



2023 FACILITY CONDITION SURVEY

Cascadia College

SURVEY CONDUCTED BY:
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and Technical Colleges

Olympia, Washington

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INTRODUCTION

The facility condition survey is conducted by the State Board for Community and Technical Colleges (SBCTC) every two years. In 1989 the SBCTC directed that a facility condition survey be performed on all community college facilities owned by the state. The intent of the survey was to provide a determination of the physical condition of state-owned community college facilities, and to identify capital repair project candidates for funding consideration for the bi-annual state budget cycle. Starting in 1991, the five technical colleges and Seattle Vocational Institute were also included in this process.

The current survey continues the process begun in 1989 as a method of identifying and budgeting capital repair needs by applying a uniform process to all colleges system-wide. The capital repair candidate validation process uses a condition evaluation protocol and deficiency prioritization methodology applied in a consistent manner across all of the colleges. The process was initiated with a detailed baseline condition survey conducted at each college in 1989, followed by updates conducted every two years. In 1995 a detailed baseline survey was conducted once again. Updates have been conducted every two years since 1995. Each update reviews both unfunded prior needs and emergent issues that have become more critical since the prior survey.

In 2001 the survey was augmented by a facility condition rating process whereby the overall condition of each college facility is rated by evaluating the condition of 20 separate technical adequacy characteristics. A score is calculated for each facility based on this evaluation. The condition rating process continues to be an integral part of the condition survey update process.

The focus of the 2023 survey update includes:

- Reviewing deficiencies documented in the previous survey that have either not been funded or only partially funded for the current biennium, and evaluating the current condition of those deficiencies;
- Updating the relative severity/priority of those deficiencies to result in a deficiency score to be used as a guide for repair request prioritizing and timing;
- Modifying the recommended corrective action for unfunded deficiencies if necessary, and updating the estimate of repair costs for capital repair project requests;
- Reviewing, validating, prioritizing, and estimating corrective costs for “emerging” deficiencies identified by the college as potentially requiring capital repairs;

- Updating the building and site condition ratings.

This survey is intended to assist the SBCTC in establishing the relative severity of each capital repair deficiency to allow system-wide prioritizing of each college repair request. The SBCTC will also be able to estimate the cost of the projects to be requested for its 2025-2027 capital budget.

The scope of the condition survey update, as determined by the SBCTC, includes major building systems, utility distribution systems, and some site elements. It does not include dormitories, parking lots, asbestos hazard identification, ADA compliance, new construction, construction currently under warranty, or facilities recently purchased.

EXECUTIVE SUMMARY

The campus visit and validation assessment for this facility condition survey update for Cascadia College was conducted in 2023. The report will be used to help develop the 2025-2027 capital budget request.

This report includes two main focus areas. One focus area is the identification and evaluation of facility deficiencies that require capital funding. The deficiencies are scored and ranked to determine which projects will be proposed in the capital budget. The other focus is the evaluation of campus sites and buildings to determine the asset conditions. The buildings are scored using consistent criteria. These scores can be used by colleges that submit a major project request for consideration in the proposed capital budget.

Campus areas and facilities not owned by the State are not evaluated during the survey since they do not qualify for State capital appropriations. Also, dormitories, parking lots and other enterprise activities are not included because they have their own revenue source.

College Overview

Cascadia Community College serves north King and south Snohomish counties. The college, co-located with the Bothell branch of the University of Washington, is located in the city of Bothell, and has been in operation since 2000.

The college is located on a 128-acre site at the intersection of I-405 and SR 522, and occupies two buildings totaling approximately 165,506 GSF. The site includes 58-acres of wetlands restoration. The college also uses jointly operated facilities for library, media, cafeteria, student program and educational partnering services functions.

Deficiency Survey Update Summary

Previous Survey

Several deficiencies were identified in the previous facility condition survey for the Cascadia College. Additional needs may have also been identified in the 2019 Infrastructure Survey. Typically, the survey data for all college deficiencies are included in a single list and prioritized by severity. The prioritized list of repair needs is then pared down to the most severe deficiencies based on the total dollar amount identified in the State Board's capital budget request for Minor Works Preservation projects.

The portion of the funding request related to an individual campus is determined by adding up all of the projects that are included in the pared down list for each campus. After the list is correctly sized, colleges are given the opportunity to make modifications to their preliminary list of projects, but are constrained by the pre-determined budget amount for their college. The State Board then uses the modified project data to help develop the final capital budget Minor Works Preservation request.

To address the worst deficiencies identified in the previous survey, the State Board submitted the following deficiencies as Minor Works Preservation projects in the 2023-2025 capital budget request (some of these have been combined into sub-projects in the budget request or subsequent allocations):

Deficiency F01: Replace boilers in the Bothell Library (300-3998) building. Project cost estimate = \$166,000

Deficiency not identified during survey: Replace the obsolete boilers. The cost must be shared 50/50 with the University of Washington since these are shared assets owned by both agencies in the BOTHELL LIBRARY 2 building. Project cost estimate = \$248,000

Deficiency not identified during survey: Replace the failing section of roofing and spot repair other areas as required in the BOTHELL LIBRARY 2 building. Project cost estimate = \$272,000

Survey Update

This condition survey update validated additional repair deficiencies and recommendations for funding. Many of the deficiencies have been recommended for funding in the 2025-2027 capital budget, however, any deferrable deficiencies should also be included in the budget in order of severity as funds allow.

The following table summarizes by funding category the number of deficiencies, average severity score, and estimated repair cost. Projects not recommended for funding are not included.

Category	Campus	Deficiencies	Average Deficiency Score	Total Repair Cost Estimate
Facility	Cascadia Community College (300A)	4	53	\$978,000
College Total		4	53	\$978,000

Capital Repair Requirement Deficiency Overview

All of the deficiencies identified during this survey are summarized below:

Deficiency F01

Cascadia Community College (300A)
 Location: Bothell Library 2 (300-4054)
 Severity Score: 41
 Construction Cost Estimate: \$80,000

The college is concerned about the age and reliability of the elevator controls. Typically, elevators can be maintained and remain in service for up to 45 years, however, the college indicated that the elevator has frequent repair needs. The college believes that the vendor is no longer able to repair the controls. This elevator is a critical component of the accessible path to several campus buildings and should continue to be monitored and maintained to ensure reliability. The elevator vendor provided a memo that described obsolete parts, but did not state that the controls were no longer maintainable. The elevator control should be replaced within the next few years to ensure reliability. The cost should be shared 50/50 with UW.

Deficiency F02

Cascadia Community College (300A)

Location: Bothell Phys Plant (300-4016)

Severity Score: Needs Study

Construction Cost Estimate: \$479,000

The college is concerned about the reliability of the 1,000 ton chiller. This is the biggest of three chillers that serve all buildings on campus. The automatic start function is no longer reliable due to the age and demand of the chiller. The chiller is now manually started, when required. The transformer that solely serves the chiller has recently been replaced. All of the equipment is original. The chiller currently is only used with high demand during summer months, but will be required to support two new buildings that will come online in the next few years. The chiller still functions as designed. Reconditioning the chill would likely cost more than half of the cost of a new chiller, so the chiller should be replaced rather than be reconditioned. Additional information from the equipment vendor is required to properly evaluate the remaining expected life of the chiller. The cost of the chiller should be split 50/50 with UW.

Deficiency F03

Cascadia Community College (300A)

Location: Bothell Phys Plant (300-4016)

Severity Score: 49

Construction Cost Estimate: \$492,000

The three in-line cooling towers have degraded. The grills and pans have corroded. The cooling towers should be reconditioned to extend their useful life. The cost of the towers should be split 50/50 with the UW.

Deficiency F04

Cascadia Community College (300A)

Location: Multiple (300A)

Severity Score: Needs Study

Construction Cost Estimate: \$60,000

The college is concerned about the reliability of the fire alarm panels in CC1, CC2, CC3, Library, Library annex and the Physical plant. The college believes that the panels are no longer supported by the vendor and are no longer repairable. If that is true, then the panels should be replaced. A memo was provided from the vendor regarding panel upgrades, but did not address the question of maintaining the current panels. Additional information from the vendor is required to justify replacing the panels.

Deficiency F05

Cascadia Community College (300A)

Location: Multiple (300A)

Severity Score: 60

Construction Cost Estimate: \$20,000

There are several windows in CC1, LB1, LB2 and the Physical plant that have failed. These failed windows should be replaced. The cost for windows in shared buildings should be split 50/50 with UW.

Deficiency F06

Cascadia Community College (300A)

Location: Multiple (300A)

Severity Score: 60

Construction Cost Estimate: \$97,000

The college indicated that the Lutron lighting controls found in LB1 and LB2 have degraded and become unreliable. The panel components are no longer available and the vendor is no longer able to replace broken panel components. Portions of one of the panels did not function at the time of the survey. The failing lightning control panels should be replaced.

The following table summarizes the average severity score and estimated repair cost. The data is sorted by facility.

Campus & Location	Deficiencies	Average Score	Estimated Total Cost	Current Replacement Value	Facility Condition Index
Cascadia Community College (300A)					
Bothell Library 2 (300-4054)	1	41	\$113,000	\$5,740,959	1.4%
Bothell Phys Plant (300-4016)	1	49	\$698,000	\$904,750	54.4%
Multiple (300A)	2	60	\$166,000	NA	NA

Facility Condition Index (FCI) = Project Cost / Current Replacement Value

The following table summarizes the number of deficiencies, average severity score and estimated repair cost. The data is sorted by probable deficiency cause.

Campus & Location	Deficiencies	Average Score	Estimated Total Cost
Cascadia Community College (300A)			
Age/Wear	4	53	\$978,000
College Total	4	53	\$978,000

Since capital funding is derived largely from long-term State bond indebtedness, the investment of capital repair dollars in a facility should likewise result in a long-term benefit, a minimum of thirteen years according to OFM guidelines. This means that facilities for which capital repair dollars are being requested should have a reasonable remaining life expectancy to recover the repair dollar investment. Therefore, capital repair requests for facilities that a college has identified as a high priority for renovation or replacement are carefully scrutinized to determine whether the requests should instead be incorporated into any renovation or replacement proposal that is submitted. Typically, capital repair requirements identified in a facility that is being considered for renovation or replacement are backlogged pending receipt of renovation or replacement funding.

Major Infrastructure Overview

At this time no major infrastructure issues have been identified at the college and no specific Infrastructure projects are being proposed.

Consistency of Repair Requests with Facility Master Planning

One of the criteria used for the capital repair request validation process is to review the college’s master or facilities plan to determine what the medium and long-term planning and programming objectives of the college are with respect to the facilities for which capital repair dollars are being considered. The primary focus is to determine what the college considers the remaining life of these facilities to be, which will determine whether or not the proposed capital repair projects have economic merit.

The deficiencies that have been identified in this condition survey are located in buildings and campus grounds that will likely be utilized for at least the next fifteen years or are in buildings that are slated for renovation or replacement, but require minor repairs to continue basic use of the space.

Building Condition Rating Overview

The condition rating of the facilities at Cascadia College that are included in this condition survey update ranges from “222” to “152.302158273381”, and varies significantly, as shown in the following table. The rating scores presented in this summary were generated by the condition analysis conducted as part of the 2023 condition survey update.

In some cases, larger buildings are broken into smaller sections to be scored independently. These newly defined building sections are identified in this report by the “- Partial” label included at the end of the building name. A description of the newly identified building section is provided in the “Building Condition Rating” section.

Building Name	Building Number	Size (SF)	Previous Score	Updated Score
Bothell Lib Annex (300-4017)	3004017	6,233	163	163
Bothell Library (300-3998)	3003998	22,434	215	215
Bothell Library 2 (300-4054)	3004054	14,989	175	190
Bothell Phys Plant (300-4016)	3004016	3,850	222	222
Cascadia I (300-CC1/CC2)	300CC1/CC2	111,500	200	200
Global Learning And The Arts (300-CC3)	300CC3	54,006	152	152
Grand Total Area (SF)	213,013			
Weighted Average Score	188			

146 To 175 = Superior

176 To 275 = Adequate

276 To 350 = Needs Improvement/Additional Maintenance

351 To 475 = Needs Improvement/Renovation

476 To 730 = Replace or Renovate

The rating scores for permanent college facilities that were rated range from a low of 152.302158273381 to a high of 222, with a lower score indicating a better overall condition rating. (See the Site/Building Condition Scoring Overview and Ratings section for a breakdown of the rating scores.) In general, the better scores were received by the newer facilities and by facilities that have undergone remodels in recent years.

Furthermore, buildings in the construction phase of a major renovation at the time of the survey were rated based on the anticipated condition of the facility after the project is completed. This concept was also applied to major system renovations. Partial renovations and additions were rated based on the average condition of the existing and renovated components of the facility.

In some cases a portion of a larger building was given an independent score. This can be used to request a major project using the defined smaller portion of the building. The overall score for a split building is also shown and includes the total area in the building.

The weighted average score for all rated facilities is 188 for this survey. Based on this score, the overall average condition of the college = “Adequate”. Independent building scores indicate that 6 of the 6 college facilities are rated as either Superior or Adequate. The State Board goal is to bring all building conditions up to the “Adequate” rating or better by 2020. The survey data over the last 10 years suggests that this goal may be attainable if capital funding is focused on buildings in worse condition.

Maintenance Management Concerns

The recent changes due to the Covid-19 response have created both benefits and challenges for college maintenance teams. The benefit has been the increased access to facilities due to the significant reduction in students and staff on campus. Many spaces were unoccupied during much of 2020 through 2022. This has given the maintenance staff a much broader schedule to work on capital assets in need of repair. Many colleges now function in a more hybrid fashion, including both on-site and remote attendance. Challenges have included a tighter budget due to the student enrollment drop, a workload increase to ensure facilities remain sanitized and a high number of staff retirements within a deflated labor market.

Additionally, previous State of Washington capital and operating budgets were significantly impacted by the last recession. The impact of the recession directly affected the level of funding appropriated to the community and technical colleges. As a result, facility maintenance budgets were reduced accordingly. A few college maintenance

staffing levels have not returned to their pre-recession level, but many colleges have increased staff levels as well as outside maintenance contracts over the last four biennia.

One symptom of a reduced maintenance staffing level of is an increase in deferred maintenance. Another result of the temporarily reduced funding level is the trend to approach maintenance with a “repair by replacement” strategy, which is a more expensive approach to maintaining a facility and merely replaces the operating costs with higher capital costs.

Custodial and maintenance personnel are being asked to do more. The amount of square feet maintained per full-time custodian increased by 16 percent after the last recession and has remained fairly consistent over the last five biennia. The area maintained per full-time maintenance worker increased by 13 percent in 2009-11 and has remained roughly at the same level since 2013. In the past few years, there have been significant staffing transitions in many college facilities departments. This has dampened productivity in some cases as staff become familiar with the new roles and responsibilities. Some colleges have also struggled through changes to district staffing structures. During this same period, there has been a significant increase in expenditures related to outside maintenance contracts.

Troubleshooting equipment and taking the time to effect repairs may not be seen as a priority when funding is tight. However, the resulting long-term costs are far higher than following a prudent policy of balancing reasonable and cost-effective repairs and justifiable replacement.

Many facilities have older large equipment, especially HVAC equipment such as air handlers. This equipment, when manufactured, was very well constructed, often to industrial standards, as compared to commercial equipment manufactured today, which is very often much less robust. Much of this older equipment can be cost-effectively repaired. Fans, motor, dampers, heating/cooling coils, shafts and bearings in air handlers can all be replaced as they fail, without the added expense of replacing the case, which often requires expensive structural work because of size and location. Why throw away a chiller, when only the compressors are bad, and when they can often be rebuilt? A lot of smaller unitized equipment can similarly be repaired instead of simply replaced.

This tendency toward replacement rather than repair also too often extends to roofs. Many times the problems that occur with roof membranes can be satisfactorily resolved with repairs, re-conditioning or partial replacement instead of wholesale replacement of the entire system. This will require more rigorous investigation to determine the extent of problems, often by employing thermal scanning and/or core sampling to determine the extent of leaks or membrane condition as well as condition of underlying insulation. This does cost some money, but if it can save a significant portion of the cost of a roof, or if repairs can extend the life of the membrane for five to ten

more years, it is certainly money well spent. The state board has supported a trend to re-condition aging roofs prior to replacing them to extend the life of the system.

Solar arrays have become more common on roofs. These panels make roof repairs and replacement more difficult and expensive. For example, if a solar array is constructed on top of a 15-year-old roof, then the array will have to be removed when the roof requires repairs or is replaced. This adds significant cost to the project. Another concern is the expected life of solar arrays related to roof systems. The life expectancy of a solar array has not yet been established, but it is estimated to be 15 years. A roof surface is typically expected to last between 20 and 30 years, depending on the materials used. The solar array and roof surface life expectancies are not similar, so repairs or replacement of the roof system will typically require the removal, storage and replacement of the solar array as an added expense to the roof project.

Roof membranes with a low initial investment often win out over alternatives that may have a higher initial cost, but a lower life-cycle cost. The use of single-ply PCV or TPO membranes seems to be a preferred design option for new buildings and for membrane replacements. These may be a low cost option, but not a good choice for many applications. On a building with a lot of rooftop equipment and penetrations, single-ply membranes have a short life due to the abuse they sustain by people constantly walking and working around equipment on the roof. Such roofs almost always fare better with a torch-down membrane with a mineral-surfaced cap sheet, which are somewhat more costly initially, but typically last much longer and have lower life-cycle maintenance costs.

If the expertise to troubleshoot and to really analyze the condition of building systems does not exist within the maintenance organization, the organization must make sure that the consultants it hires have the experience and expertise to provide effective troubleshooting and diagnosis, and that they can provide reasonable alternative solutions to a problem. Having design expertise is simply not enough. The same is true of contractors. A contractor should not be allowed to take the easy way out and simply recommend replacement when there could be cost-effective repair alternatives. The emphasis should be on contractors and consultants who can provide more than one solution to a maintenance problem, and insure that those solutions are reasonable and cost-effective.

Another increasing concern is DDC control systems. There appears to be a built-in obsolescence factor in these systems, such that manufacturers seem to be recommending replacement about every twelve years. Over the last two to three biennia the survey team has found that colleges are being told that their systems are “obsolete” and will no longer be supported, that replacement parts will no longer be manufactured and that the college needs to upgrade to the latest system, often at very high cost. Attempting to determine the truth of these claims from manufacturers and their distributors has proved very difficult. To test these claims the survey consultant, starting in 2009, asked colleges that requested DDC replacements to have the manufacturer and distributor provide written, signed confirmation that a system would no longer be supported as of a given date, that replacement

parts would no longer be available as of a given date, and that there was no third party source of replacement parts. To date no such documentation has been forthcoming from either manufacturers or distributors.

College facility teams need to make sure that their available maintenance funds are allocated in the most cost-effective manner possible. In practice this will mean giving a lot more thought to what should and can reasonably be rebuilt or repaired rather than simply replaced. It will also mean starting to apply the principles of life-cycle cost analysis and alternatives analysis to repair and replacement decisions.

Facility Condition Survey Report Format

This facility condition survey report is divided into two major sections that present the survey data in varying degrees of detail. Section I is titled *“Narrative Summary”* and includes four subsections. Section II is titled *“Summary/Detail Reports”* and includes three subsections.

Section I - Narrative Summary

The *“Introduction and Executive Summary”* is the first subsection. It includes an overview of the survey objectives; an overview of the college; a summary update of deficiencies funded from the previous survey; an overview of capital repair requests being submitted for the 2025-2027 biennium; a discussion of major infrastructure issues; significant maintenance/repair issues identified by the college maintenance organization, which the survey team determined could not be addressed through the capital repair process; a discussion of the consistency of repair requests with facility master planning; and a building condition rating overview.

The second subsection is titled *“Facility Replacement and Renovation Proposals”* and discusses facilities that are viewed by the college as prime candidates for replacement and major renovation.

The third subsection is titled *“Facility Maintenance Management Overview.”* It presents an overview and discussion of maintenance staffing and funding; and an overview and discussion of facility maintenance management issues.

The fourth subsection is titled *“Survey Methodology”* and discusses the methodology of the condition survey, including the survey process; deficiency documentation; deficiency severity scoring; cost estimating; and data management and reporting.

Section II - Summary/Detail Reports

The *“Summary/Detail Reports”* section of the report presents both summary and detail deficiency data. The first subsection is titled *“Repair Programming Summary”* and provides a summary deficiency cost estimate by building and by the criticality or deferability assigned to each deficiency, and a facility repair programming summary report. The repair programming summary report provides both descriptive and cost deficiency data for each facility, categorized by the criticality or deferability assigned to each deficiency.

The second subsection is titled *“Detailed Deficiency Data”* and contains the detailed deficiency data for each facility wherein deficiencies were identified. Each individual deficiency report page provides detailed information on a single deficiency.

The third subsection is titled *“Site/Building Condition Scoring Overview and Ratings”* and contains a discussion of the facility and site rating process; an overview of facility and site condition; the site rating sheet for the main campus and any satellite campuses; and the building condition rating sheets for each facility.

The report also contains three appendices. *Appendix A* provides a detailed overview of the deficiency severity scoring methodology employed by the survey team. *Appendix B* provides an overview of the building/site condition analysis process, including the evaluation standards and forms used in the analysis. *Appendix C* contains the capital repair request validation criteria that were first developed for the 2001 survey process to insure a consistent approach in identifying candidates for capital repair funding.

FACILITY DEVELOPMENT HISTORY

The Cascadia Community College facility, Cascadia I, was constructed in 2000. The Center for Global Learning and the Arts was constructed in 2009. Cascadia also shares facilities belonging to the University of Washington, which are co-located on the UW Bothell campus.

Facility planning

The date of the most recent master plan(s) for the college campuses is shown below. During the survey, the college was asked to identify the top four priorities for facility renovation, replacement and demolition based on the master plan(s). This information was used to better understand the future needs of the college, but also to further evaluate the need for repair work. A deficiency located within a building planned for renovation, replacement or demolition was typically not considered for funding if the work was not absolutely required to maintain program functions until the larger project could be funded. It is difficult to justify spending capital funds on an asset that will likely be removed or replaced within a short period of time. The following table summarizes the college planning priorities.

Master Plan

Campus	Most recent full plan	Most recent update
Cascadia Community College (300A)	2000	2017

Renovation Priorities

Building	Largest program deficiency or need
None	-

Replacement Priorities

Building	Largest program deficiency or need
None	-

Demolition Priorities

Building	Planned demolition year
None	-

FACILITY MAINTENANCE MANAGEMENT

A questionnaire was sent to each college soliciting input from the college maintenance organization on maintenance staffing, the status of the PM program, annual workload, how work is managed, and annual maintenance expenditures. The responses from Cascadia College have been analyzed and are discussed below. The data is used to generate an overview of facility maintenance management effectiveness at the college, and is also used to compare all colleges statewide. Some colleges did not provide maintenance data. In these cases, it was assumed that there were not significant changes to the maintenance approach or staffing levels and prior maintenance data was used for the report.

The maintenance questionnaire provides data to evaluate and compare maintenance staffing levels and maintenance expenditures. College responses are compared with benchmarking data available from national organizations to help identify variances.

Maintenance Staffing and Expenditure Overview

The benchmarking data for maintenance staffing and expenditures used in previous condition survey updates has come primarily from the International Facility Management Association (IFMA). This organization periodically collects and publishes comparative data gathered through in-depth surveys of a wide variety of maintenance organizations. Even though the data is not updated regularly, it still holds value when used for comparative analysis. IFMA completed the last major facility operations and maintenance survey in 2008. That data was reported in a publication titled “Operations and Maintenance Benchmarks – Research Report #32,” published in mid-2009.

Similar comparative data was found to be available from an annual maintenance and operations cost study for colleges conducted through a national survey by American School & University (ASU) magazine. The most recent data from this source is their 38th annual study published in April of 2009.

Maintenance Staffing

The Cascadia College facility encompasses approximately 2,130,.55 GSF, not including leased facilities. The campus maintenance staff has the following composition:

Maintenance Staff (DOP Class./Annual Salary + Benefits)	Maint. Hrs Per Wk	Estimated Staff Cost (Salary + Benefits)
Facilities Operations Maintenance Specialist	10	\$21,533
Facilities Operations Maintenance Specialist	10	\$21,533
Maintenance Technician 2	5	\$8,821
Facilities Operations Maintenance Specialist	5	\$10,767
Maintenance Mechanic 2	10	\$20,484
Facilities Operations Maintenance Specialist	10	\$21,533
Maintenance Mechanic 2	5	\$10,242
Plumber	10	\$20,484
Facilities Operations Maintenance Specialist	5	\$10,767
Control Technician	5	\$10,242
Painter	5	\$9,284
Facilities Operations Maintenance Specialist	5	\$10,767

Many colleges supplement the maintenance staff effort by hiring outside contractors to complete some of the maintenance activities. A comparative analysis of total maintenance effort at the colleges requires that the

outside contractor data be included in the total maintenance effort. See the “Overall Maintenance Comparison” section below for the comparative analysis.

IFMA Survey Comparison

For comparison with the community colleges, the size range of 250,000 to 500,000 GSF was selected from the IFMA data as representative of the average size of a state campus. The average total maintenance staffing reported by IFMA in 2009 for this size of plant was **8.7 FTEs**. Dividing the upper end of the selected range (500,000 GSF) by the FTE staffing provides the number of GSF maintained per FTE -- **57,471 GSF**.

In its 2009 report, IFMA also provided comparative data for the average number of maintenance staff by specific categories of maintenance personnel (e.g. electricians, painters, etc.), using the same ranges of physical plant size as for total staffing. This data, which is presented below, could be useful for evaluating the college’s existing staffing in terms of specific trades/capabilities and staffing numbers.

<u>Staff position</u>	<u>Average number of staff</u>
Supervisor (incl. Foremen)	1.75
Administrative Support (incl. Help Desk)	2.38
Electricians	1.28
Plumbers	1.13
Controls Techs.	0.94
HVAC and Central Plant	1.93
Painters	1.25
Carpenters	1.28
General Workers	3.22
Locksmiths	0.96

ASU Survey Comparison

The American School & University (ASU) magazine cost study provides data on the average number of maintenance employees and the average GSF of physical plant maintained per employee. However, unlike the IFMA data, this data is not broken down by size ranges of physical plant. The average number of maintenance employees in the 37th annual study was reported as **eight** FTEs per college or university. The corresponding data was not available in the most recent, 38th annual study. The average number of GSF maintained per FTE was reported as **79,293** in the 38th annual study. Using the average number of FTE's identified in the 37th study and the average GSF per FTE identified in the 38th Study, it can be determined that the average campus included roughly 635,000 square feet of buildings.

Maintenance Expenditures

The total cost of maintenance is the sum of the total cost of college maintenance staff, outside maintenance contracts and maintenance material. Based on this assumption, the total maintenance cost per gross square foot is calculated and shown in the table below. It was critical to include outside contract data since there was significantly different levels of outside contracts for each college.

Some data was not tracked by the colleges, making it difficult to compare the college with benchmark data. As colleges move to more sophisticated tracking software, this data should become more accurate.

Total Estimated Maintenance Staff Cost	Total Cost of Outside Contracts	Cost of Maintenance Material	Total Maintenance Cost per GSF
\$176,458	\$101,929	\$75,501	\$1.66

Staff costs were calculated using current Department of Personnel job classification salary data and estimated benefits costs (salary x 1.36 = total cost). If the college did not have the ability to track or did not provide outside maintenance contract expenses, this cost data may be roughly 10% to 30% below actual total maintenance costs. Staff repair efforts related to capital projects (likely funded by Capital Budget bill appropriations) is included in this calculation and varies by college, but this data was difficult to isolate at the time of this survey.

OVERALL MAINTENANCE COMPARISON

The following table compares the college maintenance staff FTEs and area per FTE (GSF/FTE) to other colleges and to the IFMA and ASU averages. Since some colleges spent maintenance funds on outside contracts to supplement their staff efforts, an estimated contract FTE number was generated based on the average annual total contracted amount. If the college did not have the ability to accurately track or did not provide outside maintenance contract expenses, the “Equivalent Contract FTE” data is inaccurate (zero FTEs). This “Equivalent Contract FTE” calculation assumes that the external contracts were primarily labor only. The “Combined Total FTEs” data attempts to reflect the combined in-house and contracted maintenance effort. This analytical approach allows data comparisons between facilities that complete all work with internal staff to facilities that contract out some of their work.

	No. of College Maintenance FTEs	Est. No. of Equivalent Contract FTEs**	Combined Total FTEs	GSF / Combined Total FTEs	Maintenance Cost / GSF
College (CC)	2.1	1.2	3.3	64,218	\$1.66
Average College (weighted)			10.1	74,279	\$1.48
IFMA			8.7	57,471	
ASU			8.0	79,293	

** Estimated by dividing the average total fiscal year cost of contracted maintenance work by the statewide average cost of college maintenance FTEs

This data will likely include some level of inaccuracy because of inconsistent data recording methods implemented at each college. It is also difficult to compare college data to the IFMA and ASU data because of similar reasons.

The college comparison should become more accurate as the statewide maintenance tracking system is implemented.

Maintenance Philosophy

During the survey process the college maintenance organization was asked to self-rate the level of maintenance at the college based on responses to questions developed by the APPA in the form of a matrix. The APPA matrix identifies five maintenance levels and asks the organization to determine which level applies to his/her institution for each of eleven different measures of maintenance performance, and as a whole. The five maintenance levels are:

- 1) Showpiece Institution;
- 2) Comprehensive Stewardship;
- 3) Managed Care;
- 4) Reactive Management;
- 5) Crisis Response.

It is felt that this rating, which measures a very comprehensive set of maintenance performance indicators, reflects to a great extent the overall maintenance philosophy that exists at each college. This is viewed as a useful metric for comparing maintenance effectiveness among the community and technical colleges.

The Cascadia College maintenance organization has rated the college as a Managed Care institution in response to this query. The elements that define this rating can be viewed on the following page.

MAINTENANCE LEVEL MATRIX (Based on APPA Guidelines)					
Level	1	2	3	4	5
Description	Showpiece Institution	Comp. Stewardship	Managed Care	Reactive Management	Crisis Response
Customer Service/ Response Time	Able to respond to virtually any type of service; immediate response	Average response time for most service needs, including limited non-maintenance activities is one week or less	Services available only by reducing maintenance, with average response times of two weeks or less	Services available only by reducing maintenance, with average response times of one month or less	Service not available unless directed from administration; none provided except for emergencies
Customer Satisfaction	Proud of facilities; high level of trust for the facilities organization	Satisfied with facilities related services; usually complementary of facilities staff	Accustomed to basic level of facilities care. Generally able to perform mission duties but lack pride in physical environment	Generally critical of cost, response and quality of services	Consistent customer ridicule and mistrust of facilities services
Preventive Maintenance Ratio	100% PM	75-100% PM	50-75% PM	25-50% PM	0% PM
Corrective Maintenance Ratio		0-25% Corrective	25-50% Corrective	50-75% Corrective	
Maintenance Mx	All recommended PM scheduled and performed on time. Reactive maintenance minimized to things that are unavoidable or minimal. Emergencies are very infrequent and handled efficiently	Well-developed PM program with most PM done at a frequency only slightly less than defined schedule. Reactive maintenance required only due to premature system wear out. Only occasional emergency work required	Reactive maintenance predominates due to system failing to perform, especially during harsh seasonal peaks. Effort still made to do PM. Priority to schedule as staff and time permit. High number of emergencies is routine.	Worn-out systems require staff be scheduled to react to poorly performing systems. Significant time spent procuring parts and services due to high number of emergencies. PM is done inconsistently and only for simple tasks.	No PM performed due to more pressing problems. Reactive maintenance predominates due to worn out systems that fail frequently. Good emergency response due to extreme frequency of occurrences.
Interior Aesthetics	Like-new finishes	Clean/crisp finishes	Average finishes	Dingy finishes	Neglected finishes
Exterior Aesthetics	Windows, doors, trim and exterior walls are like new	Watertight and clean. Good exterior appearance	Minor leaks and blemishes Average appearance	Somewhat drafty and leaky. Rough looking exterior. Extra painting routinely necessary	Inoperable, leaky windows unpainted surfaces, significant air and water penetration poor overall appearance
Lighting Aesthetics	Bright, clean attractive lighting	Bright, clean attractive lighting	Small percentage of lights are routinely out, but generally well and clean	Numerous lights generally out, some missing diffusers; second areas are dark	dark, lots of shadows, bulbs and diffusers missing, damaged and missing hardware

SURVEY METHODOLOGY

One of the primary objectives of the 2023-2025 facility condition survey is to identify building and site deficiencies. This process includes two primary focus areas. The first focus area is to re-evaluate deficiencies that were identified in the previous survey, but were not included or were only partially funded in the current capital budget. The second focus area is to incorporate emergent deficiencies identified by the college that qualify as capital repair needs into this update. All college deficiencies identified during this survey were prioritized using a scoring algorithm to derive a deficiency score for each deficiency. The resulting prioritized list was used to help determine the minor works preservation portion of the agency's capital budget request.

Survey Process

The facility condition survey itself was conducted as a five-part process. First, a listing of facilities for each campus was obtained in order to verify the currency and accuracy of facility identification numbers and names, including the new assigned State ID numbers and facility GSF.

Second, a proposed field visit schedule was developed and transmitted to the facility maintenance directors at each college. Once any feedback as to schedule suitability was received, the schedule was finalized.

Third, the field visit to each college consisted of an in-brief, an evaluation and validation of the capital repair deficiencies proposed by the college, a building condition rating update, and a debrief. The in-brief consisted of a meeting with college maintenance personnel to review the funded and unfunded 2021-2023 deficiencies, discuss the emergent capital repair deficiency candidates to be validated and evaluated, and arrange for escorts and space access. The survey was conducted by the SBCTC principal architect. During the survey process the principal architect interacted with college maintenance personnel to clarify questions, obtain input as to equipment operating and maintenance histories, and discuss suspected non-observable problems with hidden systems and/or components.

In addition to the condition survey update, a building condition rating update was also conducted. The objective of this update is to provide an overall comparative assessment of each building at a college, as well as a comparison of facility condition among colleges. Each facility is rated on the overall condition of 20 separate building system and technical characteristics. A total rating score is generated for each facility to serve as a baseline of overall condition that is used to measure improvements as well as deterioration in facility condition over time.

A site condition analysis was also conducted of each separate site at a college. The site analysis rates eight separate site characteristics to provide an overall adequacy and needs evaluation of each college site. **The rating and scoring processes for both analyses are discussed in *Appendix B*.**

Upon conclusion of the field evaluations, an informal exit debriefing was held with college maintenance personnel to discuss the deficiencies that would be included in the condition survey update by the principal architect and to answer any final questions. In addition, an exit summary report and data update was provided to both the facility director and the primary business officer to encourage further dialog and promote clarification.

The fourth part of the process consisted of developing or updating MACC costs for each deficiency and preparing the deficiency data for entry into the database management system. Colleges were also given the opportunity to clarify or provide additional deficiency information during this part of the process.

The last step in the process involved the preparation of the final deficiency reports represented by this document.

The condition survey methodology used is comprised of four basic elements:

- 1) A set of repair and maintenance standards intended to provide a baseline against which to conduct the condition assessment process;
- 2) A deficiency scoring methodology designed to allow consistent scoring of capital repair deficiencies for prioritization decisions for funding allocation;
- 3) A “conservative” cost estimating process;
- 4) A database management system designed to generate a set of standardized detail and summary reports from the deficiency data.

Repair/Maintenance Standards

Repair and maintenance standards originally developed for the 1995 baseline survey continue to be used by the survey teams as a reference baseline for conducting the condition survey. The standards were designed as a tool

to assist facility condition assessment personnel by identifying minimum acceptable standards for building system condition. The standards provide a series of benchmarks that focus on:

- Maintaining a facility in a weather tight condition;
- Providing an adequate level of health and safety for occupants;
- Safeguarding capital investment in facilities;
- Helping meet or exceed the projected design life of key facility systems;
- Providing a baseline for maintenance planning.

Deficiency Documentation

Documentation of emerging capital repair deficiencies was accomplished using a field data collection protocol. The deficiency data collection protocol includes five elements:

- 1) Campus/building identification information and deficiency designation;
- 2) Capital repair category and component identification;
- 3) Deficiency description, location, and associated quantity information;
- 4) Deficiency prioritization scoring choices;
- 5) Alternative repair information, if applicable, and a MACC cost estimate.

Deficiency Scoring

To assist in the process of allocating capital repair funding, each deficiency receives a score that reflects its relative severity or priority compared to other deficiencies. The scoring system is designed to maximize the objectivity of the surveyor.

A two-step scoring process has been developed for this purpose. First, a deficiency is designated as immediate, deferrable or future, based on the following definitions:

Immediate - A deficiency that immediately impacts facility systems or programs and should be corrected as soon as possible. This type of deficiency is recommended to be included in the 2025-2027 proposed capital budget.

Deferrable - A deficiency that does not immediately impact facility systems or programs where repairs or replacement can be deferred. This type of deficiency is recommended to be included in the capital budget immediately following the 2025-2027 biennium.

Future - A deficiency that does not immediately impact facility systems or programs where repairs or replacement can be deferred beyond the next two biennia.

Second, a priority is assigned to the deficiency by selecting either one or two potential levels of impact in descending order of relative importance:

- Health/Safety
- Building Function Use
- System Use
- Increased Repair/Replacement Cost
- Increased Operating Cost
- Quality of Use

Each impact choice is relatively less important than the one preceding it, and is assigned a percentage. If two priorities are chosen, they must total 100%.

A score is calculated for each deficiency by multiplying the deficiency category score by the priority score.

A detailed discussion of the deficiency severity scoring methodology is provided in *Appendix A*.

Cost Estimates

The Maximum Allowable Construction Cost (MACC) cost estimates that have been provided for each deficiency represent the total labor and material cost for correcting the deficiency, including sub-contractor overhead and profit. The estimates are based either on the R.S. Means series of construction and repair and remodeling cost guides, data from campus consultants provided to the SBCTC by the college, or from the facility maintenance staff. In some cases cost estimates were obtained directly from vendors or construction specialists.

The cost estimates provided have been developed to be “conservative” in terms of total cost. However, since the condition survey is based on a visual assessment, there are often aspects of a deficiency that cannot be ascertained as they are hidden from view and a clear picture of the extent of deterioration cannot be determined until such time as a repair is actually undertaken.

In some cases, if it is strongly suspected or evident that an unobservable condition exists, the cost estimate is increased to include this contingency. However, assumptions about underlying conditions are often difficult to make and, unless there is compelling evidence, such as a detailed engineering or architectural assessment, the estimate will not reflect non-observable or non-ascertainable conditions. Similarly, the extent of many structural deficiencies that may be behind walls, above ceilings, or below floors is not visible and there are often no apparent signs of additional damage beyond what is apparent on the surface. In such situations the cost estimate only includes the observable deficiency unless documentation to the contrary is provided. This can, and has in many instances, resulted in what may be termed “latent conditions,” where the actual repair cost once work is undertaken is higher than the original MACC estimate. Typically a contingency amount is added into the MACC estimate. However, even this may not be enough in some cases to cover some unforeseen costs.

Alternatively, “scope creep” sometimes occurs due to college decisions to change the scope of the repair after funding is received compared to what the deficiency write-up envisioned. Such modifications may occur for a variety of reasons. However, since the survey consultant is not performing a design when developing the deficiency write-up, changes in scope once a deficiency is finalized may result in inadequate funding for that repair.

In some cases the SBCTC may also request that the college retain an architectural or engineering consultant to conduct a more detailed analysis of the problem and develop an appropriate corrective recommendation and associated cost estimate for submittal to the SBCTC. This may be appropriate for more complex projects involving multiple trades.

Survey Data Management and Reporting

The deficiency data identified and documented during the survey process was entered into a computerized database management system. The DBMS is currently built with Microsoft's Excel software. This data resource is used to identify capital repair needs as well as maintenance planning and programming.

IN THIS SECTION:

- Facility Deficiency Summary
- Facility Deficiency Details
- Site / Building Condition
 - Facility Condition Overview

FACILITY DEFICIENCY SUMMARY

The individual deficiency pages presented in this subsection of the report are divided into two parts.

- The first part includes a summary report showing the facility deficiencies grouped by location.
- The second part includes a summary level list of all facility deficiencies, sorted by severity score (highest to lowest).

Campus & Location	Funding Need			Total
	Immediate	Deferrable	Future	
Cascadia Community College (300A)				
Bothell Library 2 (300-4054)		\$114,000		\$114,000
Bothell Phys Plant (300-4016)	\$698,000			\$698,000
Multiple (300A)	\$166,000			\$166,000
College Total	\$864,000	\$114,000		\$978,000

FACILITY DEFICIENCY DETAIL

The individual deficiency pages presented in this subsection of the report are divided into five parts.

- The first part identifies the college and campus; facility number and name; primary building use; and provides the date of the field survey.
- The second part identifies the assigned deficiency number; the applicable capital repair funding category; the deferability recommendation; the affected component; and the affected building system.
- The third part provides a description of the deficiency and recommended corrective action, and any applicable sizing data.
- The fourth part identifies the deficiency location; the probable cause of the deficiency; estimated remaining life and life expectancy when repaired or replaced; the quantity involved; and estimated replacement dates over a 50 year life cycle if a replacement rather than a repair is recommended.
- The fifth part provides the MACC cost estimate and the deficiency score for that deficiency based on the priority assignment and percentage allocation for the assigned priorities.

Deficiency F01

Carryover from prior survey (not yet funded) : Yes
Location : Cascadia Community College (300A)
Building name : Bothell Library 2 (300-4054)
Unique Facility Identifier (UFI) : A06977
Funding category in capital budget : Minor Works Facility appropriation
Uniformat category : D10-Conveying
Assessment : Asset should be repaired to extend its useful life
Quantity : 1
Unit of measurement : EA
Component : Elevator equipment
Location within building or site : Multiple
Issue clarity : Adequate information was provided to assess deficiency
Main cause of asset degradation or failure : Age/Wear
Detailed description : The college is concerned about the age and reliability of the elevator controls. Typically, elevators can be maintained and remain in service for up to 45 years, however, the college indicated that the elevator has frequent repair needs. The college believes that the vendor is no longer able to repair the controls. This elevator is a critical component of the accessible path to several campus buildings and should continue to be monitored and maintained to ensure reliability. The elevator vendor provided a memo that described obsolete parts, but did not state that the controls were no longer maintainable. The elevator control should be replaced within the next few years to ensure reliability. The cost should be shared 50/50 with UW.
Recommended funding schedule : Fund in Next Biennium (score = 2.5)
Estimated remaining life (years) : 5
Estimated average life expectancy (years) : 40
Scoring priority category 1 : System Use (score = 15)
Category 1 percentage : 80 %
Scoring priority category 2 : Facility Use/ Civil Rights Violation (score = 20)
Category 2 percentage : 20 %
Project construction estimate (MACC): \$80,000
Total project estimate (including soft costs): \$113,000
Additional points based on building condition: 1
Deficiency score : $2.5 \times ((15 \times 80\%) + (20 \times 20\%)) + 1 = 41$



Deficiency F02

Carryover from prior survey : No
Location : Cascadia Community College (300A)
Building name : Bothell Phys Plant (300-4016)
Unique Facility Identifier (UFI) : A01138
Funding category in capital budget : Minor Works Facility appropriation
Unifomat category : E10-Equipment
Assessment : Asset is near or at the end of its useful life and should be replaced
Quantity : 1
Unit of measurement : EA
Component : Chiller
Location within building or site : Basement
Issue clarity : Additional information is required to assess deficiency
Main cause of asset degradation or failure : Age/Wear
Detailed description : The college is concerned about the reliability of the 1,000 ton chiller. This is the biggest of three chillers that serve all buildings on campus. The automatic start function is no longer reliable due to the age and demand of the chiller. The chiller is now manually started, when required. The transformer that solely serves the chiller has recently been replaced. All of the equipment is original. The chiller currently is only used with high demand during summer months, but will be required to support two new buildings that will come online in the next few years. The chiller still functions as designed. Reconditioning the chill would likely cost more than half of the cost of a new chiller, so the chiller should be replaced rather than be reconditioned. Additional information from the equipment vendor is required to properly evaluate the remaining expected life of the chiller. The cost of the chiller should be split 50/50 with UW.
Recommended funding schedule : Fund in Next Biennium (scoring weight=2.5)
Estimated remaining life (years) : 5
Estimated average life expectancy (years) : 25
Scoring priority category 1 : System Use (scoring weight=15)
Category 1 percentage : 80 %
Scoring priority category 2 : Facility Use/ Civil Rights Violation (scoring weight=20)
Category 2 percentage : 20 %
Project construction estimate (MACC): \$479,000
Total project estimate (including soft costs): \$679,000
Additional points based on building condition: 1
Deficiency score : Needs study



Deficiency F03

Carryover from prior survey : No
Location : Cascadia Community College (300A)
Building name : Bothell Phys Plant (300-4016)
Unique Facility Identifier (UFI) : A01138
Funding category in capital budget : Minor Works Facility appropriation
Unifomat category : D30-HVAC
Assessment : Asset is near or at the end of its useful life and should be replaced
Quantity : 3
Unit of measurement : EA
Component : Cooling towers
Location within building or site : Multiple
Issue clarity : Adequate information was provided to assess deficiency
Main cause of asset degradation or failure : Age/Wear
Detailed description : The three in-line cooling towers have degraded. The grills and pans have corroded. The cooling towers should be reconditioned to extend their useful life. The cost of the towers should be split 50/50 with the UW.
Recommended funding schedule : Immediate (scoring weight=4)
Estimated remaining life (years) : 3
Estimated average life expectancy (years) : 30
Scoring priority category 1 : High Repair/Repl. Cost (scoring weight=12)
Category 1 percentage : 100 %
Scoring priority category 2 : None
Category 2 percentage : 0 %
Project construction estimate (MACC): \$492,000
Total project estimate (including soft costs): \$697,000
Additional points based on building condition: 1
Deficiency score : $4 \times (12 \times 100\%) + 1 = 49$



Deficiency F04

Carryover from prior survey : No
Location : Cascadia Community College (300A)
Building name : Multiple (300A)
Unique Facility Identifier (UFI) : 300A
Funding category in capital budget : Minor Works Facility appropriation
Uniformat category : D40-Fire Protection
Assessment : Asset is near or at the end of its useful life and should be replaced
Quantity : 7
Unit of measurement : EA
Component : fire panel
Location within building or site : Multiple
Issue clarity : Additional information is required to assess deficiency
Main cause of asset degradation or failure : Age/Wear
Detailed description : The college is concerned about the reliability of the fire alarm panels in CC1, CC2, CC3, Library, Library annex and the Physical plant. The college believes that the panels are no longer supported by the vendor and are no longer repairable. If that is true, then the panels should be replaced. A memo was provided from the vendor regarding panel upgrades, but did not address the question of maintaining the current panels. Additional information from the vendor is required to justify replacing the panels.
Recommended funding schedule : Immediate (scoring weight=4)
Estimated remaining life (years) : 3
Estimated average life expectancy (years) : 20
Scoring priority category 1 : System Use (scoring weight=15)
Category 1 percentage : 60 %
Scoring priority category 2 : Health/Safety (scoring weight=25)
Category 2 percentage : 40 %
Project construction estimate (MACC): \$60,000
Total project estimate (including soft costs): \$85,000
Additional points based on building condition: 0
Deficiency score : Needs study



Deficiency F05

Carryover from prior survey : No
Location : Cascadia Community College (300A)
Building name : Multiple (300A)
Unique Facility Identifier (UFI) : 300A
Funding category in capital budget : Minor Works Facility appropriation
Unifomat category : B20-Exterior Enclosure
Assessment : Asset is near or at the end of its useful life and should be replaced
Quantity : 50
Unit of measurement : EA
Component : windows
Location within building or site : Multiple
Issue clarity : Adequate information was provided to assess deficiency
Main cause of asset degradation or failure : Age/Wear
Detailed description : There are several windows in CC1, LB1, LB2 and the Physical plant that have failed. These failed windows should be replaced. The cost for windows in shared buildings should be split 50/50 with UW.
Recommended funding schedule : Immediate (scoring weight=4)
Estimated remaining life (years) : 3
Estimated average life expectancy (years) : 30
Scoring priority category 1 : System Use (scoring weight=15)
Category 1 percentage : 100 %
Scoring priority category 2 : None
Category 2 percentage : 0 %
Project construction estimate (MACC): \$20,000
Total project estimate (including soft costs): \$28,000
Additional points based on building condition: 0
Deficiency score : $4 \times (15 \times 100\%) + 0 = 60$



Deficiency F06

Carryover from prior survey : No
Location : Cascadia Community College (300A)
Building name : Multiple (300A)
Unique Facility Identifier (UFI) : 300A
Funding category in capital budget : Minor Works Facility appropriation
Unifomat category : D50-Electrical
Assessment : Asset is near or at the end of its useful life and should be replaced
Quantity : 1
Unit of measurement : EA
Component : Lighting controls
Location within building or site : Multiple
Issue clarity : Adequate information was provided to assess deficiency
Main cause of asset degradation or failure : Age/Wear
Detailed description : The college indicated that the Lutron lighting controls found in LB1 and LB2 have degraded and become unreliable. The panel components are no longer available and the vendor is no longer able to replace broken panel components. Portions of one of the panels did not function at the time of the survey. The failing lightning control panels should be replaced.
Recommended funding schedule : Immediate (scoring weight=4)
Estimated remaining life (years) : 3
Estimated average life expectancy (years) : 30
Scoring priority category 1 : System Use (scoring weight=15)
Category 1 percentage : 100 %
Scoring priority category 2 : None
Category 2 percentage : 0 %
Project construction estimate (MACC): \$97,000
Total project estimate (including soft costs): \$137,000
Additional points based on building condition: 0
Deficiency score : $4 \times (15 \times 100\%) + 0 = 60$



SITE/BUILDING CONDITION

As part of the condition survey update, the building condition scores for college facilities are updated. This condition score is derived from an evaluation of 17 building system adequacy components, one maintenance condition rating component, one estimate of remaining life, and an appearance rating, with a numerical rating assigned to each component. Each individual component rating is adjusted by a multiplier to produce a score for that component. The scores of all components are totaled to provide an overall condition score for each facility, which can range between 146 points and 730 points. The higher the score received by a facility the poorer its overall condition. The entire score range is divided into five sub-sets of score ranges, and a condition rating designation is assigned to each range. The ranges and associated condition ratings are as follows:

- 146 – 175 = Superior;
- 176 - 275 = Adequate;
- 276 – 350 = Needs Improvement/Additional Maintenance;
- 351 – 475 = Needs Improvement/Renovation (If facility merits keeping);
- 476 – 730 = Replace or Renovate.

Originally the condition ratings were developed to provide an overall picture of the physical condition of a facility and allow a comparison among colleges of overall condition. However, over time the rating scores were viewed more and more by both the SBCTC and the colleges as a key element in determining funding for facility replacement or renovation. The original intent of a simple comparative process became subject to pressure to score facilities low (high score) to support college plans for replacement and/or renovation. This pressure made it increasingly difficult for the consultant to remain objective. The buildings currently being targeted by colleges for replacement or renovation may deserve replacement or renovation consideration from a functional, program adequacy, design, or simply age point of view. However they may also be in reasonably good physical condition, largely because most colleges have continued to replace/update building systems and perform on-going repairs or replacement of system components out of necessity.

In 2011, three rating elements of the 23 original rating elements were removed. Two, named “Adaptability” and “Adequacy for Education” evaluated the functional adequacy of a building for educational use. The third, named “ADA”, evaluated the overall ADA compliance of a college. Buildings are now being rated only on their comparative objective physical condition. If a building that is a high priority for replacement or renovation has newer or adequate building system components, the score for the affected rating elements and for the building will reflect that fact.

Functional adequacy, program adequacy, age, design, classroom size, office size, building size, ADA considerations and grandfathered code considerations will be considered separately from the building condition ratings. This should once again allow greater objectivity in the condition rating process.

One result of this modification is a slight change in total score from the previous biennium for some buildings. This is because the intent was to keep the scoring range the same-146 to 730. However, the elimination of three rating items required a redistribution of the scoring range among fewer items, which necessitated revising several of the weightings associated with several rating elements. For example, where a score of 1 may have had a weighting of 6, it became a 7. Overall, however, the changes should not impact the various scoring ranges unless the previous score was right on the boundary between ranges.

In addition to comments for a rating element, which was all that was printed on the reports in the past, the rating description associated with a 1 through 5 score for each rating element is now also included. Any comments are now in italics below this description

To more accurately assess the condition scores for buildings with missing components (such as elevators that do not exist in a one story building), the scoring method was modified for the 2015 survey. Within this new method, the potential points associated with missing building components were proportionately distributed to the other building components by increasing the category weights. For example, the structural component scoring weight for a building with no elevator could increase from the base weight of 8 to a modified weight of 8.3 because it inherited a part of the weight for the missing elevator. This redistribution of building condition points better reflects the existing conditions and helps to eliminate the previously skewed scores of buildings with missing components. Prior to the 2015 survey these missing components were given a superior condition rating. This past practice did not affect the accuracy of the condition score for buildings that were in superior condition (where most or all components were in excellent condition). However, this less accurate scoring method artificially improved the assessed condition (lower condition score) of buildings that were in poor condition and had missing components.

An average building condition score is also calculated for a college as a whole. This score is a weighted average rather than an arithmetic average. It was decided to use a weighted average because, in many instances, the arithmetic average was not truly reflective of the “average” condition of a college. Smaller buildings, such as portables that were in poor condition, could increase (worsen) the average score for a college, even if most other larger facilities were in good condition. The weighted average score is calculated by summing the GSF of all buildings rated and dividing that total by the total of all individual building scores.

Facility Condition Overview

Building conditions

Individual facility scores for the permanent facilities ranged from a low of 152.302158273381 to a high of 222 for owned campus buildings. Building scores are derived from the summation of 20 building component scores.

Building component scores change from previous scores for various reasons. Scores tend to increase as buildings age and deteriorate. Scores may increase because of recent renovations. Scores may also vary slightly based on the interpreted conditions, which may be affected by the level of maintenance.

The condition rating reports for each individual facility are provided on the following pages. Photos of each building rated are provided at the end of this section.

BUILDING CONDITION RATING

Cascadia I (300-CC1/CC2) STATE UFI: A03343 Cascadia Community College (300A)
AREA: 111,500 SF BUILT: 2000 REMODELED: No PREDOMINANT USE: Multi-Purpose
CONSTRUCTION TYPE: Heavy CRV/SF: \$461 REPLACEMENT VALUE: \$51,401,500



Primary Systems			
COMPONENT:	Structure	RATING: 1 x WEIGHT: 8 =	SCORE: 8
No signs of settlement or cracking, no abrupt vertical changes Columns, bearing walls and roof structure appears sound/free of defects			
COMMENTS:	Steel framing; concrete post and beam		
COMPONENT:	Exterior Closure	RATING: 1 x WEIGHT: 8 =	SCORE: 8
Weatherproof, tight, well-maintained exterior walls, doors, windows/finishes			
COMMENTS:	Brick; metal wall panels; aluminum window walls		
COMPONENT:	Roofing	RATING: 2 x WEIGHT: 10 =	SCORE: 20
Majority of roofing and flashing appear sound, but a small portion of roofing shows deterioration where maintenance or minor repair needed			
COMMENTS:	Standing seam metal; rock-ballasted EPDM membrane; single ply TPO		

Secondary Systems			
COMPONENT:	Floor Finishes	RATING: 2 x WEIGHT: 6 = SCORE: 12	
	Some wear is evident on finish; maintenance needed		
COMMENTS:	Sealed concrete; quarry tile; carpet-surface wear		
COMPONENT:	Wall Finishes	RATING: 2 x WEIGHT: 6 = SCORE: 12	
	Maintainable surfaces, minor maintenance is required in some areas		
COMMENTS:	Gypsum board-marred and dinged		
COMPONENT:	Ceiling Finishes	RATING: 1 x WEIGHT: 6 = SCORE: 6	
	Maintainable surfaces in good condition; good alignment and appearance		
COMMENTS:	Lay-in tile; concrete; direct adhered tile; open wood strip		
COMPONENT:	Doors & Hardware	RATING: 2 x WEIGHT: 6 = SCORE: 12	
	Fairly modern door surfaces and hardware with minor deterioration; good working order		
COMMENTS:	Interior wood/HM doors w HM frames-surface wear; sidelites; exterior wood/aluminum glazed doors/frames		

Service Systems			
COMPONENT:	Elevators	RATING: 1 x WEIGHT: 6 = SCORE: 6	
	Appropriate and functional for occupancy and use		
COMMENTS:	5 stop		
COMPONENT:	Plumbing	RATING: 1 x WEIGHT: 8 = SCORE: 8	
	Fixtures and piping appear to be in good condition; no evidence of leaks		
COMMENTS:	Copper, cast iron, PVC and steel piping; porcelain fixtures		
COMPONENT:	HVAC	RATING: 2 x WEIGHT: 8 = SCORE: 16	
	Equipment in fair condition; minor deterioration; controls require troubleshooting; most areas have A/C; hazardous areas are ventilated		
COMMENTS:	4 HW boilers (2-1999, 2-2015); chilled water from central plant; AHUs w terminal units; boiler exhaust corrosion problems		
COMPONENT:	Electrical	RATING: 1 x WEIGHT: 8 = SCORE: 8	
	Adequate service and distribution capacity for current/future needs		
COMMENTS:	1600amp 480/277v; 1200amp 480/277v		
COMPONENT:	Lights/Power	RATING: 1 x WEIGHT: 8 = SCORE: 8	
	Contemporary lighting with good work area illumination; ample outlets		
COMMENTS:	Recessed can, lay-in, hanging strip and ceiling-mount fluorescent lighting		

Safety Systems			
COMPONENT:	Life/Safety	RATING: 1 x WEIGHT: 10 = SCORE: 10	
	Appears to meet current codes		
COMMENTS:			
COMPONENT:	Fire Safety	RATING: 1 x WEIGHT: 10 = SCORE: 10	
	Locally monitored detection; alarm and strobes present; sprinklers in high hazard areas		
COMMENTS:			
COMPONENT:	Modifications	RATING: 1 x WEIGHT: 7 = SCORE: 7	
	Modifications appear to be in compliance with codes and sound construction practices; HVAC/electrical service properly provided		
COMMENTS:	First floor remodel on south end in 2008; appears well constructed		

Quality Standards			
COMPONENT:	Maintenance	RATING: 1 x WEIGHT: 7 = SCORE: 7	
	Facility appears well maintained		
COMMENTS:			
COMPONENT:	Remaining Life	RATING: 1 x WEIGHT: 6 = SCORE: 6	
	Life expectancy is >20 years; minor system deterioration		
COMMENTS:	Facility has some construction/material defects, but core of building is solid		
COMPONENT:	Appearance	RATING: 1 x WEIGHT: 6 = SCORE: 6	
	Well-constructed building; generally attractive interior and exterior		
COMMENTS:			

Heat Loss			
COMPONENT:	Insulation	RATING: 2 x WEIGHT: 6 = SCORE: 12	
	Some insulation meets current standards (2010 or newer), but other insulated areas or systems do not		
COMMENTS:			
COMPONENT:	Glazing	RATING: 3 x WEIGHT: 6 = SCORE: 18	
	Double glazing with aluminum/metal window frames that conduct heat		
COMMENTS:	Operable awning units		

TOTAL SCORE = 200 PREVIOUS BIENNIUM SCORE = 200

CONDITION: Adequate

BUILDING CONDITION RATING

Global Learning And The Arts (300-CC3) STATE UFI: A07969 Cascadia Community College (300A)
 AREA: 54,006 SF BUILT: 2009 REMODELED: No PREDOMINANT USE: Multi-Use
 CONSTRUCTION TYPE: Heavy CRV/SF: \$508 REPLACEMENT VALUE: \$27,435,048



Primary Systems			
COMPONENT:	Structure	RATING: 1 x WEIGHT: 8.4 = SCORE: 8.4	
No signs of settlement or cracking, no abrupt vertical changes Columns, bearing walls and roof structure appears sound/free of defects			
COMMENTS:	Steel framing; concrete		
COMPONENT:	Exterior Closure	RATING: 1 x WEIGHT: 8.4 = SCORE: 8.4	
Weatherproof, tight, well-maintained exterior walls, doors, windows/finishes			
COMMENTS:	Brick; metal panels; aluminum window walls; concrete		
COMPONENT:	Roofing	RATING: 1 x WEIGHT: 10.5 = SCORE: 10.5	
Flashing and penetrations appear sound and membrane appears water- tight; drainage is positive and there are overflow scuppers			
COMMENTS:	TPO single-ply; 2 small green roofs		

Secondary Systems			
COMPONENT:	Floor Finishes	RATING: 2 x WEIGHT: 6.3 = SCORE: 12.6	
	Some wear is evident on finish; maintenance needed		
COMMENTS:	Concrete; carpet; vinyl tile; wood strip		
COMPONENT:	Wall Finishes	RATING: 1 x WEIGHT: 6.3 = SCORE: 6.3	
	Maintainable surfaces in good condition		
COMMENTS:	Gypsum board; concrete; ceramic tile; wood panels; Masonite panels; wood strips; wood framed interior glass walls		
COMPONENT:	Ceiling Finishes	RATING: 1 x WEIGHT: 6.3 = SCORE: 6.3	
	Maintainable surfaces in good condition; good alignment and appearance		
COMMENTS:	Lay-in tile; wood strip; metal deck pan; tectum panels; gypsum board		
COMPONENT:	Doors & Hardware	RATING: 1 x WEIGHT: 6.3 = SCORE: 6.3	
	Appropriate hardware, closers, panic devices; in good working order		
COMMENTS:	Interior wood/HM doors/frames; exterior aluminum/HM doors/frames; metal coiling doors; aluminum glazed OH doors		

Service Systems			
COMPONENT:	Elevators	RATING: 1 x WEIGHT: 6.3 = SCORE: 6.3	
	Appropriate and functional for occupancy and use		
COMMENTS:	3 stop		
COMPONENT:	Plumbing	RATING: 1 x WEIGHT: 8.4 = SCORE: 8.4	
	Fixtures and piping appear to be in good condition; no evidence of leaks		
COMMENTS:	Copper, cast iron, PVC and steel piping; porcelain fixtures		
COMPONENT:	HVAC	RATING: 1 x WEIGHT: 8.4 = SCORE: 8.4	
	Equipment in good condition; easily controlled; serves all required spaces; All necessary spaces are adequately ventilated; A/C provided throughout		
COMMENTS:	4 HW boilers; chilled water from central plant; AHUs w terminal units		
COMPONENT:	Electrical	RATING: 1 x WEIGHT: 8.4 = SCORE: 8.4	
	Adequate service and distribution capacity for current/future needs		
COMMENTS:	1200amp 480/277v		
COMPONENT:	Lights/Power	RATING: 1 x WEIGHT: 8.4 = SCORE: 8.4	
	Contemporary lighting with good work area illumination; ample outlets		
COMMENTS:	Recessed can, hanging strip, hanging pendant, lay-in and wall-mount fluorescent fixtures		

Safety Systems			
COMPONENT:	Life/Safety	RATING: 1 x WEIGHT: 10.5 =	SCORE: 10.5
Appears to meet current codes			
COMMENTS:			
COMPONENT:	Fire Safety	RATING: 1 x WEIGHT: 10.5 =	SCORE: 10.5
Locally monitored detection; alarm and strobes present; sprinklers in high hazard areas			
COMMENTS:			
COMPONENT:	Modifications	RATING: 0 x WEIGHT: 0 =	SCORE: 0
No data			
COMMENTS: None			

Quality Standards			
COMPONENT:	Maintenance	RATING: 1 x WEIGHT: 7.4 =	SCORE: 7.4
Facility appears well maintained			
COMMENTS:			
COMPONENT:	Remaining Life	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
Life expectancy is >20 years; minor system deterioration			
COMMENTS:			
COMPONENT:	Appearance	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
Well-constructed building; generally attractive interior and exterior			
COMMENTS: Well-designed multi-use meeting hall with good space use flexibility			

Heat Loss			
COMPONENT:	Insulation	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
Insulation is up to current standards (2010 or newer)			
COMMENTS:			
COMPONENT:	Glazing	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
Double glazing with window frames that minimize conductivity			
COMMENTS: Operable awning units			

TOTAL SCORE = 152 PREVIOUS BIENNIUM SCORE = 152

CONDITION: Superior

BUILDING CONDITION RATING

Bothell Phys Plant (300-4016) STATE UFI: A01138 Cascadia Community College (300A)
 AREA: 3,850 SF BUILT: No data REMODELED: No PREDOMINANT USE: Boiler/Chiller Plant
 CONSTRUCTION TYPE: No data CRV/SF: \$219 REPLACEMENT VALUE: \$843,150



Primary Systems			
COMPONENT:	Structure	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
No signs of settlement or cracking, no abrupt vertical changes Columns, bearing walls and roof structure appears sound/free of defects			
COMMENTS:	No data		
COMPONENT:	Exterior Closure	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
Weatherproof, tight, well-maintained exterior walls, doors, windows/finishes			
COMMENTS:	No data		
COMPONENT:	Roofing	RATING: 3 x WEIGHT: 10.5 =	SCORE: 31.5
Some deterioration is evident in membrane and flashings; maintenance or minor repair is needed			
COMMENTS:	Repairs funded 2021		

Secondary Systems			
COMPONENT:	Floor Finishes	RATING: 3 x WEIGHT: 6.3 =	SCORE: 18.9
Some physical wear and minor imperfections are evident; beginning deterioration			
COMMENTS:	No data		
COMPONENT:	Wall Finishes	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
Maintainable surfaces in good condition			
COMMENTS:	No data		
COMPONENT:	Ceiling Finishes	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
Maintainable surfaces in good condition; good alignment and appearance			
COMMENTS:	No data		
COMPONENT:	Doors & Hardware	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
Appropriate hardware, closers, panic devices; in good working order			
COMMENTS:	No data		

Service Systems			
COMPONENT:	Elevators	RATING: No data	
No data			
COMMENTS:	No data		
COMPONENT:	Plumbing	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
Fixtures and piping appear to be in good condition; no evidence of leaks			
COMMENTS:	No data		
COMPONENT:	HVAC	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
Equipment in good condition; easily controlled; serves all required spaces; All necessary spaces are adequately ventilated; A/C provided throughout			
COMMENTS:	No data		
COMPONENT:	Electrical	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
Adequate service and distribution capacity for current/future needs			
COMMENTS:	No data		
COMPONENT:	Lights/Power	RATING: 3 x WEIGHT: 8.4 =	SCORE: 25.2
Adequate work area illumination; adequate outlets for current use; maintenance required			
COMMENTS:	No data		

Safety Systems			
COMPONENT:	Life/Safety	RATING: 1 x WEIGHT: 10.5 =	SCORE: 10.5
	Appears to meet current codes		
COMMENTS:	No data		
COMPONENT:	Fire Safety	RATING: 1 x WEIGHT: 10.5 =	SCORE: 10.5
	Locally monitored detection; alarm and strobes present; sprinklers in high hazard areas		
COMMENTS:	No data		
COMPONENT:	Modifications	RATING: 0 x WEIGHT: 0 =	SCORE: 0
	No data		
COMMENTS:	No data		

Quality Standards			
COMPONENT:	Maintenance	RATING: 1 x WEIGHT: 7.4 =	SCORE: 7.4
	Facility appears well maintained		
COMMENTS:	No data		
COMPONENT:	Remaining Life	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
	Life expectancy is >20 years; minor system deterioration		
COMMENTS:	No data		
COMPONENT:	Appearance	RATING: 3 x WEIGHT: 6.3 =	SCORE: 18.9
	Average construction; average interior and exterior appearance		
COMMENTS:	No data		

Heat Loss			
COMPONENT:	Insulation	RATING: 2 x WEIGHT: 6.3 =	SCORE: 12.6
	Some insulation meets current standards (2010 or newer), but other insulated areas or systems do not		
COMMENTS:	No data		
COMPONENT:	Glazing	RATING: 3 x WEIGHT: 6.3 =	SCORE: 18.9
	Double glazing with aluminum/metal window frames that conduct heat		
COMMENTS:	No data		

TOTAL SCORE = 222 PREVIOUS BIENNIUM SCORE = 222

CONDITION: Adequate

BUILDING CONDITION RATING

Bothell Library (300-3998) STATE UFI: A05564 Cascadia Community College (300A)
AREA: 22,434 SF BUILT: No data REMODELED: No PREDOMINANT USE: Library
CONSTRUCTION TYPE: Heavy CRV/SF: \$376 REPLACEMENT VALUE: \$8,435,296



Primary Systems			
COMPONENT:	Structure	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
No signs of settlement or cracking, no abrupt vertical changes Columns, bearing walls and roof structure appears sound/free of defects			
COMMENTS:	No data		
COMPONENT:	Exterior Closure	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
Weatherproof, tight, well-maintained exterior walls, doors, windows/finishes			
COMMENTS:	No data		
COMPONENT:	Roofing	RATING: 3 x WEIGHT: 10.5 =	SCORE: 31.5
Some deterioration is evident in membrane and flashings; maintenance or minor repair is needed			
COMMENTS:	Ballasted roofs leaking		

Secondary Systems			
COMPONENT:	Floor Finishes	RATING: 2 x WEIGHT: 6.3 =	SCORE: 12.6
Some wear is evident on finish; maintenance needed			
COMMENTS:	No data		
COMPONENT:	Wall Finishes	RATING: 2 x WEIGHT: 6.3 =	SCORE: 12.6
Maintainable surfaces, minor maintenance is required in some areas			
COMMENTS:	No data		
COMPONENT:	Ceiling Finishes	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
Maintainable surfaces in good condition; good alignment and appearance			
COMMENTS:	No data		
COMPONENT:	Doors & Hardware	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
Appropriate hardware, closers, panic devices; in good working order			
COMMENTS:	No data		

Service Systems			
COMPONENT:	Elevators	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
Appropriate and functional for occupancy and use			
COMMENTS:	No data		
COMPONENT:	Plumbing	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
Fixtures and piping appear to be in good condition; no evidence of leaks			
COMMENTS:	No data		
COMPONENT:	HVAC	RATING: 2 x WEIGHT: 8.4 =	SCORE: 16.8
Equipment in fair condition; minor deterioration; controls require troubleshooting; most areas have A/C; hazardous areas are ventilated			
COMMENTS:	Boiler replaced 21-25; 2nd boiler funded for replacement 23-25		
COMPONENT:	Electrical	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
Adequate service and distribution capacity for current/future needs			
COMMENTS:	No data		
COMPONENT:	Lights/Power	RATING: 2 x WEIGHT: 8.4 =	SCORE: 16.8
Contemporary lighting with good work area illumination; adequate number of outlets; some finishes appear aged			
COMMENTS:	No data		

Safety Systems			
COMPONENT:	Life/Safety	RATING: 1 x WEIGHT: 10.5 =	SCORE: 10.5
	Appears to meet current codes		
COMMENTS:	No data		
COMPONENT:	Fire Safety	RATING: 1 x WEIGHT: 10.5 =	SCORE: 10.5
	Locally monitored detection; alarm and strobes present; sprinklers in high hazard areas		
COMMENTS:	No data		
COMPONENT:	Modifications	RATING: 0 x WEIGHT: 0 =	SCORE: 0
	No data		
COMMENTS:	Only minor updates		

Quality Standards			
COMPONENT:	Maintenance	RATING: 1 x WEIGHT: 7.4 =	SCORE: 7.4
	Facility appears well maintained		
COMMENTS:	No data		
COMPONENT:	Remaining Life	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
	Life expectancy is >20 years; minor system deterioration		
COMMENTS:	No data		
COMPONENT:	Appearance	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
	Well-constructed building; generally attractive interior and exterior		
COMMENTS:	No data		

Heat Loss			
COMPONENT:	Insulation	RATING: 2 x WEIGHT: 6.3 =	SCORE: 12.6
	Some insulation meets current standards (2010 or newer), but other insulated areas or systems do not		
COMMENTS:	No data		
COMPONENT:	Glazing	RATING: 3 x WEIGHT: 6.3 =	SCORE: 18.9
	Double glazing with aluminum/metal window frames that conduct heat		
COMMENTS:	No data		

TOTAL SCORE = 215 PREVIOUS BIENNIUM SCORE = 215

CONDITION: Adequate

BUILDING CONDITION RATING

Bothell Library 2 (300-4054) STATE UFI: A06977 Cascadia Community College (300A)
AREA: 14,989 SF BUILT: No data REMODELED: No PREDOMINANT USE: Library
CONSTRUCTION TYPE: No data CRV/SF: \$356 REPLACEMENT VALUE: \$5,336,244



Primary Systems			
COMPONENT:	Structure	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
No signs of settlement or cracking, no abrupt vertical changes Columns, bearing walls and roof structure appears sound/free of defects			
COMMENTS:	No data		
COMPONENT:	Exterior Closure	RATING: 1 x WEIGHT: 8.4 =	SCORE: 8.4
Weatherproof, tight, well-maintained exterior walls, doors, windows/finishes			
COMMENTS:	No data		
COMPONENT:	Roofing	RATING: 2 x WEIGHT: 10.5 =	SCORE: 21
Majority of roofing and flashing appear sound, but a small portion of roofing shows deterioration where maintenance or minor repair needed			
COMMENTS:	Ballasted roof leaks; replacement funded 23-25		

Secondary Systems			
COMPONENT:	Floor Finishes	RATING: 2 x WEIGHT: 6.3 = SCORE: 12.6	
	Some wear is evident on finish; maintenance needed		
COMMENTS:	No data		
COMPONENT:	Wall Finishes	RATING: 2 x WEIGHT: 6.3 = SCORE: 12.6	
	Maintainable surfaces, minor maintenance is required in some areas		
COMMENTS:	No data		
COMPONENT:	Ceiling Finishes	RATING: 1 x WEIGHT: 6.3 = SCORE: 6.3	
	Maintainable surfaces in good condition; good alignment and appearance		
COMMENTS:	No data		
COMPONENT:	Doors & Hardware	RATING: 1 x WEIGHT: 6.3 = SCORE: 6.3	
	Appropriate hardware, closers, panic devices; in good working order		
COMMENTS:	No data		

Service Systems			
COMPONENT:	Elevators	RATING: 2 x WEIGHT: 6.3 = SCORE: 12.6	
	Aged elevators functional, but deterioration or abuse of finishes is evident		
COMMENTS:	Elevator with exterior access has become less reliable		
COMPONENT:	Plumbing	RATING: 1 x WEIGHT: 8.4 = SCORE: 8.4	
	Fixtures and piping appear to be in good condition; no evidence of leaks		
COMMENTS:	No data		
COMPONENT:	HVAC	RATING: 2 x WEIGHT: 8.4 = SCORE: 16.8	
	Equipment in fair condition; minor deterioration; controls require troubleshooting; most areas have A/C; hazardous areas are ventilated		
COMMENTS:	Boiler replacement funded 23-25		
COMPONENT:	Electrical	RATING: 1 x WEIGHT: 8.4 = SCORE: 8.4	
	Adequate service and distribution capacity for current/future needs		
COMMENTS:	No data		
COMPONENT:	Lights/Power	RATING: 1 x WEIGHT: 8.4 = SCORE: 8.4	
	Contemporary lighting with good work area illumination; ample outlets		
COMMENTS:	No data		

Safety Systems			
COMPONENT:	Life/Safety	RATING: 1 x WEIGHT: 10.5 =	SCORE: 10.5
	Appears to meet current codes		
COMMENTS:	No data		
COMPONENT:	Fire Safety	RATING: 1 x WEIGHT: 10.5 =	SCORE: 10.5
	Locally monitored detection; alarm and strobes present; sprinklers in high hazard areas		
COMMENTS:	No data		
COMPONENT:	Modifications	RATING: 0 x WEIGHT: 0 =	SCORE: 0
	No data		
COMMENTS:	No data		

Quality Standards			
COMPONENT:	Maintenance	RATING: 1 x WEIGHT: 7.4 =	SCORE: 7.4
	Facility appears well maintained		
COMMENTS:	No data		
COMPONENT:	Remaining Life	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
	Life expectancy is >20 years; minor system deterioration		
COMMENTS:	No data		
COMPONENT:	Appearance	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
	Well-constructed building; generally attractive interior and exterior		
COMMENTS:	No data		

Heat Loss			
COMPONENT:	Insulation	RATING: 2 x WEIGHT: 6.3 =	SCORE: 12.6
	Some insulation meets current standards (2010 or newer), but other insulated areas or systems do not		
COMMENTS:	No data		
COMPONENT:	Glazing	RATING: 1 x WEIGHT: 6.3 =	SCORE: 6.3
	Double glazing with window frames that minimize conductivity		
COMMENTS:	No data		

TOTAL SCORE = 190 PREVIOUS BIENNIUM SCORE = 175

CONDITION: Adequate

BUILDING CONDITION RATING

Bothell Lib Annex (300-4017) STATE UFI: A07882 Cascadia Community College (300A)
AREA: 6,232 SF BUILT: No data REMODELED: No PREDOMINANT USE: Library
CONSTRUCTION TYPE: No data CRV/SF: \$356 REPLACEMENT VALUE: \$2,218,876



Primary Systems			
COMPONENT:	Structure	RATING: 1 x WEIGHT: 8 =	SCORE: 8
No signs of settlement or cracking, no abrupt vertical changes Columns, bearing walls and roof structure appears sound/free of defects			
COMMENTS:	No data		
COMPONENT:	Exterior Closure	RATING: 1 x WEIGHT: 8 =	SCORE: 8
Weatherproof, tight, well-maintained exterior walls, doors, windows/finishes			
COMMENTS:	No data		
COMPONENT:	Roofing	RATING: 1 x WEIGHT: 10 =	SCORE: 10
Flashing and penetrations appear sound and membrane appears water- tight; drainage is positive and there are overflow scuppers			
COMMENTS:	No data		

Secondary Systems			
COMPONENT:	Floor Finishes	RATING: 2 x WEIGHT: 6 =	SCORE: 12
Some wear is evident on finish; maintenance needed			
COMMENTS:	No data		
COMPONENT:	Wall Finishes	RATING: 1 x WEIGHT: 6 =	SCORE: 6
Maintainable surfaces in good condition			
COMMENTS:	No data		
COMPONENT:	Ceiling Finishes	RATING: 1 x WEIGHT: 6 =	SCORE: 6
Maintainable surfaces in good condition; good alignment and appearance			
COMMENTS:	No data		
COMPONENT:	Doors & Hardware	RATING: 1 x WEIGHT: 6 =	SCORE: 6
Appropriate hardware, closers, panic devices; in good working order			
COMMENTS:	No data		

Service Systems			
COMPONENT:	Elevators	RATING: 1 x WEIGHT: 6 =	SCORE: 6
Appropriate and functional for occupancy and use			
COMMENTS:	No data		
COMPONENT:	Plumbing	RATING: 1 x WEIGHT: 8 =	SCORE: 8
Fixtures and piping appear to be in good condition; no evidence of leaks			
COMMENTS:	No data		
COMPONENT:	HVAC	RATING: 1 x WEIGHT: 8 =	SCORE: 8
Equipment in good condition; easily controlled; serves all required spaces; All necessary spaces are adequately ventilated; A/C provided throughout			
COMMENTS:	No data		
COMPONENT:	Electrical	RATING: 1 x WEIGHT: 8 =	SCORE: 8
Adequate service and distribution capacity for current/future needs			
COMMENTS:	No data		
COMPONENT:	Lights/Power	RATING: 1 x WEIGHT: 8 =	SCORE: 8
Contemporary lighting with good work area illumination; ample outlets			
COMMENTS:	No data		

Safety Systems			
COMPONENT:	Life/Safety	RATING: 1 x WEIGHT: 10 = SCORE: 10	
	Appears to meet current codes		
COMMENTS:	No data		
COMPONENT:	Fire Safety	RATING: 1 x WEIGHT: 10 = SCORE: 10	
	Locally monitored detection; alarm and strobes present; sprinklers in high hazard areas		
COMMENTS:	No data		
COMPONENT:	Modifications	RATING: No data	
	No data		
COMMENTS:	No data		

Quality Standards			
COMPONENT:	Maintenance	RATING: 1 x WEIGHT: 7 = SCORE: 7	
	Facility appears well maintained		
COMMENTS:	No data		
COMPONENT:	Remaining Life	RATING: 1 x WEIGHT: 6 = SCORE: 6	
	Life expectancy is >20 years; minor system deterioration		
COMMENTS:	No data		
COMPONENT:	Appearance	RATING: 1 x WEIGHT: 6 = SCORE: 6	
	Well-constructed building; generally attractive interior and exterior		
COMMENTS:	No data		

Heat Loss			
COMPONENT:	Insulation	RATING: 2 x WEIGHT: 6 = SCORE: 12	
	Some insulation meets current standards (2010 or newer), but other insulated areas or systems do not		
COMMENTS:	No data		
COMPONENT:	Glazing	RATING: 3 x WEIGHT: 6 = SCORE: 18	
	Double glazing with aluminum/metal window frames that conduct heat		
COMMENTS:	No data		

TOTAL SCORE = 163 PREVIOUS BIENNIUM SCORE = 163

CONDITION: Superior

Site condition

A similar analysis was conducted for the college site by evaluating and rating eight site characteristics. These ratings also translated into a site condition score that ranges between 36 and 175. As with the facility condition analysis, the lower the score the better the overall condition.

The site condition rating reports for each campus are provided on the following pages.

SITE CONDITION RATING

Cascadia Community College (300A)

COMPONENT:	Location	RATING: 1	x	WEIGHT: 6	=	SCORE: 6
	Site is adequate for future growth					
COMMENTS:						
COMPONENT:	Traffic Flow	RATING: 1	x	WEIGHT: 6	=	SCORE: 6
	Traffic flow poses no apparent safety hazards and is efficient					
COMMENTS:	Multiple access points					
COMPONENT:	Parking	RATING: 1	x	WEIGHT: 6	=	SCORE: 6
	Parking and circulation are efficient and adequate for future expansion					
COMMENTS:	Parking garages reduce need for lots					
COMPONENT:	Security	RATING: 3	x	WEIGHT: 4	=	SCORE: 12
	Site lighting is adequate; some security booths or emergency phones					
COMMENTS:	Very open campus					
COMPONENT:	Drainage	RATING: 3	x	WEIGHT: 5	=	SCORE: 15
	Some ponding is observable; flat slope allows standing water at buildings or between buildings					
COMMENTS:	Some drainage problems on larger grass areas adjacent to buildings					
COMPONENT:	Paving	RATING: 1	x	WEIGHT: 4	=	SCORE: 4
	Pedestrian walkways provided for circulation between buildings; paved parking areas					
COMMENTS:						
COMPONENT:	Maintenance	RATING: 1	x	WEIGHT: 7	=	SCORE: 7
	Site is landscaped and appears well maintained					
COMMENTS:						
COMPONENT:	Signage	RATING: 3	x	WEIGHT: 2	=	SCORE: 6
	Signage is minimal, except for emergency exit identification					
COMMENTS:	Site signage could be larger					

TOTAL SCORE = 57 PREVIOUS BIENNIUM SCORE = 57 (Score Range = 36 - 175)

Weighted Average and comparison

The State Board has a long term goal of improving the condition of all college facilities, bringing the condition scores up to “adequate” condition levels. Historical data indicates that this trend is occurring. After this goal is achieved, the average weighted condition scores at each campus would likely exceed the “adequate” rating.

During the 2015 survey, the building condition scoring method took into account missing building components in an attempt to be more accurate. The buildings with missing components typically resulted in worse building condition scores than the previous biennium. This occurred because in previous surveys, missing components (like an elevator) were given the best possible rating. This artificially improved the condition of the building. The modified scoring method resulted in a slightly worse average condition score for the college system in the 2015 survey. The following table shows all college weighted average scores for comparison.

College	Previous	Current
Bates Technical College	255	248
Bellevue College	229	224
Bellingham Technical College	243	252
Big Bend Community College	236	238
Cascadia College	187	161
Centralia College	221	189
Clark College	237	221
Clover Park Technical College	221	228
Columbia Basin College	235	217
Edmonds Community College	222	228
Everett Community College	209	194
Grays Harbor College	212	218
Green River College	197	171
Highline College	251	274
Lake Washington Institute of Technology	249	189
Lower Columbia College	221	212
North Seattle College	275	266
Olympic College	240	209
Peninsula College	204	212
Pierce College Fort Steilacoom	238	230
Pierce College Puyallup	186	185
Renton Technical College	242	246
Seattle Central College	269	309
Shoreline Community College	290	267
Skagit Valley College	257	242
South Puget Sound Community College	185	178
South Seattle College	265	274
Spokane Community College	291	260
Spokane Falls Community College	243	219
Tacoma Community College	242	226
Walla Walla Community College	265	264
Wenatchee Valley College	288	293
Whatcom Community College	211	230
Yakima Valley College	243	210

Weighted Average	237	230
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146 - 175 = Superior

176 - 275 = Adequate

276 - 350 = Needs Improvement By Additional Maintenance

351 - 475 = Needs Improvement By Renovation

>475 = Replace or Renovate

- Appendix A
 - Deficiency Scoring Method
- Appendix B
 - Building Condition Ratings
- Appendix C
 - Capital Repair Request Validation Criteria

APPENDIX A

DEFICIENCY SCORING METHOD

In most facility maintenance environments funding available for facility maintenance and repair never matches need in terms of identified requirements. This is no less true for capital repair funding for the state community and technical colleges. Therefore, a key component of a sound maintenance planning and programming system must be the ability to prioritize capital repair deficiencies for system-wide programming over a multi-year period. The key objective in conducting the bi-annual condition assessment is to validate and prioritize deficiencies identified by the colleges so that capital repairs can be accomplished in a timely manner, and potentially more costly repairs can be forestalled. For this reason, the SBCTC determined that a method of assigning a relative severity score to each capital repair deficiency was necessary to allow equitable allocation of funding for capital repairs among all the colleges. It was determined that such a scoring system needed to be “transparent” to the facility condition assessment personnel, so that it could be applied in a consistent manner to establish deficiency severity. It was further determined that such a system needed to have a range of severity scores that would allow some level of differentiation among scores.

At the request of the SBCTC, a deficiency scoring system was developed by the SBCTC’s consultants in 1995, and updated in 1999. This system is designed to allow the person validating a deficiency to assign a relative severity score to each deficiency in an objective fashion, based on a clearly defined set of severity criteria. The primary concern in designing the scoring system was insuring the timely accomplishment of repair work so that current deficiencies do not degrade to the point where more costly corrective action is required. A collateral concern was to reduce or eliminate any identified health and safety risks.

Repair funds are critical in maintaining building conditions that allow programs to function and also to provide appealing environments that retain students pursuing educational goals. The state board established a goal of raising the condition of all buildings to an “adequate” level or higher to support the system mission.

In 2017, there appeared to be trend in building condition data that indicated a slower rate of overall improvement to college buildings that were rated below the “adequate” condition. In an attempt to increase the rate of improvements for these buildings, a bonus point system was established to help focus repair funds. These additional points were added to deficiency scores for deficiencies that were found in buildings in “adequate” or worse condition. When deficiencies are ranked during the budget development process, these additional points help to prioritize repairs in buildings in worse condition.

The non-linear bonus point structure favors buildings that are in worse condition, however, the points are reduced for buildings that are in such a poor condition that they should be renovated or replaced rather than repaired. In

most cases, making significant repairs to buildings that will be replaced or significantly renovated in the near future is not cost effective. In these cases, an increased level of maintenance that extends the life of the component or system makes more sense. The bonus point structure is as follows:

Additional points	Building condition score
0	Superior
1	Adequate
2	Needs Improvement / Additional Maintenance
5	Needs Improvement / Renovation
2	Replace or Renovate

The core of the scoring process that was developed consists of:

- A reasonable set of definitions that are easily subscribed to by all members of the assessment management and execution team;
- A manageable number of priority levels, each of which is clearly distinct from the other;
- A clear implication of the potential impacts if corrective action is not taken.

Field prioritization of deficiencies is accomplished using a two-step scoring process. This process involves, first, determining whether a deficiency is Immediate or Deferrable and, second, prioritizing the criticality or deferability using a priority ranking system.

Immediate Vs Deferrable

A deficiency is categorized as **Immediate** if it must be corrected within a short period of time after being identified. An “Immediate” deficiency should meet the following criteria:

1. If the deficiency is not corrected within a short time, a significant health and/or safety risk will develop.

2. If the deficiency is not corrected within a short time, a significant increase in the cost of corrective action could result.
3. If the deficiency is not corrected within a short time, the deficiency could significantly degrade to the point where an entire building system could be impacted.

All deficiencies degrade over time if they are not corrected, and often the cost of deferring corrective action will increase. **However, the magnitude of the degradation or cost increase is the key consideration in determining if a deficiency is “Immediate”.** For example, a built-up roof with significant blisters and felts that are beginning to separate is deteriorating. However, if that deterioration is in its early stages, and interior leaks are not yet present, roof replacement/repair can be legitimately deferred. If, however, the roof has been deteriorating for some time, and leaks have become so common that they have begun to cause deterioration in other building systems, the roof should be classified as “Immediate”. The cost of replacing that roof will not increase. However, the total cost of repairs associated with the leakage caused by that roof will in all likelihood increase significantly. Not only will the roof continue to degrade, but there will also be associated roof insulation, roof deck, or interior structural degradation, as well as possible damage to mechanical or electrical system components.

A deficiency is categorized as **Deferrable** if corrective action can be postponed to be reviewed again the next biennium or later. Since deficiencies can degrade over time, their associated corrective costs can also increase. Therefore, a “Deferrable” deficiency should meet the following criteria:

1. The degree of degradation over the deferrable time frame will be at a relatively constant rate, or at least will not increase significantly from year to year.
2. The degree of corrective cost increase over the deferrable time frame will be at a relatively constant rate, or at least will not increase significantly from year to year.
3. Potential health/safety impacts will be minor, and will not increase as to severity over the deferrable time frame.
4. There will be little, if any, mission impact over the deferrable time frame.

The point at which noticeable changes in the character of a deficiency can be projected with respect to the above considerations is the end point of the deferability time frame, because at that point the character of a deficiency can be assumed to change from “Deferrable” to “Immediate”.

A deficiency categorized as **Immediate** should be considered for submission to the SBCTC as a project request in the next capital budget. A deficiency categorized as **Deferrable** could be postponed for corrective for two years or

more after the next biennium. Furthermore, a deficiency categorized as **Future** could be postponed even further than a Deferrable deficiency if it is anticipated to degrade very slowly and does not restrict the use of the facility.

Prioritizing Deficiencies

Once a deficiency is categorized as Immediate, Deferrable or Future, the next step in the scoring process is to assign a priority designating relative importance for planning and programming purposes. A six-level prioritizing system was developed for assigning a priority to a deficiency:

1. **Health/Safety:** This designation is the highest priority level assigned to a deficiency. It designates a deficiency as having potentially adverse health and/or safety impacts on building occupants or users if the deficiency is not corrected.
2. **Building Function (Use):** This priority designates a deficiency as having a potentially adverse impact on the ability to fully utilize a facility if the deficiency is not corrected.
3. **System Use:** This priority designates a deficiency as having a potentially adverse impact on a building system's ability to operate properly if the deficiency is not corrected.
4. **Repair/Repl. Cost:** This priority designates that the repair or replacement cost associated with correcting a deficiency will escalate sharply after the time period recommended for correction of the deficiency. In all probability this will occur because degradation of associated components or systems will occur.
5. **Operating Cost:** This priority designates that the operating cost associated with correcting a deficiency will escalate sharply after the time period recommended for correction the deficiency. Operating costs can include maintenance staff and energy costs.
6. **Quality of Use:** This is the lowest level priority assigned to a deficiency. It designates that the deficiency should be corrected as part of a "prudent owner" strategy within the time recommended.

For programming purposes, each priority level is assumed to be relatively more important than the next. It is also assumed that more than one of the priority choices can apply to establishing the overall priority for a deficiency. It

was determined that up to two selections could be made from the priority choices for each deficiency. Each of the selections would be assigned a percentage value, with the total of the selections equaling 100%. To avoid having to consider all possible combinations of numbers from 1 to 100 for a priority choice, it was determined that a finite set of numbers would be used for scoring. For a single priority choice a score of 100 would always be assigned. For two priority choices combinations of 50/50, 70/30, 60/40 or 75/25 would typically be used.

Severity Scoring

A severity score is calculated for each capital repair deficiency by formula that was programmed into the database management system used for the survey. The formula calculates a severity score based on a numerical value assigned to each of the DEFERABILITY and PRIORITY choices.

The numerical values assigned to the Deferability choices are:

- Immediate 4
- Deferrable 2.5
- Future 1

The numerical values assigned to the Priority choices are:

- Health/Safety 25
- Facility Use 20
- System Use 15
- Increased Repair/Replacement Cost 12
- Increased Operating Cost 10
- Quality of Use 5

A deficiency score is calculated by multiplying the value of the selected deferability choice by the value of the selected priority choice. Where more than one priority choice is applied to a deficiency, the percentage of each priority applied is multiplied by the corresponding priority value. The results are added together, and the sum is multiplied by the value of the deferability choice.

For example, for a deficiency with an assigned deferability of “Deferred” and a 100% assigned priority of “System Use” the deficiency score is **38**. This score is calculated as:

Step 1 $1 \times 15 = 15$, where 15 is the value of “System Use,” and 1 is 100%, since only one priority choice was selected.

Step 2 $15 \times 2.5 = 38$ rounded, where 15 is the value of “System Use,” and 2.5 is the value of the deferability choice of “Deferred.”

If more than one priority choice is assigned to a deficiency, say 30% “System Use” and 70% “Increased Repair/Replacement Cost”, with an assigned deferability category “Deferred”, the score would be calculated as:

Step 1 $(0.3 \times 15) + (0.7 \times 12) = 12.9$, where 15 is the value of “System Use,” 12 is the value of “Increased Repair/Replacement Cost,” 0.3 is the 30% assigned to “System Use,” and 0.7 is the 70% assigned to “Increased Repair/Replacement Cost.”

Step 2 $12.9 \times 2.5 = 32$ rounded, where 2.5 is the value of a deferability category “Deferred.”

The possible calculated severity score ranges for a deficiency are shown below:

	<u>Immediate</u>	<u>Deferred</u>	<u>Future</u>
Possible severity score range:	20-100	13-63	5-25

This demonstrates that a deficiency with a deferability category of “Deferred” could have a severity score that is higher than a deficiency with a deferability category of “Immediate”. All deficiencies are ranked using the severity score.

APPENDIX B

BUILDING/SITE CONDITION RATINGS

As part of the facility condition survey update, a building condition analysis was also conducted for each building on a campus. The objective of this analysis is to provide an overall comparative assessment of the condition and adequacy each building on a campus, and a method of comparing facilities among campuses.

The condition analysis was performed by rating the condition or adequacy of 20 building system and operating characteristics. Three evaluation criteria were developed for each characteristic to provide a relative ranking of the standard of good, average or poor. A rating of 1, 3, or 5 was assigned to each of the three evaluation criteria for each characteristic. Each facility is rated by applying the evaluation criteria to each of the 20 separate building systems and operating characteristics.

If a characteristic does not apply, a rating of zero is assigned to that element. In this case, the missing component weight is spread among the other components so that the final condition score is based only on existing components. For example a greenhouse does not typically have an elevator, interior walls, ceilings or glazing. These missing components weight would each be set to zero. The weight for these components would then be spread to the other building components. This process may change the structural component weight from an 8 to a 9 for example. This modification to the characteristic weight would effectively place more emphasis on all of the existing characteristics rather than what is missing.

Each characteristic has an associated weighting score that is multiplied by the rating assigned to that characteristic to generate a score for that characteristic. The scores for all 20 characteristics (or less if components are missing) are totaled to provide an overall rating score for a facility.

The scoring range for a facility, based on the weighted scores for all 20 characteristics, multiplied by the rating for each characteristic, is between 146 and 730. The lower the score, the better the relative overall condition of a facility. It is intended that these ratings will serve as a baseline benchmark of overall condition, which can be used to measure improvements or deterioration in facility condition over time.

In addition to the building condition analysis, a site condition analysis was also conducted of each campus. Eight site characteristics were selected for the analysis, and three evaluation criteria were developed for each characteristic to provide a relative ranking of good, average or poor. A rating of 1, 3 or 5 was also assigned to each of the three evaluation criteria for the site characteristics. Each site was rated by applying the evaluation criteria

to each of the eight characteristics. Each site characteristic also had an associated weighting score that was multiplied by the rating assigned to that characteristic to generate a score for that characteristic. The scores for all eight characteristics were totaled to provide an overall rating score for a site.

The evaluation criteria associated with the building and site ratings are presented on the following pages.

FACILITY EVALUATION CRITERIA

System RTNG WGHT

Structure	1	8	No signs of settlement or cracking, no abrupt vertical changes Columns, bearing walls and roof structure appears sound/free of defects
	2		Minor cracks evident in a small portion of the structure
	3		Some cracking evident but does not likely affect structural integrity; Visible defects apparent but are non-structural
	4		Some structural flaws potentially exist and should be evaluated by a structural engineer
	5		Visible settlement and potential structural failure; potential safety hazard Structural defects apparent in superstructure
Exterior Closure	1	8	Weatherproof, tight, well-maintained exterior walls, doors, windows/finishes
	2		Weatherproof exterior, but generally appears poorly maintained
	3		Sound and weatherproof but with some deterioration evident
	4		General deterioration detected, one or more minor leaks apparent
	5		Significant deterioration, leaking and air infiltration apparent
Roofing	1	10	Flashing and penetrations appear sound and membrane appears water- tight; drainage is positive and there are overflow scuppers
	2		Majority of roofing and flashing appear sound, but a small portion of roofing shows deterioration where maintenance or minor repair needed
	3		Some deterioration is evident in membrane and flashings; maintenance or minor repair is needed
	4		General deterioration and some leaks are evident; resurfacing or partial repair is needed
	5		Leaking and deterioration is to point where new roof is required
Floor Finishes	1	6	Nice appearance, smooth transitions, level subfloors, no cracks/separating
	2		Some wear is evident; maintenance needed
	3		Some wear and minor imperfections are evident; beginning deterioration
	4		General deterioration evident; one-third to one-half of flooring exhibits extensive deterioration
	5		Extensive deterioration and unevenness
Wall Finishes	1	6	Maintainable surfaces in good condition
	2		Maintainable surfaces, minor maintenance is required in some areas

	3		Aging surfaces but sound; some maintenance is required
	4		Aging surfaces generally require maintenance; some areas require repair
	5		Surfaces are deteriorated and require resurfacing or rebuilding
Ceiling Finishes	1	6	Maintainable surfaces in good condition; good alignment and appearance
	2		Aging surfaces in fair condition and good alignment
	3		Some wear and tear; Minor staining or deterioration
	4		General deterioration and moderate amount of staining or damage apparent
	5		Deteriorated, significant number of stained or sagging areas; inappropriate for occupancy
Doors & Hardware	1	6	Appropriate hardware, closers, panic devices; in good working order
	2		Fairly modern door surfaces and hardware with minor deterioration; good working order
	3		Functional but dated
	4		General deterioration evident in both door and hardware; some doors with significant deterioration
	5		Inoperable, deteriorating and outdated; non-secure
Elevators	1	6	Appropriate and functional for occupancy and use
	2		Aged elevators functional, but deterioration or abuse of finishes is evident
	3		Elevators provided but functionality is inadequate; Unreliable operation
	4		Elevators provided; car and controls need repairs; some elevators are not functional
	5		No elevator access for upper floors
Plumbing	1	8	Fixtures and piping appear to be in good condition; no evidence of leaks
	2		Fixtures and piping are functional; finishes require maintenance
	3		Fixtures are functional but dated; some leaks; maintenance required
	4		General deterioration of most fixtures and pipes; moderate number of leaks and blockage areas; need repairs
	5		Extensive pipe leaks or blockage; deteriorated fixtures; inadequate fixtures
HVAC	1	8	Equipment in good condition; easily controlled; serves all required spaces; All necessary spaces are adequately ventilated; A/C provided

	2		Equipment in fair condition; minor deterioration; controls require troubleshooting; office areas have A/C; hazardous areas are ventilated
	3		System generally adequate; some deterioration; needs balancing; Offices areas have A/C; hazardous areas are ventilated
	4		System partially adequate; many areas served by equipment needing repair; no A/C in offices, but hazardous areas are ventilated
	5		Inadequate capacity, zoning and distribution; equipment deteriorating; No A/C in office areas; no ventilation in hazardous areas
Electrical	1	8	Adequate service and distribution capacity for current/future needs
	2		Adequate service and distribution capacity for current/future needs; some deterioration evident
	3		Service capacity meets current needs but inadequate for future
	4		Service capacity generally meets current need, but electrical load in some areas exceeds circuit or panel capacity
	5		Loads exceed current capacity
Lights/Power	1	8	Contemporary lighting with good work area illumination; ample outlets
	2		Contemporary lighting with good work area illumination; adequate number of outlets
	3		Adequate work area illumination; adequate outlets for current use
	4		Generally adequate work area illumination; some areas with unsafe levels of illumination or inadequate outlets
	5		Unsafe levels of illumination; inadequate outlets
Life/Safety	1	10	Appears to meet current codes
	2		Most areas meet current codes; some areas meet codes for prior construction phases
	3		Generally meets codes for vintage of construction
	4		Generally meets codes for vintage of construction; minor health or accessibility violations exist
	5		Does not meet minimum health/safety requirements
Fire Safety	1	10	Locally monitored detection; alarm and strobes present; sprinklers in high hazard areas
	2		Locally monitored detection; alarm present, but missing visual component
	3		Extinguishers and signed egress; no alarm or sprinklers
	4		Only extinguishers or signed egress exist; no alarm or sprinklers
	5		Violations exist; Missing exit signs or extinguishers; No alarm or sprinklers

Modifications	1	7	Modifications appear to be in compliance with codes and sound construction practices; HVAC/electrical service properly provided
	2		Modifications appear to be in compliance with codes and sound construction practices, however, HVAC/electrical service was not properly reconfigured
	3		Some modifications lack code compliance; HVAC service not fully considered during renovation
	4		Some of the modifications not well thought out or constructed; inadequate HVAC and electrical service provided
	5		Modifications not well thought out or constructed; inadequate HVAC and electrical service provided
Maintenance	1	7	Facility appears well maintained
	2		Routine maintenance is required; impact is minor
	3		Routine maintenance is required; deferred maintenance is evident; impact is minor to moderate
	4		Lack of maintenance in some areas is evident; impact is moderate
	5		General deterioration is evident; lack of adequate maintenance is evident; impact is moderate to severe
Remaining Life	1	6	Life expectancy is >20 years; minor system deterioration
	2		Life expectancy is 15-20 years; minor to moderate system deterioration
	3		Life expectancy is roughly 10-15 years; moderate system deterioration
	4		Life expectancy is 5-10 years; moderate to significant system deterioration
	5		Life expectancy is <5 years; significant system deterioration
Appearance	1	6	Well-constructed building; generally attractive interior and exterior
	2		Well-constructed building; average interior and exterior appearance
	3		Average construction; average interior and exterior appearance
	4		Average construction; some unattractive exterior and interior spaces
	5		Poor to average construction; very unattractive exterior and interior spaces
Insulation	1	6	Insulation is up to current standards (2010 or newer)
	2		Some insulation is up to current standards (2010 or newer), but other insulated areas or systems are not
	3		Insulation present, but not to current standards (installed prior to 2010)

	4		Insulation present in some areas or systems, but missing in other areas or systems
	5		No insulation
Glazing	1	6	Double glazing with window frames that minimize conductivity
	2		Mix of double glazed windows; some with aluminum/metal frames and some that minimize conductivity
	3		Double glazing with aluminum/metal window frames
	4		Mix of double and single glazed windows
	5		Single glazing

730 max
points

146-175 = Superior

176-275 = Adequate

276-350 = Needs Improvement/Additional Maintenance

351-475 = Needs Improvement/Renovation

476-730 = Replace or Renovate

SITE EVALUATION
CRITERIA

Campus Site	RTNG	WGHT	
Location	1	6	Site is adequate for future growth
	2		Some portion of site is adequately configured for future growth, but other areas are only reasonably sized for short term needs
	3		Site is reasonably sized for foreseeable future
	4		Site is generally adequate current need; some areas are restrictive and will not allow growth
	5		Site is inadequate, fails to meet current demand. Lack of future expansion capability; threatened by incompatible adjacent development
Traffic Flow	1	6	Traffic flow poses no apparent safety hazards and is efficient
	2		Traffic flow poses no apparent safety hazards and is mostly efficient
	3		Traffic flow has some inefficiencies but is adequate
	4		Traffic flow is inefficient, but appears safe
	5		Traffic flow is inefficient and unsafe
Parking	1	6	Parking and circulation are efficient and adequate for future expansion
	2		Parking is adequate for future expansion; circulation is adequate
	3		Parking is adequate for present needs; circulation is adequate
	4		Generally parking is adequate for current need; circulation is inefficient in some areas
	5		No expansion potential for parking; circulation is inefficient
Security	1	4	Site lighting is adequate; site has security booths and emergency phones
	2		Site lighting is adequate; most areas have security booths or emergency phones
	3		Site lighting is adequate; some security booths or emergency phones
	4		Site lighting is generally adequate; some areas are inadequate; a few security booths or emergency phones available
	5		Site lighting is inadequate; no security booths or emergency phones
Drainage	1	5	Positive slope away from buildings; roof drainage to underground system; surface drainage to catch basins or swales
	2		Generally adequate drainage; minor ponding is observable in a few areas that do not disrupt pedestrian or auto circulation
	3		Some ponding is observable; flat slope allows standing water at buildings or between buildings

	4	Moderate ponding is observable; some poorly sloped areas
	5	Extensive pooling of water adjacent to buildings; poor slope and drainage
Paving	1	4 Pedestrian walkways provided for circulation between buildings; paved parking areas
	2	Pedestrian walkways provided are generally adequate with some minor deficiencies; paved parking areas
	3	Pedestrian walkways do not provide for adequate circulation between buildings; only partial paved parking
	4	Pedestrian walkways do not provide for adequate circulation between buildings; repairs needed; no paved parking
	5	No paved pedestrian walkways; no paved parking
Maintenance	1	2 Site is landscaped and appears well maintained
	2	Site is landscaped and most areas well maintained; some areas require improvement
	3	Landscaping is adequate but maintenance needs improvement
	4	Landscaping generally adequate with some sparse areas; does not appear well maintained
	5	Little site landscaping; does not appear well maintained
Signage	1	2 Building numbers/names identified; parking and disabled signage exists Rooms are numbered; exits properly marked
	2	Building numbers/names identified; other signage is minimal, except for emergency exit identification and parking signs
	3	Signage is minimal, except for emergency exit identification
	4	Signage is minimal, inadequate parking signs; poor emergency signage
	5	Lack of adequate building/room identification; poor emergency signage

APPENDIX C

CAPITAL REPAIR REQUEST VALIDATION CRITERIA

Achieving consistency in the facility condition survey and repair request validation process has long been a key SBCTC objective. The effort to achieve consistency in this process has focused on two main elements:

- 1) The surveyor in evaluating capital repair deficiencies,
- 2) The individual colleges in identifying candidates for capital repair funding.

In order to assist both the colleges and the surveyor to be more consistent in identifying legitimate candidates for capital repair funding, the SBCTC in 2001 developed a set of guidelines for use in the condition survey updates. The guidelines reiterate the objective of capital repair funding, and are intended to help the surveyor and the colleges to determine whether work is to be funded from operating dollars such as URF or M&O, or from a capital repair request by identifying circumstances that do not meet the intent of capital repair funding.

Achieving consistency in the facility condition survey/capital repair request validation process has been a key objective of the SBCTC since the first survey was initiated in 1989. Over the years, every effort has been made to insure that a consistent approach is followed by the survey teams in evaluating capital repair deficiencies at each college. However, to achieve this objective, it is also necessary that the individual colleges are consistent in identifying candidates for capital repair funding.

The repair category represents funding to replace or repair major components and systems, as well as building and infrastructure failures. This category of repair is NOT intended for renovation or remodel of facilities. In addition, capital repairs must conform to the OFM definition of an allowable capital expense. Smaller repairs need to be accommodated with operations and maintenance dollars from the operating budget. Finally it is critical that capital repairs be coordinated with the facility master plan and not be wasted in a building that will be renovated or replaced in the short term.

The following criteria have been developed to reiterate the objective of capital repair funding and to assist the colleges and the surveyor to identify legitimate candidates for capital repair funding. Again, it is important to know when work is to be funded from operating dollars or from a capital request category. The guidelines and conditions included herein are provided to help identify circumstances that do not meet the intent of capital repair funding.

GENERAL GUIDELINES

Capital Repair funds may be used for repair/replacement of building systems and fixed equipment, or campus infrastructure, if one or more of the following conditions exist:

- 1) The system or equipment is experiencing increasing incidence of breakdown due to age and general deterioration. However, if the deterioration is not readily visible, the college must provide documentation as to the age of the system or component, and substantiate increasing repair costs.
- 2) The overall quality of the system or equipment is poor, resulting in deterioration sooner than normal design life expectancy would otherwise indicate.
- 3) The system or equipment is no longer cost-effective to repair or maintain. This implies that the cost of repair is estimated to be 50% or more of the cost of replacement, or replacement parts are virtually impossible to obtain or are at least 150% of the cost of parts for similar contemporary equipment.
- 4) For a deficiency to be considered a capital repair, the estimated MACC cost of corrective action should exceed \$20,000 for a single item. However, the same individual items in one building (e.g. door closer mechanisms) can be combined into a single deficiency if they are all experiencing the same problems and are deteriorated to the same degree.

The following additional considerations apply to the facility condition survey deficiency validation process:

- 1) If a building system or major piece of equipment is experiencing component failure at a rate greater than what is considered normal, the entire piece of equipment should be replaced. However, maintenance/repair records should be available to support the rate of component failure.
- 2) If replacement of a piece of equipment is being considered because of the inability to obtain replacement parts, vendor confirmation should be available.
- 3) If a system or equipment operation problem exists that may lead to replacement consideration, but the cause of the problem/s is not readily evident, any troubleshooting and/or testing to identify the problem and its cause should be completed prior to the survey. The surveyor is not responsible for detailed analysis or troubleshooting. Recurring equipment problems should be documented by the college.
- 4) Any operational problems with equipment (e.g. air flow/ventilation or system balancing) that may require equipment replacement should be identified prior to the surveyor visiting the campus.

- 5) If a major system replacement is requested (e.g. a steam distribution system), the campus should first conduct an engineering/cost analysis to determine whether replacement with the same system will be cost-effective over the life-cycle of the replacement or whether an alternative system would be more cost-effective.
- 6) While piecemeal replacement of systems and components may be necessary operationally, replacement programming should nevertheless conform to an overall campus facility maintenance plan that addresses the maintenance and replacement of major systems such as HVAC from a campus-wide perspective.
- 7) If structural problems are suspected with respect to foundations, substructure, superstructure components, exterior closure components or roof systems, a structural engineering evaluation should be conducted by the college prior to the visit of the surveyor. Any resulting reports should be made available to the team at the time of their visit.
- 8) Capital repair funds will NOT be used for facility remodel/improvements.
- 9) Capital repair funds will NOT be used to repair facilities acquired by a college (e.g. gift from a foundation, COP, local capital) until they have been in state ownership for a minimum of six years. Repair needs can be assessed for facilities that have been owned for at least four years at the time of the facility condition survey since funds would not become available until the next capital budget bill has become law (which usually takes two years on average).
- 10) Capital repair funds shall NOT be used solely to achieve energy conservation, ADA compliance, hazardous materials abatement, or code compliance.
- 11) Capital repair funds shall NOT be used to repair or replace systems or equipment used predominantly for instructional purposes.

In addition, it should be understood that the surveyor will not be conducting a baseline condition survey for a college. The college should have identified capital repair deficiencies it considers candidates for funding prior to the arrival of the surveyor. The surveyor will validate these candidates and may, during their facility walk-through to rate facility condition, identify additional candidates. However, the prime responsibility for determining repair needs is with the college.

In order to provide a common focus for all colleges on the types of deficiencies and project recommendations they propose as a candidate for capital repair funding, specific conditions for which capital repair funds will not be used have been identified. These conditions are provided below by major building system.

EXTERIOR CLOSURE SYSTEMS/COMPONENTS

Capital repair funds will **NOT** be available for the following conditions:

- 1) Painting of exterior wall surfaces, unless the substrate also needs to be replaced due to damage.
- 2) Upgrading of door/closure hardware if the existing hardware is still functional. If hardware must be replaced because parts can no longer be obtained, the use of capital repair funds may be permissible.
- 3) Masonry cleaning, other than to prep a surface for restoration work. Masonry cleaning, such as for mildew removal, is considered part of the on-going maintenance responsibility of a campus. **Exterior masonry wall restoration, such as tuckpointing, is a valid use of capital repair funds.**
- 4) Patching, sealing and re-coating of EFIS or plaster or stucco surfaces.
- 5) Repair/renovation of building sealants, damp proofing or coatings.
- 6) Door or window replacement for energy conservation only.
- 7) Wall or ceiling insulation retrofits.

INTERIOR CLOSURE/FLOOR SYSTEMS/COMPONENTS

Capital repair funds will **NOT** be available for the following conditions:

- 1) Painting of interior wall surfaces, unless the substrate also needs to be replaced due to damage or deterioration.
- 2) Upgrading of door/closure hardware if the existing hardware is still functional. If hardware must be replaced because parts can no longer be obtained, the use of capital repair funds may be permissible.
- 3) Patching/minor repairs to interior wall and ceiling surfaces.
- 4) Replacement of suspended ceiling tiles that are dirty or stained, unless the suspension system also needs replacement.
- 5) Repair/replacement of movable partitions.
- 6) Moving of interior walls/modification of spaces (This remodeling should be part of a matching fund, minor works program, local capital or renovation project).
- 7) Repair or replacement of wall coverings, window coverings, draperies, casework and office partitions.
- 8) Replacement of floor coverings, unless the floor structure underneath must also be repaired.

ROOF SYSTEM/COMPONENTS

Capital repair funds will **NOT** be available for the following conditions:

- 1) Repair of blisters or tears in built-up or single-ply membrane roofs.
- 2) Minor replacement of shingles or tiles.
- 3) Gutter/downspout repairs or repairs to curbs, flashings or other roof appurtenances. Replacement will generally be done as part of a total roof replacement.
- 4) Moisture testing. This is the responsibility of the campus as part of its annual roof maintenance strategy. If evidence of moisture is suspected under the membrane, but is not readily apparent, the campus should have a moisture survey performed to provide data to the survey team.
- 5) Repair to low spots on flat roofs, unless the condition can be shown to result in water infiltration and damage to underlying components.

Each college is encouraged to implement an annual roof maintenance program that includes roof surface cleaning, gutter and downspout or roof drain cleaning, minor repairs to membrane and flashing and spot re-coating of UV retardants where these are worn. Each college is also encouraged to implement a roof management plan that includes standardization of roof membrane types and tracking of wear, repairs and manufacturer's warranties.

PLUMBING SYSTEMS/COMPONENTS

Capital repair funds will **NOT** be available for the following conditions:

- 1) Replacement of functional fixtures such as lavatories, urinals, toilets, faucets and trim simply because they are older.
- 2) Replacement of water supply piping simply because of age, unless it can be shown through pipe samples or other evidence of significant leaks in several areas in a building that piping failures are generalized throughout the system. Otherwise, piping replacement should be part of a comprehensive building renovation.

- 3) Replacement of domestic hot water heaters of 80 gallons or smaller.
- 4) Drinking fountain replacement.

HVAC SYSTEMS/EQUIPMENT

Capital repair funds will **NOT** be available for the following conditions:

- 1) Expansion of system capacity due to building/space modifications driven by instructional programs if the existing system is in good condition. Such system expansion should be funded out of operating or program related funds, or be included in a minor works project.
- 2) Bringing building/spaces up to current ventilation or indoor air quality standards. However, if system replacement is warranted due to age and condition, the replacement system should meet all current standards, code, and other requirements.
- 3) Providing heating/cooling for buildings/spaces where none currently exists. If however, a building currently has no cooling, but the heating/ventilation system must be replaced, the new system may include cooling.
- 4) Adding heating/cooling requirements to individual spaces due to changes in the use of space. This should be funded out of operating or program related funds.
- 5) Integrating incompatible DDC systems unless there is no vendor to support one or more of the existing systems. Written vendor confirmation must be available.
- 6) Expanding/upgrading a DDC system, except for HVAC system/equipment replacement where the new equipment can be tied into the existing DDC system.
- 7) Replacement/upgrading of an existing DDC system will be considered only if the manufacturer provides written documentation that the existing system will no longer be supported for repairs/maintenance as of a certain date, and that replacement parts will no longer be available through the manufacturer or through a third-party vendor as of a certain date.
- 8) Testing, balancing or general commissioning of HVAC equipment.

ELECTRICAL SYSTEMS/COMPONENTS

Capital repair funds will **NOT** be available for the following conditions:

- 1) Addition of emergency/exit lighting where none currently exists. This is a campus responsibility, to be funded with campus funds.
- 2) Addition of GFI outlets near sinks to replace regular outlets. This is a campus responsibility to be funded with campus funds.
- 3) Adding circuits to an individual space to address capacity problems due to space use or program use changes. Space modifications undertaken by a campus should include funds to address electrical upgrades required as part of the modification.
- 4) Adding lighting to an individual space where lighting is inadequate due to space use or program use changes. Lighting upgrades should be addressed as part of the space modification process and funding as a local fund project, conservation project, renovation project, or minor works program project.
- 5) Replacing functional lighting fixtures simply because they are older. Colleges should work with General Administration to provide an energy audit and potentially use ESCO (performance contracts) to upgrade energy systems, lighting, etc.
- 6) If a request is made to replace older distribution or lighting panels that are still functional because replacement breakers are no longer available, documentation must be available supporting that claim.
- 7) Additions to site lighting around buildings and campus walkways are allowable for security considerations. However, the college must support the need with a lighting study that identifies specific inadequacies and quantifies light levels. The survey team is not charged with undertaking light level studies. Additions to parking lot lighting must be funded out of parking fees.

FIRE/SAFETY SYSTEMS/COMPONENTS

Capital repair funds will **NOT** be available for the following conditions:

- 1) Installation of a fire sprinkler system where none currently exists, unless the local fire marshal has mandated in writing that a system be installed and a specific compliance date is part of that mandate.
- 2) Installation of a fire alarm system where none currently exists, unless the local fire marshal has mandated such installation in writing and a specific compliance date is part of that mandate.
- 3) Replacement/upgrading of an existing fire alarm system will be considered only if the manufacturer provides written documentation that the existing system will no longer be supported for repairs/maintenance as of a certain date, and that replacement parts will no longer be available through the manufacturer or through a third-party vendor as of a certain date.

- 4) Installation of a security, telecommunications or information technology system where none currently exists.
- 5) Repairs to or expansion/enhancement of existing security, telecommunications or information technology systems.

PAVING/SITE COMPONENTS

Capital repair funds will **NOT** be available for the following conditions:

- 1) Parking lot maintenance and repair, including pavement repairs, crack sealing, seal coating, striping, signage and lighting. Colleges should fund all parking lot maintenance/repair through parking fees or facility fees.
- 2) Repair of trip hazards in parking lots caused by tree root damage.
- 3) Tennis court repair/resurfacing (O&M or local funds, or student supported COPs).
- 4) Running track repair/resurfacing (O&M or local funds, or student supported COPs).
- 5) Repairs/replacement of landscape irrigation systems for athletic fields, replacement of turf and landscape plantings, athletic fields, lighting systems and scoreboards.