



Facility Master Plan

Adopted by College Planning Council

September 28, 2022

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Introduction

In 2014, the Blue Mountain Community College Board of Education directed the BMCC administration to conduct a strategic planning process. Over the course of a year, the College conducted a transparent and inclusive strategic planning process that included all employees and numerous stakeholders. The result of this process outlined a refreshed vision, mission, values statements, and core themes that serve as the foundation for the goals set forth in the strategic plan.

The BMCC mission is: “To provide responsive and high-quality, innovative educational programs and services that promote personal and professional growth to strengthen our communities.” BMCC is committed to providing a “Students First” Learning Environment

The Blue Mountain Community College Board of Education approved a new five-year strategic plan in January of 2015. It is this strategic plan and its vision, mission, core themes, values and goals that drive the facilities master plan. Two goals of the strategic plan that tie directly with the facilities master plan are:

Goal #5 A Safe Environment for All

Goal #6 Welcoming, Well-Maintained and Safe facilities and Grounds at all Locations

The purpose of the facilities master plan is to serve as a tool for advancing the mission of BMCC by ensuring all BMCC Facilities are in good operating condition and provide safe and secure access for all. The facilities master plan will help accomplished this by ensuring all facilities and equipment have a maintenance repair/replacement program/schedule in place. BMCC is comprised of 14 educational facilities between the main campus in Pendleton and the outlying centers creating a combined total of 344,735 square feet of educational facilities.

Stakeholder Analysis

BMCC interacts with a variety of stakeholders, both within the College and externally. BMCC must understand who the stakeholders are and what their relationships are with the College.

Students: BMCC serves around 8,800 students. Approximately 2,400 of these are credit-seeking, full-time students. Around 2,200 students receive their instruction via distance education at BMCC. The Pendleton campus serves approximately 5,000 students. BMCC’s four centers also provide learning opportunities for students: Around 2,000 students utilize the Hermiston Center; around 440 students utilize the Milton-Freewater Center; around 700 students utilize the Boardman Center, and around 630 students utilize the Baker City Center.

Faculty: BMCC employs 58 full-time and 150 part-time faculties who serve as instructors and advisors in a wide range of academic disciplines. The Blue Mountain Faculty Association is the organized union that represents faculty members. Some faculty also serve as advisors for student organizations/clubs

Classified Staff/Exempt-Tech: BMCC employs 107 full-time classified and exempt-tech staff and 56 part-time staff. The classified staff are represented by the BMCC Classified Employee Association.

Board of Education: The BMCC Board of Education is comprised of seven members who set policy and oversee governance of the College. They meet monthly, rotating meetings around the main campus and center locations in an effort to allow community members, employees and students from different regions to attend meetings.

Alumni: BMCC has been in existence since 1963, and therefore has a large number of alumni. Many college employees (past and present), as well as community members proudly consider themselves alumni of BMCC.

Community Members: There are a wide range of community members across the BMCC service district with a variety of interests who live in the BMCC area. Community members are also taxpayers who recently approved a \$23 million bond.

Departmental Purpose and Goals

Purpose

The purpose of Blue Mountain Community College (BMCC) Facilities Department is to ensure the facilities are safe and accessible to all. Ensure that all facilities are clean and equipment is operating as designed. The facilities department is a service-oriented organization and provides customer service to Blue Mountain Community College students, faculty members, staff members, and community members.

Operating Principles:

- Our interactions will be professional and respectful
- Our customer service will be attentive, responsive, focused, and detailed
- Our responses will be simplified, even for complex problems

Goals

The Facilities department goals are to clean, maintain all facilities to a high standard and conserve energy where possible.

- Refresh/refurbish building exteriors
- Maintain all buildings structural integrity,
- Maintain all HVAC equipment, fire protection system, boilers, chillers, pumps, motors, compressors, blowers, etc.

- Manage Mechanical Systems to Conserve Energy Usage
- Continue to refurbish, improve and maintain the grounds at all BMCC locations
- Maintain the cleanliness of all buildings to a high standard
- Maintain college fleet vehicles to a reliable standard
- Continue to partner with the Energy Trust of Oregon to reduce utility costs
- Standardize all office furniture (desks)
- Ensure all facilities are safe and accessible to all

Purpose of Facilities Master Plan

The Facilities Master Plan is designed to provide a guide for the future of Blue Mountain Community College facilities. This plan sets a guideline for the maintenance and replacement schedule of boilers, chillers, Roof Top Units (RTU's), fire protection system, boilers, chillers, pumps, motors, compressors, blowers, classroom furniture, office furniture. Maintenance and upkeep of all facility buildings and infrastructure to ensure campus is safe and accessible to all.

The Facilities department is a service organization with priority number one being safety of all who enter BMCC facilities and grounds whether that be students, faculty, staff or community members as well as ensure all equipment is functioning as designed.

Facilities Information

BMCC Pendleton Campus



BMCC Pendleton FARM



BMCC Pendleton FARM



BMCC Precision Irrigated Agriculture Facility (PIAF)



BMCC Boardman, Work Force Training Center (WFTC)



BMCC Hermiston, Eastern Oregon Higher Education Center (EOHEC), & Columbia Hall



BMCC Baker City



BMCC Milton Freewater



Facilities Information

Building Name	Use type	Year Built	Most recent renovation	Gross SF	Building Value
Emigrant Hall	Class & Admin	1988	August 2017 one new boiler and new controls system	10,600	\$3,344,000
FARM	Ag, Class & Lab	2017	New Sept. 2017	17,565	\$5,222,400
Health Ed	Nursing, Dental	1969	August 2017 Dental lab And new RTU	8,700	\$2,610,000
McCrae	Athletics	1976	August 2016 two new steam boilers and HVAC controls	50,786	\$17,146,250
Morrow Hall	Class, Admin	1964-1968	August 2106 Couple new RTU's, new chiller, new controls system and remodeled area on main floor	39,214	\$10,663,250
Pioneer Hall	Class, Admin	1968	August 2016 New chiller, some RTU's and new controls system	64,052	\$16,013,000
Science & Tech	Class, Lab, Admin	1999	August 2017 Tied into existing controls with new controls system	29,344	\$7,751,250
Umatilla Hall	Class, Shop, admin	1969	August 2016 New boilers and new HVAC controls system	34,398	\$2,579,850
Milton Freewater Center	Class, Admin	1978	August 2017 Remodeled classrooms and 1 new RTU	8,388	\$2,100,000
EOHEC (Hermiston OR)	Class, Admin	2011	August 2017 Tied into existing controls with new controls system	32,000	\$8,830,446
Columbia Hall (Hermiston OR)	Class, Admin	1977	1992, 2000	15,295	\$3,885,000
PIA (Hermiston OR)	Class, Admin	2017	New Aug. 2017	12,150	\$3,468,000
WFTC (Boardman OR)	Class, Admin	2017	New June 2017	15,200	\$3,953,520
Baker Center	Class, Admin	1965	1981, 2000	7,043	\$2,212,000

Facilities Information

Location	Construction date Remodel date	Roofing	Heating	Cooling	Roof Top Units Heating and Cooling
Pioneer Hall 64052 sq ft	1968-1969 student union 1998-1999 Bookstore 1999-2000 Library 2000	9/4/2000-Stevens Single Ply Roofing with 15 Year Warranty	June 2016 Manufacturer ATH, Model KN Series 16, S/N 0 81644203, S/N 0 81644204	Carrier Model 30 RAP1305JB0L160 S/N 3716Q85664	6 Roof Top Units
Morrow Hall 38,771 sq ft	1964-1965 1969, 1981-82, 1999-2000	9/4/2000-Stevens Single Ply Roofing with 15 Year Warranty	1 new in summer Of 2017, ATH, Model KN20F, S/N 61745730, Model KN20, S/N KN-H-NET-M09N-3509	September 2017, Daikin, Model AGZ120EDHEMNN00, S/N STNU170700072	
Emigrant Hall 10,600 sq ft	1988-1989	Stevens Single Ply Roofing with 15 Year Warranty	Well-McLain, Model PG-676-W/S4.2-G0-03, S/N 8282, Model 80, S/N 17N 932150000003	Trane-SFHCC40LG45c69 S/N 588M-73985	N/A
Umatilla Hall 34,398 sq ft	1965-1966 2005	9/4/2000-Stevens Single Ply Roofing with 15 Year Warranty	ATH, Model KN6WW S/N 81644220 S/N 81644221	Carrier Model 30RAP0355DA52F64 S/N 2415Q53993	N/A
Health Ed 8,700 sq ft	1971-1972	Stevens Single Ply Roofing with 15 Year Warranty	Lochinvar Model CHN0752 S/N 1729106882728	Trane, two Model TTA180H300AA S/N 17204YA7TA S/N	N/A
McCrae 50,786 sq ft	1974-1975	Stevens Single Ply Roofing with 15 Year Warranty	Boiler C.B. FTSM 5427-76 SN# L5964	Trane, Series R, Model RTAA0804XL, S/N U99K02342	6 Roof Top Units
Science/Tech 29,344 sq ft	1999-2000	1999-2000 Stevens Single Ply Roofing with 15 Year Warranty	Hydrotherm KN10 S/N KN-H-NET-M09N-3405 S/N KN-H-NET-M09N-3402	N/A	5 Roof Top Units
FARM 17,565 sq ft	New Facility Constructed September 2017	September 2017, Thermoplastic Polyolefin (TPO)	Lochinvar KHN 199 S/N 1705104800373 S/N 1705104800374	NA	2 Daikin Roof Top Units
Baker 7,043 sq ft	1965 1981 & 2000	2000 Stevens Single Ply Roofing with 15 Year Warranty	Geothermal heating system, Date unknown	Lennox Model # 13DCSXA-24-068-230-1A S/N 1605L12777	N/A

Facilities Information

Location	Construction date Remodel date	Roofing	Heating	Cooling	Roof Top Units Heating and Cooling
Boardman WFTC 15,200 sq ft	New Facility Constructed September 2017	September 2017, Thermoplastic Polyolefin (TPO)	N/A	N/A	13 Roof Top Units
Hermiston (EOHEC) 32,000 sq ft	2011	2011 Metal Roofing	KN-10, S/N KN-H-NET-M11NB-6596 S/N KN-H-NET-M11NB-6594	TRANE Model # - CGAM 080A 2C02 AXD2 A1A1 A1AX XA1C 1A4X XXXX XAXA 3X1D XXXC XX S/N U11D22634	N/A
Hermiston Columbia Hall/Annex 15,295 sq ft	1977, 1992, 2000	2000 - Metal Roofing	Lennox, Model CH33-62D- 2F-2 S/N 6009D20862 Carrier M# 58SG080332 S/N 4299907H09 Carrier M# 58STX090-16 S/N 0418A17191 Carrier M# 58SG100222 S/N 413907H05	Lennox Model HSXB15-048-230-01 S/N 5805C04634 Lennox M# 10ACC- 030-230-01 S/N 5803A36765 Lennox M# HS23- 411-1P S/N 5193C29049 S/N 5193C29047 S/N 5193C29051	N/A
PIAF Hermiston 12,150 sq ft	New Facility Constructed September 2017	September 2017, Thermoplastic Polyolefin (TPO)	N/A	N/A	8 Roof Top Units
Milton- Freewater 8,388 sq ft	1978 2000 (addition) Remodeled 2017	2000 - Hot melt tar application	N/A	N/A	4 Roof Top Units

Replacement Value of Existing Facilities

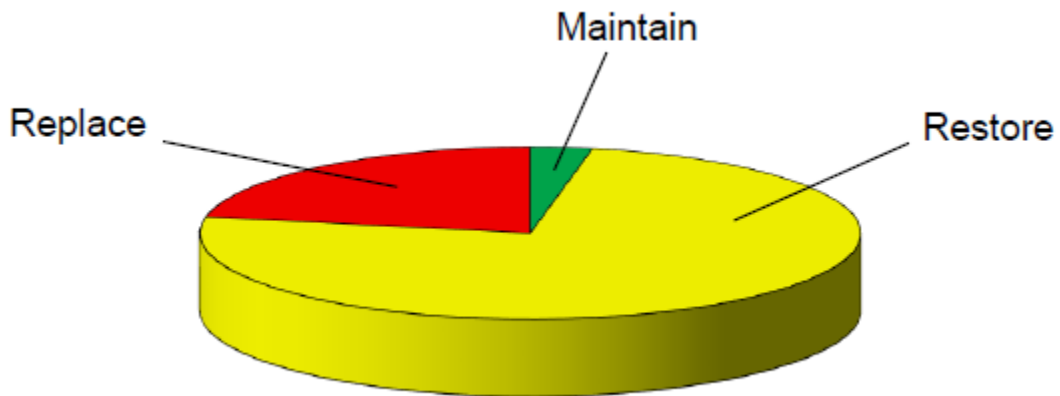
Location	Building	# of Stories	Sq Ft	2017-2018		2018-2019	
				Build Value	Personal Property Value	Build Value	Personal Property Value
Baker	Main	1	7,728	\$ 1,932,000	\$ 347,760	\$ 1,970,640	\$ 354,715
	Modular	1	1,400	\$ 280,000	\$ 49,000	\$ 285,600	\$ 49,980
	SBDC Office						\$ 3,121
Boardman	WFTC	1	15,023	\$ 3,876,000	\$ 1,224,000	\$ 3,953,520	\$ 1,248,480
Hermiston	Columbia	1	10,540	\$ 2,635,000	\$ 474,300	\$ 2,687,700	\$ 483,786
	Learning	1	5,000	\$ 1,250,000	\$ 225,000	\$ 1,275,000	\$ 229,500
	Science	1	33,010	\$ 8,830,446	\$ 1,980,600	\$ 9,187,196	\$ 2,020,212
	Pn Ag	1	14,750	\$ 3,400,000	\$ 600,000	\$ 3,468,000	\$ 612,000
Pendleton	Morrow	2	42,653	\$ 10,663,250	\$ 2,559,180	\$ 10,876,515	\$ 2,610,364
	Pioneer	3	64,052	\$ 16,013,000	\$ 4,803,900	\$ 16,333,260	\$ 4,899,978
	Umatilla	2	34,398	\$ 8,599,500	\$ 2,579,850	\$ 8,771,490	\$ 2,631,447
	Health	1	8,700	\$ 2,610,000	\$ 522,000	\$ 2,662,200	\$ 581,966
	MAC	3	62,350	\$ 17,146,250	\$ 4,676,250	\$ 17,489,175	\$ 4,769,775
	Emigrant	2	13,376	\$ 3,344,000	\$ 601,920	\$ 3,410,880	\$ 613,958
	S&T	2	29,466	\$ 7,751,250	\$ 1,767,960	\$ 8,064,400	\$ 1,803,319
	FARM	2	16,390	\$ 5,120,000	\$ 900,000	\$ 5,222,400	\$ 918,000
Milton-Freewater		1	8,388	\$ 2,097,000	\$ 503,280	\$ 2,138,940	\$ 513,346
Total				\$ 95,547,696	\$ 23,815,000	\$ 97,796,916	\$ 24,343,947

Blue Mountain Community College

Total Sq. Ft. = 259,180 sq. ft

Total Roof Asset = \$6,479,500

2020



Roof Assessment

Roof Level/ Condition	Square Feet	Estimated Cost
Category 1 Restore		
Morrow Hall		
Roof A	27718	\$429,629.00
Roof B	10276	\$159,278.00
Pioneer Hall		
Roof A	31924	\$494,882.00
Roof A1, B, E, F	21416	\$331,948.00
Roof C, D	6302	\$97,689.00
Health Ed		
Roof A	11665	\$180,808.00
Umatilla Hall		
Roof A	10930	\$169,415.00
Roof B	22012	\$341,186.00
Emigrant Hall		
Roof A, A1	14940	\$268,920.00
Science & Tech		
Roof A	17500	\$273,350.00
Baker City		
Roof A	8700	\$134,856.00
Milton Freewater		
Roof A	9920	\$163,680.00
Category 2 Replace		
Morrow Hall		
Roof C	1112	\$31,160.00
McCrae Activity Center		
Roof A, B, C	12120	\$399,630.00
Roof D	29845	\$835,660.00
Hermiston		
Roof A	14050	\$407,450.00

Roof assessment Continued

Category 3 Maintain			
Boardman Roof A, A1	8750	\$135,625.00	
Hermiston PIAF Roof A			TBD
FARM Roof A			TBD
Category 3 Repairs			
Emigrant Hall Roof A		\$3,980.00	
Science & Tech Roof A		\$7,240.00	
Baker City Roof A			TBD

Total Square Feet	259,180
Total Roof Assessment	\$6,479,500.00
Total Tremco Roof Plan	\$4,806,089.00

Tremco Roofing performed the roof assessment on all BMCC facilities and has put together a comprehensive 12-year repair/replacement plan to assist BMCC with roof repairs if we choose to use them for upcoming needed repairs.

Facilities Assessment (Latest)

ASSESSMENT SUMMARY

A facilities assessment was performed by Mahlum in 2012 of all BMCC facilities buildings. The buildings were all given a rating of 0 to 100

Existing buildings on the BMCC campuses were assessed to determine building condition. The assessment reviewed buildings in Baker City, Boardman, Milton Freewater, Hermiston and Pendleton campuses. Assessments consisted of a brief architectural, mechanical, plumbing, electrical and structural walk-through. Specialized in-depth review of the buildings were not a part of this assessment.

It is important to note that BMCC manages a collection of buildings, all of which were well-built for their time. BMCC maintains a detailed ongoing maintenance program and understands the importance and long-term benefits of this robust maintenance plan.

ASSESSMENT AREAS

Buildings were evaluated in five key areas:

- Primary structure, including foundation system, column/exterior wall system, floor system and roof system
- Secondary structure, including interior walls and partitions, ceiling systems, window and door systems, and casework
- Service systems, including ventilation and cooling, heating, plumbing, and electrical
- Safety standards
- Building accessibility (ADA & Best Practices)

BUILDING GRADING

Buildings were given a weighted numeric score for each key assessment area, based on condition. It is important to note that the rating system itself is measuring the buildings relative to each other and represents a base understanding of their overall condition. Building ratings range from 0 to 100 points and fall into the following categories, definitions of potential scope and timeline for consideration:

- 95-100 points: Satisfactory to Excellent condition
No major deferred maintenance issues or immediate concerns noted.
- 75-94 points: Minor Upgrade

A minor upgrade consists of capital investments of less than 25% of building replacement costs and include standard deferred maintenance and isolated repairs of building equipment, infrastructure or systems. Recommended timeline for consideration ranges between 10-15 years away.

- 55-74 points: Upgrade

An upgrade consists of capital investments of 25-50% of building replacement cost and can include ongoing deferred maintenance, as well as wholesale updates to building components and minor systemic conditions. Recommended timeline for consideration ranges between 5-10 years away.

- 35-54 points: Major Upgrade

A major upgrade consists of capital investments of 50-75% of building replacement cost and include ongoing Deferred maintenance issues, wholesale upgrades of entire building components and systemic issues. Recommended timeline for consideration ranges between 1-5 years away.

- 0-34 points: Full Upgrade

Full upgrade consists of capital investments in excess of 75% of building replacement cost and includes wholesale upgrades or replacement of the majority of building systems, infrastructure, and major building components.

SUMMARY OF FINDINGS

17 buildings were reviewed during this study. Two buildings are in satisfactory condition while a majority of the remaining buildings are generally in good condition for their age but need some portion of upgrades. Furthermore, it is evident that BMCC has implemented an ongoing deferred maintenance program that has significantly extended the serviceable life of the buildings.

The chart illustrates assessment levels and building ratings for each facility. The majority of the buildings fall within the upgrade category, with only Baker City scoring lower, in the Major Upgrade category.

There was a bond measure passed and bond work began in the spring of 2016. During the bond project there were new buildings constructed in Boardman (WFTC), Hermiston (PIAF), Pendleton (FARM) and the Milton Freewater center was remodeled and upgraded. There for changing the overall ratings for the Agriculture facility, (FARM), Boardman (WFTC) to 100 and the Milton Freewater Center to 93. The new Hermiston PIAF building rating is 100 as well.

ASSESSMENT RATING CHART

AREA

Building	Primary Structure	Secondary Structure	Service Systems	Safety & Accessible	Functional Standards	Raw Rating	Score
Baker City - Main Building	22.60	3.90	18.80	2.40	4.80	52.50	Upgrade/Major Upgrade
Baker City - Modular	34.00	5.00	29.70	3.60	7.20	79.50	Minor Upgrade
Boardman – WFTC	40.00	9.00	33.00	6.00	12.00	100.00	Excellent
Milton-Freewater	37.50	8.30	29.70	6.00	11.50	93.00	Minor Upgrade
Hermiston - Columbia Hall	33.40	5.40	19.80	4.20	7.60	70.40	Minor Upgrade/Upgrade
Hermiston – Annex	36.70	8.10	29.70	5.40	10.80	90.70	Minor Upgrade/Satisfactory
Hermiston – EOHEC	40.00	9.00	33.00	6.00	12.00	100.00	Excellent
Hermiston – PIAF	40.00	9.00	33.00	6.00	12.00	100.00	Excellent
Pendleton - FARM	33.30	6.90	19.80	3.00	9.60	100.00	Excellent
Pendleton - Emigrant Hall	32.00	7.90	26.90	5.40	10.00	82.20	Minor Upgrade
Pendleton - Health Ed	33.30	7.50	20.30	4.80	9.60	75.50	Minor Upgrade
Pendleton - Morrow Hall	33.30	6.60	19.80	3.90	8.00	71.60	Minor Upgrade/Upgrade
Pendleton – MAC	31.30	6.60	21.80	3.30	8.00	71.00	Minor Upgrade/Upgrade
Pendleton - Pioneer Hall	32.00	6.60	17.50	4.50	8.40	69.00	Upgrade
Pendleton – Science & Tech	38.70	9.00	32.30	5.70	10.80	96.50	Satisfactory
Pendleton – Umatilla Hall	31.30	6.40	21.60	3.90	8.00	71.20	Minor Upgrade/Upgrade
Pendleton - Umatilla Office	33.30	6.30	22.10	4.80	10.80	77.30	Minor Upgrade
Pendleton - Umatilla Annex	25.90	4.70	19.80	4.20	8.80	63.40	Upgrade

Building Assessment Summary - Pendleton Campus

Morrow Hall Assessment Summary:

Assessment Rating: 71.60 (minor upgrade/upgrade)

Minor improvements to the building's structural system would be required due to the age of the building to meet current structural seismic codes. The mechanical system is in Satisfactory condition. The chiller, one boiler and one roof top unit were replaced during the bond in the fall of 2017. The buildings control system was updated during the bond as well to a Direct Digital Control system (DDC control system). There were also some electrical upgrades done during the bond in 2017 as well. The plumbing system is in satisfactory condition. Due to modifications over the years, there are classrooms and offices that have acoustic problems that should be addressed so each space functions for its intended use. The lighting for the building is in fair condition. There have been a couple lighting upgrade projects in the last few years replacing old fluorescent fixtures with new more efficient LED fixtures. In all reality the assessment rating for this building should be raised to somewhere between 75 and 80 with the upgrades that were performed to the building during the bond project. This would change the assessment rating to minor upgrade recommended.

Pioneer Hall Assessment Summary:

Assessment Rating: 69.00 (upgrade recommended)

Due to the age of the building and structural system, minor improvements would need to be made to comply with current structural codes. During the last bond project that started in 2016 two new boilers were installed, a new chiller was installed, a new fan wall was installed, and the controls were upgraded to Direct Digital Control System (DDC). A few of the roof top units were also replaced during the bond project. There are several other roof top units that should be replaced in the next 5 to 10 years. A portion of the electrical system was also upgraded during the bond. In 2012 Malhum's report recommended that the interior distribution and branch panels be replaced. The lighting in the building is in fair shape. The older fluorescent fixtures in classrooms should be replaced with new more efficient LED fixtures, this would also reduce maintenance and maintenance costs. Some of the theater lighting was upgraded in the fall of 2019. In all reality the assessment rating for this building should be raised to somewhere between 70 and 75 with the upgrades that were performed to the building during the bond project. This would change the assessment rating to minor upgrade/upgrade recommended.

Science & Technology Assessment Summary:

Assessment Rating: 96.50 (Satisfactory)

The building is in satisfactory condition due to its recent construction. It is recommended, however, to add an additional panel board to the facility as the existing branch panel boards are full with no spare breakers and therefore does not allow for future expansion. During the bond

project of 2016 the existing Johnson Controls for the HVAC were tied into the Automated Logic Direct Digital Control System (DDC) system so the HVAC could be better controlled.

McCrae Activity Center Assessment Summary:

Assessment Rating: 71.00 (minor upgrade/upgrade recommended)

Improvements should be made through out the facility with specific key areas needing more attention than others.

The music building:

The structural system should be upgraded to comply with current code forces. Possible retrofits for these areas might include proper hold-downs, sheathing, and attachments and sill attachments. The mechanical system is in satisfactory condition but there are fluctuations within the systems air distribution. The mechanical system needs to be updated to provide the specific requirements for this portion of the building. The lighting is currently in poor condition and should be replaced with an energy efficient, dimmable LED system that is more appropriate for the departments activities. It was also recommended that additional electrical outlets and data outlets (or WIFI system) be installed to further help the department's needs.

Athletics:

The structural system should be upgraded to comply with current codes. Possible modifications for these areas might include additional concrete shear walls and retrofits of the joist-to-wall connections. In addition, the interior CMU partition walls currently do not extend up to the underside of the floor above. To meet current codes, steel kickers should be added to the top of the walls for adequate bracing. The pool and pool room were in poor condition. It was decided in 2018 to shut down and decommission the pool. The interior electrical distribution board and branch panels should be replaced in the building as they are near the end of their lifespan. As noted in the music building section, It was also recommended that additional electrical outlets and data outlets (or WIFI system) be installed to further help the department's needs. Architecturally the locker rooms are in satisfactory condition, but the ventilation and locker systems should be upgraded to meet the current needs for BMCC and the athletics department.

While a major upgrade for the full McCrae Activity Center should not be required within the next 10 years., there are major renovations that should occur to specific portions of the building to maintain existing programs and uses. There was a new Direct Digital Controls system installed for HVAC controls during the bond project that started in 2016 and two new steam boilers were installed during this project as well.

Health Education Building Assessment Summary:

Assessment Rating: 75.50 (Satisfactory)

Minor improvements to the buildings structural system would be required to meet current seismic codes such as providing shotcrete shear walls and retrofit of the joist-to –wall connections. There was a new Direct Digital Controls system installed for HVAC controls and a

new boiler-chiller split system installed in this building during the bond project that started in 2016. BMCC should plan to replace the air handler fan noise is noticeable inside the building corridor. Acoustic improvements should be made to both the air handler and the corridor walls to help mitigate this problem. BMCC should plan to replace the air handler in the next ten years. The interior electrical distribution panel is in poor condition and nearing the end of its lifespan. The entire interior distribution and branch panel board should be replaced as soon as possible to maintain support of the building. While the condition of the Health Education building does not warrant a major upgrade, it is recommended that the above-mentioned issues be addressed to increase the life of the building to meet future needs. With the upgrades that were performed during the bond project the building assessment rating should increase to approximately 80.00.

Umatilla Hall Building Assessment Summary:

Assessment Rating: 71.20 (minor upgrade/upgrade recommended)

The buildings age and intense program use have expedited wear and tear on this building. Due to these factors, an upgrade to some of the systems is recommended. The lateral system does not comply with current structural codes and will require some mitigation in the form of additional shotcrete walls and retrofit of the joist-to-wall connections. Most of the mechanical and exhaust systems at the time of this assessment were in poor condition, however since this assessment was performed there was a new chiller installed and during the bond project that started in 2016 there were two new boilers installed. The radiant heaters in the large shop/lab areas are in poor condition, excessively loud and do not exhaust properly through the roof. It is recommended that a new general exhaust and make up air system be installed in the next five years for the shops/labs. The offices and some classrooms are heated/cooled with coils and valve boxes which is loud and should be replaced in these locations. There was also a new Direct Digital Control system installed for the HVAC control during the bond project that started in 2016.

The electrical system for this building is in fair to poor condition. It's recommended that the distribution panel be replaced, as well as the interior distribution and branch panel boards. There were some electrical upgrades performed during the bond work. The lighting for the shop/lab areas is in poor condition. The older fixtures in the shops/labs and in selected classrooms should be upgraded to an energy efficient LED fixture, this will also reduce maintenance and Associated costs. In the summer of 2017 one of the diesel shops lighting was converted to LED fixtures.

Emigrant Hall Building Assessment Summary:

Assessment Rating: 82.20 (Minor Upgrade Recommended)

Minor improvements to the building would be required to meet current seismic codes such as providing proper hold downs, sheathing attachments and sill attachments. He exterior soffits near the entryway have noticeable weather damage that will need to be repaired. There is some roof top mechanical equipment that should be replaced in the next ten years. One new boiler

was installed and some concrete stairs and handrail replaced during the bond project that started in 2016 as well as the new Direct Digital Control system that was installed

Facility for Agricultural Resource Management, (FARM) Building Assessment Summary:

Assessment Rating: 100 (Excellent)

The FARM building is the newest building on the Pendleton campus. It is a two-story building that was constructed in 2017 and opened for classes in the fall of 2018 and is approximately 17,565 square feet. No upgrades required.

Building Assessment Summary - Hermiston

EOHEC Building Assessment Summary:

Assessment Rating: 100 (Excellent)

Due to the buildings age and that it was designed for educational use there is no upgrade recommended or necessary at this time. The building should be re-evaluated yearly to assure proper function and longevity of the systems, equipment, and building. During the bond project that started in 2016 the existing Johnson Controls for the HVAC were tied into the Automated Logic Direct Digital Control System (DDC) system so the HVAC could be better controlled.

Hermiston, Annex Building Assessment Summary:

Assessment Rating: 90.70 (Satisfactory/Minor Upgrade Recommended)

The Hermiston Annex is in relatively good shape with no significant building problems. It is recommended however that the mechanical closet be modified to increase the combustion air provided to the gas hot water heater. The exterior canopy that connects the Annex to Columbia Hall also appears to be in relatively good condition. One structural recommendation would be to add an expansion joint between the buildings to provide proper seismic separation and allow both buildings to move without damage to the canopy in the event of seismic activity.

Columbia Hall Building Assessment Summary:

Assessment Rating: 70.40 (Minor Upgrade/Upgrade Recommended)

Minor improvements to the buildings structural system would be required to provide the necessary seismic upgrades to meet current codes. Complete replacement is recommended for the mechanical equipment by using high efficiency furnaces and adding additional furnaces to support the zones that have been created by the college. Plumbing for the building is in satisfactory condition but will need to be replaced within the next ten years. Recommended full

replacement of the interior electrical branch panels. The panels are in poor condition and the entire system should be replaced and centralized in one location.

Precision Irrigated Agriculture Facility (PIAF) Building Assessment Summary:

Assessment Rating: 100 (Excellent)

The PIAF building is the newest building in Hermiston. It is a one-story building that was constructed in 2017 and opened for classes in the fall of 2018 and is approximately 12,150 square feet. No upgrades required.

Building Assessment Summary - Boardman

Work Force Training Center (WFTC) Building Assessment Summary:

Assessment Rating: 100 (Excellent)

The WFTC building is the new building in Boardman. It is a one-story building that was constructed in 2017 and opened for classes in the fall of 2018 and is approximately 15,200 square feet. This building replaced the old Boardman facility that was sold back the city of Boardman once the WFTC was opened. No upgrades required.

Building Assessment Summary

Milton Freewater

Building Assessment Summary:

Assessment Rating: 81.10 (Minor Upgrade Recommended)

Minor improvements for universal and clear circulation flow should be considered to provide equitable access to all building users. When this assessment was performed it was recommended that in the next five years BMCC should perform minor upgrades to the mechanical and electrical equipment. It was recommended that the mechanical roof top heat pump unit be replaced as part of the upgrades. Since this assessment was performed two of the four roof top units have been replaced with new units. An exterior LED lighting project was completed for safety reasons. The building also had some remodeling performed to it with the bond project of 2106 to make it more functional and accessible to all building users.

Building Assessment Summary - Baker City

Main Building Assessment Summary:

Assessment Rating: 52.50 (Upgrade/Major Upgrade Recommended)

Due to the age of the building, there are several improvements that should be made to meet current safety codes and functional needs of the program. The structural lateral system does not comply with current detailing practices and there for the existing shear walls should be reviewed for current forces and retrofits. The building joists (both main level and roof) are over stressed due to excessive span lengths but could be mitigated by sistering new joists or providing intermediate supports. Minor cracking was observed in the foundation; this should be corrected as these cracks appear to allow water in the basement. The Mechanical system is appropriately sized for the building, but the air distribution and zoning should be revised to improve the indoor environment. The plumbing system overall is in poor condition and the older plumbing should be replaced to match the newer galvanized plumbing that is there. The electrical disconnect that is original to the facility is also in poor condition and should be replaced. The condition of the Baker City main building will most likely require a major upgrade to meet the needs of the college It is recommended that the longevity and intended use of this building be carefully considered before any improvements are made.

Modular Building Assessment Summary:

Assessment Rating: 79.50 (Minor Upgrade Recommended)

The building was constructed under current structural code practices; therefore no major structural upgrades are required. In addition, the mechanical and electrical systems appear to be in good to fair condition and no improvements are recommended.

With that said, the facility was poorly constructed and is nearing the end of its serviceable life. It was recommended that no upgrades be performed, and the building be replaced with a new facility that would better support the needs of the college's programs.

Building/Classroom Utilization

Pendleton Campus

Morrow Hall Building Summary:

Morrow Hall is a two-story building. The building was constructed between 1964 and 1968. In 1981 there was a small entry way remodel to the building and in 2017 there was a major remodel done on the Northeast section of the main floor and M100 was remodeled. M100 was previously an auditorium and is now used as a classroom or conference/meeting/training room. Total size of the building is approximately 39,200 square feet after the renovations.

Morrow Hall consists of eight large general classrooms, two computer lab, student enrollment support services i.e., Enrollment, Records, Financial Aid and Testing Center Services. In addition, the building houses many departmental offices including Human Recourses, Business Office, Small Business Development Center, GED/ESL, Student Learning Center, Trio, Dedicated Veterans Area. The building also houses the Vice President of Student Affairs and Vice President of Administrative Services.

Pioneer Hall Building Summary:

Pioneer Hall is a two-story building with a partial mezzanine in the library and a partial basement. The building was constructed in 1968 with a small renovation in 1999 making the total size approximately 64,100 square feet.

The building has a range of functions including the President's office and board room, the Office of Instruction, the Student Union, bookstore, theatre, library, and numerous departments. The Art department, and social Science offices are all located in the building and shipping and receiving. The basement is primarily used by the IT department, they have an office complex in P11 and offices in P9. There is one classroom in the basement (P8) and two rooms that have been converted to storage for record retention for the HR and the Business Office department (P16) and (P12) shared by the business office and Student Services Departments. There is one classroom on the main floor as well (P132). The mezzanine in the library is primarily used for storage and study rooms, however there are a few offices in this portion of the building.

Science & Technology Building Summary:

The Science and Technology building is a two-story building that is 29,300 square feet and second to newest addition to the Pendleton campus built in 1999.

The building is the hub of the Science and Technology departments providing six fully equipped labs and corresponding preparation rooms, three general classrooms, two computer labs and one large lecture hall. In addition to classroom space the building also holds nine offices, one work room and conference room, as well as open study space for student. The buildings general classrooms and lecture hall are available for other departmental, and campus use as well.

McCrae Activity Center Building Summary:

The McCrae Activity Center is a multi-level building and was constructed in 1976. The 50,800 square foot building currently supports the music and athletic departments. The two departments utilize two separate wings of the building that were constructed of different materials. The two-story music wing was constructed using wood as the primary structural system while the four-story athletic wing was constructed with concrete as the primary structural system.

The music wing consists of three general classrooms, one large choir room and nine offices on one floor and a small mezzanine (not all currently dedicated to the music department). The athletic wing consists of one gymnasium, five offices and a training room on the main level. The mezzanine is currently used as a multipurpose room with classroom capabilities. The basement level consists of conditioning and weight rooms, batting cages and locker rooms. The lowest level houses two racquetball courts and building support spaces.

Health Education Building Summary:

The Health Education building is a one-story building that was constructed in 1969 and is 8,700 square feet.

The buildings use is dedicated to the health education departments including Allied Health, Nursing, Medical Lab Technicians, Emergency Medical Technicians, Dental Assistants and Diagnostic Imaging. The building has four nursing labs and one dental skills lab. In addition, the facility has one general classroom used for health education and one dental classroom. There are ten offices all dedicated to the Health Education departments. The dental program is currently on Hiatus.

Umatilla Hall Building Summary:

Umatilla Hall is a two-story building and was constructed in 1969 and is approximately 34,400 square feet.

The building is used by the diesel program, welding program, fire science/EMT program and a portion of the upper floor is leased to Oregon state University. The building consists of seven general classrooms, five diesel labs, one welding shop and one emergency medical tech classroom. The five labs dedicated to the Diesel Technology are not fully utilized as they were originally designed for programs that have since been cancelled.

Emigrant Hall Building Summary:

Emigrant Hall is a one-story building with a partial basement it was constructed in 1988 and is approximately 10,600 square feet with 9,200 on the main level. The building consists of five large

general classrooms and one computer tutoring lab used primarily for math and computer science (but available for use by multiple departments). In addition to classrooms there are eight Math/Computer Science offices. There are five additional offices that were previously used by the IT department that are now used for instructional purposes. The basement consists of storage, mechanical and electrical rooms.

Facility for Agricultural Resource Management (FARM) Building Summary:

The FARM building is the newest building on the Pendleton campus. It is a two-story building that was constructed in 2017 and opened for classes in the fall of 2018 and is approximately 17,565 square feet. The building consists of a livestock lab, meat processing lab, vet tech lab, a shop, four offices, a commons area and a mechanical/electrical room on the first floor. The second floor consists of two general classrooms, a lab, a large commons area and the electrical room.

BUILDING / CLASSROOM UTILIZATION - Hermiston

EOHEC Building Summary:

Eastern Oregon Higher Education Center is a two-story building that was constructed in 2011 and is approximately 32,000 square feet with a small shop that is approximately 1,000 square feet dedicated to mechanical and electrical equipment.

The building consists of fourteen general classrooms, two dedicated science labs and one computer lab. Amenities include a reception and waiting area, a testing room (with adjacent ADA testing), seven staff offices, one staff lounge, conference room, one small catering kitchen, and commons/student study areas scattered throughout the building.

Hermiston, Annex Building Summary:

The Hermiston Annex is a one-story building that was constructed in 1999 and is connected to Columbia Hall using an exterior canopy. The building is approximately 5,000 square feet.

The building consists of two general classrooms and one multipurpose room remodeled in 2011 to provide additional storage and an athletic floor. Amenities include two offices and standard support spaces.

Columbia Hall Building Summary:

Columbia Hall's original date of construction is mid-seventies, approximately 1975-1977. It is a one-story building and approximately 10,000 square feet. The building currently consists of seven classrooms and two computer labs. The existing amenities are one main office and waiting area, nine offices and one staff lounge. Four offices and two classrooms are dedicated to another organization leasing the space from BMCC.

Precision Irrigated Agriculture Facility (PIAF) Building Summary:

The PIAF building is the newest building in Hermiston, it is a one-story building that was constructed in 2017 and opened for classes in the fall of 2018. The building is approximately 2,150 square feet. The building consists of two general classrooms, two labs, a multi-use classroom/conference room, one computer lab, five offices, one lobby/commons area and a break room/kitchen.

BUILDING / CLASSROOM UTILIZATION - Boardman**Boardman, Workforce Training Center (WTC) Building Summary:**

The WFTC building is a new building in Boardman, it is a one-story building constructed in 2017 and opened for classes in the fall of 2018 and is approximately 15,200 square feet. The building consists of three general classrooms, three labs, one computer lab, one conference room, an early childhood learning center, a commons area, four offices and a reception area. This building replaces the old Boardman building that was approximately 3,400 square feet.

BUILDING / CLASSROOM UTILIZATION – Milton-Freewater**Milton Freewater Building Summary:**

The Milton Freewater building is a one-story building, original construction date is undetermined. The North portion of the building was renovated in 2000 creating a building that is approximately 8,400 square feet. The building was remodeled again 2017/18 to make the facility more functional and accessible to all building users. The building consists of five general classrooms, one lab, one computer lab, a testing area, one conference room, a staff break room, lounge/waiting room, reception area and five offices.

Building/Classroom Utilization - Baker City**Main Building Summary:**

The Baker City main building is a one-story building with a partial basement. The original date of construction is undetermined. The building is approximately 5,000 square feet on the main floor and approximately 800 square feet in the basement. The building currently consists of five general classrooms, one computer lab, and a conference room. Amenities in the building include three offices, one main office, small work room and a kitchenette. The partial basement is used for storage.

Modular Building Summary:

The modular is a one-story building, the original date of construction is undetermined, the building is approximately 1,250 square feet. The building has one large general classroom, one small classroom and one small office.

Maintenance/Replacement Schedule

Boilers:

Average life expectancy of boilers is 30 years. All BMCC boilers are fairly early in the life cycle as a majority of them were replaced during the bond work between 2016 -2018.

Hot Water Boilers

- Boiler maintenance is performed annually by a subcontractor
- Boilers are checked daily during rounds every morning to ensure they are operating properly
- The glycol loops that supply the boilers are checked daily to verify there are no leaks
- Boiler feed water pumps are checked daily for proper operation

Steam Boilers (McCrea Activity Center)

Boiler maintenance is performed annually by a subcontractor

- Boilers are checked daily during rounds every morning to ensure they are operating properly
- Boiler feed water pumps are checked daily for proper operation
- Boiler feed water treatment system is checked daily for proper operation

Chillers:

Average life expectancy of commercial chillers is 20 years. Morrow Hall and Pioneer Hall both had new chillers installed during the bond between 2016-2018 and a new split system heating and cooling unit for Health Ed building. Umatilla Chiller is about halfway through its life expectancy. Emigrant Hall and McCrae Activity Center have the oldest chillers on campus. We should start planning to replace these chillers in the next five to ten years.

- Chiller maintenance is performed annually by a subcontractor
- Chillers are checked daily during rounds every morning to ensure they are operating properly
- The glycol loops that supply the chillers are checked daily to verify there are no leaks
- Chiller compressors, condensers, and pumps are checked daily during rounds

HVAC, Roof Top Units:

Average life expectancy for Roof Top Unit's (RTU's) is 15 years and can be up to 20 years with proper maintenance. Most of BMCC's RTU's are getting aged and getting close to the end of their life cycle. BMCC needs to start strategically planning to replace these units a couple a year until all the old units are replaced with new units.

- Roof Top Unit maintenance is performed quarterly, and filters are changed.
- Roof Top unit coils are cleaned annually

Gas Hot Water Heaters:

There are several gas operated hot water heaters on the BMCC campus. As these begin to fail BMCC needs to look at replacing these water heaters with on demand water heaters that are more efficient when and where it's feasible.

Air Compressors:

There are numerous air compressors on the BMCC campus to supply air to control valves and fire protection systems. Depending on the type of compressor the average life expectancy of the air compressors is anywhere from 5 to 20 years.

- Compressors are inspected daily on rounds
- Annual maintenance is performed.

Roofs:

The majority of BMCC roofs are a Stevens brand membrane material with a 15 or 20-year warranty. Most of these roofs are beyond the warranty period for repairs, however that does not mean they need to be replaced. Most of BMCC roofs are in good condition as BMCC has had a subcontracted maintenance program to keep them in good condition.

- All BMCC roofs are inspected semi-annually by a subcontractor and a report is generated.
- Any discrepancies/deficiencies found during the inspections are repaired by a subcontractor.

Fire Protection System:

There are a couple buildings on the BMCC campus that are equipped with a wet sprinkler system, all buildings are equipped with fire alarm system and smoke detectors.

- Fire protection systems are inspected and tested annually by a licensed, certified contractor per NFPA code.
- All smoke detectors and fire alarm systems are inspected and tested annually by a licensed, certified contractor per NFPA code.

Elevators:

There are 5 elevators and two ADA elevator/lifts on the BMCC campus

- Quarterly maintenance is performed on all BMCC elevators by a licensed, certified contractor per NFPA codes and state laws.
- Annual maintenance is performed on all BMCC elevators by a licensed, certified contractor per NFPA codes and state laws.

Roll Up Doors/Windows:

There are several metal roll up doors/windows on the BMCC campus.

- These roll up doors are all inspected and tested annually with in conjunction with the fire alarm testing per NFPA code.

Bleachers:

BMCC has electric rolling bleachers in the McCrea Activity Center and several sets of fixed aluminum bleachers

- All bleachers are inspected annually and repairs are made as needed.

Classroom Furniture Replacement Schedule

Most of the Pendleton Campus classroom furniture is old and dated and should be replaced on a 10 to 15-year cycle in all classrooms as budget allows.

Infrastructure & Utility Systems

Roads and Parking lots:

Approximately 50 percent of BMCC roads and parking lots are in poor condition and need repairs.

Natural Gas Line:

Most of BMCC gas line is the old carbon steel gas line and is very old, 5 to 10 years BMCC should upgrade the gas line to the new polyethylene or polypropylene material and install gas meters on each individual building. As it is now there is one meter on the main gas line coming to the campus. It's a possibility if Cascade Natural Gas is approached about replacing the existing gas line with the newer material gas line they may possibly split the cost with BMCC.

Electrical System:

The BMCC electrical service has been fairly well maintained, however there are a couple places that still need upgraded and should be planned for in the near future.

Potable Water System:

The BMCC potable water system is in reasonably good condition for its age.

Sanitary Sewer System:

The BMCC sanitary sewer system is in reasonably good condition for its age.

Storm Drain System:

The BMCC storm drain system is in reasonably good condition, there are a couple storm drains that will need to be repaired in the near future.

Recommended Annual Repairs/Replacement

Building Exterior:

BMCC should plan to refurbish, repaint one building per year for the next 10 years at an annual cost of \$25,000.00 - \$50,000.00 per year depending on size of building and repairs needed.

Building Interior:

BMCC should plan to paint and refurbish building interiors at an annual cost of \$15,000.00 a year

Carpet replacement:

BMCC should plan to replace carpet in one building annually as needed, starting with either the library or the theater at approximately \$50,000.00. After that plan to replace carpet in one building a year at approximately \$20,000.00 to \$50,000.00 depending on size of area to be re-carpeted.

Road and Parking Lot Repairs:

BMCC should plan and budget for \$150,000.00 of road repairs for 20/21 and approximately \$50,000.00 a year for the next ten years to get the roads and parking lot back in good condition.

Concrete, Handrail and Curb Repairs

BMCC should plan and budget for \$20,000.00 annually for at least the next five years to replace bad concrete and curbing.

Classroom Furniture Replacement

BMCC should plan and budget for \$20,000.00 a year annually for the next 10 years for classroom furniture upgrade/replacement.

Five Year Maintenance Plan

Required Budget Per Year

Task	20/21	21/22	22/23	23/24	24/25
Road, Parking Lot Repairs	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Building Exterior Repairs	\$50,000	\$50,000	\$50,000	\$ 50,000	\$50,000
Building Interior Repairs	\$20,000	\$20,000	\$20,000	\$ 20,000	\$20,000
Carpet/Floor Repairs/Replacement	\$50,000	\$50,000	\$50,000	\$ 50,000	\$50,000
Classroom Furniture Replacement	\$20,000	\$ 20,000	\$20,000	\$ 20,000	\$20,000
Sidewalk, Handrail and Curb Repairs	\$30,000	\$30,000	\$25,000	\$ 25,000	\$25,000
ADA Compliance	\$20,000	\$20,000	\$20,000	\$ 20,000	\$20,000
Total	\$340,000	\$340,000	\$335,000	\$335,000	\$335,000

Known Annual Maintenance Costs

Task	20/21	21/22	22/23	23/24	24/25
Annual Boiler/Chiller Maintenance	\$23,726.00	\$23,726.00	\$23,726.00	\$23,964.00	\$23,964.00
Elevator Inspection & Testing	\$23,500.00	\$23,500.00	\$25,000.00	\$25,000.00	\$25,000.00
Fire alarm & Security Monitoring	\$10,542.00	\$10,542.00	\$11,596.00	\$11,596.00	\$11,596.00
Fire Alarm Testing & Inspection	\$6,350.00	\$6,350.00	\$7,350.00	\$7,350.00	\$7,350.00
Fire Protection System Testing	\$2,500.00	\$2,500.00	\$3,000.00	\$3,000.00	\$3,000.00
Fire extinguisher Inspection	\$1,715.00	\$1,715.00	\$1,715.00	\$1,915.00	\$1,915.00
Roll Down Door Testing	\$1,275.00	\$1,375.00	\$1,375.00	\$1,475.00	\$1,475.00
Back Flow Preventer Testing	\$1,500.00	\$1,500.00	\$1,850.00	\$1,850.00	\$1,850.00
Backup Emergency Generator Maintenance & Testing	\$1,000.00	\$1,000.00	\$1,200.00	\$1,200.00	\$1,200.00
Roof Inspections	\$10,000.00	\$10,000.00	\$10,000.00	\$10,000.00	\$10,000.00
Gym Floor Refinish	\$4,500.00	\$4,500.00	\$5,000.00	\$5,000.00	\$5,000.00
Custodial Services WFTC Boardman	\$23,500.00	\$23,500.00	\$23,500.00	\$25,000.00	\$25,000.00
Custodial Services Baker City	\$15,260.00	\$16,360.00	\$17,460.00	\$18,560.00	\$19,660.00
Snow Removal Services District Wide	\$12,000.00 Varies	\$12,000.00 Varies	\$12,000.00 Varies	\$12,000.00 Varies	\$12,000.00 Varies
Lawn Care Services, Baker City & Pendleton	\$42,500.00	\$44,000.00	\$44,000.00	\$44,000.00	\$45,500.00
US Linen Services	\$15,925.00	\$15,925.00	\$18,000.00	\$18,000.00	\$19,000.00
Total	\$195,793.00	\$198,493.00	\$206,772.00	\$209,910.00	\$213,510.00

Energy Audit (Latest)

BMCC had an Energy Audit Performed in 2012 that was sponsored by Energy Trust of Oregon and prepared by ABACUS Resource Management Company. The audit was a level II Technical Analysis study for Energy Savings Projects on the Pendleton campus at 2411 NW Carden Ave.

Below is table 1 of Energy Efficiency Measures (EEMs) recommended from the audit with years for final payback ranging from 1.5 to 11.9 depending on the project.

Many of the projects in the table below were addressed during the bond that began in 2016. All the buildings HVAC controls were upgraded to DDC controls. Morrow Hall RTU 13 was replaced in 2017 for what used to be the lecture hall and is now a classroom, meeting room, training room, etc.

The audit also mentions that BMCC should further investigate Energy Efficiency Measures for exterior building lighting. This audit does not cover lighting as lighting is another program with the Energy Trust of Oregon. The audit stated that a campus wide LED lighting upgrade could exceed \$100,000.00. The audit said further study is warranted to determine the appropriate costs and savings-particularly because some of the exterior of the campus is under lit. The new LED lighting would qualify for Energy Trust of Oregon incentives but under a different incentive program.

BMCC CAMPUS-WIDE

Table 1: FINANCIAL SUMMARY OF RECOMMENDED EEMS

Campus EEM #	Bldg	Description	Total Utility \$ Saved	Estimated Installed Cost	Estimated ETO Incentive ²	Estimated ODOE Incentive ³	Estimated Final Owner Cost	Final Owner Payback (years)
1	Science	Install VSDs on EF-8a & 8b	\$2,070	\$21,920	\$7,274	\$2,795	\$11,851	5.7
2	Science	Optimize HVAC: Upgrade to NAE; Rebalance VAVs; Recalibrate CO2 sensors on RTUs-1, 2 & 3; Add HVAC Occupancy Controls to classrooms served by RTUs-1, 2 & 3; Reset Static Pressure of RTUs 1 & 2	\$13,804	\$80,542	\$28,099	\$0	\$52,444	3.8
3	Science	Install Air to Air Heat Recovery on RTU-4	\$2,869	\$34,250	\$1,512	\$4,367	\$28,371	9.9
4	Science	Install VSDs on HWP-1 & 2	\$775	\$13,700	\$2,991	\$1,482	\$9,227	11.9
5	Emigrant	Optimize HVAC Systems & Controls (Upgrade DDC to NAE; Install and Program (2) Occupant Over-ride Switches to allow reduced HVAC operation; Install CO2 Sensor; Optimize Economizer Controls)	\$8,034	\$23,790	\$11,895	\$0	\$11,895	1.5
6	Health Ed	Optimize HVAC Systems & Controls (Upgrade DDC to NCE; Install and Program (1) Occupant Over-ride Switch to allow reduced Main HVAC operation; Install CO2 sensor)	\$2,504	\$17,669	\$4,157	\$2,253	\$11,259	4.5
7	Pioneer	Optimize Main HVAC Systems & Controls (Recommission DDC Programming & Re-balance TUs; Install and Program (4) Occupant Over-ride Switches to allow reduced Main HVAC operation; Install CO2 sensor on Main AHU)	\$9,362	\$53,846	\$22,843	\$0	\$31,003	3.3
8	Pioneer	Optimize Theater HVAC Systems & Controls (Install 10 hp VSD on SF; Install and Program (1) Occupant Over-ride Switch to allow reduced Theater HVAC operation; Install CO2 sensor on Theater AHU; Connect Theater AHU to Lighting Circuit or Occupancy Sensor for reduced operation)	\$2,354	\$20,917	\$6,359	\$2,667	\$11,891	5.1
9	Pioneer	Optimize (6) RTUs by Installing CO2 Sensors	\$4,664	\$30,710	\$5,058	\$3,916	\$21,736	4.7
10	Pioneer	Expand DDC to control Kitchen EF & MUA	\$6,099	\$20,550	\$8,723	\$2,620	\$9,207	1.5
11	Pioneer	Delamp Lights in Library Stacks	\$391	\$2,685	\$0	\$342	\$2,343	6.0
12	McCrae	Install Automatic Pool Blankets	\$8,013	\$73,355	\$8,691	\$9,353	\$55,312	6.9
13	McCrae	Optimize (4) Gymnasium RTUs and (1) Mezzanine RTUs by Installing CO2 Sensors and Occupancy Sensors to reduce operating hours	\$9,370	\$52,992	\$17,899	\$6,756	\$28,336	3.0
14	McCrae	Optimize Main HVAC Systems & Controls (Retro-Commission Controls to reduce operating hours; Install CO2 sensor)	\$1,163	\$11,146	\$4,491	\$0	\$6,656	5.7
15	Morrow	Optimize RTU-13 (Lecture Hall) HVAC Systems & Controls (Install CO2 & lighting occupancy sensor and connect to RTU to reduce operating hours)	\$756	\$4,927	\$2,161	\$628	\$2,137	2.8
TOTALS ¹			\$72,226	\$463,000	\$132,154	\$37,178	\$293,667	4.1

General Note – About \$24,000 of additional lighting opportunities are not listed on this table because they are handled through a different incentive program. There is also a \$36,000 controls upgrade the owner is interested in for Morrow that is not included in this table because it does not generate energy savings.

Note 1: Savings for above measures assume that all measures in this table will be installed - they include the effects of interactions upon each other.

Note 2: ETO incentives are estimated on this table at \$0.25 / kWh and \$1.00 per therm – capped at 50% of project costs – the ETO will issue an actual incentive offer for the EEMs after they review the report, and after the owner notifies the ETO which EEMs they want to install, and which EEMs they want incentive offers for.

Note 3: The Oregon Department of Energy incentives are estimated on this table at 12.8% of the total project cost – the Oregon Department of Energy will determine if these projects qualify for incentives after applications are submitted and reviewed in a competitive incentive process. The owner will have the choice of what % of the project cost to request an incentive for on their application. Applications are currently being accepted twice a year.

Deferred Maintenance

	<u>Deferred Maintenance</u>	Project Estimated Cost (\$)	Rank	Project Classification
1	Upgrade HVAC systems (boilers, chillers, controls)	2,400,000	1	AI with SSI and PEUI
2	Upgrade energy management systems	850,000	2	AI with SSI and PEUI
3	Replace deteriorated mansards on two (2) buildings	120,000	10	AI with PSI
4	Resurface and upgrade parking lots (Pendleton Campus)	200,000	9	AI with PSI
5	Refurbish performing arts theater (catwalk, carpet, lighting, seating, sound, communication)	875,000	7	AI with PSI
6	Refurbish lecture hall (ceiling, seating, flooring, electrical, sound)	430,000	11	AI with PSI
7	Repair swimming pool, replace pumps, and upgrade chlorine injection system	750,000	5	AI with SSI and PEUI
8	Replace or install selected campus signage, interior and exterior (all campuses)			
9	Upgrade natural gas, water supply, electrical distribution systems (Pendleton campus)	1,000,000	4	AI with SSI and PEUI
10	Abate asbestos	125,000	12	S&S
11	Replace single pane windows with energy efficient windows	100,000		
12	Replace landscaping tied to safety and security (all campuses)	130,000	14	S&S
13	Replace selected carpeting and tiles (all campuses)	190,000	6	AI with PSI
14	Install second major access road to Pendleton campus	850,000	8	AI with PSI
15	Refurbish tennis courts	500,000	15	AI with PSI
16	Upgrade safety and security related lighting	125,000		
17	Upgrade selected classrooms and instructional offices	250,000	13	AI with PSI
	Additional projects			

	Seismic upgrades			
	Sidewalk, handrail replacement all campuses			
	Restroom Upgrades partitions, fixtures, tile,			
	Complete duct cleaning			
	Repair/renovate air handling units, exhaust fans, pumps, fans and controls.			
	Energy efficiency controls for HVAC Hermiston, Boardman, Milton-Freewater Baker Campus's			
	Electrical Improvements all campuses			
	TOTAL			
		\$8,895,000		

This Deferred Maintenance list is 5 years old and some of these items were addressed during the bond project that began in the summer of 2016

- Line-item number 1 was significantly addressed during the bond project
- Line-item number 2 was addressed during the bond project
- Line-item number 4 was started last summer, \$135,000.00 of asphalt road repairs were completed last year. BMCC needs to have a ten-year maintenance plan to bring the roads and parking lots back to good condition.
- Line-item number 7, swimming pool has been shut down. It has not been totally decommissioned yet. BMCC needs to budget and plan to decommission and pour a concrete slab over it. This area could then be utilized for many different purposes.
- Line-item number 8 exterior signage was replaced in 2019
- Line-item number 10 there has been some asbestos abatement performed at BMCC. In 2018 the Welding Lab booths were remodeled, and the asbestos walls were abated and removed at that time.

Infrastructure & Utility System Condition

BMCC's roads and parking lots have been deteriorating for several years. The main road coming onto campus has been repaved in sections over the last four years from the main entryway around to the West side of the McCrea Activity Center. A few parking lots need to have the old asphalt removed, new base installed and repaved.

BMCC's electrical systems have had areas that have been selectively upgraded during the latest bond. Even though there have been upgrades there are many areas that still need the electrical services upgraded.

BMCC's water and sewer lines are in pretty good condition overall, although there are still areas that have the original ductile iron pipe in place and at some point, should be replaced.

BMCC's natural gas line on the Pendleton campus is not in the greatest condition. The natural gas line has one meter that supplies all the buildings off one gas meter. Most of the gas lines on the Pendleton campus are the old carbon steel lines and are deteriorating. In the future, the natural gas line should be replaced from the meter to all the buildings with the new flexible poly piping and individual meters installed at each building.

Summary

In order for Facilities to properly plan for the long-term future and ensure all of BMCC is successful. The Facilities Department needs to meet with every department on campus and learn what their long-term goals and plans are for the future as well as for the near future. If this is accomplished Facilities can then put together a comprehensive long term master plan that would encompass all BMCC's interests and needs.

At this time the known annual budget required for vendor support is \$198,293.00. This includes scheduled maintenance activities, contracted custodial services, lawn care services, inspections & testing, etc.

The facilities department also needs \$320,000.00 in fiscal year 20-21 for capital projects. This would include another \$150,000.00 for continued road repairs, interior and exterior building repairs, carpet replacement where needed, sidewalk, curb and handrail replacement, classroom furniture replacement and ADA compliance issues.

The Facilities Department is working diligently to reduce costs to the college in any way they can. BMCC has collaborated with the Energy Trust of Oregon in a strategic energy management program (SEM). Energy Trust of Oregon works with the facilities department to identify potential projects that will save the college money. This program has been very beneficial to BMCC, in the first year of the program BMCC reduced the energy consumption enough that we were able to purchase a new much needed piece of equipment.