No	Tested	108ZKB	Panel - A-2
No	Tested	108ZKA	Panel - A-3
No	Tested		Suite 15509
No	Tested	108ZKE	Panel - A-4
No	Tested	108ZKF	Panel - Unmarked
No	Tested		Suite 15517
Yes	Tested	108VCS	Panel - A-6
No	Tested	108VCV	Panel - A-7
No	Tested	108VCU	Panel - A-8

Site: City of Redmond Buildings

Inventory Report
Inspection # 1
Date: 10/28/2013

Open Problem	Status	Barcode	Location\Equipment
No	Tested		Sammamish River Business Park Building 2 (NE 154th Ave)
No	Tested		Main Electrical Room
No	Tested	108VDB	Disconnect - 15523 Training Lab
No	Not Tested	108VDA	Disconnect - 15527 Hinds Bock (Locked out)
Yes	Not Tested	108VD9	Main Disconnect
No	Tested	108VD8	Panel - HB
No	Tested		Suite 15519
No	Tested	108VD6	Panel - B-3
No	Tested		Suite 15521
No	Tested	108VD5	Panel - B-2
No	Tested		Suite 15523
No	Tested	108VD3	Disconnect - Unmarked
No	Tested	108VD2	Panel - B-1
No	Tested	108VD4	Panel - Unmarked
No	Tested	108VD1	Panel - Unmarked (next to B-1)
No	Tested		Suite 15525
No	Tested	108VD7	Panel - Unmarked
No	Tested		Suite 15527
No	Tested	108VDC	Panel - B-5
No	Tested		Suite 15529
No	Tested	108VDD	Panel - B-6

Infrared Thermographic Inspection
Of
Selected Electro-Mechanical Equipment

Provided For
City of Redmond Fire Stations
10/29/2013

Summary:

An Infrared Electrical / Mechanical inspection was performed on 10/29/2013 for City of Redmond Fire Stations

All of the items inspected are listed in the inventory section of this Thermal Trend report. Any anomalies that were found at the time of the inspection (if any) are documented in the Problem Detail section of this report with their appropriate associated data, i.e. Thermograms, Photos, comments, measurements, etc.. They are also listed in the Prioritized list of problems section, in their order of priority based on the components temperature rise, as compared to a similar reference component of equal type, loading, and environmental influences, at the time of the inspection.

The final decision as to the repair priority of any and all problems in this report rests on the owners, management, and/or facilities engineering teams. Colbert Infrared Services, Inc. and the IR Thermographer assumes no liability directly or indirectly as a result of this inspection or the decisions made as to establishing the priority and timeline of repair decisions made by the owners, management, and/or facilities engineering teams. This inspection is not a guarantee or warranty of any kind.

Executive Overview - for Thermal Items:

Total number of locations in the database:	32
Total number of pieces of equipment in the database:	69
Total number of Items (open and closed covering all inspections) in the database	
Acute Items:	1
Chronic Items:	0
Overall total of all acute and chronic:	1
Current status of Items, acute and chronic	
Total closed Items (covering all inspections):	0
Current total open Items (tested or not tested at the time of this inspection):	1

I hereby certify that the above project was inspected by myself or under my direction and that the enclosed data is the direct result of this inspection.

Fred Colbert

President CIS, Inc.

Certified Level III Infrared Thermographer / Instructor: The Professional Thermographers Association



Professional
Thermographers
Association

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Thermal Item List - Prioritized by Temperature Rise

Site: City of Redmond Fire Stations

Inspection # 1

Start Date:

Site: City of Redmond Fire Stations Insp. No. 1 Start Date:

Thermal Item # 1At: Oct 30 2013 11:56AM

Indirect Measurement: No	Severity: 4	Repair Status:	Problem Status: OPEN 

Route: Station #13 (8701 208 Ave NE) \ Break Room

Location/Equipment: Panel - A

Barcode: 108ZE2 Asset ID:

Voltage: 120 Rated Load: 150 Wind Speed: 0 Ambient: 70.0

IR/Image GUID File : cc716b59-47bd-4260-b470-89505b3d29f7.idn

	Temp	Phase	Load	% of
Component:	90.0		25Amps@	16.7%
Reference:	<u>73.0</u>		13Amps@	8.7%
Delta T:	17.0			@16.7%

Comment: A phase load side wire lug connection on 2-pole Breaker "Panel E To ATS Normal"

Thermal Items: Detail Report

Site: City of Redmond Fire Stations Insp. No. 1 Start Date: 10/29/2013 Thermal Item # 1 At: 10/30/2013 11:56

Indirect Measurement: No Severity: 4 Repair Status: Problem Status: **OPEN** 

Route: Station #13 (8701 208 Ave NE) \ Break Room

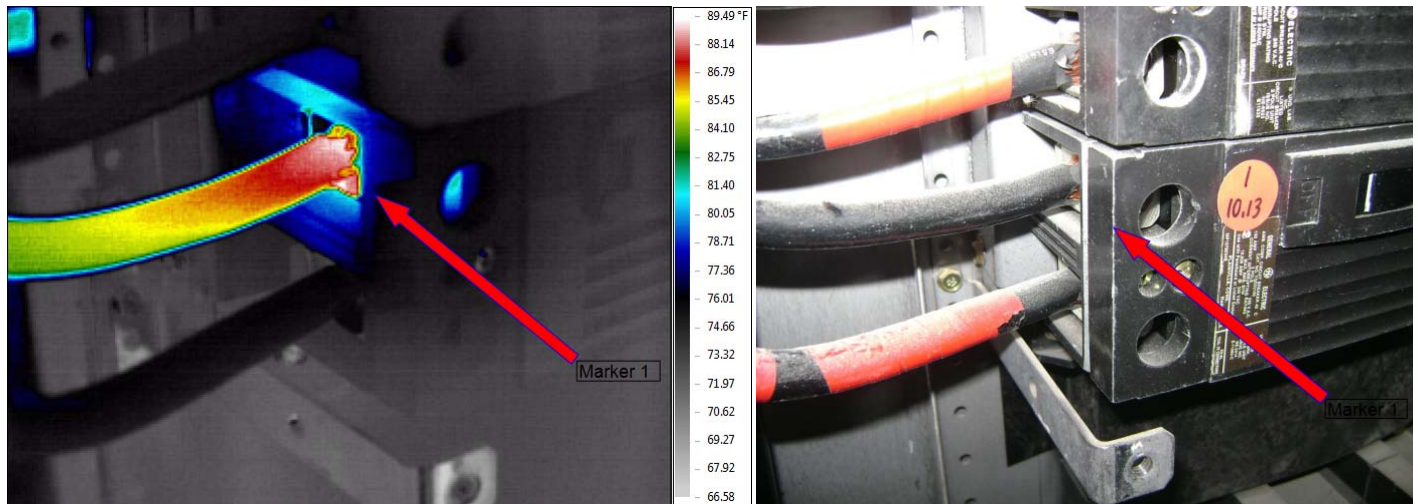
Location/Equipment: **Panel - A**

Barcode: 108ZE2 Asset ID:

Voltage: 120 Rated Load: 150 Wind Speed: 0 Ambient: 70.0

IR/Image GUID File : cc716b59-47bd-4260-b470-89505b3d29f7.idn

	Temp	Phase	Load	% of
Component:	90.0		25Amps@	16.7%
Reference:	73.0		13Amps@	8.7%
Delta T:	17.0			@16.7%



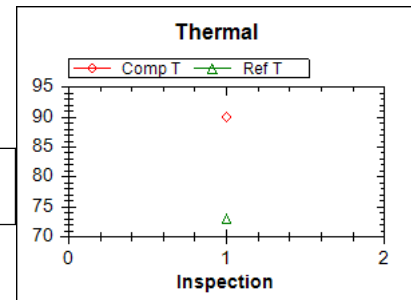
Comment: A phase load side wire lug connection on 2-pole Breaker "Panel E To ATS Normal"

Probable Cause: Loose or corroded connection

Recommendation: Clean, inspect, and repair or replace as necessary

Historical Sub Report

Insp.#	Prob.#	Date	Comp Temp	Ref. Temp	Temp Rise	Sev. Code	Load	% Load	Wind Spd.	Amb. Temp
1	1	10/30/2013	90.0	73.0	17.0	4	25	16.7%		70.0



Problem Status:	☐ Not repaired	☐ Repair made, but needs IR recheck	☐ Closed
Repair assigned to:	Repair target date:		
Repair assigned by:	Date:		
Repaired by:	Date:		
Type of defect found:			
Corrective action taken:			

Inventory Report

Inspection # 1
Date: 10/29/2013
Site: City of Redmond Fire Stations

Open Problem	Status	Barcode	Location\Equipment
No	Tested		Old Medic One Building (next to Station #11)
No	Tested	108ZHF	Panel - Unmarked
No	Tested		Station #11 (8450 NE 161st Ave)
No	Tested		01 Floor
No	Tested		Electrical Room
No	Tested		Main Switchboard
No	Tested	108ZHK	Section 1
No	Tested	108ZHJ	Section 2
No	Tested	108ZHG	Panel - M (Section 1)
No	Tested	108ZHH	Panel - M (Section 2)
No	Tested		Garage
No	Tested	108ZHR	Control Panel - Exterior Lighting
No	Tested	108ZHL	Disconnect - Air Compressor
No	Tested	108ZHM	Disconnect - H2O Extractor
No	Tested	108ZHN	Disconnect - Panel B Section 2
No	Tested	108ZHQ	Panel - A (Section 1)
No	Tested	108ZHP	Panel - A (Section 2)
No	Tested		Tele / Data Room
No	Tested	108ZHT	Contactor - Plectron Kitchen
No	Tested	108ZHS	Contactor - Unmarked
No	Tested	108ZHU	Control Panel - Plectron Lighting
No	Tested		Station #12 (4211 NE 148th Ave)
No	Tested		Garage
No	Tested	108ZJ2	ATS (Normal Side)
No	Tested	108ZJ1	Breaker - ATS Normal Side
No	Tested	108ZHY	Contactor - Lighting
No	Tested	108ZHX	Contactor - Receptacles
No	Tested	108ZHW	Control Panel - Exhaust Fan
No	Tested	108ZHV	Control Panel - Exterior Lighting
No	Tested	108ZHZ	Panel - A (Section 1)
No	Tested	108ZJ0	Panel - A (Section 2)
No	Tested	108ZJ3	Panel - B
No	Tested		Station #13 (8701 208 Ave NE)
No	Tested		Break Room
Yes	Tested	108ZE2	Panel - A
No	Tested	108ZE0	Panel - B
No	Tested	108ZE1	Panel - E
No	Tested		Station #14 (5021 264 Ave NE)
No	Tested		Generator Room
No	Tested	108ZE9	Disconnect - Panel E
No	Tested		Main Electrical Room
No	Tested	108ZE7	Distribution Panel
No	Tested	108ZE8	Panel - A
No	Tested	108ZE3	Panel - B
No	Tested	108ZE5	Panel - C
No	Tested	108ZE4	Panel - E
No	Tested	108ZE6	Transfer Switch (Normal Power)
No	Tested		Station #16 (6205 185 Ave NE)
No	Tested		Garage



Professional

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Association

Inventory Report

Inspection # 1

Site: City of Redmond Fire Stations

Date: 10/29/2013

Open Problem	Status	Barcode	Location\Equipment
No	Tested		Electrical Room
No	Tested	108ZEM	Panel - A
No	Tested	108ZEP	Panel - B
No	Tested	108ZEN	Panel - C
No	Tested		Generator Room
No	Tested	108ZEK	Disconnect - Generator
No	Tested	108ZEL	Transfer Switch (Normal Power)
No	Tested		Station #16 Mechanic Shop
No	Tested		Chemical Room
No	Tested	108ZEA	Contactor - Hydraulic Pump
No	Tested	108ZEB	Disconnect - Hydraulic Pump
No	Tested		Parts Room
No	Tested	108ZEH	Contactor - Air Compressor
No	Tested	108ZEJ	Disconnect - Air Compressor
No	Tested	108ZEF	Disconnect - Generator
No	Tested	108ZEC	Panel - M1
No	Tested	108ZEE	Panel - M2
No	Tested	108ZED	Panel - M3
No	Tested	108ZEG	Transfer Switch (Normal Power)
No	Tested		Station #17 (16917 NE 116th Street)
No	Tested		01 Floor
No	Tested		Elevator Machine Room
No	Tested	108ZGC	Disconnect - PNL:MDP
No	Tested	108ZGD	Disconnect - PNLP2
No	Tested	108ZGB	Panel - EL
No	Tested		02 Floor
No	Tested		Main Electrical Room
No	Tested	108ZGG	ATS (Normal Supply)
No	Tested	108ZGH	Disconnect - Generator
No	Tested	108ZGL	Panel - 1
No	Tested	108ZGM	Panel - 1A
No	Tested	108ZGP	Panel - 2
No	Tested	108ZGQ	Panel - 3
No	Tested	108ZGR	Panel - 4
No	Tested	108ZGN	Panel - Control Relay
No	Tested	108ZGF	Panel - D
No	Tested	108ZGJ	Panel - MDP
No	Tested	108ZGK	Panel - N
No	Tested		Tele/Com Room
No	Tested	108ZGE	Panel - TC
No	Tested		Station #18 (22710 NE Aldercrest Drive)
No	Tested		Garage
No	Tested	108ZDW	Panel - R2
No	Tested	108ZDX	Panel - Unmarked
No	Tested		Hallway
No	Tested		Main Electrical Closet
No	Tested	108ZDZ	Main Switchboard
No	Tested	108ZDY	Transfer Switch (Normal Power)
No	Tested	108ZDT	Panel - LM



Professional
Thermographers
Association

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Site: City of Redmond Fire Stations
Inventory Report
Inspection # 1
Date: 10/29/2013

Open Problem	Status	Barcode	Location\Equipment
No	Tested	108ZDU	Panel - R1
No	Tested		Outside
No	Tested	108ZDV	Breaker - Main

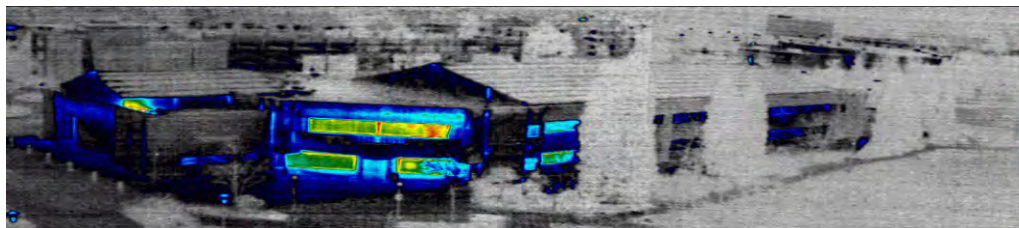
Infrared Building Envelope Survey

City of Redmond : December 16th 2013

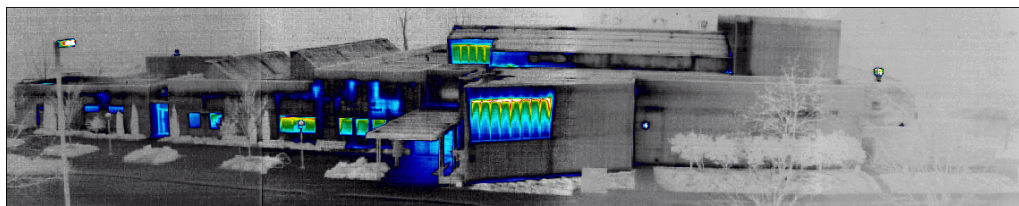
City Hall



Public Safety Building



Senior Center



Overview:

On the evening of December 16th 2013, an Infrared Thermographic Building Envelope Survey was performed under the direction of Meng Analysis by Colbert Infrared Services, Inc.. With the intent to identify any areas of the exterior of the building (walls and roof surfaces) that showed non-uniform thermal continuity as compared to similar areas.

The survey was started at approximately 7:00 pm at night to allow for as much solar loading from the day to diminish. The outside ambient air temperature was approximately 42 deg. F and the interior building air temperature was held as close to 70 deg. F as possible during the night. The weather conditions at the time of the test were cold with no accumable rain fall, and no significant wind/air flow.

The infrared images that comprise this report were taken with three different thermographic cameras depending on which system could produce the best results given conditions of the testing environments. A Mikron 7600 Pro, Fluke Ti32 and a ICI 760 were used for the inspection. All of the images have been post processed using Thermal Trend – Image Analyzer to produce Ultra-X HD infrared thermographic images.

All of the images in this report, for the three buildings are in separate report sections following this section. Further testing and study may be required to provide remedial solutions to the items that have been found, and were not a part of this survey. Colbert Infrared Services, Inc. is not responsible for any follow up actions that may be required to alleviate any of the items documented in this report.

Please contact us if we can be of any further assistance in answering any questions or clarifications are needed.

Fred Colbert

Fred Colbert

President, CIS Inc.

Level III Certified Thermographer/Instructor

Infrared Thermographic Building Envelope Evaluation

There are as many ways that heat loss can manifest itself through a building walls/floor structures as there are different methods of building construction and materials used, combined with as many ways that you can construct inappropriately those materials or methods.

One of the great advantages of Infrared Thermography is that it allows for quick qualitative evaluation of the homogeneity of the wall structure, or the connection points between different structures and materials.

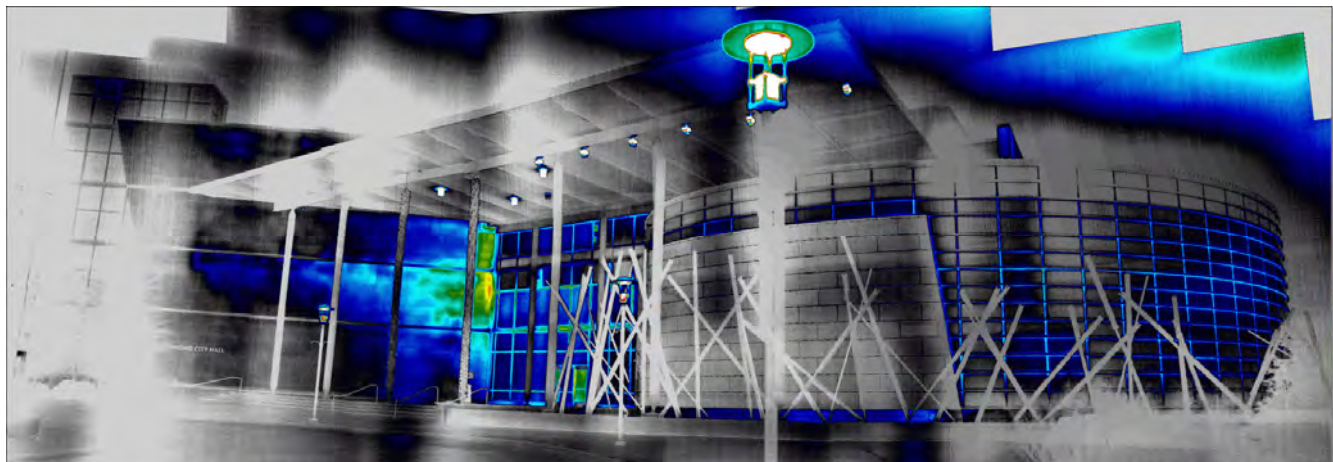
The term “**Thermal bridging**” is where excess heat flow from the interior of the building is manifesting on building exterior walls. The exact cause of these anomalies can not be determined by the use of infrared thermography alone, but further forensic testing by reviewing construction details, as well as in the field testing (destructive testing like core samples and non-destructive testing; for example capacitance) can all be combined to evaluate the actual causes of the thermal anomalies.

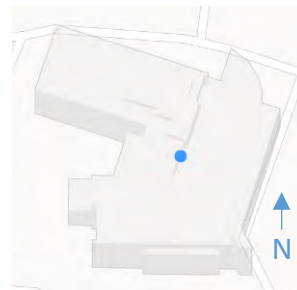
Thermal bridging / Heat transfer: Conduction, Convection, and Radiation, depending on the construction material and the way that the structure is formed, can all happen in conjunction with one another. In any given scenario, one or the other may be of more influence than the others. For example warm air that is escaping from poor window or door seals will not only warm the exterior surfaces of the structure by the transfer of heat by convection (warm air exfiltration) but will also influence the heat loss in that area by conduction. In areas where the wall section is not penetrable by air exfiltration, you can still have convection on (or within) the wall structure, that will be influencing the amount of heat loss by conduction through the exterior wall section. Infrared Thermography in and of itself can not determine the exact cause, but is a tremendous tool for finding the locations and the extent of these anomalies. Detailed follow up investigation (as described above) at the locations where these anomalies have been found as compared to adjacent locations where no anomalies were found (to be used as controls), is the best follow up action for the result of a Thermographic building envelope evaluation.

If we can be of further assistance in this additional testing, or clarification of the imaging results, please let us know and we will be pleased to assist you.

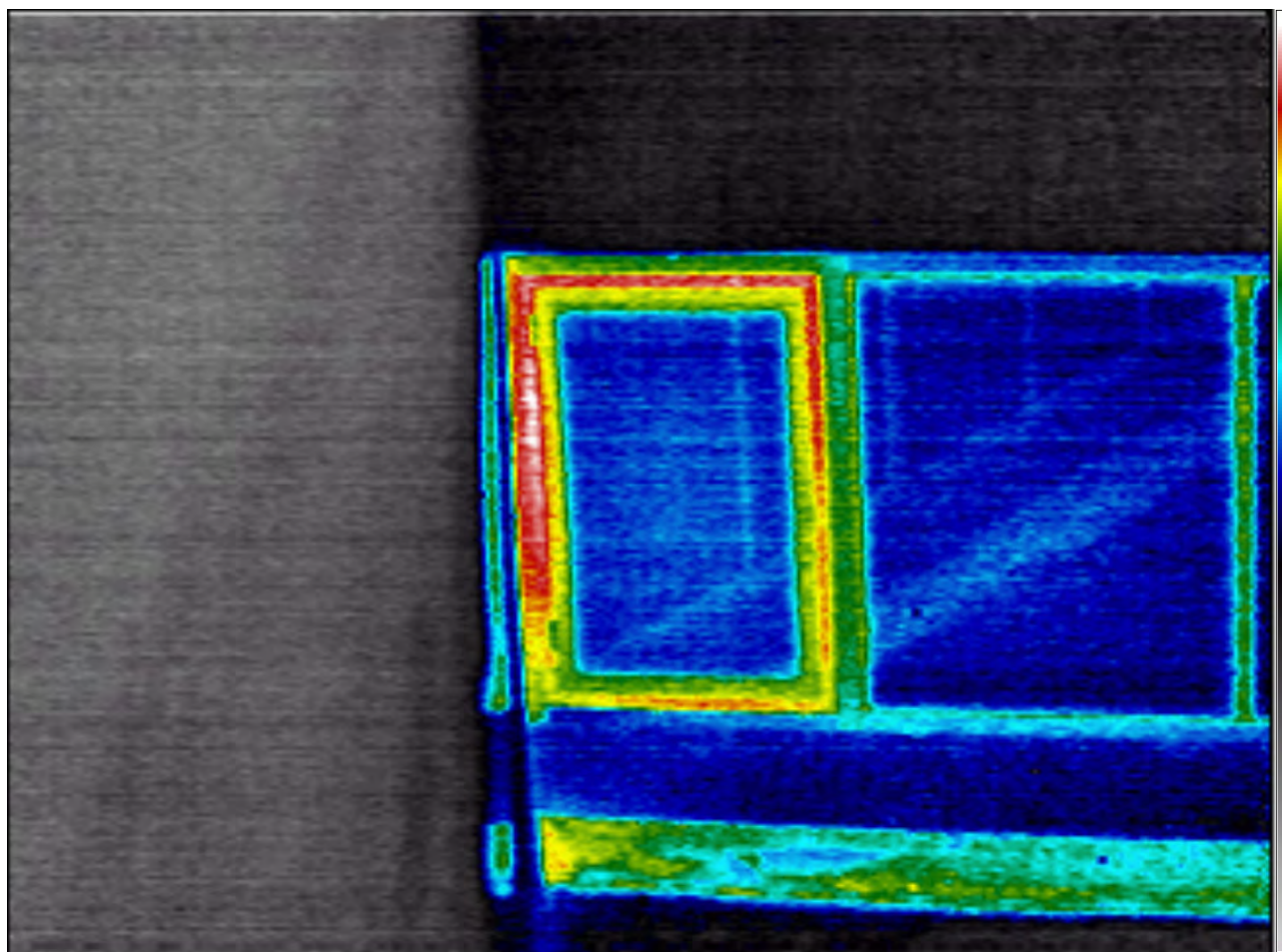
6.2 Infrared Envelope

Redmond, City of: City Hall
Infrared Building Envelope Survey
December 16th 2013



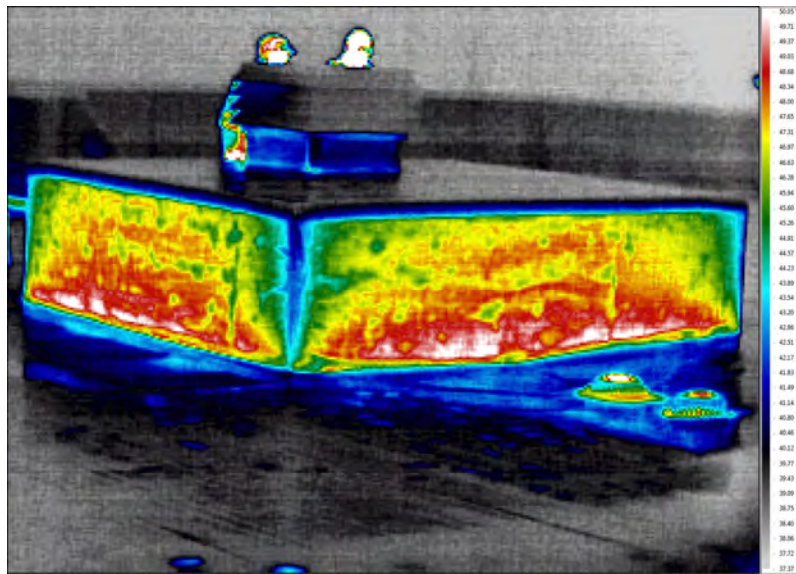


3rd Floor, roof level above main entrance



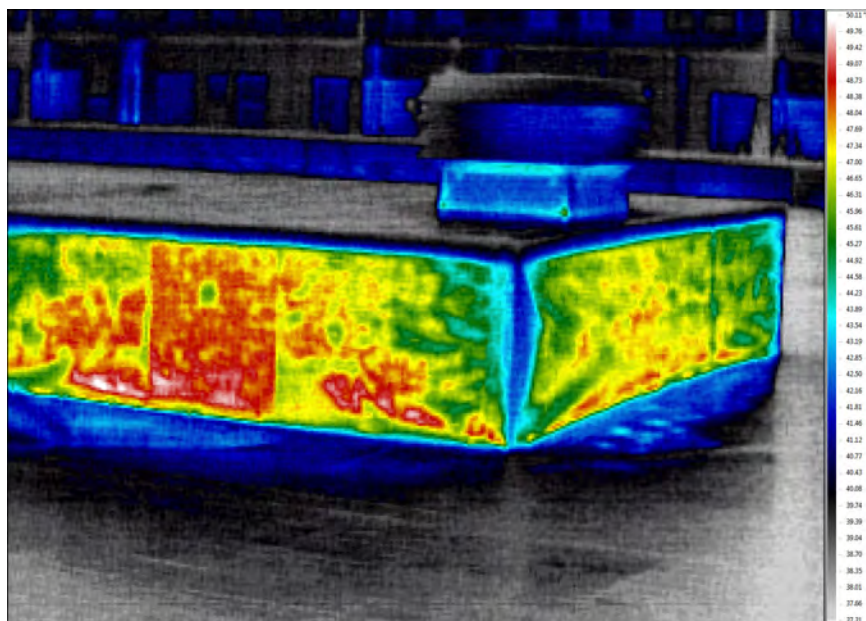
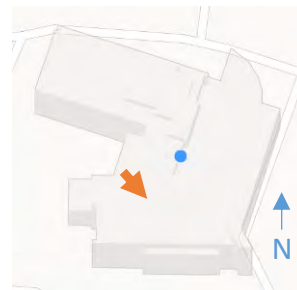
Heat escaping around the window/door seal for the south window that is used as a access point to the outside roof level.

4th Floor Roof, Fright Elevator Shaft,
Southeast corner of cap.



Thermal bridging though the walls of the elevator shaft.

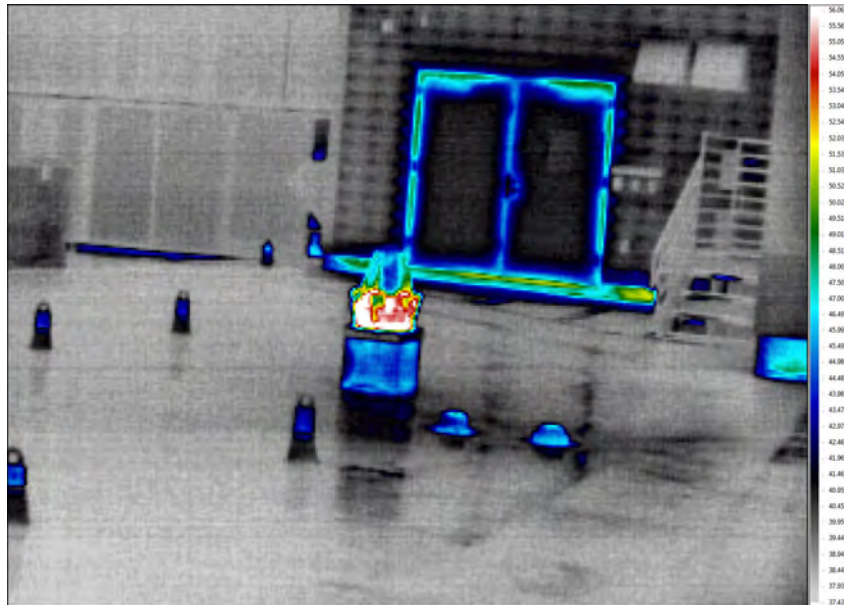
4th Floor Roof, Fright Elevator Shaft, Northwest corner of cap.



Thermal bridging though the walls of the elevator shaft.

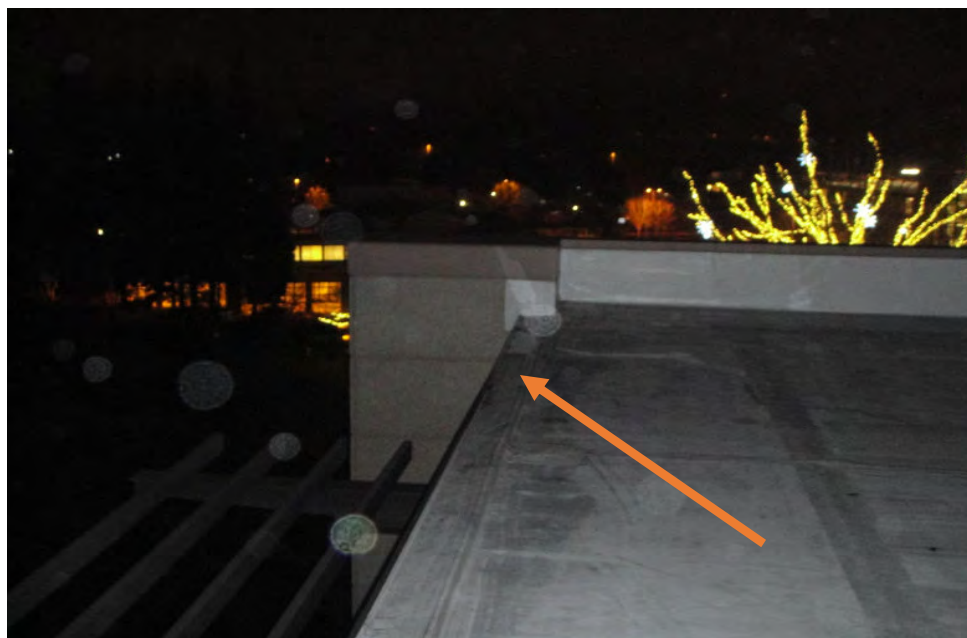
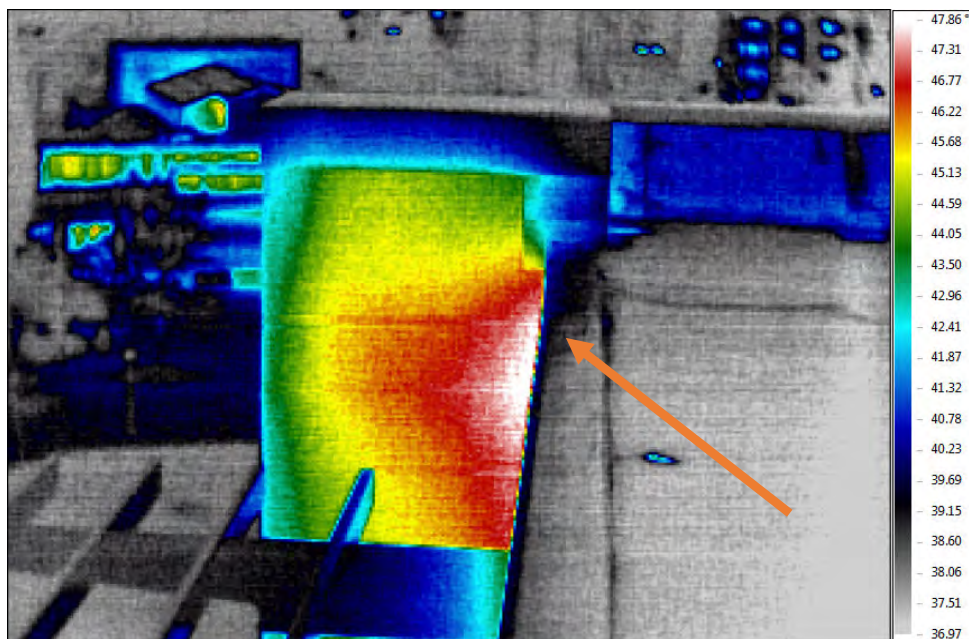
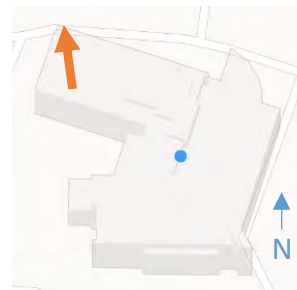


4th Floor rooftop, and door entryway.

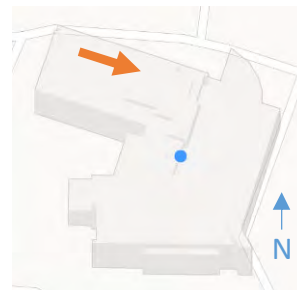


Heat escaping around the edge of the door frame for the mechanical room.

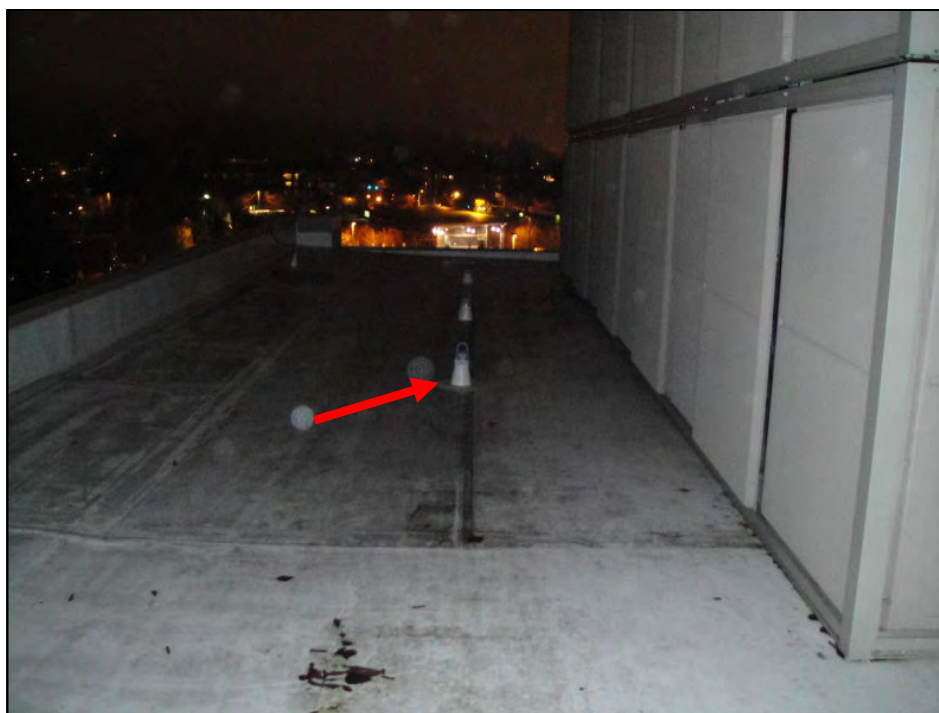
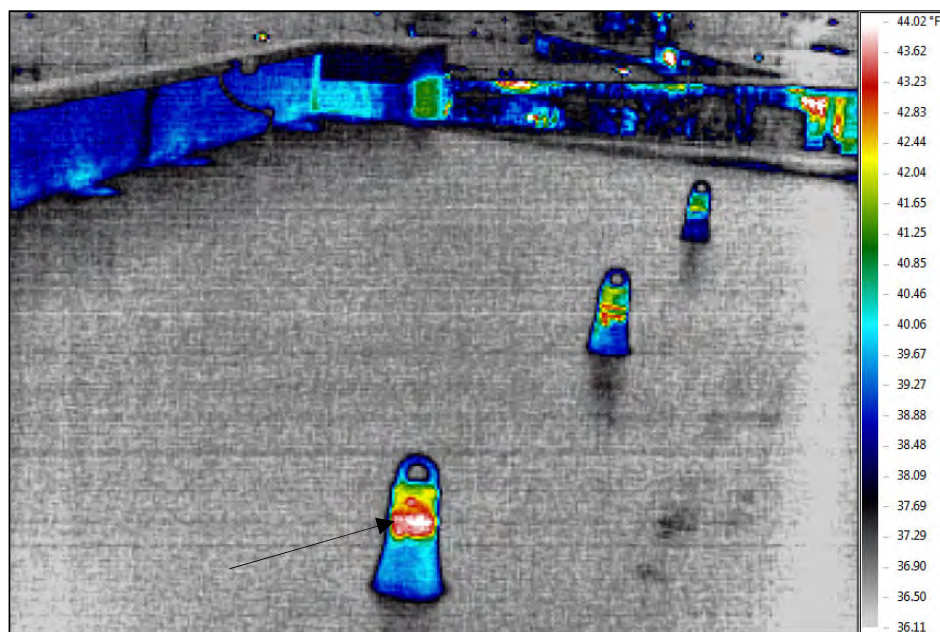
4th Floor Roof level, Northwest corner architectural wing.



Thermal bridging at intersection of roof and wing wall

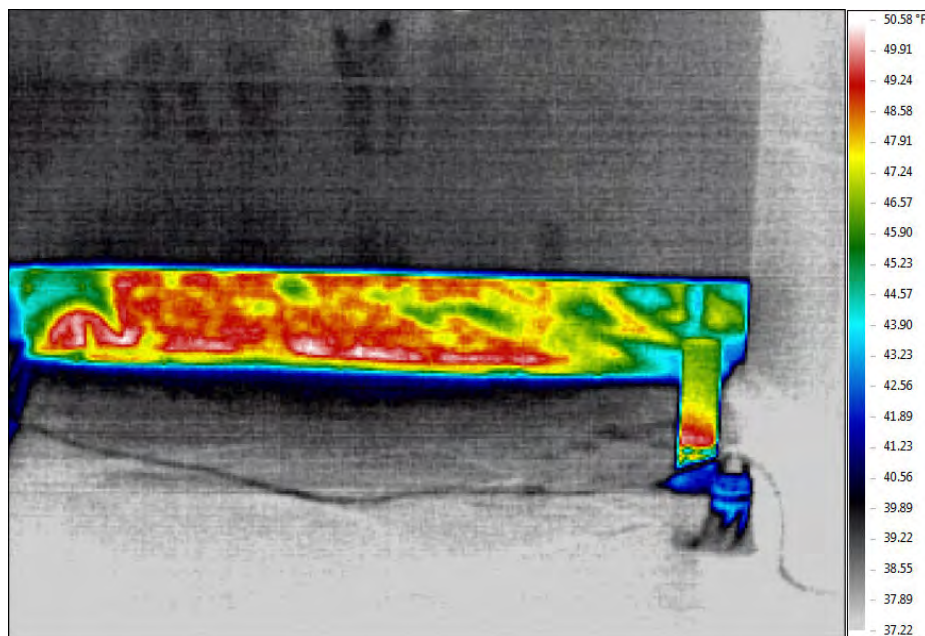
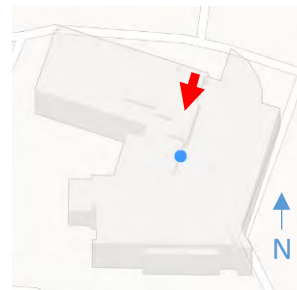


4th Floor Roof, Northeast corner.

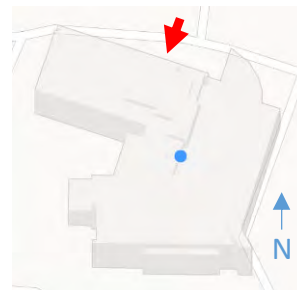


Thermal bridging from fall protection footings.

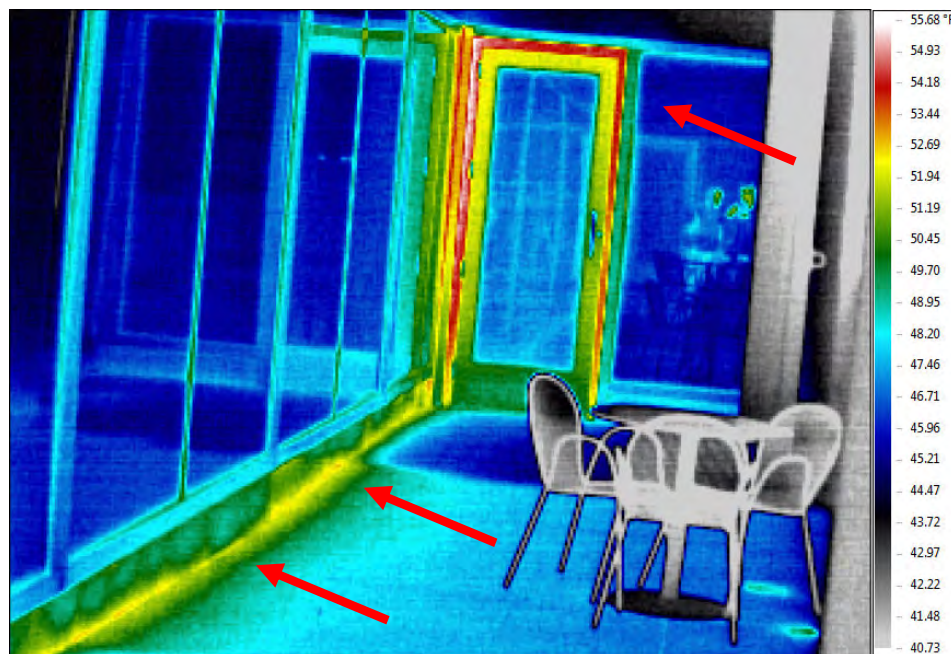
4th Floor Roof, North wall of Mechanical penthouse.



North wall, thermal bridging at base of the wall



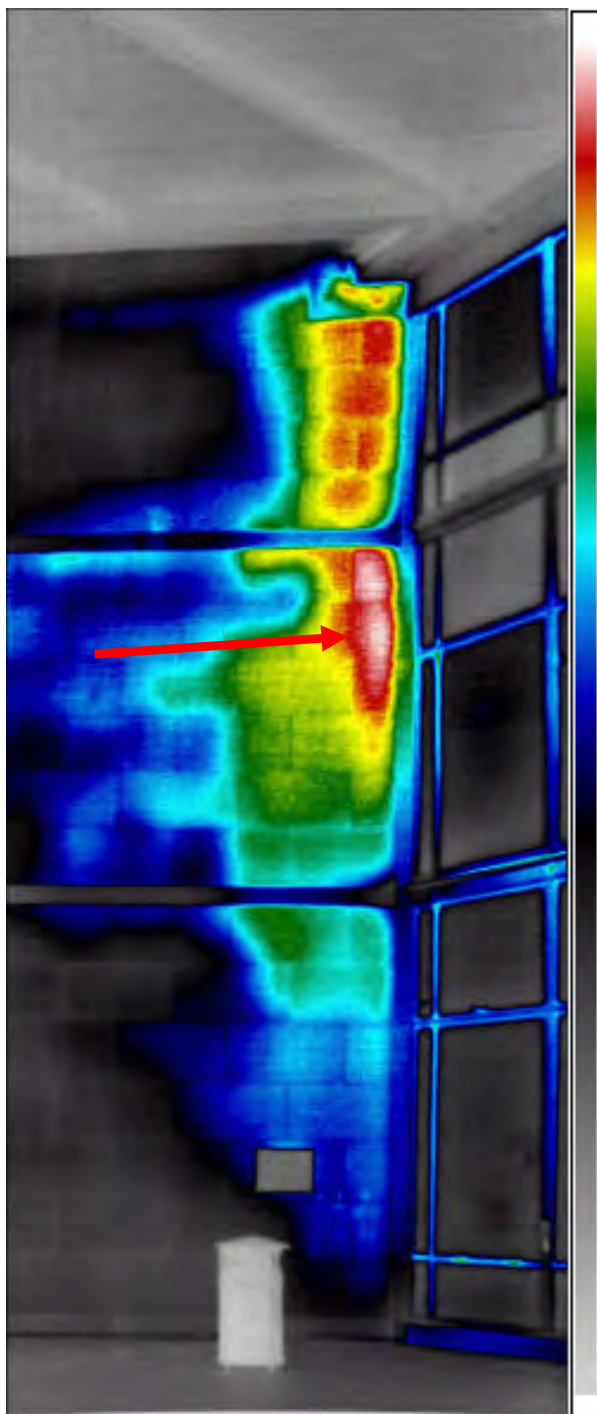
4th Floor, North Balcony



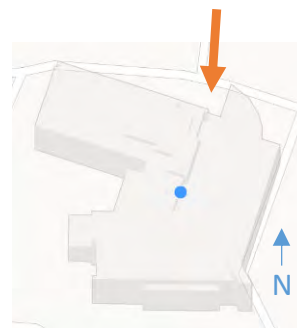
Heat escape from the West door frame and base of south wall



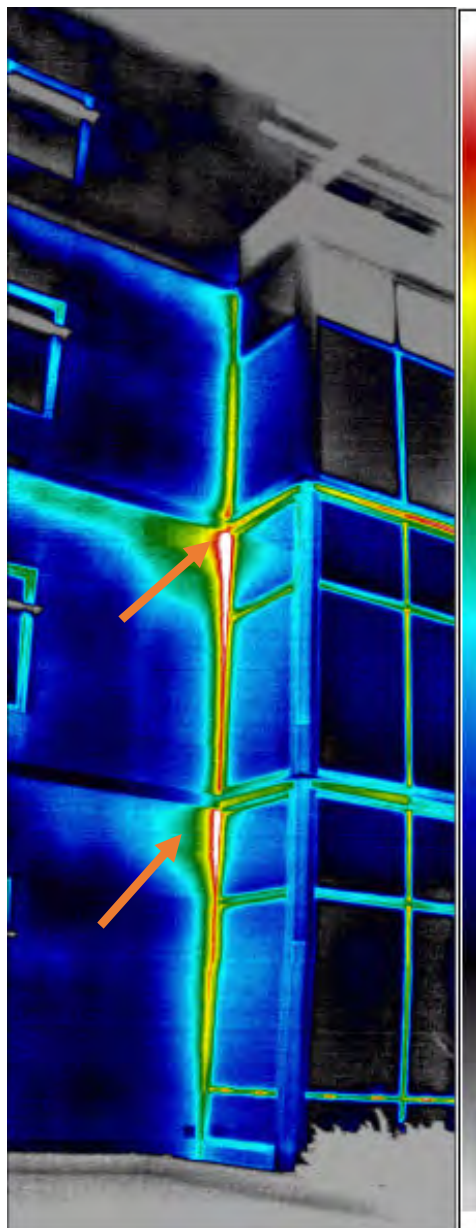
1st Floor east main entrance.



Unusual thermal bridging in the wall next to the glass entrance in the front of the building.



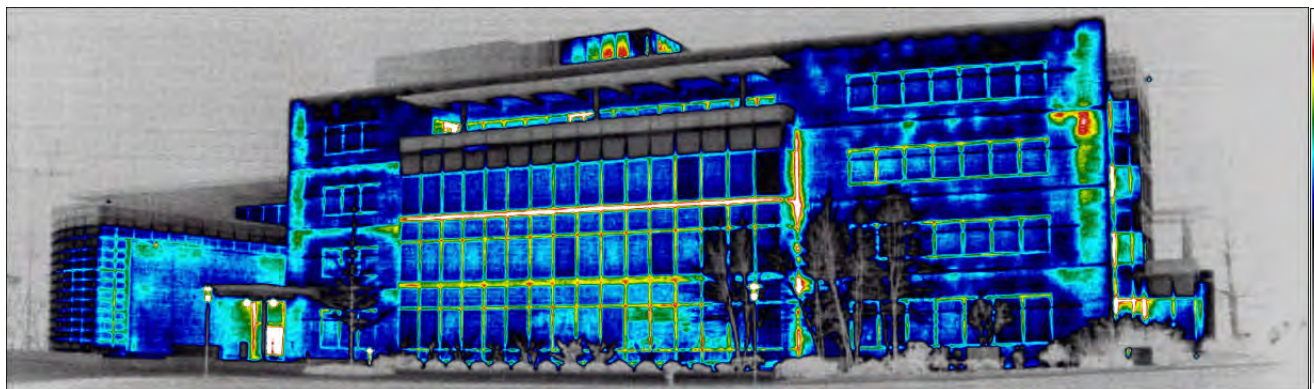
North side, East wall seam.



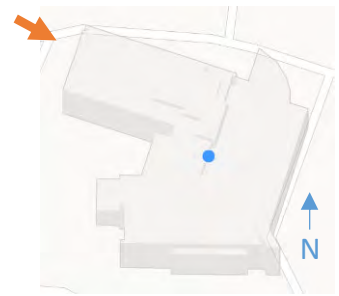
Thermal bridging along the seam of the building as the wall protrudes outward.



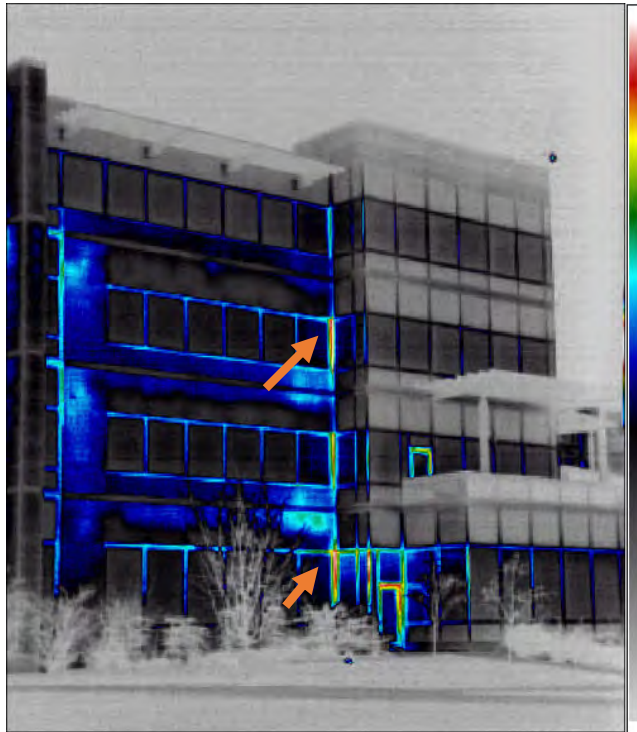
North side, exterior.



View of the north side elevation of the building showing overall view of the building envelope.

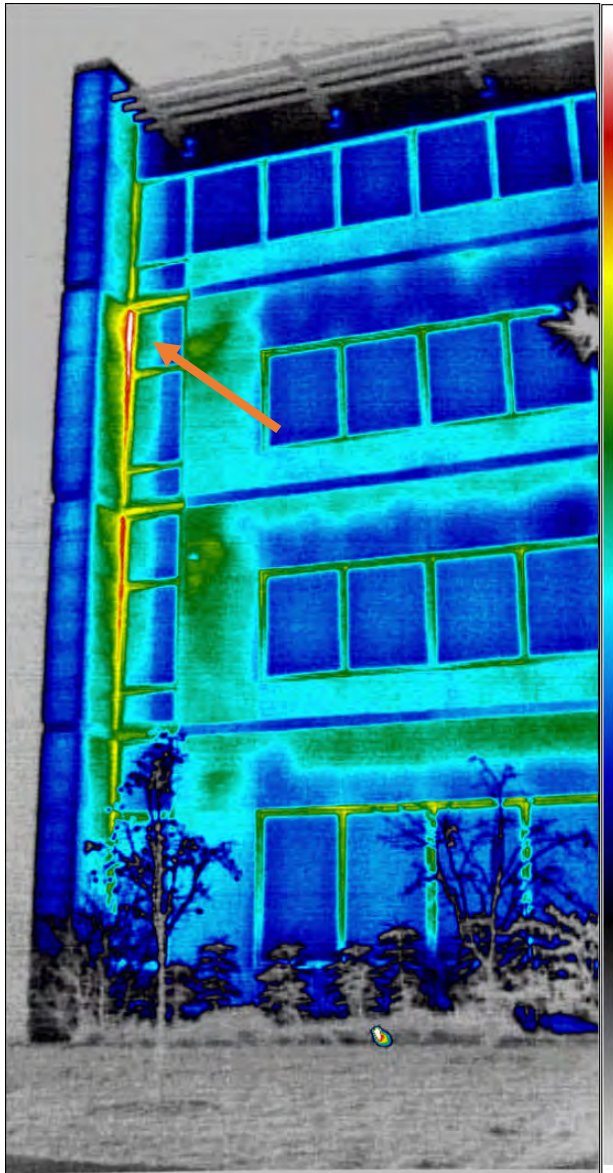
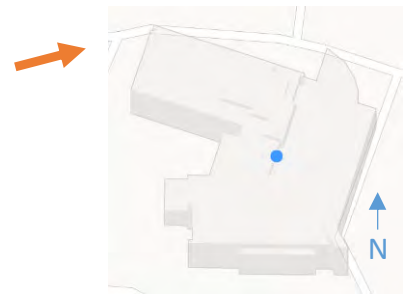


West side, North wing building exterior.

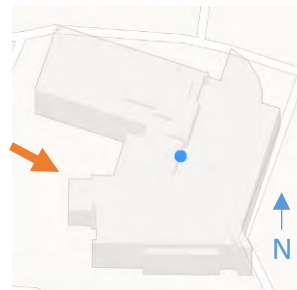


1st and 3rd floor heat loss around the window flashing at the intersection of the south wall and the glass exterior.

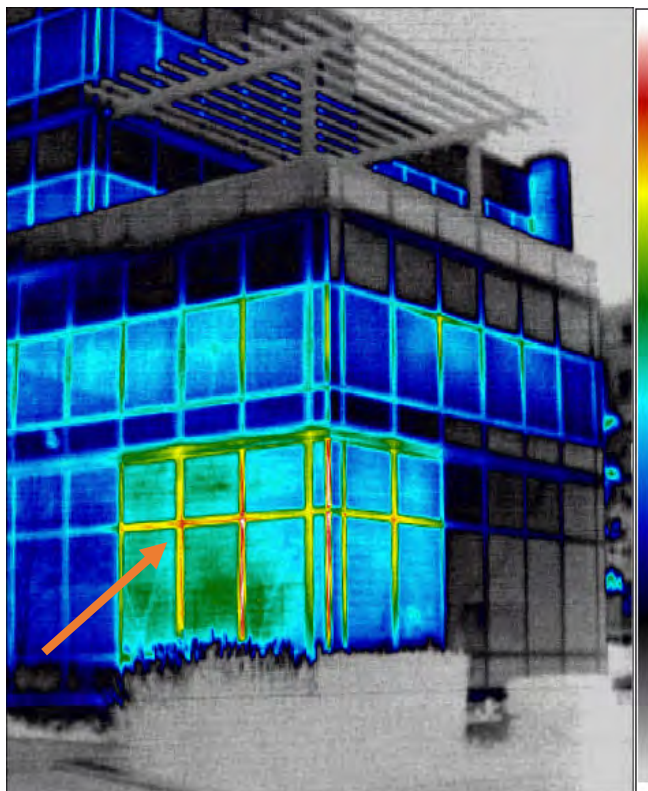
Redmond: City of, Town Hall Building



The red arrow shows the region of the most concentrated thermal bridging occurring between the wing wall and the 3rd floor windows.

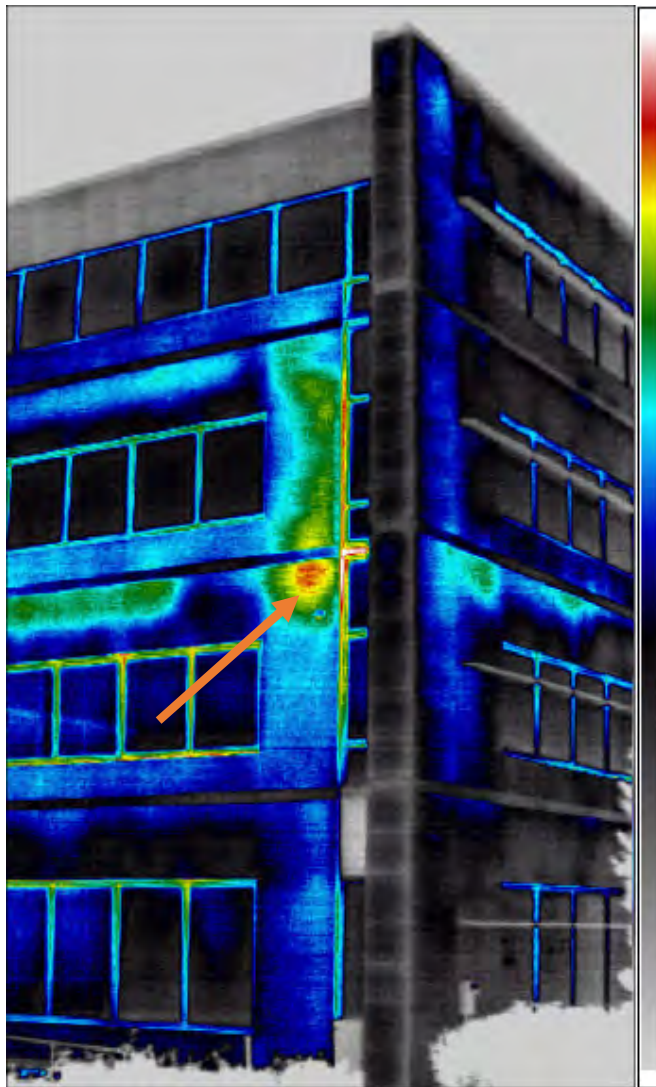
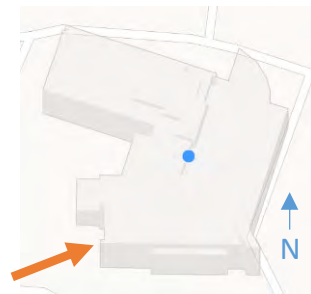


West side, north window wall exterior.



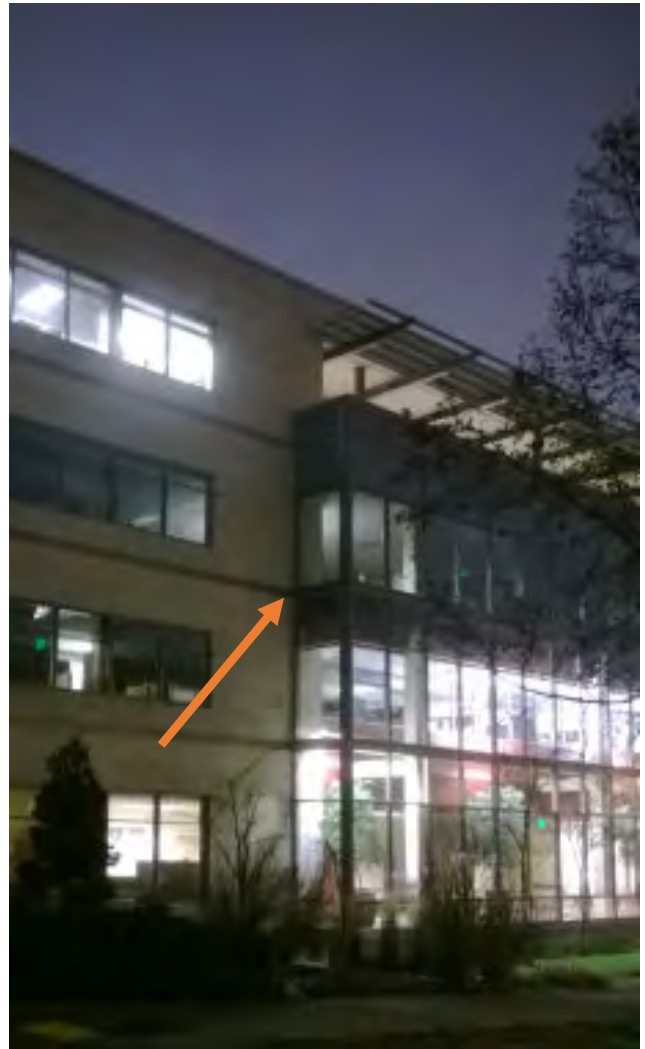
1st floor loading dock northwest corner of the building.

West side, southwest building exterior.



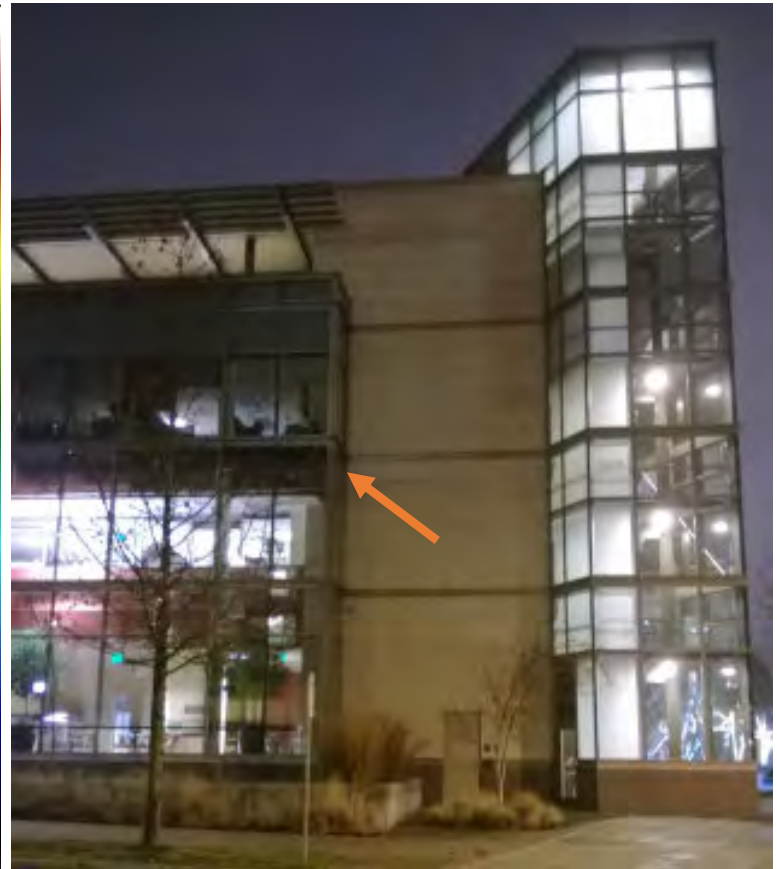
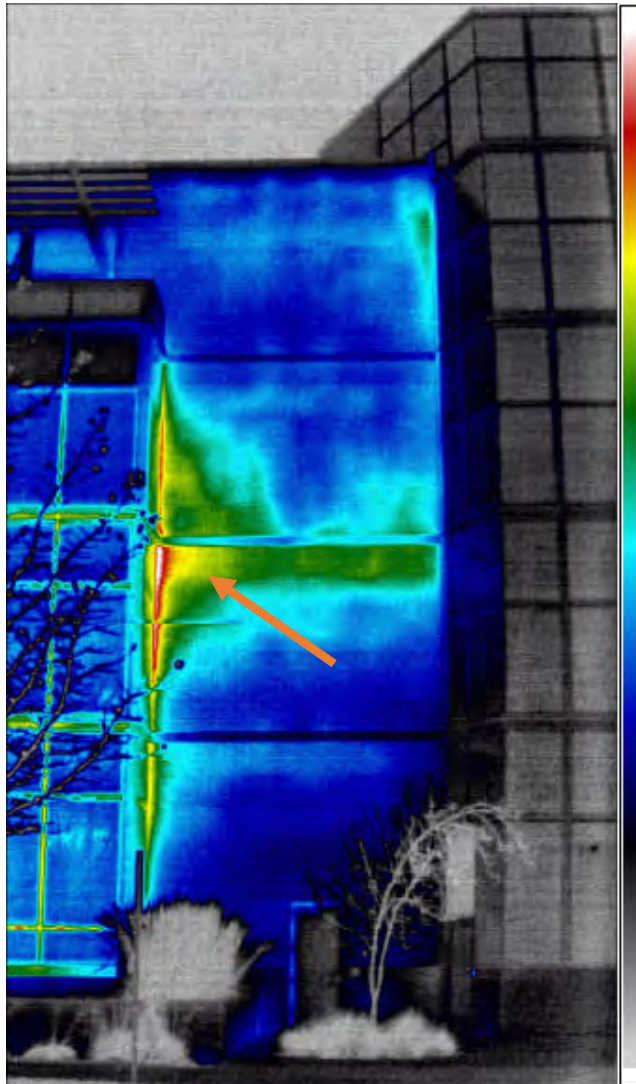
Thermal bridging at the intersection of the second and third floors and the wing wall.

South side, West wall seam.



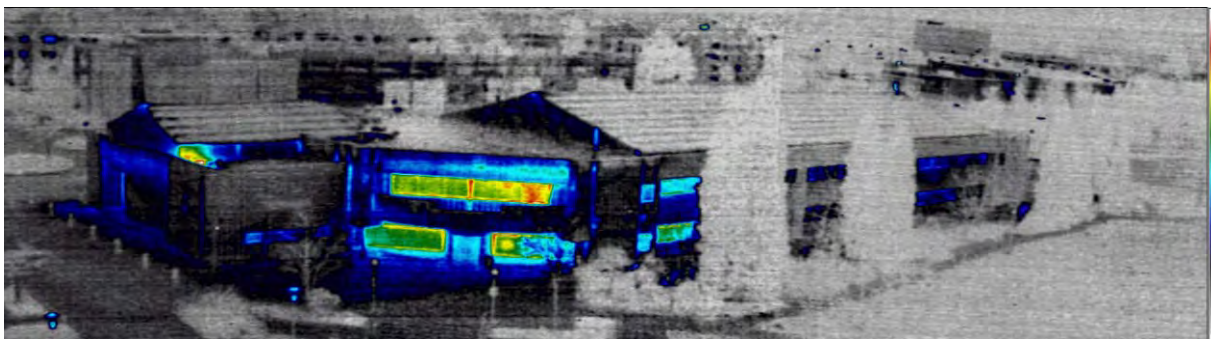
Thermal bridging at the intersection of the 2nd and 3rd floor where it meets the glass.

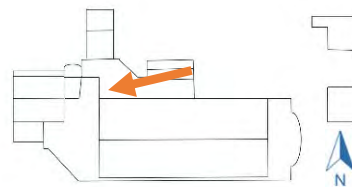
South side, East wall seam.



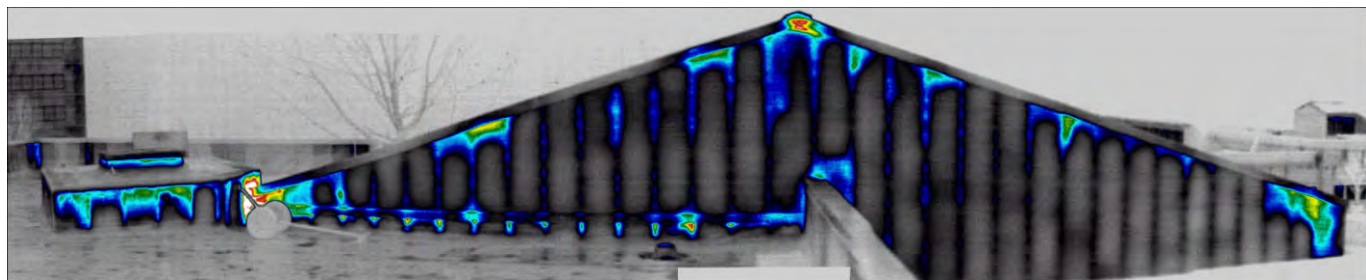
Thermal bridging at the intersection of the 2nd and 3rd floor where it meets the glass.

Redmond, City of: Public Safety Building
Infrared Building Envelope Survey
December 16th 2013

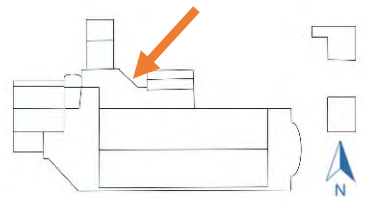




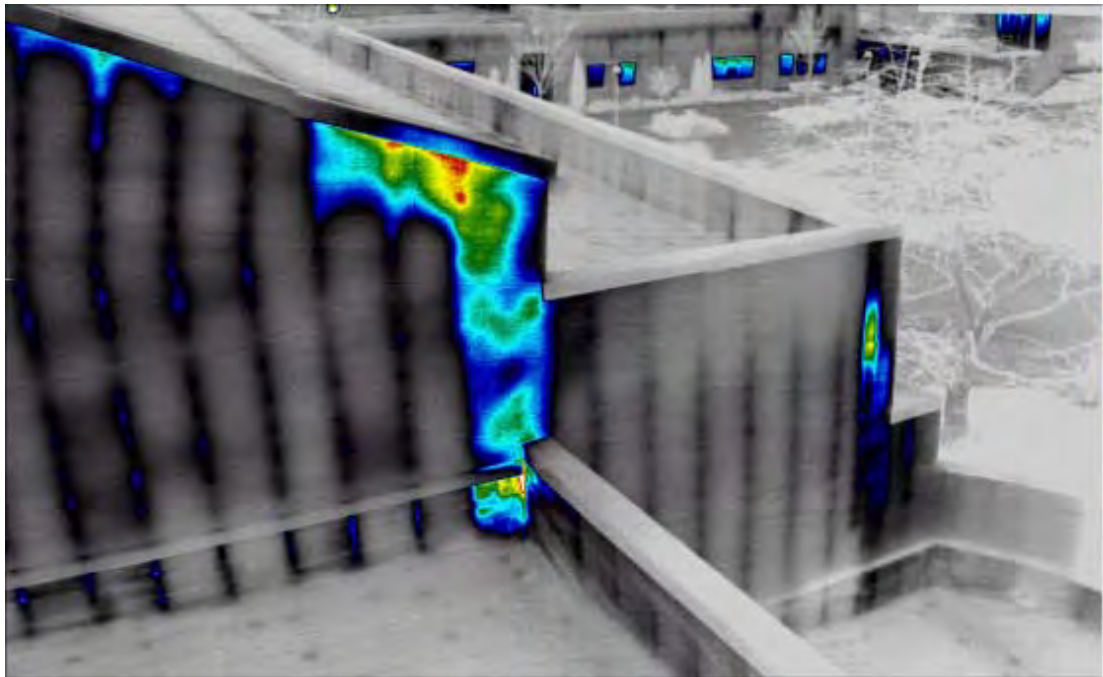
West end over entrance.



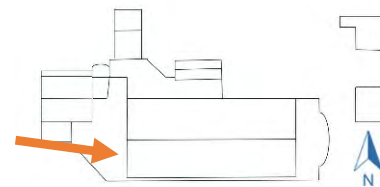
Thermal bridging spanning over various points the metal peaked roof.



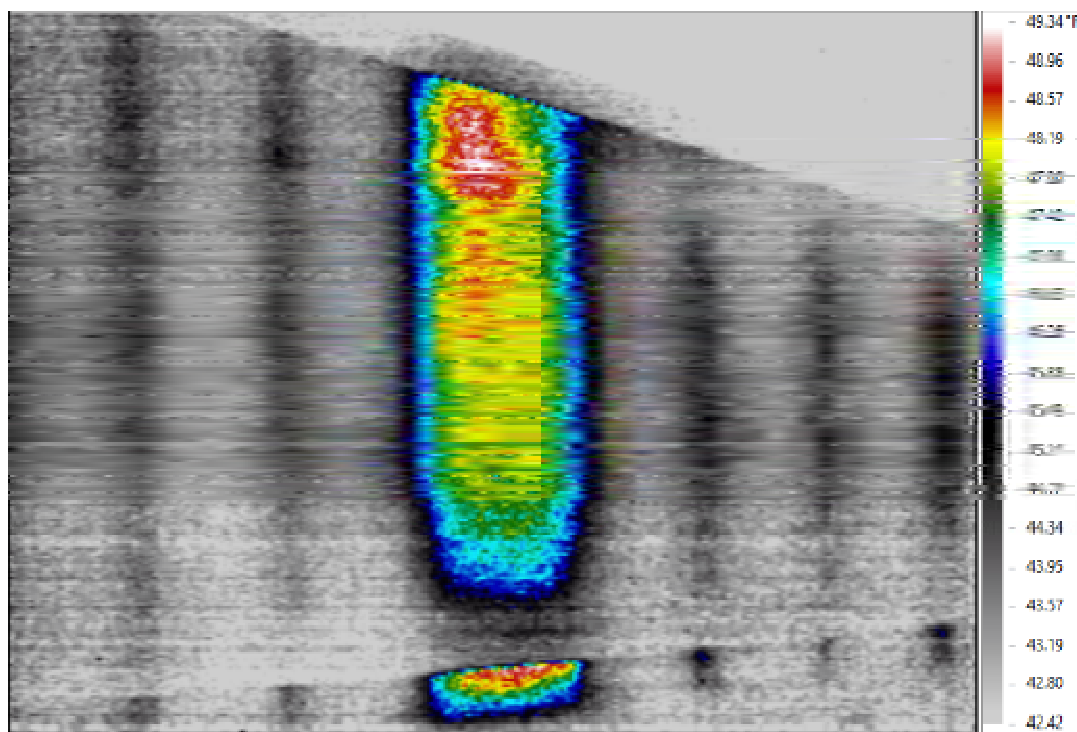
West end over front entrance.



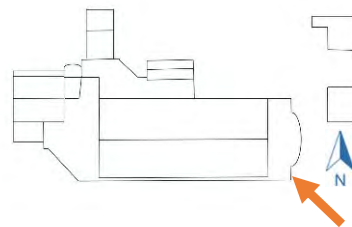
Thermal bridging on the north end, east side of the peaked metal roof section.



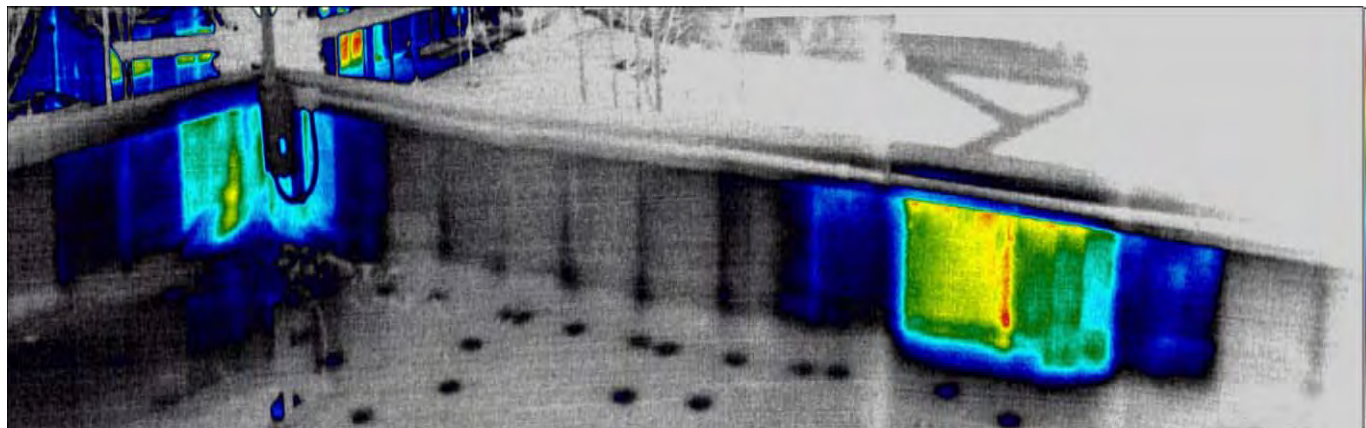
West end over front entrance.



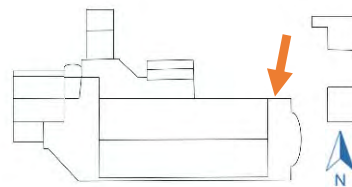
Thermal bridging located on the west end of the wall.



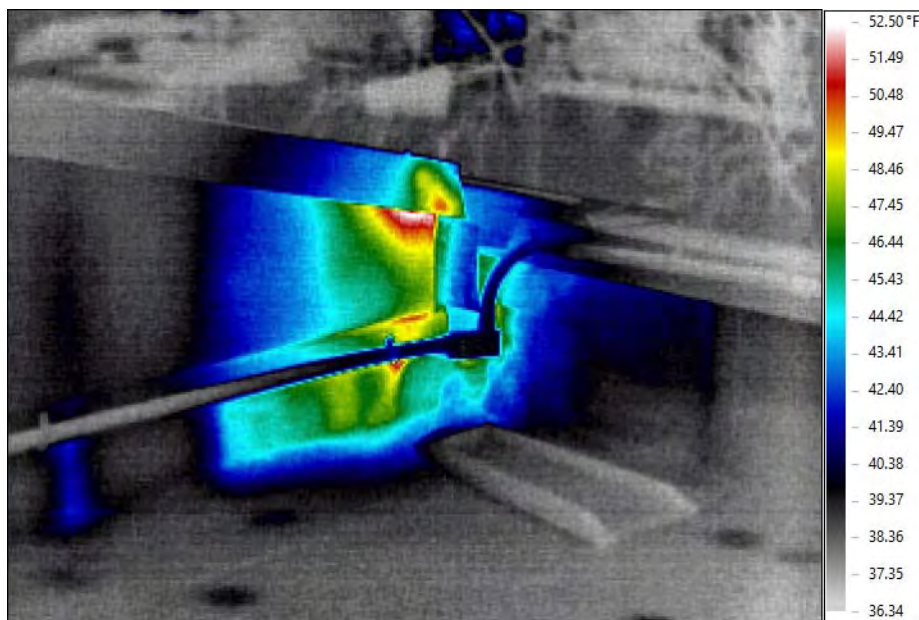
East end of the building rooftop.



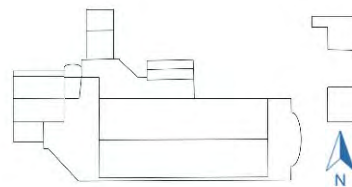
Thermal bridging found along the southeast corner of the roof parapet.



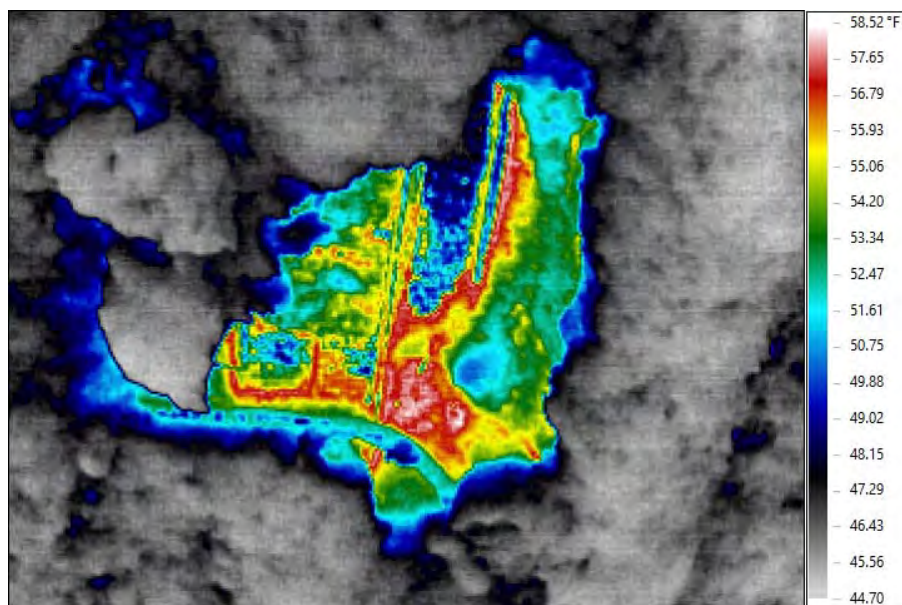
East end of the building rooftop.



Northeast corner of the roof, where the metal roof intersects with the gutter.

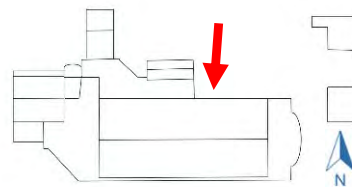


Underground parking garage, the ceiling near the white gate.

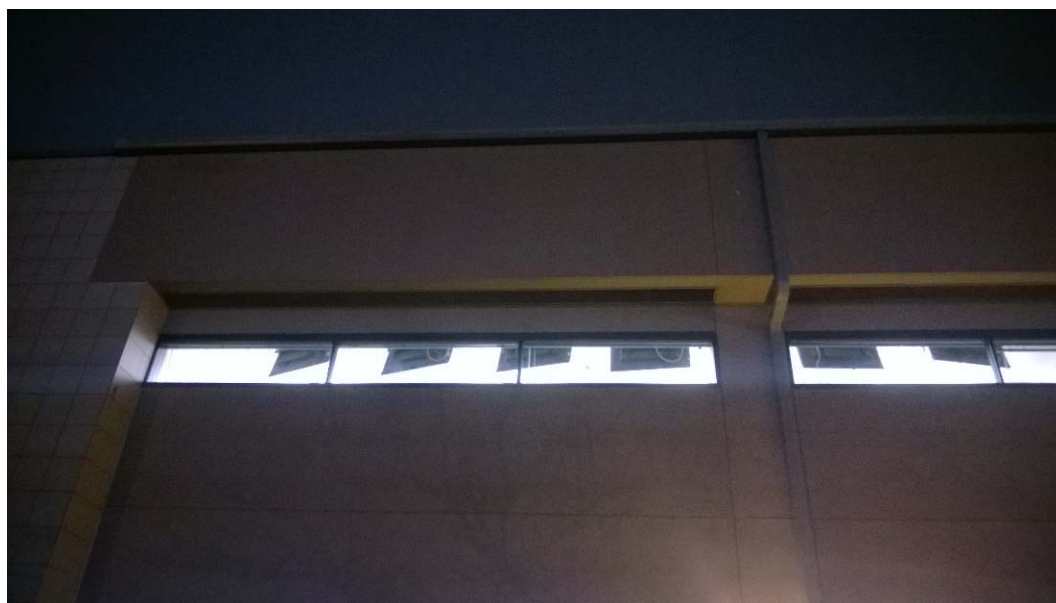
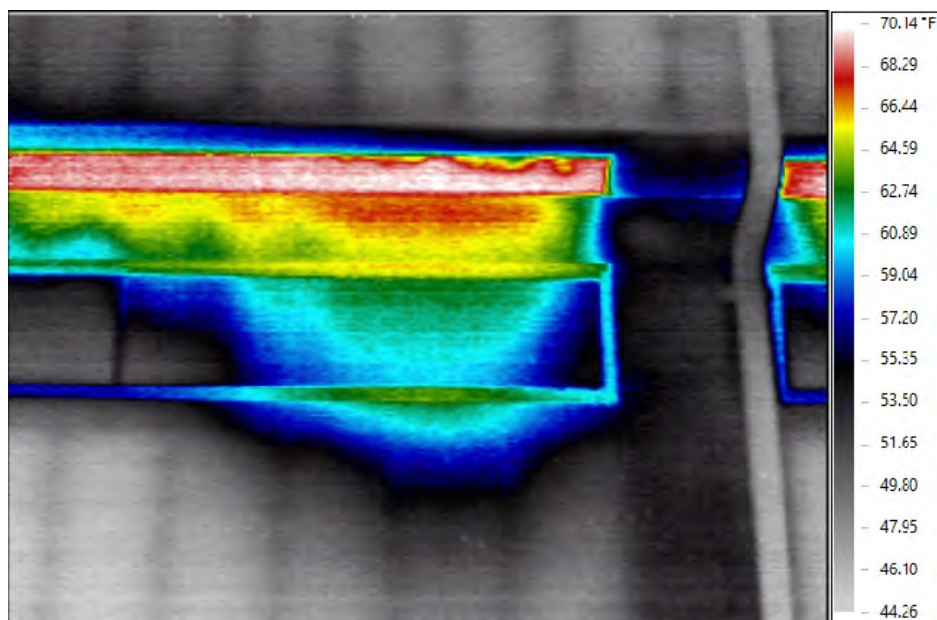


Numerous thermal observations in locations where the insulation is missing from the ceiling.

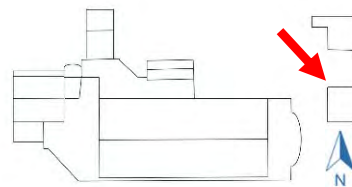
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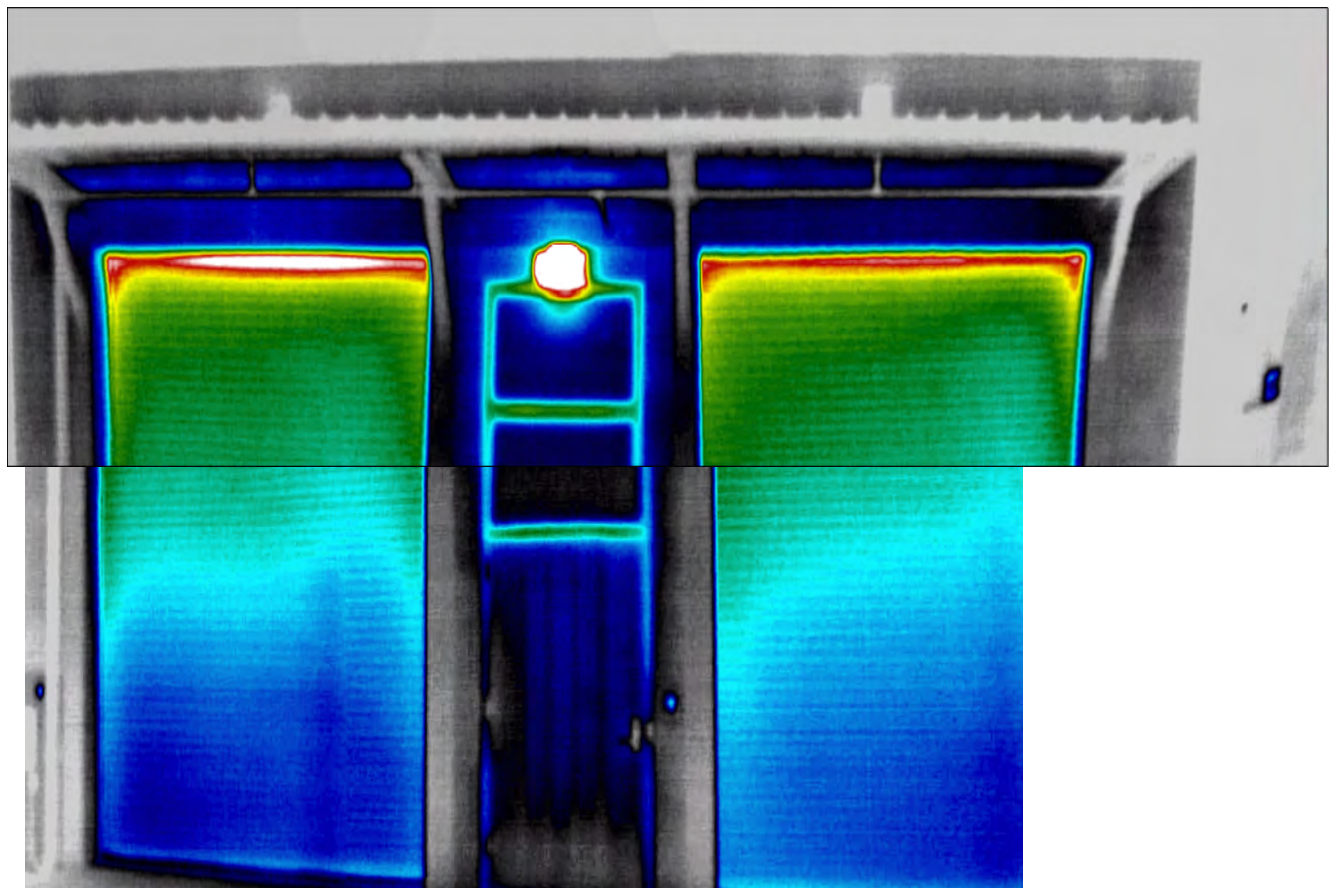
Building exterior on the north wall of the 911 Call Center.



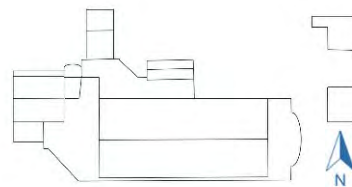
Example of heating coming from beneath the soffit.



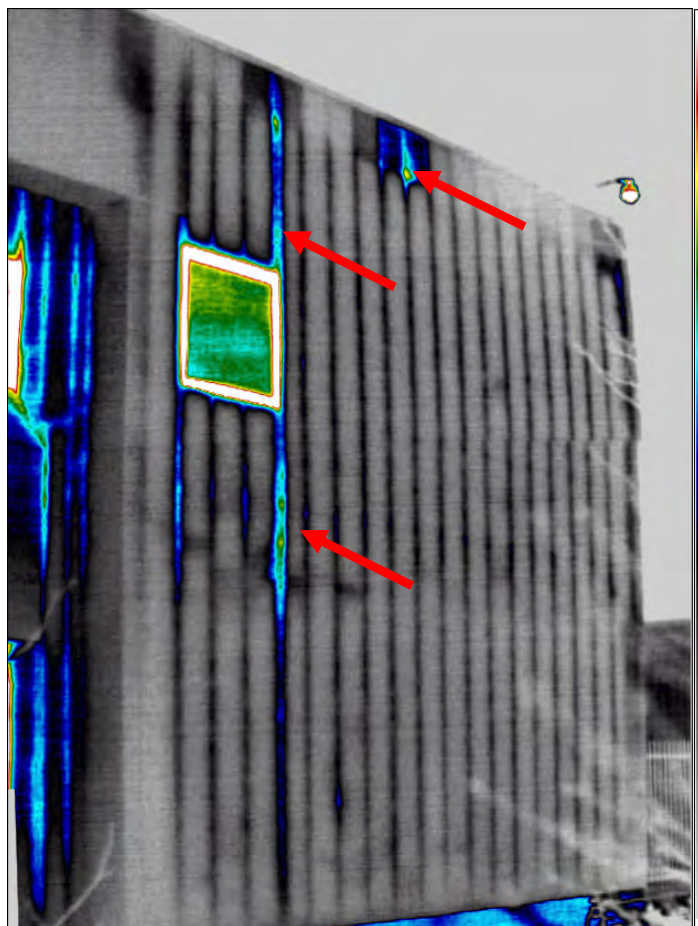
Northeast storage building by red gate.



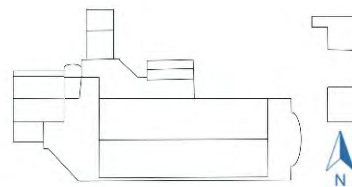
Front entrance and rollup doors profile.



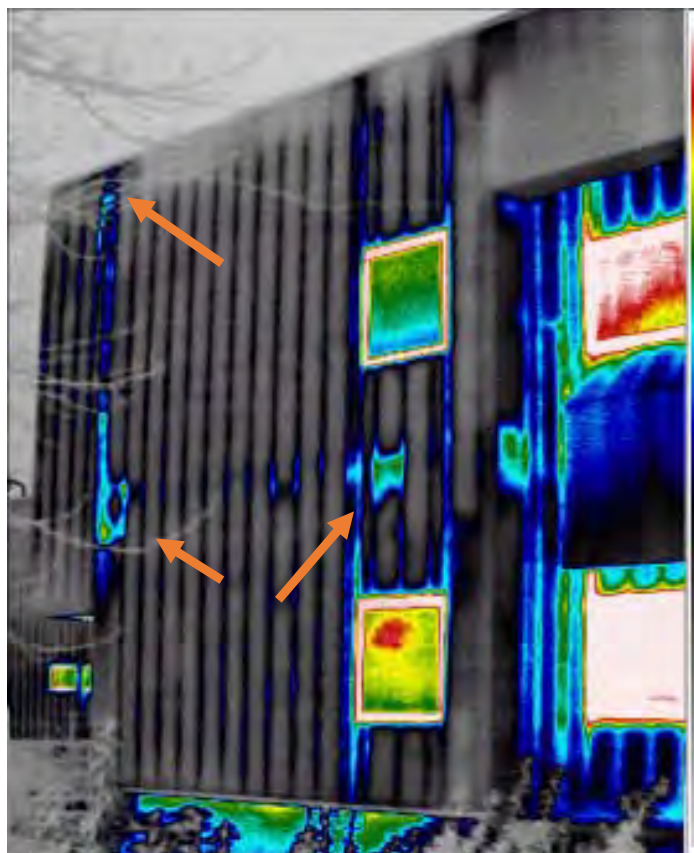
South wall exterior at the Southeast corner.



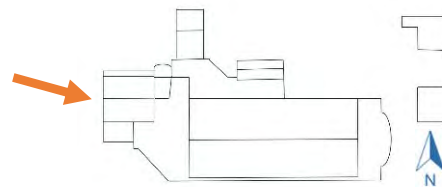
Thermal bridging above and below the window and along the parapet.



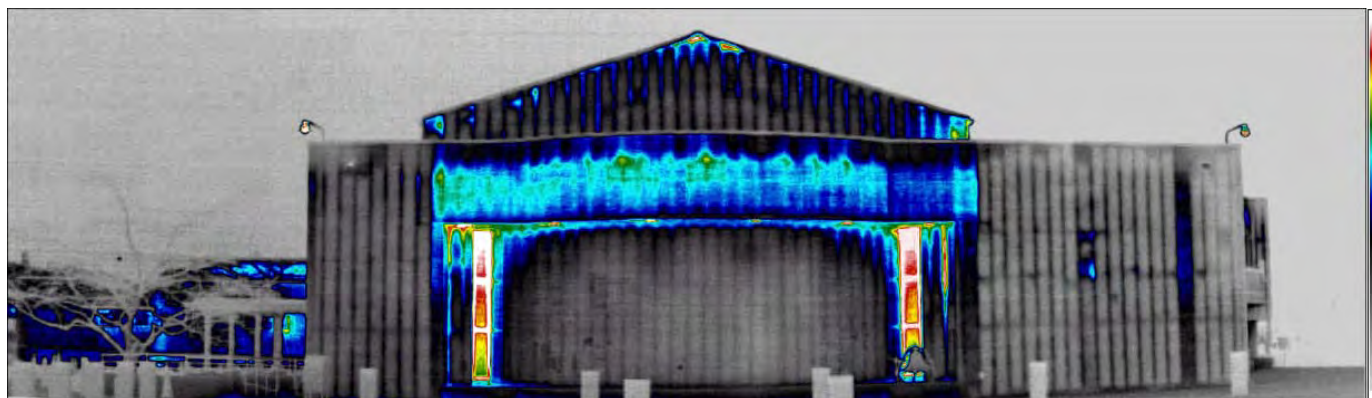
South wall exterior at the Southwest corner.



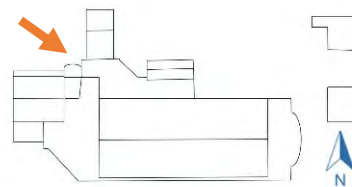
Thermal bridging above and below the window and along the parapet, and the corner of the building overhang for the entrance.



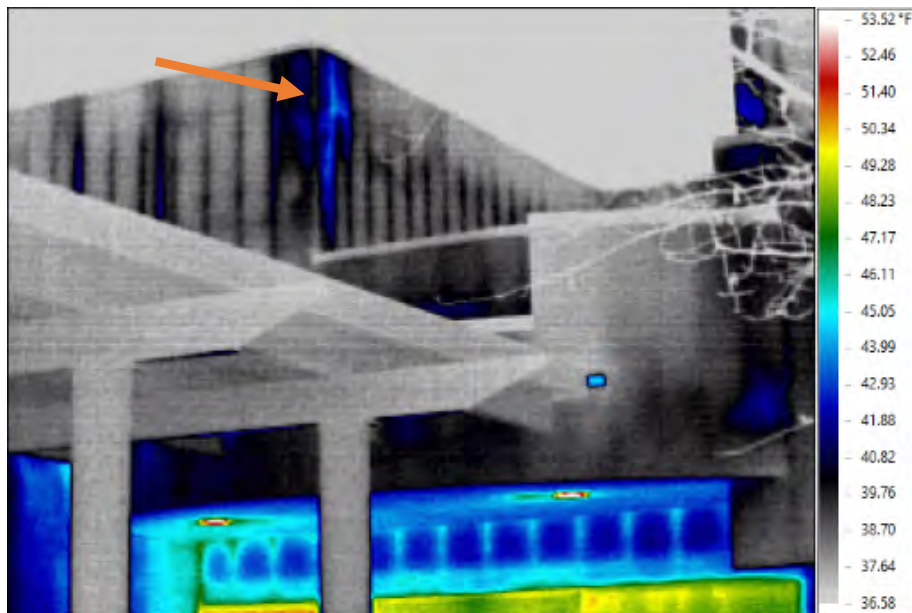
West end exterior of the building.



Thermal bridging in the overhead wall section on the far west side of the building.

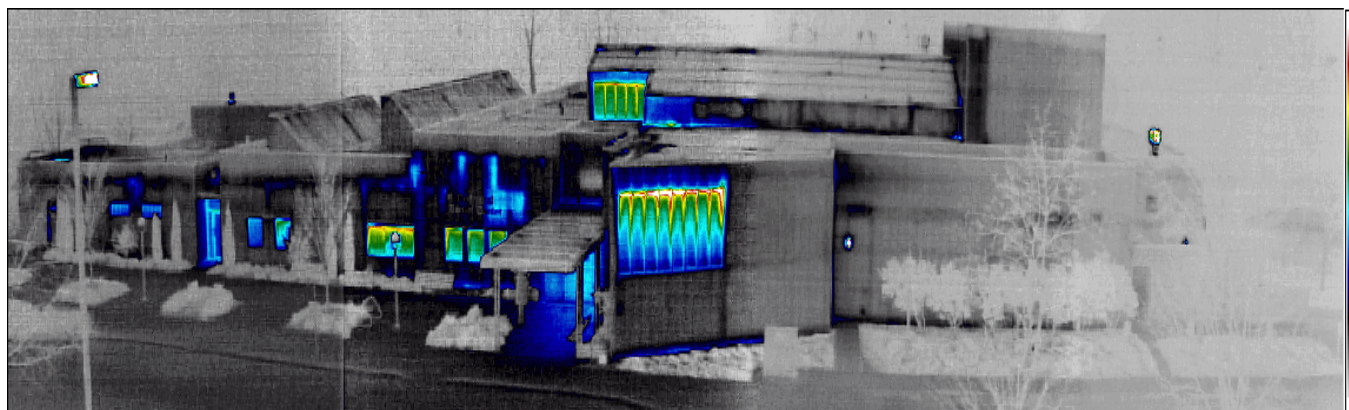


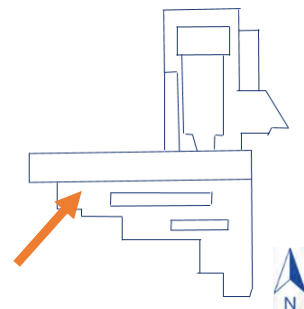
North entrance, building exterior.



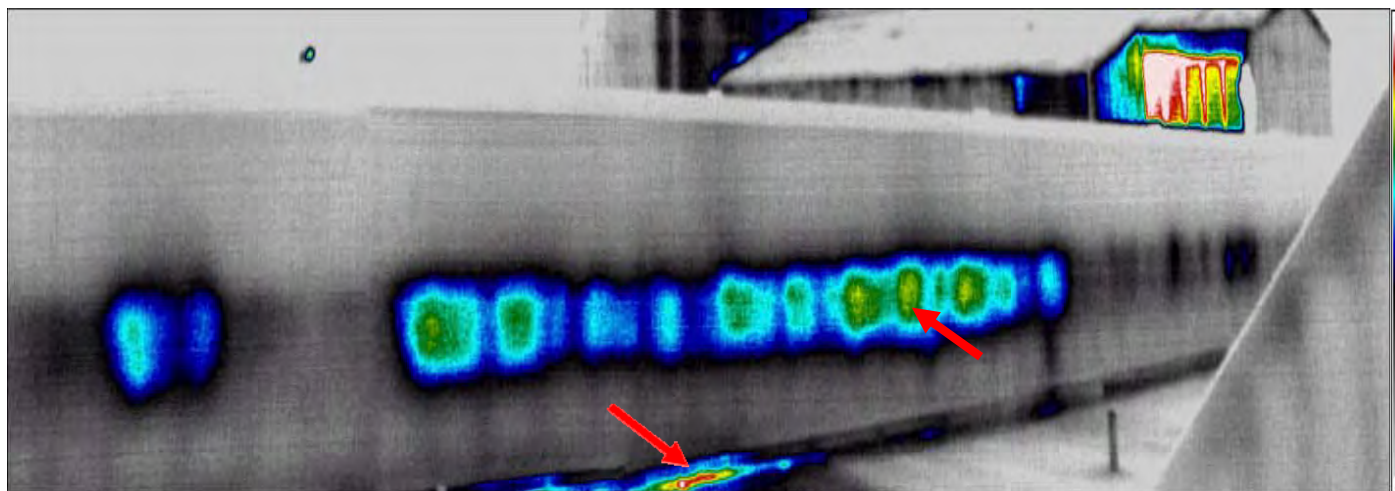
Thermal bridging in northwest corner above the north entrance.

Redmond, City of: Senior Center
Infrared Building Envelope Survey
December 16th 2013

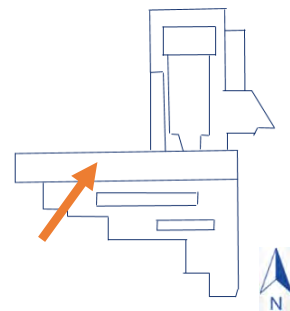




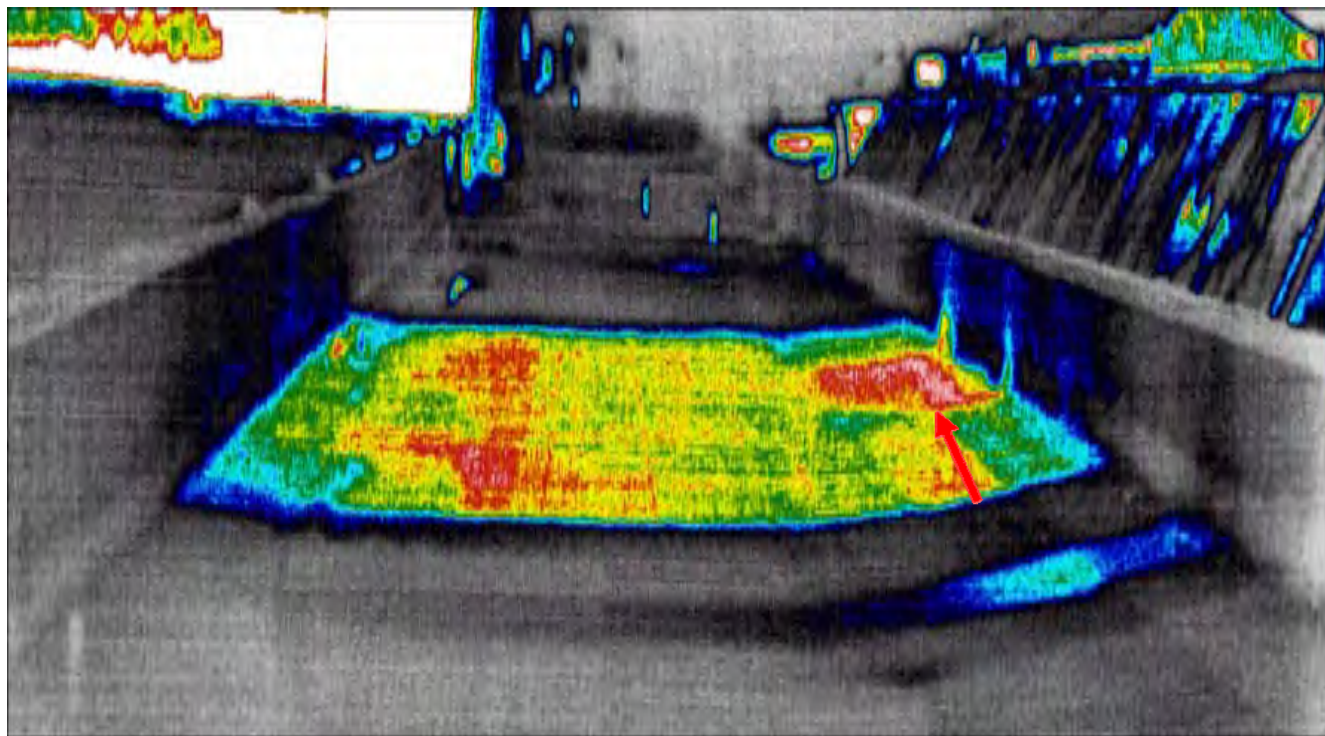
South rooftop, North wall of parapet to roof level.



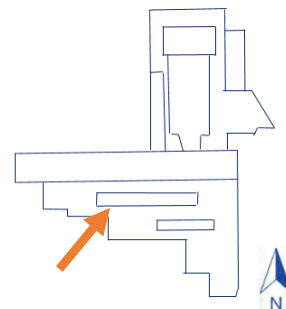
Thermal bridging along center and base of the upper roof parapet/wall (south facing side).



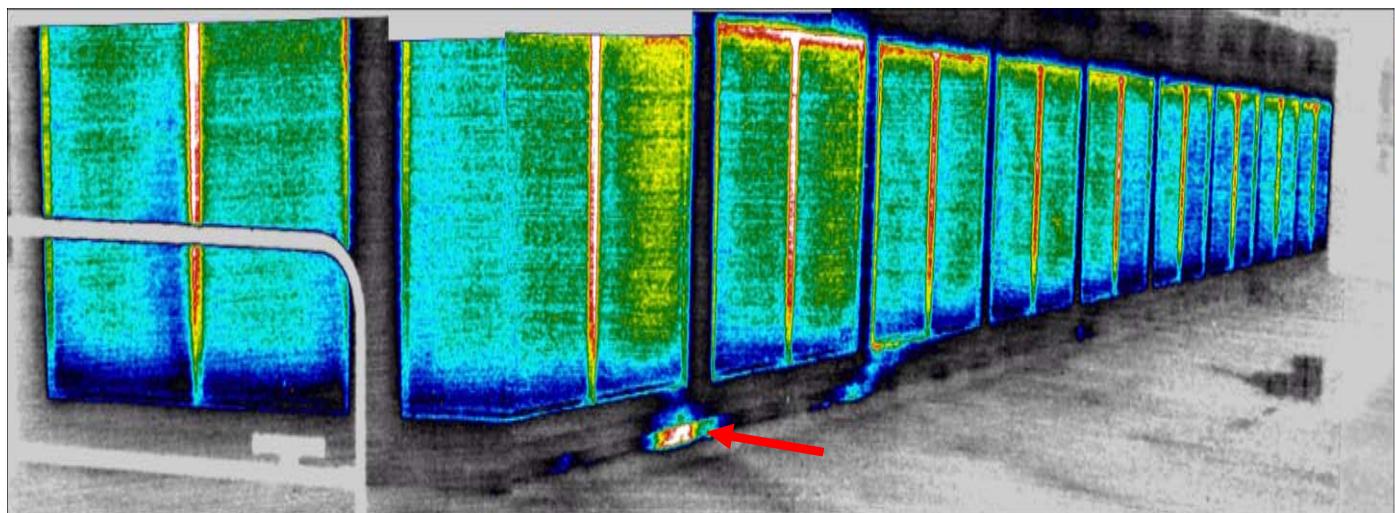
West side, mid-level rooftop.



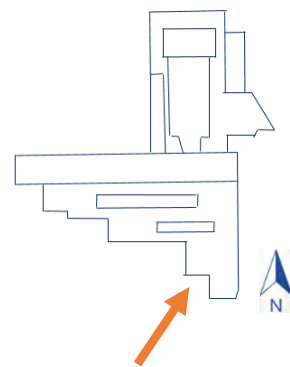
Typical thermal signature of wet insulation within the built up roof system. This image is looking east from the edge of the roof.



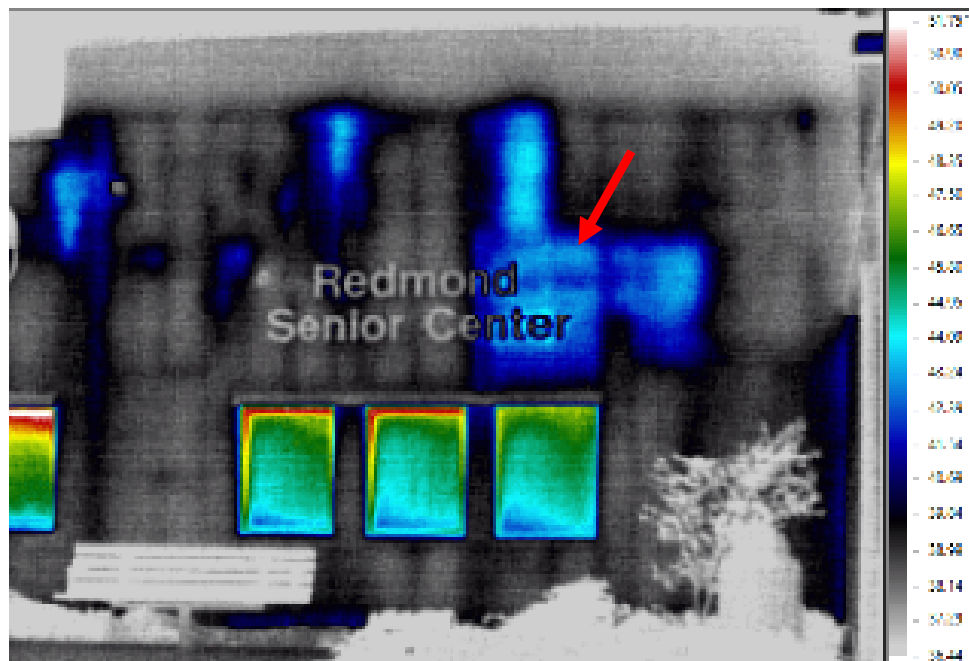
West side, mid-level roof, base of skylight windows.



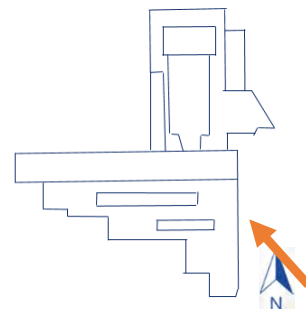
Heating occasionally along the base of the skylight windows.



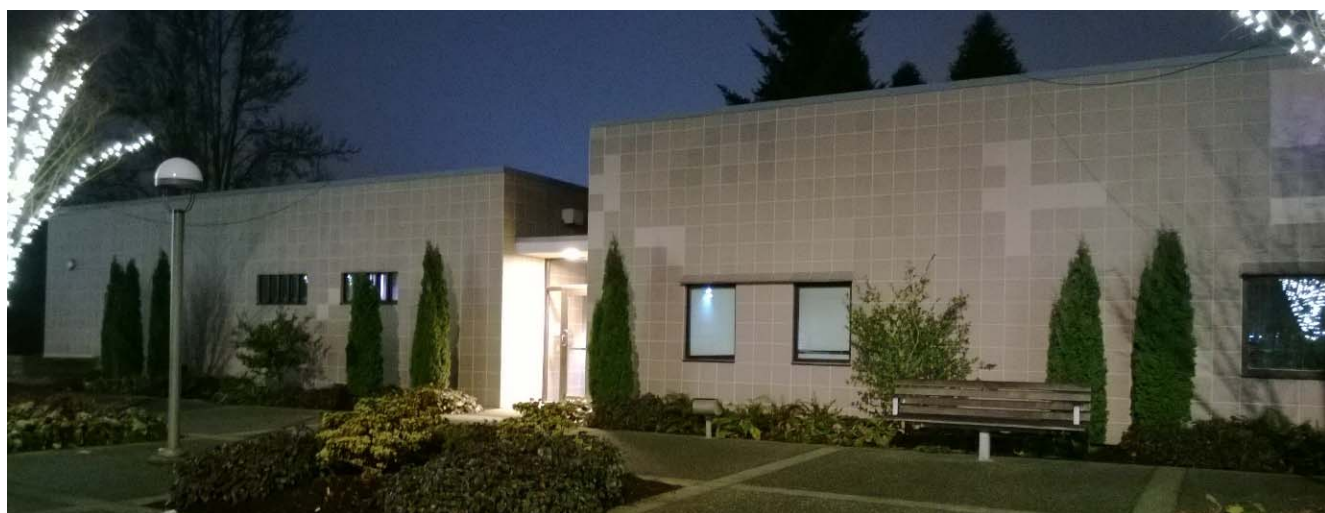
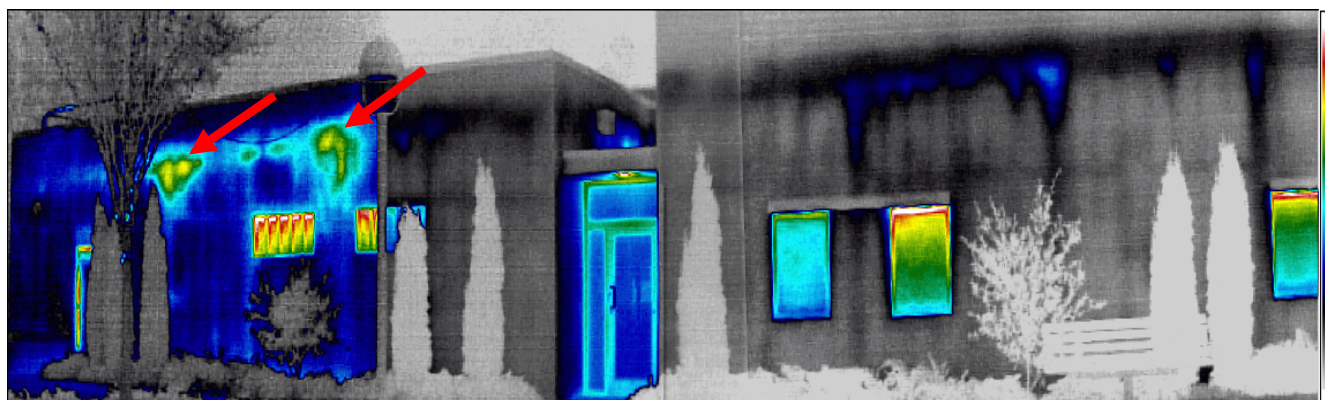
South exterior, front sign.



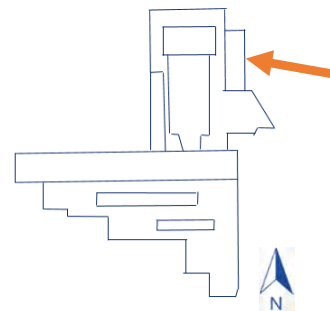
Thermal bridging through the east wall shows a random pattern above the windows.



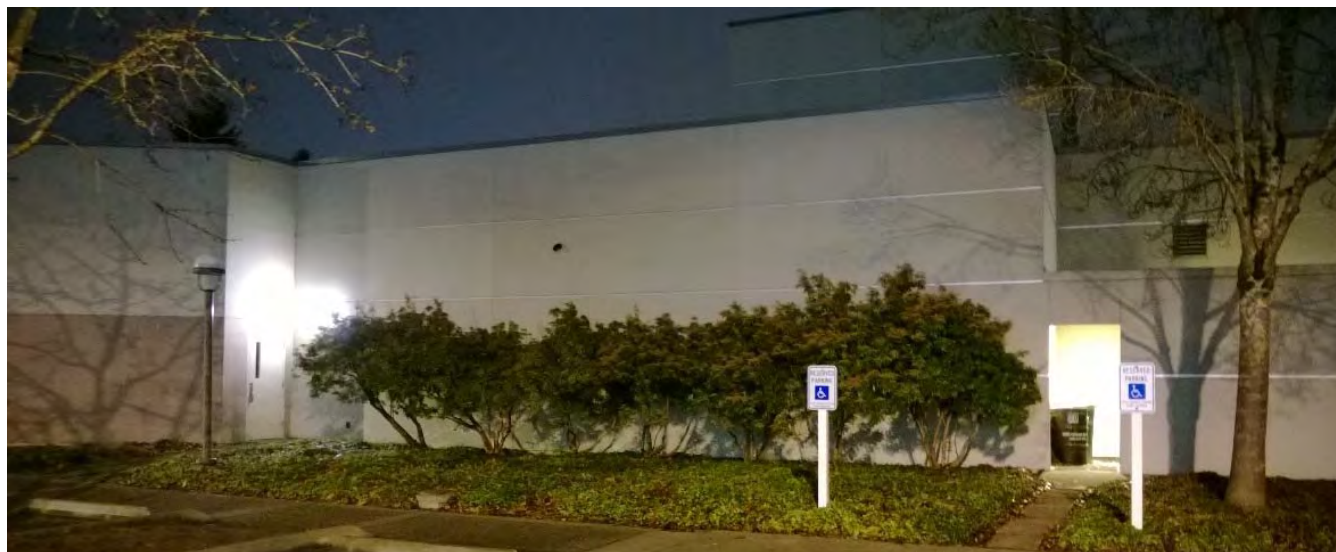
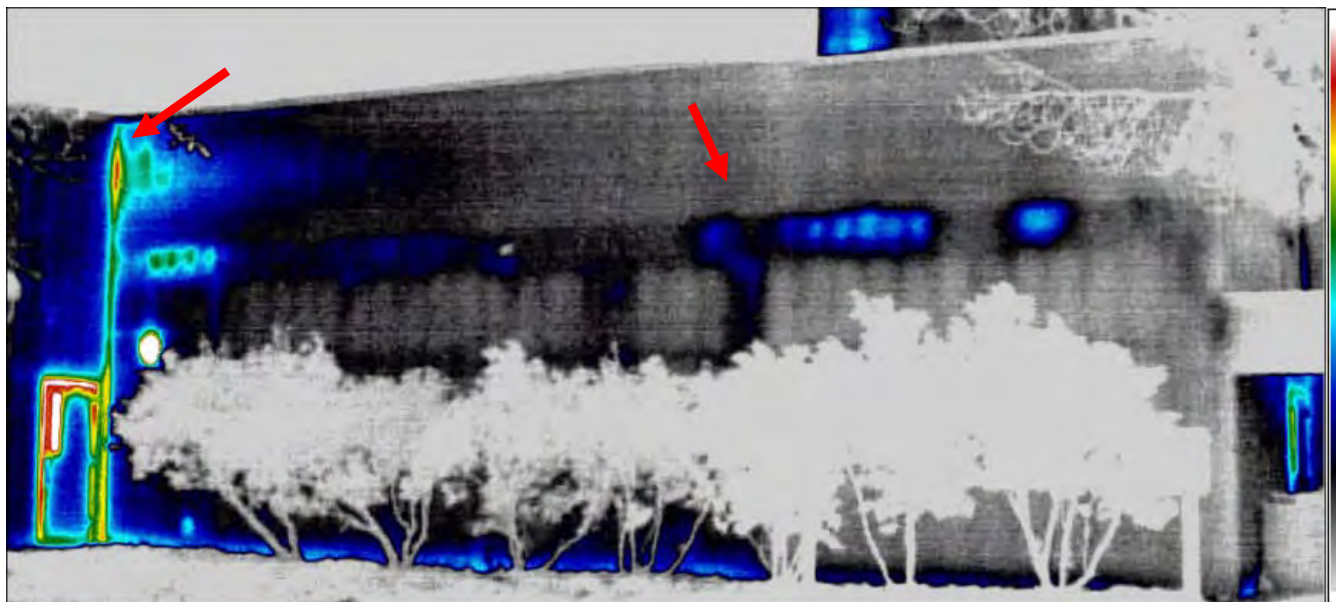
East wall, South end exterior.



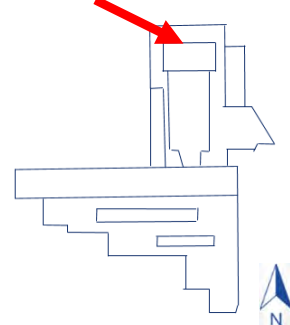
Thermal bridging just below the region of the roof line, involving the base of the parapet wall on the reverse side.



East wall, North end exterior.



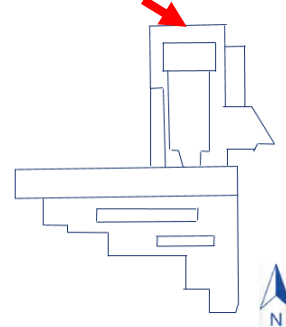
Thermal bridging along the seam of the two walls intersecting above the doorway.



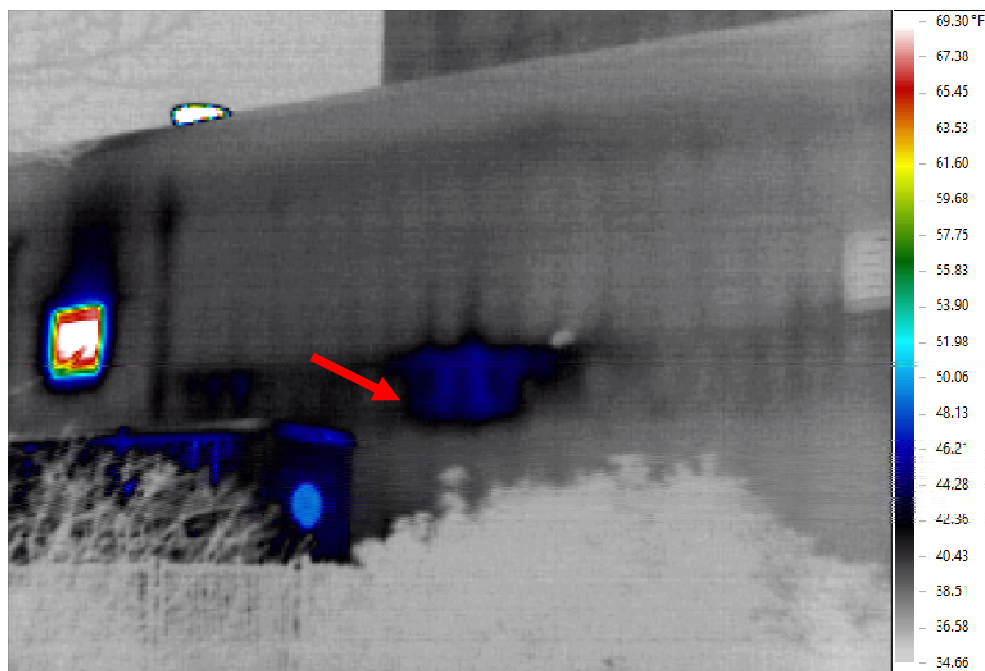
North end, penthouse exterior.



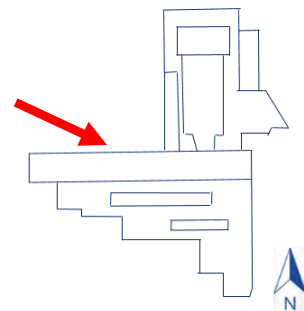
Thermal bridging just below the region of the roof line, involving the base of the parapet wall on the reverse side.



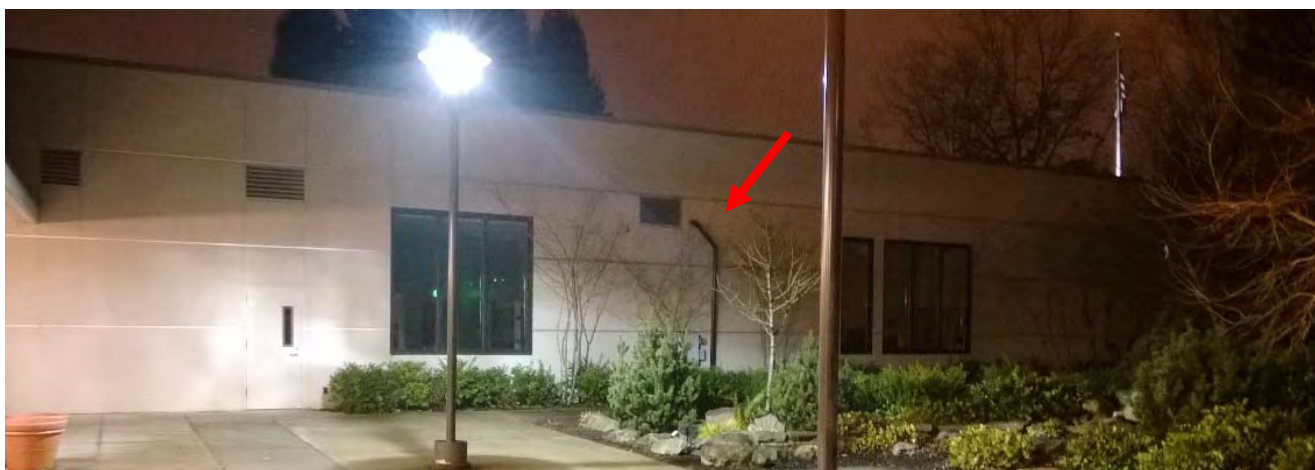
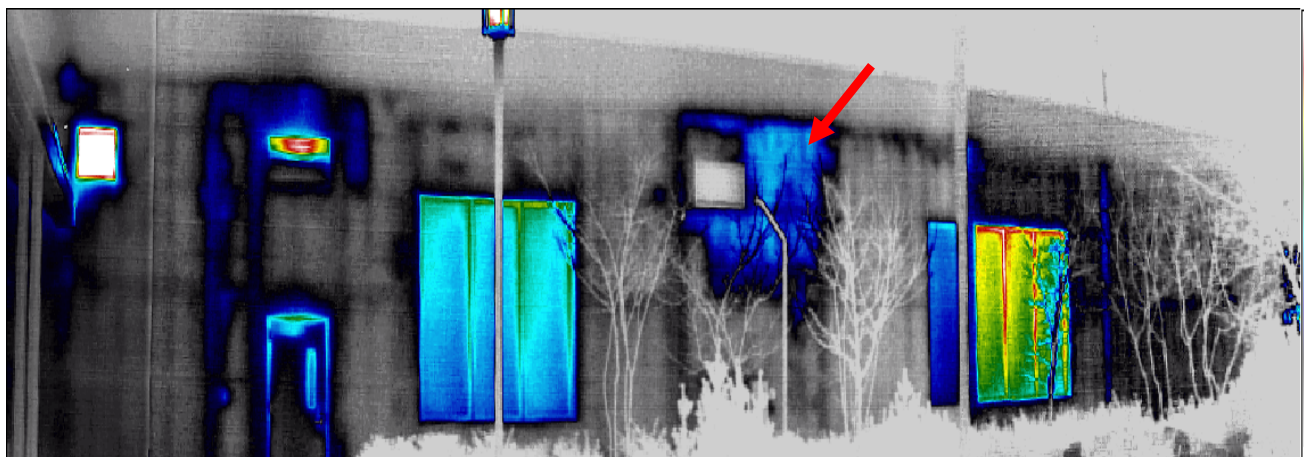
North end, mechanical area exterior.



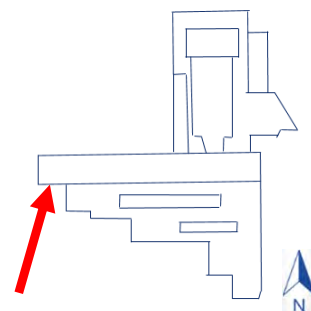
Thermal bridging through the north wall next to the water tower/evaporator.



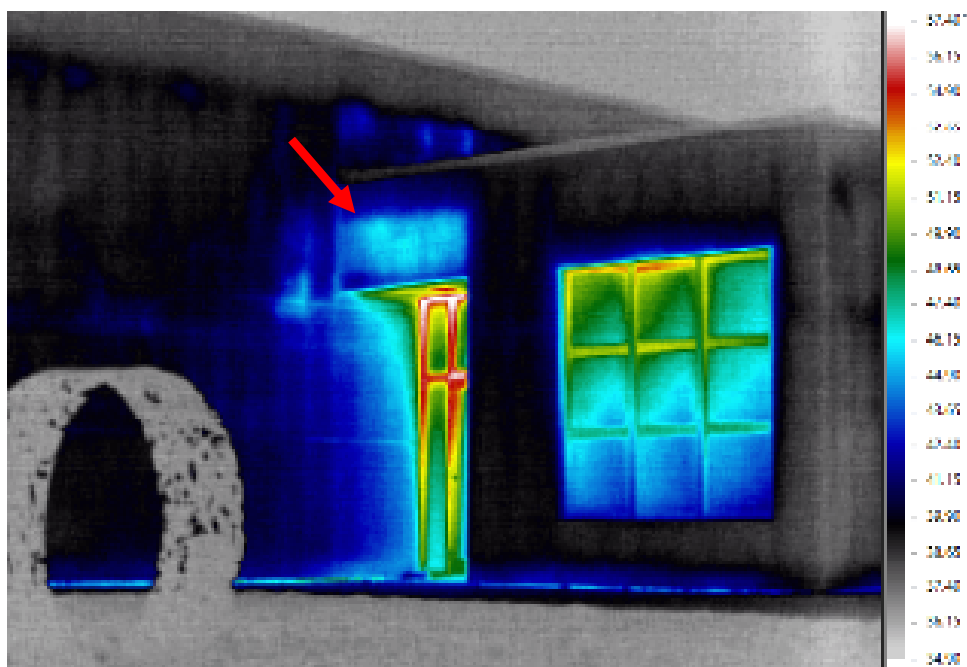
West wall, North face at east end, building exterior.



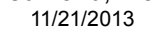
Thermal bridging in the wall section that is below the roof section that is showing wet insulation.



West wing, entrance exterior.



Area above entrance is showing thermal bridging in the entry way and around the door.



- Disclaimer: This map is created and maintained by GIS Services Group, Finance and Information Services, City of Redmond, Washington, for reference purposes only. The City makes no guarantee as to the accuracy of the features shown on this map.



Last updated by: smyers on 11/21/2013 at 10:10:05 AM