# Big Bend Community College
## Facility Master Plan
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OVERVIEW
Overview
MASTER PLAN UPDATE

2014 FACILITY MASTER PLAN UPDATE

Since the 2011 Facility Master Plan (FMP) was implemented, Big Bend Community College (BBCC) has achieved many of its goals. A Master Plan is a living document that must be continually revitalized. When goals are achieved, new goals need to be developed.

The 2014 update is based on the following:

- President Leas’s Vision
- Recent Capital Accomplishments
- Receiving funding for a new Professional Technical Education Center
- Academic Master Plan

President Leas

With every new President comes a renewed look to the future. President Leas brings with him a vision of collaboration, community connectivity, student success, and transparency. He believes student success is achieved by aligning community needs with educational output.

The President takes great care in preserving Big Bend’s culture of family, as the caring nature is one of its greatest assets. His strategy is to develop the college through connectivity, by strengthening its ties through direct outreach, distributing marketing materials through various means, and ensuring the college meets the workforce needs of the local economy.

Additionally, Big Bend is aligning curriculum with the needs of business, industry, and student interest to strengthen programs. President Leas’s strategy is to move Big Bend progressively from being “present and relevant” to being “prominent and essential.”

He believes that lives can be transformed through excellence in teaching and learning. Big Bend must provide life-long learning opportunities, creating multiple and continual pathways to living wage employment.

The campus must engage business and industry partners and make it easy to collaborate in project-based learning. BBCC can ensure students graduate with the skills needed for rewarding and meaningful careers through joining forces with area employers.

Big Bend must also create strong relationships with K-12 throughout the service district and develop space to increase partnerships and engagement with students at younger ages.

Accessibility means opening doors by partnering with other colleges and universities. Big Bend’s service district features many challenges:

- Making educational opportunities accessible.
- Overcoming the hurdle of time and distance.
- Creating innovative projects with proper program scheduling and delivery methods.

Resources must be available and inviting to assist students in improving their study skills, locating resources, resolving personal issues, making strong career decisions, paying for college, or arranging the details of a smooth college transfer. All of these services must be welcoming and accessible both on campus and online.

Space is needed on campus for music, clubs, intercollegiate sports, and student government. These opportunities provide students with a sense of belonging, achievement, and a chance to make dreams happen. The success of Big Bend’s students is Big Bend’s standard of accountability.

PTEC Funded

The 2011 Facility Master Plan’s number one priority, a new Professional Technical Education Center, has tentatively received funding.

The facility will consist of just under 80,000 square feet and have a maximum allowable construction cost (MACC) of $23,000,000.

Academic Master Plan

The Big Bend Community College (BBCC) Academic Master Plan (AMP) 2014-19 was approved by the Board of Trustees May 22, 2014.

The Big Bend Community College (BBCC) Academic Master Plan (AMP) 2014-19 serves as the strategic plan for the college. The plan is titled “Student Success” in order to emphasize the fact that student success is BBCC’s number one priority. The AMP is reviewed annually, updated as needed, and re-written every five years, in order to ensure that it remains a living document that is attuned and responsive to the needs of students and our service district.

The AMP outlines BBCC’s process for assessing mission fulfillment. This process includes identifying measurable outcomes, setting relevant objectives, and tracking appropriate indicators of success. The results of these assessments are reported annually in a series of monitoring reports. The monitoring reports correspond to BBCC’s Core Themes as well as to the Board of Trustees’ Ends Statements.

The Academic Master Plan also provides a framework for other strategic planning efforts at the college. These efforts include the Facilities Master Plan and the college marketing plan.
Overview

ACADEMIC MASTER PLAN

MISSION, VISION, AND VALUES

During 2013-14, BBCC engaged in a collaborative process to review and rewrite its mission statement. This process involved college faculty and staff, as well as students and community members. As a result of this process, BBCC adopted new statements of mission, vision, and values. Starting with these statements, the college then wrote new core themes, outcomes, and objectives; the Board of Trustees updated and revised their ends statements in order to align the college’s strategic planning goals with the Board’s expectations.

BBCC Mission Statement:
Big Bend Community College delivers lifelong learning through commitment to student success, excellence in teaching and learning, and community engagement.

BBCC Vision Statement:
Big Bend Community College inspires every student to be successful.

BBCC Values:
Our institutional values are principles, fundamental beliefs or qualities that shape institutional attitudes, opinions, decisions, and actions.

Student Success
• Academic achievement
• Empowerment
• Lifelong learning
• Service to students

Excellence in Teaching & Learning
• Innovation
• Commitment to quality
• High standards
• Continuous improvement

Community Engagement
• Collaboration
• Outreach
• Partnerships
• Improving quality of life

Inclusion & Climate
• Diversity
• Access
• Opportunity
• Equity

Integrity & Stewardship
• Accountability
• Sustainability
• Ethics and honesty
• Resource management

These statements form the foundation of BBCC’s mission and strategic planning process. Building on this foundation, the college establishes operational goals in two ways:
• Core themes establish assessable outcomes for mission fulfillment.
• Board of Trustees’ ends statements lay out the Board’s expectations for meeting the needs of our service district.

These items form the architecture of the AMP as approved by the Board of Trustees and as demonstrated in the following diagram.

Ends Statements:
Describe how the Board expects the college to interact with and have an impact on our service district.

Core Themes:
Address the three broad areas described in the mission and represent the primary measure.
Overview

ACADEMIC MASTER PLAN

Core Themes
The core themes represent BBCC’s primary measure of mission fulfillment. There are three core themes:
• Student Success
• Excellence in Teaching & Learning
• Community Engagement

Each core theme is composed of an overarching outcome, one or more specific objectives, and the indicators used to measure success. Each core theme is described separately below.

Student Success
Outcome: BBCC provides access to programs and services that meet the needs of our service district.

Objectives-Indicators
1.1 BBCC provides access to programs and services that meet the educational needs of our students and prospective students.
• 1.1a Inventory of programs, modalities, and services
• 1.1b Service area & student demographic data
• 1.1c Class fill rates, wait lists & cancellation data
• 1.1d Feedback from advisory committees

1.2 Use of services correlates with success, retention, and completion.
• 1.2a Course success, retention and completion rates
• 1.2b Use of service reports
• 1.2c Use of technology & resources

1.3 Students are prepared to graduate and to transfer or to seek employment.
• 1.3a Student Achievement Initiative (SAI) data
• 1.3b Retention & graduation rates
• 1.3c Transfer rates & transfer success rates
• 1.3d Employment & certification rates
• 1.3e Annual Assessment Report

The core theme of student success focuses on access to educational resources, correlating student activity with success, retention, and completion, and assuring that students leave BBCC with the preparation that they need for their next step, whether that is to transfer to a four-year institution or to enter the job market. Both internal and external data are collected annually, reported to the Board of Trustees and the college community, and assessed for effectiveness. The results of these assessments are used to make decisions for budgeting, program changes, and other measures.

Excellence in Teaching and Learning
Outcome: BBCC supports innovation, variety, and creativity; maintains high academic and industry standards; and supports professional development for continued growth.

Objectives-Indicators
2.1 BBCC implements innovation and creativity in programs and services.
• 2.1a Program audit, including best practices
• 2.1b Correlation of practices to success, retention, or completion

2.2 BBCC helps students attain high academic standards.
• 2.2a External certification rates
• 2.2b CCCSS data on academic challenge
• 2.2c NCCBP data on success rates
• 2.2d MRTE data on transfer success
• 2.2e Student/faculty ratio
• 2.2f Annual Assessment Report

2.3 BBCC supports professional development for faculty and staff in order to improve student engagement and outcomes.
• 2.3a Budgets for professional development
• 2.3b Attendance for professional development
• 2.3c Report on Professional/Technical Certification plans

The core theme of excellence in teaching and learning focuses on delivering innovative and successful programs, both in and out of the classroom, in order to help students achieve high academic standards. This requires ongoing professional development for faculty and staff, as well as ensuring that programs have adequate resources to implement best practices effectively. Internal and external data are collected annually, reported to the Board of Trustees and the college community, and assessed for effectiveness. The results of these assessments are used to make decisions for budgeting, program changes, and other measures.

Community Engagement
Outcome: BBCC supports economic development, nurtures community and industry partnerships, and acts as a responsible steward of resources.

Objectives-Indicators
3.1 BBCC works with community and industry partners to support economic development.
• 3.1a Inventory of active partnerships
• 3.1b Report on economic impact

3.2 BBCC works with K-12 & university partners to provide educational opportunities.
• 3.2a Inventory of current dual credit programs
• 3.2b Analysis of partnership opportunities

3.3 BBCC practices responsible use of resources, including fiscal and natural resources.
• 3.3a Budget process is tied to strategic goals
• 3.3b Inventory of sustainable practices is increasing

3.4 BBCC provides an inclusive environment for students, employees, and partners in order to sustain a vibrant community.
• 3.4a Training opportunities increase multicultural awareness and ability
• 3.4b Students, employees and partners report feeling welcome on campus
• 3.4c Data is disaggregated to show equivalent success for all student groups

The core theme of community engagement addresses the college’s partnerships with business and industry, K-12 and university partners, as well as other community and technical colleges, and the cultivation of an inclusive campus environment. It also addresses responsible stewardship of natural and fiscal resources. The reporting for community engagement also includes an annual summary report to the Board of Trustees from the Big Bend Community College Foundation on their activities and accomplishments for the year.

Overview 1-3

Facility Master Plan Update 2014
Overview

ACADEMIC MASTER PLAN

Board of Trustees’ Ends Statements
While the Core Themes address the three broad areas described in the mission statement and represent the primary measure of mission fulfillment, the Board of Trustees also establishes Ends Statements as part of the policy governance process. The Ends Statements give guidance to the president and college personnel with regard to specific areas of policy focus. The Ends Statements describe how the college expects the college to interact with and have an impact on our service district. There are six Ends Statements, as described below.

End 1: Mission
Big Bend Community College delivers lifelong learning through commitment to student success, excellence in teaching and learning, and community engagement.

End 2: Student Success
BBCC provides the diverse population of its entire district with access to opportunities, assists students in completion of their goals, and develops skills for lifelong learning.

End 3: Excellence in Teaching and Learning
BBCC supports innovation, variety, and creativity; maintains high academic and industry standards; and supports professional development for continued growth.

End 4: Community Engagement
BBCC supports economic development by nurturing community and industry partnerships and support to the college to enhance access and service to our district population.

End 5: Integrity and Stewardship
BBCC acts as a responsible steward of resources by promoting accountability, sustainability, ethics and honesty, and prudent resource management to provide quality and affordable resources to the diverse population of our service district.

End 6: Inclusion and Climate
BBCC provides and maintains a climate of inclusiveness for students, employees and partners by maintaining a safe learning environment and promoting cultural inclusiveness, understanding, and respect by embracing diversity, access, opportunity, and equality.

Monitoring Reports
BBCC has established a culture of evidence and uses data and assessment findings to inform planning and decision making. While this culture of evidence takes many forms on a day-to-day basis, the formal structure for tracking and publishing evidence is through the annual AMP monitoring reports. The first three monitoring reports below are compiled by the Institutional Research and Planning Office in conjunction with other college departments and focuses on a specific set of outcomes. The Budget and Safety Monitoring Reports are assembled through the office of Vice President for Financial and Administrative Services. The reports are then presented to the Board of Trustees and distributed to the college community.

The following Monitoring Reports will be presented to the Board of Trustees and the college community on an annual basis:
1. Community Engagement
2. Excellence in Teaching & Learning
3. Student Success/Mission Fulfillment
4. Budget
5. Safety

Additional Strategic Planning Tools
The AMP represents the guiding architecture for strategic planning and mission assessment at BBCC. In conjunction with the AMP, several other strategic documents outline annual goals and outcomes for specific aspects of the college.

Master Plan Background
The Facility Master Plan is a strategic effort to evaluate and identify the physical needs of the campus to support Big Bend’s academic mission and strategic vision. The current Facility Master Plan was rewritten in 2013-14 in order to align facility planning with the new mission statement, the Board’s Ends Statements, and the AMP.

The Facility Master Plan includes a number of components, including the history of the campus, internal and external needs for facility development and use, an assessment of current space availability and usage, an in-depth assessment of the conditions of current facilities, and a tentative schedule for future development of the physical plan of BBCC.

The Facility Master Plan establishes specific goals for use and development of the physical campus, in order to support the accomplishment of overall strategic planning goals.

Methodologies
During Facility Master Plan Update meetings, students and faculty were able to discuss the current conditions of the BBCC campus and share their vision for the future. Opportunities for growth were discussed, as well as identifying current campus deficiencies.

Five Facility Master Plan Goals were developed and a list of major and minor capital improvements were generated and prioritized.
GOAL #1
INCREASE STUDENT SUCCESS

Objectives:
1. Provide facilities that engage students in exploration and learning.
2. Create environments that celebrate programs and student success.
3. Encourage college readiness.
4. Provide 21st century facilities, technology, and equipment.
5. Provide resources, real world equipment, and supplies.
6. Create flexibility in the built environment, curriculum, technology, and degree or certificate completion.
7. Partner with other institutions, agencies, and educational providers to streamline processes and increase effectiveness.
8. Provide an appealing environment where students feel like they belong and want to spend time.
9. Provide space and program adjacencies that encourage exploration and expand student exposure.

Capital Projects:
1. Professional Technical Education Center
2. Allied Health, Wellness & Fitness
3. Computer Science/BBT
4. Global Learning Center
5. Aircraft Hangar Renovation
6. Performing Arts Building
7. Business Incubator 3300
8. Diesel & Agriculture
9. Student Housing

GOAL #2
OFFER STATE OF THE ART TEACHING AND LEARNING OPPORTUNITIES

Objectives:
1. Provide educational spaces that reflect current and future needs of area businesses and industries.
2. Provide flexible, properly sized, modern classrooms and labs that enhance current and future instructional methodologies.
3. Provide flexible, user-friendly technology campus wide and throughout Big Bend’s service district.
4. Provide informal learning areas that encourage student-to-student, student-to-faculty, and faculty-to-faculty interactions.
5. Provide continuous professional development through partnerships.
6. Provide learning space that aligns with real world learning and working environments.
7. Provide space for learning outside the classroom.

Capital Projects:
1. Professional Technical Education Center
2. Allied Health, Wellness & Fitness
3. Computer Science/BBT
4. Global Learning Center
5. Aircraft Hangar Renovation
6. Performing Arts Building
7. Business Incubator 3300
8. Diesel & Agriculture
9. Student Housing

Mission
Big Bend Community College delivers lifelong learning through commitment to student success, excellence in teaching and learning, and community engagement.

Vision
Big Bend Community College inspires every student to be successful.

Values
Student Success
Excellence in Teaching & Learning
Community Engagement
Integrity & Stewardship
Inclusion & Climate

Approved by the Board of Trustees 5/23/13

Core Themes
Student Success
Excellence in Teaching and Learning
Community Engagement

Approved by the Board of Trustees 6/14/13
GOAL #3
PROVIDE A SAFE, ACCESSIBLE AND SUSTAINABLE CAMPUS

Objectives:
1. Increase security by installing additional lighting, security cameras, and providing 24-hour security and mass notification.
2. For ADA compliance, provide accessibility and fire sprinklers in facilities.
3. Provide safe and accessible computer and tutoring labs throughout campus.
4. Provide technology that is easy to access campus wide.
5. Provide individual and group study areas that are flexible, safe, and secure.
6. Provide useful and aesthetically pleasing signage.
7. Increase use of public transportation.
8. Lower greenhouse admissions.

Capital Projects:
1. Professional Technical Education Center
2. Allied Health, Wellness & Fitness
3. Computer Science/BBT
4. Aircraft Hangar Renovation
5. Performing Arts Building
6. Global Learning Center
7. Business Incubator 3300
8. Diesel & Agriculture
9. Student Housing

GOAL #4
CREATE A SENSE OF CAMPUS IDENTITY

Objectives:
1. Create a user-friendly inviting campus with a central core, special places, and consistent landscaping.
2. Create more prominent entrances.
3. Enhance pedestrian experience.
4. Transform Big Bend’s image from that of “The Base” to a provider of excellence in higher education, technical education, and continuing education opportunities.
5. Move from being “Present and Relevant” to “Prominent and Essential.”
6. Define the campus edge with peripheral signage.
7. Represent building usage by building design.
8. Provide community recreational and collaborative spaces.
9. Develop image through unification and enforcement of construction standards.
10. Develop facilities that are inviting and reflect the traditions and culture of the campus.

Capital Projects:
1. Professional Technical Education Center
2. Allied Health, Wellness & Fitness
3. Computer Science/BBT
4. Global Learning Center
5. Aircraft Hangar Renovation
6. Performing Arts Building
7. Business Incubator 3300
8. Diesel & Agriculture
9. Student Housing

GOAL #5
EXPAND AND ENHANCE PARTNERSHIPS AND COLLABORATION. INCREASE COMMUNITY ENGAGEMENT.

Objectives:
1. Develop facilities that promote and celebrate Big Bend programs.
2. Create a more welcoming campus.
3. Strengthen K-12 outreach programs.
4. Feature Allied Arts and other cultural events.
5. Provide space that allows for regional and statewide meetings and training in a central location.
6. Develop and offer continuing education classes.
7. Design facilities that act as teaching tools.
8. Provide more on-campus events and activities that attract the community to campus.
9. Increase sense of community ownership in the college.
10. Create welcoming exterior gathering and reflection space.

Capital Projects:
1. Professional Technical Education Center
2. Allied Health, Wellness & Fitness
3. Computer Science/BBT
4. Global Learning Center
5. Aircraft Hangar Renovation
6. Performing Arts Building
7. Business Incubator 3300
8. Diesel & Agriculture
9. Student Housing
Colleges must provide environments that bring together the following partners:

- the development of collaborative partnerships.
- attainment and success.
- increased pride and engagement need to be developed at all levels of education.
- environments and activities that encourage innovation, continual improvement, and entrepreneurship. Space must be available to showcase success stories not only of students but also of local business and industry.

Environments must encourage exploration, innovation and the spirit of entrepreneurship. Space must be available to showcase success stories not only of students but also of local business and industry. In order to compete globally, great pride must develop. Successful competition requires continual improvement. To give America back its competitive edge, environments and activities that encourage innovation, continual improvement, increased pride and engagement need to be developed at all levels of education. Educators must collaborate and create multiple and modular pathways to career attainment and success.

The idea of specialization and clusters is gaining ground by focusing on highly concentrated strengths within regions. Regional clusters produce high-value products and services by concentrating on specific skill sets. Hubs of innovation are occurring in specific areas. Education must position itself to develop and serve innovation hubs and districts effectively as they emerge and grow.

Developing customized trainings or a series of trainings for individual companies will become more common. Students are demanding active, real-life, out-of-the-classroom learning experiences. There will be great demand for internships and apprenticeships. Close relationships between industry and educators must emerge.

Space must be created to unite students, educators, and industry. Celebration of successes should be felt by students, instructors, and those touring the campus. Mixed-use space that encourages out-of-the-classroom conversations should be strategically developed and placed.

Technology will continue to impact higher education. The increased accessibility of alternative learning should be leveraged to strengthen the college and stretch resources. On both a national and global level, courses will be available that instructors can use to increase value. Using this material as a resource will allow instructors to free the time necessary to engage in a more active hands-on learning practice. Instructors will move into an advisor and mentor role.

Learning environments must accommodate this shift. The move from traditional classrooms to active learning centers (ALCs) will impact campus planning for the foreseeable future. Campuses must integrate and provide value to the surrounding community. Colleges are becoming a central resource hub in many areas. Technological advancements and the need for skill upgrades are changing the way people think of education. Learning is becoming lifelong and to some extent recreational. Colleges are creatively designing environments and programs that allow for continual skill upgrades and multiple pathways to degree completion.

The College in Relationship to the State
Big Bend is located in Central Washington between Spokane and Seattle, just off of the main interstate (I 90). It is the ideal place for the two segments of the state to unite when holding conferences or trainings.

BBCC has created a conference center with an inviting cafeteria that allows it to meet the needs of most agendas. The conference center is well used and a valuable asset to the community. BBCC encourages outside industry use of this facility. Student exposure to various industry conventions is beneficial and allows students to gain insight into real world business practices and for instructors to stay at the forefront.

Competition throughout Washington state is leading to more student choice and opportunity. Community colleges throughout the state are developing Applied Bachelor degrees or teaming with four-year institutions to bring opportunities to place-bound students. An example of this is Western Governors University (WGU). WGU Washington is a Washington online university offering bachelor’s and master’s degrees to working adults.

The state is actively developing online resources to bring down the cost of textbooks and course materials for students. Washington state is focusing on removing barriers and providing all residents with the opportunity to achieve a college or technical education.

Additionally, Washington state has been systematically building regional K-12 skill centers. Skill centers expose students to technical education at an early age and assist them in developing the skills necessary to enter the workforce or continue their education at the college level.

Unfortunately, resources are scarce and spread pretty thin. Colleges throughout the state operate on continually shrinking budgets. Capital improvements are scarce, and most future capital funding will come from private donations. Creating strong ties with industry and creating sustainable multipurpose space that is easily adaptable to the changes occurring in industry will be mandatory if BBCC is to meet future community needs.
The College in Relationship to the Local Region and Workforce

Big Bend, demographically, is a Hispanic Serving Institution. Approximately 40% of its student body speaks English as a second language. Nation wide, college enrollment numbers in 2011 and 2012 went down. But for one group - Hispanics - enrollment actually increased. The 2012 census data shows upward trends in educational attainment and college attendance among Hispanic populations.

To improve service to this population, BBCC must create environments and activities that attract local residents and encourage them to spend time on campus. K-12 students should view the community college as their next educational step. Counselors and K-12 advisors should have space on campus where students can go for advice and information. Space should be easily understood and welcoming. The community college should be a place where people are excited to visit. It should feature and showcase local success stories, so that residents feel connected.

BBCC should provide activities that recruit students and instill pride. Athletics is a prime resource that needs further development. BBCC should host tournaments and offer summer athletic camps. Fitness and wellness courses should be available. College facilities should serve students and community members.

Additionally, the college should be the center of the arts. Theater, drama, and art shows should be featured throughout the year. The lines between college and community need to blur. The community college needs to be the heart and the center of the community. It needs to move from “present and relative” to “prominent and essential.”

College Background

Big Bend’s service district stretches over 4,600 square miles and complements thirteen K-12 school districts. The college believes in a high-tech philosophy.

The college works directly with K-12, Economic Development Agencies, and local ports to increase the economic vitality of the region. Great care is taken to develop programs and outreach methodologies that meet the region’s business and industry requirements.

BBCC is slowly redeveloping its campus from an Air Force base into a welcoming state-of-the-art higher learning environment that encourages learning and the sharing of information. To increase offerings and better serve place-bound students, the college leases space to Central Washington University and Heritage University, so that students can reach their educational goals.

Big Bend is also developing hybrid and e-learning opportunities to overcome distance barriers. Many potential students are unable to attend classes on a day-to-day basis. Through careful research and planning, Big Bend is developing outreach centers and hybrid programs to offer high-quality educational programs to all service-district residents.

The College in Relationship to Current Educational Trends

Instructor roles are quickly moving toward becoming facilitators of learning and may even move more toward a partner or mentor role. They will mentor students and lead them through project-based learning and experiences. Accessing needed resources and working in collaboration with K-12, community, business and industry, and higher education will lead to a more learner-centered educational experience.

Learner-centered facilities must:

- Be multi-functional and flexible
- Be quickly adaptable
- Offer accessibility
- Foster interdisciplinary collaborations
- Integrate education and research
- Encourage small and large group interactions outside of the classroom
- Combine academic and student life
- Offer interior and exterior environments for reflection and learning
- Encourage use of technology
- Integrate use of technology
- Encourage wide ranging and cross-disciplinary knowledge

As we move further into the 21st Century, these trends will continue to increase in importance. Students are actively taking control of their education and demanding meaningful and relevant educational experiences. Students no longer want to sit in class and listen to a lecture. They want to be involved in problem solving and meaningful discussions.

The student population is becoming increasingly diverse in race, ethnicity, religion, education, and age. Instructors are serving students from different backgrounds and generations. Millennials expect customized active collaborative learning. Generation X and Baby Boomers are more comfortable with traditional lecture.

Instructors must simultaneously incorporate lectures, education experience, student interaction and technology. Facilities must complement modern day instruction by being adaptable, flexible and able to serve multiple purposes.

Technology Impact

Technology has enabled students to learn anytime and anywhere. Students are beginning to demand educational opportunities that bend around their schedules. This is beginning to blur the traditional quarter and semester-based education and call for opportunities that are more in pace with the student’s abilities, prior learning and current schedule. Customizing learning opportunities will occur at all
Upcoming High School Students
Typically, 30% of area high school students choose to start their educational careers at community colleges. Of the 13 school districts in Big Bend service district, over 30% of students in five districts choose to attend Big Bend. Over 50% of Moses Lake School Districts students and 70% of Soap Lakes students choose Big Bend. The following table forecasts Big Bend’s Service Districts upcoming graduates:

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Soap Lake</td>
<td>30%</td>
<td>34%</td>
<td>36%</td>
<td>34%</td>
<td>32%</td>
<td>31%</td>
</tr>
<tr>
<td>Moses Lake</td>
<td>53%</td>
<td>55%</td>
<td>57%</td>
<td>63%</td>
<td>66%</td>
<td>67%</td>
</tr>
<tr>
<td>Warden</td>
<td>40%</td>
<td>37%</td>
<td>33%</td>
<td>32%</td>
<td>26%</td>
<td>27%</td>
</tr>
<tr>
<td>Ephrata</td>
<td>37%</td>
<td>41%</td>
<td>46%</td>
<td>48%</td>
<td>53%</td>
<td>52%</td>
</tr>
<tr>
<td>Royal</td>
<td>35%</td>
<td>37%</td>
<td>39%</td>
<td>35%</td>
<td>32%</td>
<td>34%</td>
</tr>
<tr>
<td>Quincy</td>
<td>30%</td>
<td>28%</td>
<td>26%</td>
<td>24%</td>
<td>24%</td>
<td>25%</td>
</tr>
<tr>
<td>Othello</td>
<td>40%</td>
<td>43%</td>
<td>45%</td>
<td>50%</td>
<td>53%</td>
<td>52%</td>
</tr>
<tr>
<td>Wahluke</td>
<td>28%</td>
<td>27%</td>
<td>26%</td>
<td>27%</td>
<td>26%</td>
<td>25%</td>
</tr>
<tr>
<td>Odessa</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Coulee-Hartline</td>
<td>9%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Lind</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Ritzville</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Wilson Creek</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total Students</td>
<td>545</td>
<td>534</td>
<td>504</td>
<td>533</td>
<td>521</td>
<td>574</td>
</tr>
</tbody>
</table>

Barriers to Education
Overcoming student barriers to access is essential. Colleges have found that most students discontinue going to school due to financial pressures. Barriers include:
- Financial pressures
- Cost of textbooks
- Cost of tuition
- Work responsibilities
- Family responsibilities
- Developmental courses
- High school preparation weak
- Lack of family encouragement
- Limited English language ability

Top 7 Trends in Community College Education
(According to Community College Review)
1. Increased distance learning
2. Greater number of Baccalaureate degrees awarded
3. Increased partnerships between community colleges and four-year institutions
4. Greater recruiting of baby boomers (those over 50)
5. Increased enrollment across different student groups
6. Increased partnerships with business
7. Increased response to globalization
Environmental Scan

DEMOGRAPHICS

Population Growth
Big Bend Community College serves Grant and Adams counties and Odessa School District in Lincoln County. The area consists of over 4,600 square miles. In 2013, Grant County had a population of 91,878 residents, 17.5% more than the 2003 population of 78,148. During this same period Adams County experienced 16% growth, growing from a population of 16,425 in 2003 to a population of 19,067 in 2013.

According to the Washington state Office of Financial Management medium series population projection between the years of 2015 and 2035, Grant County will experience 35.4% (1.75% per year) growth, and Adams County will experience a growth rate of 38.5% (1.93% per year).

Households By Income (2010 U.S. Census Bureau)
The median per-capita income in 2012 for Grant County was $19,738 compared to the Washington state average per-capita income of $30,742. In Adams County the 2012 per-capita income was $16,940 (quickfacts.census.gov).

The median household income between the years of 2008-12 for Grant County was $46,312.60, considerably lower than the Washington state average of $59,374. Adams County shows a median household income of $41,798 this is $17,576 below the state average. Additionally, almost 20% of Grant and 23% of Adams counties populations live below the poverty level.

Over 38% of Grant County’s population is of Hispanic or Latino origin, and 33% speak another language other than English in the home. In Adams County 61.4% are of Hispanic or Latino origin with over 50% speaking a language other than English in the home.

Student Age Profile
Nationally, the average community college student is 29 years old. At BBCC the majority of transfer students are in their lower twenties. The age of technical education students varies with 21% of students under the age of 20 and 46% over the age of 24.

Sixty-six (66%) percent of adult basic education and fifty-three (53%) percent of transfer students are over the age of 25.

Students Enrollment Full-Time or Part-Time
Technical education students are more likely than transfer students to be enrolled full-time. For the 2013-14 calendar year, 40% of transfer students were enrolled part-time and 60% were enrolled full-time.

Seventy percent (70%) of transfer students are employed part-time, and twenty-three (23%) are employed full-time.
Environmental Scan

DEMOGRAPHICS

Educational Attainment

Grant and Adams counties have lower than average levels of educational attainment. Unfortunately, the numbers are on a downward trend creating a growing urgency.

The 2008 Educational Needs Index, measuring the need for education attainment, conducted in Washington state, ranked Grant and Adams counties as critical. The report takes into account regions of the state that can be identified as undereducated, facing economic challenges, experiencing population growth, and shifting demographics.

Currently, 76.1% of Grant County’s population age 25 years and older holds a high school diploma or equivalent. This compares to the state’s average rate of 90.4% and the nation’s rate of 85.4%. Adams County’s rate is 67.5%.

Additionally, in 2012 only 14.6% of Grant County and 14% of Adams County residents age 25 and older hold a bachelor’s degree or higher, in comparison to 31.9% for Washington state residents.

Homeownership

Homeownership in Grant County is 60.5% with a median value of $154,700. The average house in Washington state is valued at $262,100.

Adams County has a homeownership rate of 65.9%.

Population Growth

As of 2010, Grant County’s population was 89,120, which has grown 19.31% since 2000. The population growth rate is higher than the state average rate of 14.09% and is much higher than the national average rate of 9.71%. Adams County’s population is 18,728, which shows a growth rate of 14.00% since the year 2000.

Growing Industries in Grant County

Between 2004 and 2013, wages for the county increased from $821 Million to $1.3 Billion, a 59% increase. The following five (5) employment sectors accounted for over 66% of the growth:

- Local Government
- Agriculture
- Manufacturing
- Retail Trade
- Wholesale Trade

Growing Industries in Adams County

In 2012, the following industries provided 74% of employment in Adams County:

- Agriculture
- Local Government
- Manufacturing
- Retail Trade
- Health Services

Agriculture continues to be the fastest growing employment sector. The food and accommodation industry is a declining industry, falling from 6.1% in 2007 to 5% in 2012.

Unemployment rates, not seasonally adjusted, in Grant County (Moses Lake MSA) and Adams County.
Environmental Scan
REGION EMPLOYMENT

Employment in the Region
The Grant County region is known for its excellence in the aerospace industry. It features an airport and landing strip surrounded by an infrastructure and an education system that are positioned for growth. Grant County has been attracting both national and international interest. Companies are relocating or expanding in the region due to the abundance of available land and low electricity rates.

According to the Washington Economic Development Commission (WEDC) and the Workforce Training and Education Coordinating Board, the Grant County region has a competitive advantage in both Agriculture and Food Products. Adams County has a new study that shows distribution centers and food processing are key industries. Central Washington is known as region WDA 8, and the Cluster Methodology recommends that the region focus on developing the following strategic industry clusters:

1. Waste Management and Remediation
2. Health Care Services
3. Physical Science Research and Development
4. Agriculture and Food Processing
5. Advanced Manufacturing
6. Business Support Services

Industry clusters are geographically concentrated in regions and feature several businesses and industries that regularly collaborate to bring products to market. The state’s strategy is to concentrate on developing these industries and provide skilled workers to these fields so that they can have a positive effect on increasing productivity and economic growth in other fields.

Grant County Economic Development Council
The Grant County Economic Development Council (GCEDC) has identified the following Key Industries for the area:
- Aerospace
- Ag/Food Processing
- Data Centers
- Manufacturing
- Retail

GCEDC is actively growing these industries through collaborative efforts with BBCC and surrounding businesses and industries.

Healthcare
Additionally, the region is a healthcare hub and experiencing growth in specialized health services. Demand for radiologists, physical therapists, nutritionists and EMT/Paramedics is on the rise. Technologists capable of servicing various medical types of equipment are also in high demand.

According to WEDC, the industries shown above have the largest impact on the economic development of central Washington.

Location Quotient (LQ) measures the concentration of regional employment in an industry relative to the nation.

Middle and High Wage Jobs by Cluster in WDA 8

<table>
<thead>
<tr>
<th>Cluster</th>
<th>All Employment</th>
<th>Middle Wage Jobs</th>
<th>Percent Middle Wage Jobs</th>
<th>High Wage Jobs</th>
<th>Percent High Wage Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture &amp; Food Products</td>
<td>23,708</td>
<td>22,422</td>
<td>95%</td>
<td>598</td>
<td>3%</td>
</tr>
<tr>
<td>Cut Stone production</td>
<td>489</td>
<td>24</td>
<td>5%</td>
<td>86</td>
<td>18%</td>
</tr>
<tr>
<td>Forest Products</td>
<td>773</td>
<td>202</td>
<td>26%</td>
<td>89</td>
<td>12%</td>
</tr>
<tr>
<td>Gambling &amp; Recreation</td>
<td>1,060</td>
<td>684</td>
<td>65%</td>
<td>451</td>
<td>43%</td>
</tr>
<tr>
<td>Other Ambulatory Health Care</td>
<td>1,061</td>
<td>532</td>
<td>50%</td>
<td>451</td>
<td>43%</td>
</tr>
<tr>
<td>Cluster Total</td>
<td>27,091</td>
<td>23,864</td>
<td>88%</td>
<td>1,257</td>
<td>5%</td>
</tr>
<tr>
<td>All Industries</td>
<td>110,433</td>
<td>70,696</td>
<td>64%</td>
<td>17,818</td>
<td>16%</td>
</tr>
<tr>
<td>Clusters as % of All Industries</td>
<td>25%</td>
<td>34%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The SBCTC Data Warehouse contains the following student earnings information after their first year of graduating or earning certification:

### High-Wage Jobs

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Median Wages</th>
<th>Median Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airframe/Power Plant</td>
<td>$15.93</td>
<td>$30,137</td>
</tr>
<tr>
<td>Associate Degree Nurse</td>
<td>$28.11</td>
<td>$50,306</td>
</tr>
<tr>
<td>Computer Maintenance Tech</td>
<td>$14.82</td>
<td>$24,605</td>
</tr>
<tr>
<td>Construction Trades</td>
<td>$15.40</td>
<td>$24,000</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>$40.94</td>
<td>$54,496</td>
</tr>
<tr>
<td>Dental Lab Tech</td>
<td>$16.31</td>
<td>$25,988</td>
</tr>
<tr>
<td>Drafting</td>
<td>$16.76</td>
<td>$31,984</td>
</tr>
<tr>
<td>Electrical Equipment Repair</td>
<td>$18.19</td>
<td>$29,862</td>
</tr>
<tr>
<td>Electronics Technology</td>
<td>$17.55</td>
<td>$34,807</td>
</tr>
<tr>
<td>Engineering Technology</td>
<td>$18.55</td>
<td>$34,872</td>
</tr>
<tr>
<td>Industrial Technology</td>
<td>$18.33</td>
<td>$50,698</td>
</tr>
<tr>
<td>Information Technology</td>
<td>$16.02</td>
<td>$31,984</td>
</tr>
<tr>
<td>Legal/Real Estate Services</td>
<td>$17.55</td>
<td>$34,807</td>
</tr>
<tr>
<td>Machinist</td>
<td>$18.34</td>
<td>$21,790</td>
</tr>
<tr>
<td>Medical Lab Tech/Histologic</td>
<td>$19.51</td>
<td>$25,988</td>
</tr>
<tr>
<td>Medical X-Ray</td>
<td>$16.31</td>
<td>$25,988</td>
</tr>
<tr>
<td>Health Tech (radiology tech, ERG tech, denture tech, hemodialysis tech, etc)</td>
<td>$20.54</td>
<td>$36,891</td>
</tr>
<tr>
<td>Paramedic EMT, Operating Tech</td>
<td>$17.99</td>
<td>$33,725</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>$21.12</td>
<td>$38,481</td>
</tr>
<tr>
<td>Practical Nurse</td>
<td>$20.08</td>
<td>$35,496</td>
</tr>
<tr>
<td>Precision, Production, Crafts</td>
<td>$16.31</td>
<td>$25,988</td>
</tr>
<tr>
<td>Protective Services</td>
<td>$16.23</td>
<td>$25,988</td>
</tr>
<tr>
<td>Transportation Operators</td>
<td>$15.41</td>
<td>$26,099</td>
</tr>
<tr>
<td>Welding</td>
<td>$20.49</td>
<td>$36,948</td>
</tr>
</tbody>
</table>

### Medium-Wage Jobs

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Median Wages</th>
<th>Median Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>$14.90</td>
<td>$24,987</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fisheries</td>
<td>$13.67</td>
<td>$26,066</td>
</tr>
<tr>
<td>Auto Diesel</td>
<td>$13.39</td>
<td>$23,703</td>
</tr>
<tr>
<td>Commercial &amp; Graphic Art</td>
<td>$13.33</td>
<td>$24,000</td>
</tr>
<tr>
<td>Dental Assisting</td>
<td>$14.97</td>
<td>$19,072</td>
</tr>
<tr>
<td>Managerial Support</td>
<td>$16.33</td>
<td>$25,221</td>
</tr>
<tr>
<td>Marketing &amp; Sales</td>
<td>$14.49</td>
<td>$24,848</td>
</tr>
<tr>
<td>Medical Assisting</td>
<td>$13.79</td>
<td>$23,505</td>
</tr>
<tr>
<td>Health-Related Assistance</td>
<td>$14.83</td>
<td>$22,258</td>
</tr>
<tr>
<td>Health Services</td>
<td>$14.37</td>
<td>$21,790</td>
</tr>
<tr>
<td>Technical</td>
<td>$13.90</td>
<td>$23,341</td>
</tr>
<tr>
<td>Pharmacy Assisting</td>
<td>$14.11</td>
<td>$24,393</td>
</tr>
</tbody>
</table>

### Low-Wage Jobs

<table>
<thead>
<tr>
<th>Field of Study</th>
<th>Median Wages</th>
<th>Median Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Support</td>
<td>$12.97</td>
<td>$21,790</td>
</tr>
<tr>
<td>Cosmetology</td>
<td>$11.10</td>
<td>$15,847</td>
</tr>
<tr>
<td>Culinary Arts</td>
<td>$12.00</td>
<td>$18,281</td>
</tr>
<tr>
<td>Early Childhood Education</td>
<td>$12.55</td>
<td>$20,502</td>
</tr>
<tr>
<td>Nursing Assistant</td>
<td>$11.37</td>
<td>$18,302</td>
</tr>
<tr>
<td>Social Services</td>
<td>$13.75</td>
<td>$23,343</td>
</tr>
<tr>
<td>Teaching/Library Assistant</td>
<td>$12.16</td>
<td>$16,471</td>
</tr>
<tr>
<td>Veterinarian Assistant</td>
<td>$13.01</td>
<td>$23,246</td>
</tr>
</tbody>
</table>
## Fastest Growing Career Fields (Annual openings per year)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>00-0000</td>
<td>Total, All Occupations</td>
<td>127,594</td>
<td>137,230</td>
<td>143,906</td>
<td>1.5%</td>
<td>1.0%</td>
<td>1,898</td>
<td>1,304</td>
<td>5,262</td>
<td>4,748</td>
<td>$18.89</td>
</tr>
<tr>
<td>15-0000</td>
<td>Computer and Mathematical Occupations</td>
<td>790</td>
<td>865</td>
<td>913</td>
<td>1.8%</td>
<td>1.1%</td>
<td>11</td>
<td>9</td>
<td>26</td>
<td>25</td>
<td>$29.08</td>
</tr>
<tr>
<td>23-0000</td>
<td>Legal Occupations</td>
<td>416</td>
<td>451</td>
<td>482</td>
<td>1.6%</td>
<td>1.3%</td>
<td>6</td>
<td>6</td>
<td>13</td>
<td>14</td>
<td>$29.67</td>
</tr>
<tr>
<td>11-0000</td>
<td>Management Occupations</td>
<td>4,656</td>
<td>5,028</td>
<td>5,267</td>
<td>1.5%</td>
<td>0.9%</td>
<td>71</td>
<td>48</td>
<td>163</td>
<td>163</td>
<td>$44.23</td>
</tr>
<tr>
<td>17-0000</td>
<td>Engineering Occupations</td>
<td>1,217</td>
<td>1,321</td>
<td>1,379</td>
<td>1.7%</td>
<td>0.9%</td>
<td>23</td>
<td>10</td>
<td>48</td>
<td>42</td>
<td>$31.77</td>
</tr>
<tr>
<td>21-0000</td>
<td>Community and Social Service Occupations</td>
<td>1,396</td>
<td>1,487</td>
<td>1,570</td>
<td>1.3%</td>
<td>1.1%</td>
<td>16</td>
<td>16</td>
<td>50</td>
<td>54</td>
<td>$20.63</td>
</tr>
<tr>
<td>19-0000</td>
<td>Life, Physical, and Social Science Occupations</td>
<td>1,452</td>
<td>1,498</td>
<td>1,529</td>
<td>0.6%</td>
<td>0.4%</td>
<td>8</td>
<td>4</td>
<td>56</td>
<td>57</td>
<td>$22.48</td>
</tr>
<tr>
<td>31-0000</td>
<td>Healthcare Support Occupations</td>
<td>2,613</td>
<td>2,946</td>
<td>3,258</td>
<td>2.4%</td>
<td>2.0%</td>
<td>65</td>
<td>60</td>
<td>112</td>
<td>126</td>
<td>$13.52</td>
</tr>
<tr>
<td>13-0000</td>
<td>Business and Financial Operations Occupations</td>
<td>2,418</td>
<td>2,626</td>
<td>2,749</td>
<td>1.7%</td>
<td>0.9%</td>
<td>41</td>
<td>24</td>
<td>91</td>
<td>83</td>
<td>$29.82</td>
</tr>
<tr>
<td>19-0000</td>
<td>Computer and Mathematical Occupations</td>
<td>790</td>
<td>865</td>
<td>913</td>
<td>1.8%</td>
<td>1.1%</td>
<td>11</td>
<td>9</td>
<td>26</td>
<td>25</td>
<td>$29.08</td>
</tr>
<tr>
<td>23-0000</td>
<td>Legal Occupations</td>
<td>416</td>
<td>451</td>
<td>482</td>
<td>1.6%</td>
<td>1.3%</td>
<td>6</td>
<td>6</td>
<td>13</td>
<td>14</td>
<td>$29.67</td>
</tr>
<tr>
<td>00-0000</td>
<td>Total, All Occupations</td>
<td>127,594</td>
<td>137,230</td>
<td>143,906</td>
<td>1.5%</td>
<td>1.0%</td>
<td>1,898</td>
<td>1,304</td>
<td>5,262</td>
<td>4,748</td>
<td>$18.89</td>
</tr>
<tr>
<td>15-0000</td>
<td>Computer and Mathematical Occupations</td>
<td>790</td>
<td>865</td>
<td>913</td>
<td>1.8%</td>
<td>1.1%</td>
<td>11</td>
<td>9</td>
<td>26</td>
<td>25</td>
<td>$29.08</td>
</tr>
<tr>
<td>23-0000</td>
<td>Legal Occupations</td>
<td>416</td>
<td>451</td>
<td>482</td>
<td>1.6%</td>
<td>1.3%</td>
<td>6</td>
<td>6</td>
<td>13</td>
<td>14</td>
<td>$29.67</td>
</tr>
</tbody>
</table>
### Largest Healthcare Employers - Updated June 2014

<table>
<thead>
<tr>
<th>Company</th>
<th>City</th>
<th>Product or Service</th>
<th>NAICS</th>
<th>FTEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confluence Health</td>
<td>Moses Lake</td>
<td>Health Care</td>
<td>62111</td>
<td>260</td>
</tr>
<tr>
<td>Columbia Basin Hospital</td>
<td>Ephrata</td>
<td>Health Care</td>
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<td>Samaritan Healthcare</td>
<td>Moses Lake</td>
<td>Healthcare</td>
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<td>AstaReal</td>
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<td>Pharmaceutical</td>
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<td>55</td>
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<td>Samaritan Healthcare</td>
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<td>Pharmaceutical</td>
<td>325400</td>
<td>55</td>
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<tr>
<td>Western Polymer Corp.</td>
<td>Moses Lake</td>
<td>Potato Starch</td>
<td>31121</td>
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</table>

### Largest Government Employers - Updated June 2014

<table>
<thead>
<tr>
<th>Company</th>
<th>City</th>
<th>Product or Service</th>
<th>NAICS</th>
<th>FTEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moses Lake School District</td>
<td>Moses Lake</td>
<td>Education</td>
<td>61111</td>
<td>951</td>
</tr>
<tr>
<td>Grant County PUD</td>
<td>Ephrata</td>
<td>Electric Utility</td>
<td>92613</td>
<td>722</td>
</tr>
<tr>
<td>Grant County Government</td>
<td>Ephrata</td>
<td>Government</td>
<td>92114</td>
<td>633</td>
</tr>
<tr>
<td>Quincy School District</td>
<td>Quincy</td>
<td>Education</td>
<td>61111</td>
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<tr>
<td>Ephrata School District</td>
<td>Ephrata</td>
<td>Education</td>
<td>61111</td>
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<tr>
<td>Big Bend Community College</td>
<td>Moses Lake</td>
<td>Education</td>
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### Largest Manufacturing - Updated June 2014

<table>
<thead>
<tr>
<th>Company</th>
<th>City</th>
<th>Product or Service</th>
<th>NAICS</th>
<th>FTEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genie Industries, Inc.</td>
<td>Moses Lake</td>
<td>Ariel Work Platforms</td>
<td>33392</td>
<td>1400</td>
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<tr>
<td>REC Silicon</td>
<td>Moses Lake</td>
<td>Polysilicon Manufacturing</td>
<td>45299</td>
<td>450</td>
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<tr>
<td>Takata Corporation</td>
<td>Moses Lake</td>
<td>Automotive Air Bags</td>
<td>33639</td>
<td>353</td>
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<tr>
<td>D &amp; L Foundry, Inc.</td>
<td>Moses Lake</td>
<td>Manhole Cover Manufacturing</td>
<td>33151</td>
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<tr>
<td>SGL Automotive Carbon Fiber</td>
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<td>Carbon Fiber</td>
<td>33590</td>
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<tr>
<td>Eldorado Stone</td>
<td>Royal City</td>
<td>Stone &amp; Brick Processing</td>
<td>32799</td>
<td>100</td>
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<td>International Paper</td>
<td>Moses Lake</td>
<td>Corrugated Box Manufacturing</td>
<td>32221</td>
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<td>Celite Corp.</td>
<td>Quincy</td>
<td>Mineral Processing</td>
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<td>Moses Lake</td>
<td>Electrolitic Aluminium Foil</td>
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### Largest Agriculture - Updated June 2014

<table>
<thead>
<tr>
<th>Company</th>
<th>City</th>
<th>Product or Service</th>
<th>NAICS</th>
<th>FTEs</th>
</tr>
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<tbody>
<tr>
<td>Moses Lake Industries, Inc.</td>
<td>Moses Lake</td>
<td>Corp Headquarters &amp; Industrial Chemicals</td>
<td>32518</td>
<td>240</td>
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<tr>
<td>Eckenberg Hay</td>
<td>Mattawa</td>
<td>Hay Cubes</td>
<td>31111</td>
<td>60</td>
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<tr>
<td>El Oro Agribee</td>
<td>Warden</td>
<td>Cattle Feed</td>
<td>31111</td>
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<td>Wahluke Produce</td>
<td>Mattawa</td>
<td>Agricultural See Processing</td>
<td>11511</td>
<td>50</td>
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<tr>
<td>Akzo Hoebl Pulp &amp; Performance Pharmaceuticals Inc.</td>
<td>Moses Lake</td>
<td>Sodium Chloride</td>
<td>32518</td>
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<tr>
<td>Western Polymer Corp.</td>
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### Largest Food Processing - Updated June 2014

<table>
<thead>
<tr>
<th>Company</th>
<th>City</th>
<th>Product or Service</th>
<th>NAICS</th>
<th>FTEs</th>
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</thead>
<tbody>
<tr>
<td>LambWeston/BSW</td>
<td>Warden</td>
<td>Frozen Potato Processing</td>
<td>31141</td>
<td>500</td>
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<tr>
<td>ConAgra Foods, Inc.</td>
<td>Quincy</td>
<td>Frozen Potato Processing</td>
<td>31141</td>
<td>460</td>
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</table>
Institutional Research
The Institutional Research and Planning Department at Big Bend Community College designs, administers, and analyzes studies and surveys in an effort to track college enrollment, strategic planning progress, institutional effectiveness, educational outcomes, and capital needs. Information gathered is used to assist the college in continual improvement.

Student Enrollment
Over the last few years, the college has monitored the following trends in enrollment:

- Increase in Running Start students
- Average college age is dropping
- Slight decrease in professional-technical education enrollment
- Increase in academic student enrollment
- Increased interest in STEM Programs

Enrollment for 2013-14 state-funded FTEs was 1,681.2. Enrollment for 2006-07 was 1,536.3.

Distance Education
Recognizing the obstacles of time and location, BBCC offers classes during the day and evenings to make education services accessible to working students. Moreover, students may take classes via different distance learning delivery systems, so they do not have to travel to Moses Lake. Extension sites and services enable students to continue their education by linking distant service areas to Big Bend’s main campus. Courses available at distant learning sites include Adult Basic Education (ABE), General Education Development (GED) preparation, and English as a Second Language (ESL) classes. The local site assists students with getting access to services such as degree planning, registrations, textbook ordering, and scholarship/grant applications.

Partnership sites include:
- Grant County
- George
- Mattawa
- Othello
- Quincy
- Royal City
- Soap Lake
- Warden

Higher Education Opportunities on Campus
Time and distance create barriers to student’s achieving four-year degrees. To overcome this barrier, BBCC has teamed with Central Washington University and Heritage University.

Central Washington University
CWU-Moses Lake is located at Big Bend Community College in Moses Lake, Washington. This partnership provides the opportunity for students to earn their first two years of a bachelor’s degree at Big Bend Community College and stay on campus to complete their bachelor’s degree at CWU-Moses Lake.

Programs include:
- BS/BAS Information Technology and Administrative Management
- BS Aviation Management
- BS Professional Pilot
- BS Interdisciplinary Studies - Social Science

Heritage University
Heritage University offers programs to help students turn their associate’s degree into a bachelor’s or earn a master’s degree right on the BBCC campus in Moses Lake.

Programs include:
- Bachelor of Arts in Education with ELL endorsement
- Bachelor of Social Work
- Bachelor of Arts in Early Childhood Studies

Graduate:
- Master’s in Teaching

STUDENT'S FAMILY STATUS

ACADEMIC FIRST GENERATION
Running Start
The number of students choosing to attend BBCC during their high school years is steadily increasing. BBCC has worked closely with area high schools to create an accessible program that allows students to experience high school life while earning college credits.

Student Services
Student success is the core of Big Bend’s Mission. The role of Student Services is to increase student success. Over the last decade improvements have been made to the Administration Building that houses Student Services.

Improvements have focused on creating a welcoming, easily understood, and accessible environment. Future renovations will remove walls and create an environment that is student focused and streamlines processes. Currently, doors create an unwelcoming disconnect that is seen as a barrier to increasing contact with students.

Community Knowledge Centers (CKC)
With the assistance of two Title V grants and staff services from WA Campus Compact, Big Bend Community College increased access to instruction and support in rural and isolated areas within the BBCC service district at Community Knowledge Centers (CKC). The purpose of a CKC is to provide one central location that will serve a number of needs in each of the communities.

Partnerships with local organizations create an environment that fosters learning in each community, complete with wireless internet access and netbook loans for BBCC students through the college Student Success Center.

Basic computer skill workshops were developed and CKCs are now operating in the following locations:

- Grand Coulee
- Mattawa
- Othello
- Quincy
- Ritzville
- Warden
- Wilson Creek

The opportunity to achieve a GED, associate’s, bachelor’s, or master’s degree is available to everyone in the BBCC service district. Many may lack direct access to the campus or the necessary resources. College officials are making a good-faith effort with limited resources to connect with current and future students who have a desire to further their education through campus distance delivery.

Community Knowledge Centers will offer or have access to:
- Interactive classes
- Online courses
- Tutoring, advising, and other enrichment resources

TRIO-SSS (STUDENT SUPPORT SERVICE)
For over 30 years, the TRIO-SSS-Student Support Service Program at Big Bend Community College has had the pleasure of serving many students by providing academic guidance, as well as the opportunity to participate in social, cultural, and career-related activities.

- The TRIO-SSS Program is designed to assist and encourage students to aspire to achieve their goals and successfully complete their degree programs. The TRIO-SSS team is committed to assisting students with a smooth transition to the next step in their education or career and mapping out the pathway for a successful future. The TRIO-SSS team assists students in overcoming the challenges and barriers of higher education, while giving students the support they need to accomplish their goals.

Counseling Center
The Counseling Center offers personal, confidential, professional assistance to students. It is open to all BBCC students in all programs. The student may meet with the counselor of his or her choice.

Counselors use a “whole person” approach in their work. Students often find that certain personal issues need to be addressed in order to take full advantage of all the college has to offer. Counselors help students explore options and teach them to make better decisions to further their education.

Peer Mentoring Program
BBCC uses peer-to-peer advocacy programs and service learning projects to assist students in adapting and navigating the college system, as well as developing a higher level of engagement with peers, the BBCC campus, and the surrounding community. Mentor programs assist students in their academic and social transition into college. Mentors promote academic excellence, encourage the development of student relationships with other students and staff, raise awareness of campus resources and events, and provide ongoing encouragement and guidance throughout the year.

Tutoring Programs
The Student Success Center (SSC) offers Tutoring Programs that assist students to identify and develop strategies that support learning and enhance academic performance as well as to inspire students to become confident, independent learners prepared to meet academic challenges.

- Peer Tutoring
- Supplemental Instruction

The SSC highly supports students to use every means possible to be successful in a class. Students are encouraged to:

- Make regular use of their instructor’s office hours to ask for help working through the things they don’t understand.
- Talk to other students in their class about forming a study group. Study rooms are available in the library or the SSC.
- Access other academic resources on campus such as English Skills Lab, Math/Science Resource Center, Supplemental Instruction (SI), and eTutoring.
- Make use of free online BBCC Emporium Resources: Math Model videos, Khan Academy, Purplecow, Math TV.com, etc.
Job & Career Fair
The Job & Career Fair is a partnering event between Big Bend Community College, Moses Lake WorkSource, WA State Employment Security, SkillSource, Adams County Development Council, Grant County Economic Development Council, and other organizations. The Big Bend Community College Job & Career Fair provides a central location for job seekers to meet employers and a place for visitors to learn about career opportunities. By participating in this event, exhibitors have the opportunity to connect with prospective employees who may help their organization reach its staffing goals.

Residence Halls
Big Bend Community College Residence Halls provide affordable on-campus housing, with a strong emphasis on safety, hygiene, student comfort, and support of academic achievement and success. Each room is approximately 10’ x 16’, furnished with two thin extra-long beds, desks, chairs, and generous storage space. Rooms in Philip’s Hall also have bookcases. Each room has air conditioning.

Student safety is a priority. BBCC has night-time Security Officers within the halls, and the parking area is well monitored with high-resolution security cameras. Each floor also has a Resident Assistant.

Academic Programs
- Accounting
- Adult Basic Education
- Citizenship
- English as a Second Language
- G.E.D.
- High School Completion
- I-BEST
- Agriculture
- Aircraft Rescue Fire & Fighting
- Anthropology
- Art
- Automotive Technology
- Aviation
- Helicopter Training Program
- Aviation Maintenance Technology
- Biology
- Botany
- Business Accounting & Finance
- Business Information Management
- Chemistry
- Commercial Driver’s License
- Computer Science
- Criminal Justice
- Distance Learning (eLearning)
- Early Childhood Education
- Economics
- Engineering
- English
- History
- Industrial Systems Technology
- Industrial Electrical Technology
- Maintenance Mechanics Technology
- Mechanized Irrigation System Technology (MIST)
- International Students
- Japanese Agricultural Training Program (JATP)
- Mathematics
- Medical Assistant
- Music
- Nursing
- Philosophy
- Physical Education
- Physics
- Political Science
- Programs of Study
- Psychology
- Religious Studies
- Running Start
- STEM Center
- Sociology
- Upward Bound
- Welding

Student Clubs
- Aviation Club
- Brazilian Jiu-Jitsu Club
- Engineering Club
- Gay Straight Alliance
- LDSSA Club
- L.I.G.H.T
- M.E.Ch.A
- Nursing Club
- Phi Theta Kappa
- Sports Club
- Students Supporting Students Club
- Swing Club
- Veterans Club
- Welding Club

Technology
Big Bend is actively building a technology infrastructure that increases its capacity and ability to serve students throughout its 4,600-mile service area.

Additionally, technology is being used to increase student success. Through programs such as Mediasite, classes are video-recorded and accessible via the Big Bend media portal.
Main reasons for attending Big Bend Community College:

- Technical Education Student: 39%
- Associate of Applied Science: 31%
- Obtain a Transfer degree: 15%
- Other: 13%
- Advanced Certificate: 2%

Student Age Group 2013-14:

- Under 20: 26%
- 20 to 24: 24%
- 25 to 29: 17%
- 29 to 35: 14%
- Over 35: 19%

What are your future career/educational aspirations?

- Seek employment: 79%
- Pursue Further Education: 21%
In order of priority, most important first, what changes would you like to see at BBCC?

More science classes must be offered in order to complete pre and co-requisites in the allied health programs in a timely manner.

Revised computer science department that includes BBT, so that Comp-Sci students can get real hands-on experience training and education.

Expansion with more buildings and courses.

Complete overhaul of the dorms to prevent people from moving out, modernize.

I would like for the classes to have more seats because by the time I get to register, I don't get anything that I wanted and end up taking classes that don't relate to my major.

I would like to see a place that you can do homework after the library closes. There are times that I cannot get to the library before it closes, and then I have to sit in my car and do homework. I have internet at home, but on occasion it has gone out when I'm in the middle of doing an assignment. I run to the college so that I can finish my work but am disappointed that there is nowhere to work.

Better parking areas. I feel I have a hard time finding parking areas.

More room for people in the Math Lab.

More seating around campus.

Landscape could have more appeal, whether it is with flowers or more benches.

Lights in parking lots/security. Brighter lights in pool room.

More diverse classrooms & workout equipment.

What is your favorite place on campus?

Library. Resource central plus quiet equals one happy student.

In my dorm room or in one of the lounges in the dorm. Because of the resources available to me.

Library, Quiet, computers, Internet and printers.

The square in the middle of campus in front of 1800, 1600 and 1700 buildings. It feels like a park and is relaxing. (Courtyard)

STEM center. It's quiet and always has a tutor available.

Nursing building, it's quiet and relaxing. I can easily think or do work in there.

Machine Shop. What interests me, and I get an opportunity to do some machining, creating different things.

Labs because we work hands on, in which the real world is.

I use my truck to study sometimes; otherwise the library or one of the empty rooms in the Electrical building.

Library, quiet, get my stuff done.

Student Success Center (SSC). Mostly quiet, not a whole lot of people. Clean, new, and I was going there to help others by tutoring.

Besides the classroom, the library. More interaction with people of my age.

The cafeteria because I can eat, study, and interact with other students all at once.

Automotive building is my favorite because of the available equipment.

The library because it is like the perfect environment to study in, and there is a great amount of technology available if you are needing help.

Library, can study and have everything needed to finish a project. Computers, printers, chairs and copy machines. Cafe, can eat, nice lighted environment.

The auto and welding labs for my technical degree.

The 1400 building because I can get advice and relax with some friends.

Building 3300. I've spent a lot of time over there; I know everyone, I know where everything is, and it is a comfortable place for me.

Anywhere there is Wi-Fi.
Programs BBCC should think about starting

- Local area has a shortage of trained electronic/robotics technicians. BBCC programs could provide graduates with immediate placement.
- Controls. This is a fairly specialized field that takes time to train.
- IT Project Manager.
- PLC Programming, Field Training.
- Process operator certification. Some junior colleges in the south (Texas, Louisiana) offer a certification program for students in the industrial operations area.
- Diesel Mechanics.

<table>
<thead>
<tr>
<th>Soft Skills Sought by Local Employers:</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilingual Skills</td>
<td>35%</td>
</tr>
<tr>
<td>Computer Skills</td>
<td>83%</td>
</tr>
<tr>
<td>Dependable</td>
<td>91%</td>
</tr>
<tr>
<td>Innovation</td>
<td>57%</td>
</tr>
<tr>
<td>Oral Communication</td>
<td>35%</td>
</tr>
<tr>
<td>Strong Morals &amp; Ethics</td>
<td>83%</td>
</tr>
<tr>
<td>Work Independently</td>
<td>63%</td>
</tr>
<tr>
<td>Creativity</td>
<td>52%</td>
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<tr>
<td>Customer Relations</td>
<td>57%</td>
</tr>
<tr>
<td>Effective Listening</td>
<td>78%</td>
</tr>
<tr>
<td>Interpersonal Skills</td>
<td>83%</td>
</tr>
<tr>
<td>Social Skills</td>
<td>70%</td>
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<tr>
<td>Visualization</td>
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<tr>
<td>Work as a team</td>
<td>87%</td>
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<tr>
<td>Critical Thinking/Problem Solving</td>
<td>87%</td>
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<tr>
<td>Decision Making</td>
<td>74%</td>
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<tr>
<td>Grammar</td>
<td>61%</td>
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<tr>
<td>Math/Computational Skills</td>
<td>83%</td>
</tr>
<tr>
<td>Strong Work Ethic</td>
<td>83%</td>
</tr>
</tbody>
</table>

What skills are important to employers?

- Communication skills; must be in high understanding of the laws and policies.
- Agriculture & business backgrounds are very important.
- Process Operations (Chemical, Manufacturing, Food Processing).
- CPR/AED and First Aid; refresher training for electricians.
- Make sure individuals have good communication, writing and verbal skills.
- Customer service, problem solving, & basic budget knowledge.
- Most of the applicants we are finding do not have process operator knowledge. Their math skills and basic chemistry skills are poor. They are lacking problem-solving skills.
- Highly likely that specialized knowledge in computer systems will grow.
- Computer, storage, and network services. Windows and Linux operating systems.
- Most of our manufacturing equipment is very specialized, but the process is not. We are not finding applicants that understand process and process thinking. Most applicants can assemble widgets but do not understand how a change in process will affect the next or the outcome of the change, lack in cause and effect of knowledge.
SPACE UTILIZATION
Space Utilization
EXISTING SPACES

CLASSROOMS (A1)
There are 40 classrooms spread across campus. Nine of the classrooms are unused, and another ten classrooms are used at a rate of less than 33 percent. Calculations are based on 30 hours per week and take into consideration each room’s designed capacity. The poor condition of the facilities and classrooms make many of the classrooms nonfunctional for modern day instruction.

The classrooms with the highest utilization rate are located in the core of campus. Three classrooms are used at a rate of over 100%, and another 13 are used over 60%. The table to the right shows classroom utilization.

SCIENCE LABS (B1)
All science labs are located in the 1200 Building. Recent upgrades to the chemistry lab created a modern day environment that allowed the instructor and students to move more easily from lecture to lab, promoted active team learning, and allowed the instructor to more easily monitoring students for safety compliance.

Unfortunately, the remaining labs are in poor condition and in need of renovation. Currently, trip hazards and poor sight lines exist. Furniture throughout the rooms are fixed and do not allow for interactive or active learning.

AUDITORIUM (C4)
The only auditorium style classroom on campus is located in the Wallenstein Theater (Building 1100). The location is slightly removed from campus and underutilized for instruction purposes. The 1100 building is uninviting and in need of renovation. Replacing the 1100 building and creating a more inviting space would give instructors another tool to use in creating a rich educational environment.

<table>
<thead>
<tr>
<th>TYPE OF SPACE</th>
<th>CODE</th>
<th>2014 SF</th>
<th>STATE ALLOWED 1,895 FTEs</th>
<th>FUTURE - 2022 2,588 FTEs</th>
<th>NEEDED SPACE CURRENT</th>
<th>NEEDED SPACE 2022</th>
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<tbody>
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<td>30046</td>
<td>17512</td>
<td>21014</td>
<td>(12534)</td>
<td>(9032)</td>
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<tr>
<td>Basic Skills Labs</td>
<td>A2</td>
<td>638</td>
<td>6900</td>
<td>8280</td>
<td>6262</td>
<td>7642</td>
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<tr>
<td>Science Labs</td>
<td>B1</td>
<td>8828</td>
<td>8398</td>
<td>10077</td>
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<td>6064</td>
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<td>1519</td>
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<tr>
<td>Art</td>
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<td>(1260)</td>
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<td>Music</td>
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<td>Drama</td>
<td>C3</td>
<td>4146</td>
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<td>Vocational Space</td>
<td>B3, B1</td>
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<td>Auditorium</td>
<td>C4</td>
<td>5642</td>
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<td>Library/LRC</td>
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<td>36763</td>
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<td>Physical Education</td>
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<td>Faculty Offices</td>
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<td>Student Center &amp; Related</td>
<td>H1, H2</td>
<td>28911</td>
<td>24995</td>
<td>29994</td>
<td>(3916)</td>
<td>1083</td>
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<tr>
<td>Central Stores/Maintenance</td>
<td>I1</td>
<td>21241</td>
<td>13265</td>
<td>15918</td>
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<td>4278</td>
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</tr>
</tbody>
</table>

TOTAL NET SQUARE FOOTAGE 302,813 296,405 327,107 -6,408 24,293

Space Utilization 3-1
Facility Master Plan Update 2014
Technology Enhanced Classrooms (A1)

There are seven enhanced classrooms on campus. One is used as an office for individual recordings. The enhanced classroom located in the 1600 Business and Liberal Arts Building and in the 1200 Science, Math and Engineering Building are used at the highest rate.

These classrooms are used between 20 and 30 hours per week. As e-learning, hybrid courses, and MOOCs continue to grow and advance, the college will need more enhanced classrooms.

Computer Labs (B2, B4, B5)

Currently, Big Bend hosts six computer labs across campus. Four are for dedicated purposes; one is open when not being used for testing purposes.

Students can access computers in the Library Resource Center and in the Student Success Center. Additional computers are available in the Math Tutoring Lab, and laptop computers can be checked out. Wireless connections throughout campus have been improved. The Big Bend Technology Department has been actively evaluating and upgrading WiFi Services throughout all of the buildings.

<table>
<thead>
<tr>
<th>Room Number</th>
<th>SF</th>
<th>No of Stations</th>
<th>Hrs Per Week</th>
<th>Hrs Per Week Utilization Efficiency</th>
<th>Students Per Week</th>
<th>Student Capacity Per Program</th>
<th>Room Capacity Efficiency</th>
<th>Overall Occupancy Efficiency</th>
</tr>
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<tbody>
<tr>
<td>1215</td>
<td>910</td>
<td>40</td>
<td>23:40:00</td>
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<td>229</td>
<td>270</td>
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<td>84%</td>
</tr>
<tr>
<td>1426</td>
<td>774</td>
<td>40</td>
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<tr>
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<td>1,220</td>
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<td>28:30:00</td>
<td>119%</td>
<td>198</td>
<td>230</td>
<td>80%</td>
<td>102%</td>
</tr>
<tr>
<td>1609</td>
<td>695</td>
<td>29</td>
<td>19:30:00</td>
<td>81%</td>
<td>157</td>
<td>198</td>
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<td>1703</td>
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<td>1855B</td>
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<td>21</td>
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<td>.66</td>
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<td>20</td>
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<td>90</td>
<td>90</td>
<td>100%</td>
<td>42%</td>
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<td>Total</td>
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### Enhanced Classrooms

<table>
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<tr>
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<th>No of Stations</th>
<th>Hrs Per Week</th>
<th>Hrs Per Week Utilization Efficiency</th>
<th>Students Per Week</th>
<th>Student Capacity Per Program</th>
<th>Room Capacity Efficiency</th>
<th>Overall Occupancy Efficiency</th>
</tr>
</thead>
<tbody>
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<td>48</td>
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<tr>
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<td>81</td>
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<td>285</td>
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<td>81%</td>
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### Science Labs

<table>
<thead>
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<th>SF</th>
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<th>Hrs Per Week</th>
<th>Hrs Per Week Utilization Efficiency</th>
<th>Students Per Week</th>
<th>Student Capacity Per Program</th>
<th>Room Capacity Efficiency</th>
<th>Overall Occupancy Efficiency</th>
</tr>
</thead>
<tbody>
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<td>833</td>
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<td>59%</td>
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<td>102%</td>
<td>161</td>
<td>161</td>
<td>100%</td>
<td>102%</td>
</tr>
<tr>
<td>1910</td>
<td>840</td>
<td>20</td>
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</tr>
<tr>
<td>Total</td>
<td>6905</td>
<td>222</td>
<td>61:05:00</td>
<td>51%</td>
<td>401</td>
<td>449</td>
<td>85%</td>
<td>59%</td>
</tr>
</tbody>
</table>
## Space Utilization

### EXISTING SPACES

The chart below represents the 2013-14 space allocations for each of the facilities on the BBCC campus. This chart is useful in identifying how space is currently being used and where the college may re-purpose space in the future to align with recommended space guidelines.

| Existing Spaces          | 1000 | 1100 | 1200 | 1300 | 1300b | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 3000 | 3100 | 3200 | 3300 | 3400 | 3500 | 3600 | 4000 | 4100 | 4200 | 4300 | 4500 | 4600 | 5C1 | Space |
|--------------------------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| A1 General Classrooms    | 7050 | 774  | 3875 | 6488 | 1436  | 5003 | 2520 | 1168 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 30,046 |
| A2 Basic Skills          |      |      |      |      |       |      |      |      | 638  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 638   |
| B1 Science Labs          | 8828 |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 8,828 |
| E2, E4, E5 Computer Labs |      |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 4,545 |
| C1 Art                   |      |      | 1971 |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 5,260 |
| C2 Music                 |      |      | 2130 |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2,130 |
| C3 Drama                 |      |      | 4146 |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 4,146 |
| C4 Theater/Auditorium    |      |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 5,642 |
| B3, D1 Vocational        | 2013 | 2251 | 2184 | 404  | 2464  | 5232 |      |      | 4692 | 25109 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 104,568|
| E1 Library/Learning      | 278  |      | 100  |      | 572   | 18641|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 20,441|
| Resource                 |      |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| F1 Faculty               | 556  | 201  | 1640 | 120  | 1579  | 2060 | 1656 | 592  | 347  | 2250  | 224  | 451  | 0    | 225  | 126  | 560  | 360  |      |      |      |      |      |      |      |      |      |      |      | 12,947|
| G1 Administration        | 10548| 1055 |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 14,786|
| G2 Computing Support     | 407  |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 3,085 |
| H1 Student Centers       | 6938 | 1072 | 16307|      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 24,911|
| H2 Exhibition            |      |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 4,000 |
| H3 Physical Education    |      |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 24,651|
| H4 Day Care              |      |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| I1 Central Stores        | 125  | 3541 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 21,241|
| J Unassignable           | 1635 | 305  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 3,244 |
| K1 Community Relations   | 590  |      |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 3,426 |
| M1 Informal Learning     | 2316 | 1962 |      |      |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 4,278 |
|                          | 2,847| 13,754|   20,139| 2,251 | 2,304 | 21,144| 12,675| 12,148| 12,646| 52,784| 9,674 | 26,413| 6,942 | 25,333| 23,021| 28,102| 5,744 | 4,469 | 3,353 | 4,000 | 3,313 | 5,164 | 2,000 | 2,293 | 302,813|
CURRENT CONDITIONS
Vehicular Circulation — From a vehicular circulation point of view, several issues require attention. The location of the Big Bend Campus causes students to rely heavily on personal automobiles as the primary way of getting to campus. Past campus improvements have catered to this trend as expansive parking lots have been placed close to major buildings. The continuation of this planning practice will diminish the pedestrian nature of the campus.

Upon arriving at campus, there are eight main vehicle entry points, none of which is clearly defined as a main entry. Some roads are underdeveloped and require paving to be considered useful campus linkages. The new college parkway creates a campus edge, but lacks mature, developed landscaping that would better define it as a boundary. Signage could also be improved along the perimeter drive and secondary streets to better facilitate way finding.

Parking is abundant and free to students, faculty, and visitors. It is evenly dispersed around campus and is close to major buildings. However, two parking lots (north along Bolling St. and the 30th Ave. entrance to campus) are at the perimeter of campus and present safety and security issues, especially at night.
Current Conditions

CIRCULATION PEDESTRIAN

Pedestrian Circulation – For pedestrian access, there is good connectivity between parking lots and buildings. Three areas of concern though are the parking lot north of Chanute Street, the lot north of Wallenstein, and the lot west of the Business and Liberal Arts Building, where pedestrian paths cross parking lots. Also, the parking lots north of ATEC and adjacent to Smith Hall require the pedestrian to cross streets. Vehicle/Pedestrian conflicts can occur at these locations.

Pedestrian paths are abundant on campus, yet there is a shortage of pedestrian amenities that encourage informal gatherings. Outside of the ATEC plaza, there are no exterior spaces that promote social interaction.

Distance between campus zones is also a concern. The Aviation, Technical Education, and Testing buildings are all located at the perimeter of campus. Walking times from the center of campus from these facilities ranges between 6-8 minutes and causes students of the programs to be disconnected from the core of campus. This distance also limits access to public transit for these students and faculty.
INFRASTRUCTURE

It is important to undergo routine infrastructure maintenance and upkeep to ensure the prolonged life of water, sewer, and power utilities. In an ever-growing technological age, power is a necessity for any college campus.

- According to the Moses Lake Public Works Department, the known water and sewer lines were installed in 1956 by the Air Force.

- It is very important to keep an eye on these lines and expect future required upgrades, as the average useful life for these utilities is between 25-50 years.

- As shown on the infrastructure map, most of the power lines run underground near the campus core. All of these lines are maintained through the Grant County Public Utility District and are subjected to a 10-year performance test.

- The college needs to work in collaboration with Grant County PUD to take advantage of any future upgrades to incorporate a stronger IT infrastructure.
## Current Conditions

### FACILITY CONDITION REPORT

### Facility Master Plan Update 2014

Comparing Big Bend’s Campus

Each biennium the Washington State Board of Community and Technical Colleges (SBCTC) does a Facility Condition Study on all 34 Campuses. The condition of each campus and building is measured using the same scoring system. In comparison to the SBCTC system of 34 Colleges, Big Bend Community College scored the worst. The average campus weighted score for 2013 was 254, Big Bend scores 314.

The table below summarizes Big Bend Community College’s Campus. The Campus features 482,791 gross square feet with approximately 300,000 being assignable by the state. Capital acquisition and improvement costs total over $32,500,000 and the estimated replacement cost is over $127,500,000.

The State ranks 13 of the 28 buildings placed in service as “adequate or superior.” Four are rated, “replace or renovate.” All four of those facilities are scheduled to be replaced in the 2017-2019 Biennium as part of the new Professional Technical Education Center (PETC)

### Building # | Building Name | Yr Built | Yr Occupied | 50 Yrs Old | Last Renovated | GSF | ASN | Acquisition Cost | Total Cost | 2011 Score | State Status | State Estimated Replacement Cost | Master Plan Recommendation
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
1800 | Grant County ATEC & Library | 2004 | 2004 | 2014 | 66,935 | 53,131 | $14,151,473 | $14,151,473 | 146 | 146 | Superior | $20,147,435 | Exterior Connectivity
1900 | Fine Arts | 2000 | 2008 | 2014 | 13,568 | 9,404 | $1,300,606 | $1,300,606 | 146 | 146 | Superior | $4,287,488 | Privately Funded
4500 | Grounds Building | 50 | 50 | 0 | 5500 | 0 | $11,052 | $11,052 | 198 | 198 | Adequate | $876,900
4300 | Storage - Behind 3300 | 1976 | 1976 | 2026 | 3,600 | 2,000 | $11,052 | $11,052 | 264 | 264 | Adequate | $568,800
1200A | Science, Math, Engineering Addition | 1995 | 1995 | 2045 | 3,800 | 2,300 | $1,357,234 | $1,357,234 | 214 | 214 | Adequate | $6,736,539
1300B | BBC Training Center & Child Care | 2004 | 2004 | 2014 | 3,302 | 2,304 | $1,357,234 | $1,357,234 | 214 | 214 | Adequate | $696,723
4600 | Van Storage | 2006 | 2006 | 2014 | 11,564 | 8,138 | $1,667,571 | $1,667,571 | 194 | 194 | Adequate | $421,856
3200B | AMP Engine Run Station | 2004 | 2004 | 2014 | 11,564 | 8,138 | $1,667,571 | $1,667,571 | 194 | 194 | Adequate | $139,920

### Averages/Totals

<p>| | | | | | | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
Averages/Totals | $482,791 | $299,609 | $23,713,715 | $32,643,589 | 308 | 314 | $127,781,396 | |
### Testing Center

**1000**

**FAST FACTS: TESTING CENTER**

- **5,091 square feet**
- **Year Built:** 1959
- **Recommendation:** Replace in future Growth

**Project - Global Learning Opportunity Center**

**Prior Renovation:** 1974

---

**STRENGTHS**

- Large Reception area to be used for informal learning and increased interactions

**WEAKNESSES**

- Underused inflexible space - small and odd-shaped spaces
- Outdated from campus - does not allow for community engagement
- Concrete cracking & concrete masonry units (CMU) in poor condition
- Roof needs replacement
- Mechanical & Electrical Systems poor
- Finishes are in poor condition
- Code issues (accessibility)

**OPPORTUNITIES**

- Renovate and reuse for a program that does not need regular engagement with campus life & community
- Allowing testing to campus creates the opportunity to co-locate program with Basic Skills, tutoring labs and other student services to maximize efficiencies

**RISKS OF NON-ACTION**

- Student Success is not being optimized
- Students remain isolated
- Exposure to other programs limited
- Access to student services and resources remains an obstacle
- Lower student retention
- Economic Development fails to reach full potential
- Building remains uninviting

---

#### Class Type of Space, SF, NO. of Rooms, AVERAGE ROOM SIZE, NO. OF STATIONS, AVERAGE ASSESSIBLE SF

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF SPACE</th>
<th>SF</th>
<th>NO. OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>NO. OF STATIONS</th>
<th>AVERAGE ASSESSIBLE SF</th>
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<td>278</td>
<td>5</td>
<td>33.6</td>
</tr>
</tbody>
</table>

**ASSIGNABLE SQUARE FOOTAGE:** 2,847

**TOTAL SQUARE FOOTAGE:** 5,091

**EFFICIENCY:** 56.0%

---

**FLOOR PLAN - EXISTING**

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**VICINITY MAP**

---

**HISTORY**

The Testing Building was originally designed in 1959 as a dental clinic. In 1974, it was renovated to serve the College’s Allied Health programs and in 2009, began housing Big Bend’s WorkFirst Program. In 2011, it became the College’s Testing Center.

---

**FUTURE OUTLOOK**

The facility has outlived its useful life. All major components and finishes in this facility are in poor condition. Testing needs to be brought into the core of campus.

Recommendations have been made to move testing into the future Global Learning Opportunity Center.

---

*Current Conditions 4-8*
Performing Arts

1100

FAST FACTS: Arts Zone
13,180 square feet

Year Built: 1959
Recommendation: Future Replacement
Using Match Funding from Community
Prior Renovation: 2007

**Strengths**
- Interior finishes are serviceable
- Location is near the center of campus
- Incorporates informal learning space
- Offers an Auditorium

**Weaknesses**
- Site purpose inflexible design - does not work for modern day instruction
- Orchestra pit and stage are undersized
- Poor outdated technology infrastructure
- HVAC System is inefficient and noisy
- Poor lighting throughout
- Unattractive and uninviting exterior
- Code issues - Accessibility
- No informal learning areas

**Opportunities**
- Replace with modern day performance art building
- Big Bend culture strongly values music and arts programs
- This is the only performing arts facility in the area and has tremendous possibility of growth
- Create adjacencies and program strengths by locating in close proximity to the Fine Arts

**Risks of Non-Action**
- College forced to reduce quality of music and performing arts programs
- Community connectivity reduced
- Future funding from community could be affected

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
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<td>1,956</td>
<td>4</td>
<td>489</td>
<td>37</td>
<td>52.87</td>
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<tr>
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<td>6</td>
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<td>201</td>
<td>2</td>
<td>100.5</td>
<td>2</td>
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</tbody>
</table>

**Assignable Square Footage**: 10,046

**Total Square Footage**: 13,180

**Efficiency**: 76%

**History**
The building was originally built in 1959 to serve as the military base theater. A music practice room was added in 1973. In 2007, the project was funded for renovation but funds were used to build the new Fine Arts Building (1900).

**Future Outlook**
The consultant team recommends replacing the Wallenberg Theater in 2021. Currently, the theater is unattractive and uninviting. Big Bend’s strong music culture is a source of pride for the area and a strong connection that the college shares with the surrounding community. Replacement of the facility will allow the college to strengthen ties with the community and grow its Performing Arts programs.
Science, Math, Engineering

1200

Fast Facts: STEM Zone
27,257 square feet
Year Built: 1961
Recommendation: Future Renovation Project
Prior Renovation: 1997

STRENGTHS
- Large facility housing science and math programs in one facility
- Located in the Campus Core
- Large Classrooms
- STEM Learning Center with Informal Learning
- Large Computer Lab
- New Chemistry Lab
- Surrounding Green Space

WEAKNESSES
- Access to technology is poor, and labs are outdated
- Multiple renovations have created a maze
- Poor floor plan
- Adjacent/but separate/interdisciplinary collaborations and interaction space
- Some uninviting rooms with odd shapes and sizes
- Poor daylighting, acoustics, indoor air quality
- Inefficient Mechanical & Electrical Systems
- Buildings merged without careful planning

OPPORTUNITIES
- Renovate remaining science labs
- Add/Update Planetary
- Create atmosphere that blurs the line between lab and classroom
- Continue growing connections with K-12, Higher Ed and Industry
- Look at faculty office layouts and rework to create more collaborative environment
- Greenhouse Upgrade

RISKS OF NON-ACTION
- Continuation of science classes being taught in less than ideal conditions
- Value of science education not being seen and/or felt throughout campus
- Ties with Allied Health and other programs not being maximized
- Recruitment challenges, both instructor and student
- Los of more skilled workforce
- Ties with K-12 and community not being maximized

HISTORY
Originally this building served as a bowling alley. In 1973, it was converted to a science building and in 1994 and 1998, major additions were made for new laboratories and classrooms. In 2013, the College opened its new STEM Center. The STEM center is growing the Science and Math programs and providing space needed to connect science and learning. Interest in Science and Mathematics is growing. Connections with K-12, Industry and Higher Education are growing.

FUTURE OUTLOOK
The college has been systematically upgrading this facility as funding allows. The facility is becoming the go-to place on campus for studying alone and in small groups. Another major Science Laboratory Renovation is needed to complete the transition. The addition of a Planetaryarium would be beneficial to programs and strengthening ties with K-12, Industry, and the surrounding community.

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSIGNABLE SQUARE FT</th>
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<tr>
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ASSIGNABLE SQUARE FOOTAGE: 18,662
TOTAL SQUARE FOOTAGE: 27,257
EFFICIENCY: 68.0%
Early Childhood Development Center

Facility Master Plan Update 2014

1300A&B

Fast Facts: Childcare Zone
Building A - 3,620 square feet Building B - 3,302
Year Built: Building A - 1959 Building B - 2004
Recommendation: Future Renovation Project

STRENGTHS
- Location near campus core
- Visibility
- Outdoor areas

WEAKNESSES
- Access
- Adaptability
- Health & Safety - heaters
- Thermal Comfort
- Indoor Air Quality
- Circulation Space
- Visibility of all areas

OPPORTUNITIES
- Rx immediately for safety and health
- Increase security, provide viewing areas
- Create strong interaction environment for students and parents
- Small size of facility allows for inexpensive renovation
- Create an inviting facility that visually and spatially connects the interior and exterior

RISKS OF NON-ACTION
- Possible safety risk
- Condition may cause decreased usage by students and their children
- Parenting skill levels decrease
- Lower achievement rates for the next generation
- Children are provided for in less than a safe and healthy environment
- Program Closes

HISTORY
This facility was originally built with concrete masonry in 1959 and remodeled in 1974. The facility has CMU interior walls that limit flexibility.

FUTURE OUTLOOK
Adults are returning to the college for skill enhancement and new career opportunities. As the average college age increases, so does the likelihood of students needing access to high-quality affordable childcare.

Demand is increasing for programs that educate and support parents to raise their families in emotionally healthy ways, so that their children can thrive personally, socially and academically.

Early Childhood Development Center

FLOOR PLAN - EXISTING

WORKSHEET

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>AVERAGE STATIONS</th>
<th>ASSIGNABLE SQUARE FOOTAGE</th>
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<tr>
<td>A2</td>
<td>CLASS LABORATORY</td>
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<td>FACULTY OFFICE</td>
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ASSIGNABLE SQUARE FOOTAGE 4,932
TOTAL SQUARE FOOTAGE 6,922
EFFICIENCY 71.25%
Student Center, Administration 1400

**Facility Master Plan Update 2014**

**Current Conditions 4-12**

**HISTORY**

The 1400 Building was constructed in 1959 and an addition/renovation was completed in the 1990s, although the renovation did not address some of the functional issues of the existing facility. Finishes and some furniture were upgraded in 2010. In 2013, the Student Success Center was renovated. A small addition was added to increase student informal and group studying. The boiler system, exterior finishes, and glazing are original to the building.

**FUTURE OUTLOOK**

Although recent renovations improved the appearance of interior finishes, some current uses of the facility are incompatible with its original design.

The student lounge is a dark and small space that may be better placed in the future Global Learning Opportunity Center.

---

**STRENGTHS**
- Location is central to campus
- Interior finishes are in good condition

**WEAKNESSES**
- Recent additions/renovations addressed interior finishes but neglected the building envelope and some functional aspects of the building layout. Exterior is uninviting
- Boiler system and exterior glazing are original components of the building
- Facility lacks a fire alarm and automatic sprinkler system
- Student lounge is underused, underutilized, and lacks access to natural daylight
- Elevator in poor condition

**OPPORTUNITIES**
- Relocating the student lounge would increase usable office/student services space
- Open up Student Services to create a multi-client Resource Center. Consider repurposing and relocating book store
- Addition of five alarm/sprinkler system as life safety improvements
- Increasing student recreation opportunity will keep students on campus longer and increase interactions with peers and instructors
- Exterior improvements

**RISKS OF NON-ACTION**
- Operational costs will continue to increase if building systems and envelope are not made more efficient
- Acoustics and thermal comfort affect performance and student satisfaction
- The disconnect of some student amenities may lead to underutilization
- Student retention and recruitment may decrease due to the lack of student recreation opportunities

---

**CLASS**

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSIGNABLE SQ. FT</th>
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<tr>
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<td>MERCH. &amp; FACILITY SERV.</td>
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<td>H1</td>
<td>RECREATIONAL FACILITIES</td>
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<td>RECREATIONAL FACIL. SVC</td>
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<td>1</td>
<td>35</td>
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<tr>
<td>H1</td>
<td>LOUNGE</td>
<td>581</td>
<td>1</td>
<td>581</td>
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<td>H1</td>
<td>STUDENT ASSISTANCE</td>
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<td>FACULTY OFFICE</td>
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<td>DP COMMUNICATIONS</td>
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<td>150</td>
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<td>G1</td>
<td>CONFERENCE ROOMS</td>
<td>854</td>
<td>3</td>
<td>284.67</td>
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</table>

**ASSIGNABLE SQUARE FOOTAGE: 21,312**

**TOTAL SQUARE FOOTAGE: 32,153**

**EFFICIENCY: 66.0%**
## Smith Hall

**1500**

**Fast Facts:**
- Computer Science
- 24,468 square feet

**Year Built:** 1952

**Recommendation:** Future Replacement Project

**Prior Renovation:** 1991

### Lower Floor Plan - Existing

### Main Floor Plan - Existing

### Vicinity Map

### Facility Master Plan Update 2014

#### Current Conditions 4-13

### STRENGTHS
- Houses computer labs and classrooms
- Houses Central Receiving & Word Services (print shop)

### WEAKNESSES
- Safety
- Accessibility
- Inefficient
- Inflexible
- Daylighting minimal
- Overtaxed from campus core

### OPPORTUNITIES
- Replace facilities as a modern day computer science facility
- Relocate in the core of campus
- Look at placing Computer Science in the future ITE Center
- Creates functional, sustainable facility or space that will attract and grow the computer science program at Big Bend
- Create effective adjacencies and interdisciplinary engagement
- Look at possibility of co-locating Big Bend Technology Department in close proximity to Computer Science program

### RISKS OF NON-ACTION
- Computer Science remains housed in a facility disengaged from other beneficial programs and the campus core (student life)
- Big Bend’s ability to grow the computer science program is limited
- Beneficial Interdisciplinary interactions are limited
- Business and industry demand for Computer Science graduates is not met
- Students are likely to choose other colleges

### HISTORY
This facility has served as a dining hall for the dormitory and as a classroom facility for instructional purposes. Due to the condition of this facility and its inability to flex to accommodate modern day instructional methodologies, replacement is recommended.

### FUTURE OUTLOOK
In the Big Bend service area there is a strong need for graduates with computer science skills. The replacement of the 1500 facility will allow the college to develop a state-of-the-art Computer Science program located at the heart of the College Campus. Student-to-student and student-to-instructor exchanges will increase. Interdisciplinary exchanges will be more likely to occur.

The College may consider housing this program in the future Professional Technical Education Center.

### Table: Classroom Distribution

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE footage</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSIGNABLE SQ. FT</th>
</tr>
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<td>CLASS LABORATORY</td>
<td>2,375</td>
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<td>FACULTY SERVICES</td>
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<td>I1</td>
<td>CENTRAL SUPPORT</td>
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<td>9</td>
<td>393.44</td>
<td>9</td>
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</table>

###Assignable Square Footage
- 12,425

###Total Square Footage
- 24,468

###Efficiency
- 51.0%
Business & Liberal Arts

1600

Fast Facts: Administration, Student Services Zone
17,760 square feet
Year Built: 1985
Recommendation: Future Renovation Project
Prior Renovation: NA

Strengths
- Upgrades to finishes and Mechanical Systems are complete throughout facility
- Facility provides classroom space at the core of campus
- Informal learning area

Weaknesses
- Masonry interior walls limit adaptability and expansion
- Hard interior finishes are uninviting and create accoustical issues
- Masonry construction limits upgrades to technology
- Some classrooms are small and configured poorly. Space does not meet current instruction needs
- Some classrooms are as uninviting that they are not used
- Faculty offices are removed from easy student access
- Informal area blocks flow of traffic

Opportunities
- Provide modern, adaptable classroom space that integrates technology
- Integrate a Resource Learning Center into the facility
- Capitalize on location at campus core in the development of a sustainable, walkable campus
- Increase classroom size by strategically adding on to the exterior
- The development of the campus core will increase demand for modern, adaptable classroom space

Risks of Non-Action
- Not providing more modern classroom space as the campus core develops will lead to a deficiency in classroom space and underutilization of this facility
- Inability to provide a high level of modern educational opportunities

Class | Type of Room | Square Footage | Number of Rooms | Average Room Size | Stations | Average Assignable Sq. Ft. |
--- | --- | --- | --- | --- | --- | --- |
A1 | General Classroom | 6,488 | 9 | 721 | 10 | 23.92 |
B2 | Class Laboratory | 1,136 | 2 | 568 | 37 | 30.91 |
B4 | Computer Lab | 2,464 | 2 | 1232 | 58 | 44.62 |
F1 | Administration | 1,734 | 14 | 124 | 14 | 124 |

Assignable Square Footage: 11,822
Total Square Footage: 17,760
Efficiency: 66.5%

Business & Liberal Arts

Main Floor Plan - Existing

Vicinity Map

Facility Master Plan Update 2014

Current Conditions 4-14
Allied Health

**1700**

**Fast Facts:** Nursing Zone
24,464 square feet
Year Built: 1952
Recommendation: Renovation
/Replacement Project
Prior Renovation: 1995

**STRENGTHS**
- Interior finishes are in good condition
- Location is near the center of campus
- Incorporates informal learning

**WEAKNESSES**
- Narrow spaces and structure limits adaptability
- Accessibility, safety and code issues
- Poor acoustics, floor plan does not meet program requirements, poor overall efficiency
- Access to water does not meet program need
- Poor lighting and inadequate electrical service
- Ventilation in basement insufficient
- HVAC system in need of replacement
- Space inadequate for program use and growth
- Dockers in basement supporting other facilities

**OPPORTUNITIES**
- Designing new facility next to gym
- Create a Wellness, Fitness and Allied Health program that targets prevention and raising the health and wellness of the community
- Create classroom and lab space designed to meet 21st century education
- Provide informal space to encourage interactions between students and staff
- Provide space for community connectivity
- Create inspiring space that showcases the program to potential students and the community
- Move B01 to a more effective location

**RISKS OF NON-ACTION**
- Increased operational costs as the 60-year-old building continues to age
- Growth in program demand will drive students to colleges with more limiting and more technologically updated facilities
- Inability to provide individual specialty programs such as physical therapy may drive students to other campuses
- Life safety issues will persist without accessibility improvements to the basement

**HISTORY**
The 2700 Building was constructed in 1952 and was last renovated in 1995. It is constructed of concrete and concrete masonry. The structural grid limits its adaptability and creates narrow interior spaces. The campus technology department occupies two basement spaces separated by a mechanical pit, neither of which meets current accessibility requirements.

**FUTURE OUTLOOK**
Nursing is a growing program for the college with strong demand for trained professionals in the service district. They are currently producing as many students as the surrounding area can provide clinical experiences. Waiting lists are substantial, and interest in specialty programs is growing. The college would like to expand its programs to offer specialty programs such as physical therapy. Staff is struggling to offer a high level of service in classrooms that are long and narrow and labs with poor electrical service, limited lighting, and no access to water. Additionally, poor HVAC systems are causing low thermal comfort.
### Advanced Technologies Education Center

**1800**

**Fast Facts:** Library/Conference Zone

- Library - 30,000sf
- ATEC - 36,935

**Year Built:** 2004

**Recommendation:** Maintain

**Prior Renovation:** NA

---

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSIGNABLE SQ. FT.</th>
<th>STUDENTS PER WEEK</th>
<th>HOURS PER WEEK</th>
<th>CLASSROOM SCHEDULING EFFICIENCY</th>
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<td>LIBRARY</td>
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<td>STUDY ROOMS</td>
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<td>EFFICIENCY</td>
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</tbody>
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**HISTORY**

Built in 2004, the ATEC facility offers Grant County a conferencing center. It also serves as the campus library and food service venue.

**FUTURE OUTLOOK**

The ATEC Building is a unique facility for the College. It offers a conference center and is a major component in drawing the surrounding communities to campus.
**Facility Master Plan Update 2014**

**Current Conditions 4-17**

### Fine Arts

**1900**

*Fast Facts: Arts Zone*  
13,568 square feet  
*Year Built: 2008*  
*Recommendation: None*  
*Prior Renovation: NA*

#### STRENGTHS
- Modern facility with spaces for ceramics, drawing, painting, classrooms and a gallery.
- Good integration of technology and space for networking equipment.
- Solid structure designed and built to last.

#### WEAKNESSES
- Narrow corridor and classroom spaces.

#### OPPORTUNITIES
- Expand fine arts programs to attract and retain students.
- Existing facility allows the college to host art fairs and showcase their program to the surrounding community.

#### RISKS OF NON-ACTION

**HISTORY**

Facility is constructed of CMU and features technology throughout. Additional features include natural daylighting, lab space, classrooms, and informal gathering and demonstration areas.

**FUTURE OUTLOOK**

This facility is in new condition and should serve the college's art department for the foreseeable future. The display areas and areas for community engagement are strong and will allow the college to engage with the community, showcase its program, and grow.
Facility Master Plan Update 2014

DeVries Activity Center

Fast Facts: Athletics, Gym Zone
44,458 square feet
Year Built: 1981
Recommendation: Future COP Project - Allied Health, Wellness and Fitness Center Addition
Prior Renovation: 2006

STRENGTHS
- Site

WEAKNESSES
- Indoor Air Quality
  - HVAC: No air conditioning
- Condition of pipes and fixtures
- Accessibility
- Exterior does not fit with college culture
- Space doesn’t allow for student demand of amenities

OPPORTUNITIES
- Add Allied Health, Fitness and Wellness Center to the facility to better serve students and community
- Improve wellness of community, staff and students
- Create recreation hub and engage surrounding community with college

RISKS OF NON-ACTION
- Decrease connectivity with community
- Students attend colleges with more amenities
- College Athletic program loses its reputation

**HISTORY**

Built in 1983 out of concrete and CMU. The facility is in need of upgrades to the HVAC system and replacement of fixtures throughout.

**FUTURE OUTLOOK**

Many students choose BBCC because of the athletics department. Facilities need to be upgraded in order to serve students properly. Demand for additional treadmills and weight equipment was clear in a recent student survey.

### Class and Type of Room Table

<table>
<thead>
<tr>
<th>Class</th>
<th>Type of Room</th>
<th>Square Footage</th>
<th>Number of Rooms</th>
<th>Average Room Size</th>
<th>Stations</th>
<th>Assignable SQ FT</th>
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<tr>
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<td>H3</td>
<td>Academic/Staff</td>
<td>788</td>
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</tbody>
</table>

**Assignable Square Footage**: 26,413

**Total Square Footage**: 44,458

**Efficiency**: 59.4%
**Facility Master Plan Update 2014**

**Aviation Flight Training Center**

**3000**

**Fast Facts:**
- **Aviation Zone:**
  - 11,564 square feet
- **Year Built:** 1955
- **Recommendation:** None
- **Prior Renovation:** 2004

**FLOOR PLAN - EXISTING**

**VICINITY MAP**

**HISTORY**

The original structure was built in 1955. In 1995 and in 2004, the building received a complete renovation.

**FUTURE OUTLOOK**

The renovated facility is in great condition and meeting program needs. As the program grows and complementary programs grow, such as Aviation Maintenance, the college may look for ways to create more student-to-student and student-to-instructor interactions. In addition, the parking areas around the building are in poor condition.

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSIGNABLE SQ. FT</th>
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</thead>
<tbody>
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<td>INDIVIDUAL CLASS LAB</td>
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<td>2,183</td>
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<td>F1</td>
<td>ACADEMIC/STAFF</td>
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<td>143.58</td>
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</tbody>
</table>

**ASSIGNABLE SQUARE FOOTAGE**

8,138

**TOTAL SQUARE FOOTAGE**

11,564

**EFFICIENCY**

70.4%
**Aircraft Hangar 3100**

**Fast Facts:** Aviation, Power Plant & Airframe Zone
30,251 square feet
Year Built: 1956
Recommendation: Replacement project
Prior Renovation: 1992

---

**STRENGTHS**
- Facility has large, open space to house the college's aviation training fleet
- Location next to Building 3000 Aviation

**WEAKNESSES**
- The original design, although ideal for aircraft storage, is incompatible with its intended use as an aircraft maintenance shop
- Exterior and interior finishes are in need of immediate attention/repair
- The high ceiling height is inefficient for heating/cooling
- Mezzanine levels do not comply with current accessibility requirements
- No fire suppression system

**OPPORTUNITIES**
- Consolidation in a new facility will reduce operational costs and improve program integration
- Maintenance spaces can be designed to meet functional needs and be adapted to changes in technology
- Modern facilities will help attract/retain collaborations with area industries

**RISKS OF NON-ACTION**
- Operational costs of the 56-year-old building will continue to climb, further stretching campus maintenance budgets
- Deferred maintenance may lead to unsafe conditions; lack of fire suppression system is an ongoing risk
- Functional and technological needs of aircraft maintenance will become increasingly difficult to meet in an inefficient, aging facility
- Possible partners and economic growth opportunities may not be realized

---

### Facility Summary

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSIGNABLE SQ. FT.</th>
<th>STUDENTS PER WEEK</th>
<th>HOURS PER WEEK</th>
<th>CLASSROOM SCHEDULING EFFICIENCY</th>
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<td>F1</td>
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<td></td>
</tr>
</tbody>
</table>

**ASSIGNABLE SQUARE FOOTAGE:** 25,333
**TOTAL SQUARE FOOTAGE:** 30,251
**EFFICIENCY:** 83.7%

---

**History**
The 3100 Building was constructed in 1956 as part of Llano Air Force Base and was utilized for heavy aircraft storage. It was renovated in the 1970s to house the college's aviation fleet and maintenance shop. The facility is steel framed with metal roofing and siding.

**Future Outlook**
The age, condition and sheer size of this facility has stretched operational budgets to the point of deferring maintenance. Consolidation of the aviation programs into a single facility would reduce these costs. Therefore, the 3100 Building is recommended for replacement as a part of a new Aircraft, Airframe and Maintenance facility.

The current facility is in need of a fire suppression system due to the storage of aircraft.

---

**FLOOR PLAN - EXISTING**

**VICINITY MAP**
Facility Master Plan Update 2014

**3200**

**Fast Facts:**
- **Aviation, Power Plant & Airframe Zone**
- **27,592 square feet**
- **Year Built:** 1956
- **Recommendation:** Replacement project
- **Prior Renovation:** 1992

---

**STRENGTHS**
- Contains a large proportion of open, usable lab space accommodating multiple uses
- Good proximity to runway and other airfield amenities

**WEAKNESSES**
- The original design and construction are functionally incompatible with its current use as a Technical Education facility
- Difficult to integrate technology and adapt to new teaching methods
- Mezzanine levels do not comply with current accessibility requirements
- Exterior and interior finishes are in need of immediate attention/repair

**OPPORTUNITIES**
- Classroom and lab space can be increased to accommodate more students and program growth
- A replacement facility will provide for improved integration of technology and satisfy future program needs
- Student success and retention will increase with improved learning environments

**RISKS OF NON-ACTION**
- Operational costs will continue to climb as the 56-year-old building continues to age, further stretching campus maintenance budgets
- Prospective students may be drawn to other colleges with more technologically advanced programs
- The functional and technological needs of the program will not be fully met in a facility ill-adapted to renovation

---

**CLASS**

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSIGNABLE SQ. FT</th>
<th>STUDENTS PER WEEK</th>
<th>HOURS PER WEEK</th>
<th>CLASSROOM SCHEDULING EFFICIENCY</th>
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<tbody>
<tr>
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<td>STUDY ROOM</td>
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<td>I1</td>
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**ASSIGNABLE SQUARE FOOTAGE**

<table>
<thead>
<tr>
<th>TOTAL SQUARE FOOTAGE</th>
<th>21,761</th>
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</thead>
<tbody>
<tr>
<td>EFFICIENCY</td>
<td>78.9%</td>
</tr>
</tbody>
</table>

**HISTORY**

An original component of the Larson Air Force Base, the 3200 building was built in the 1950s to house large bomber aircraft. A 1992 remodel converted the space into the aircraft, airframe, and powerplant maintenance building for the aviation program.

**FUTURE OUTLOOK**

The age, condition, and size of this and other technical education facilities on campus has stretched operational budgets to the point of deferring maintenance. Consolidation of similar programs into a single facility would reduce these costs. Therefore, this building is recommended as a replacement project as a part of a new aircraft, airframe, and maintenance facility.
Automotive Technology
3300
Fast Facts: Technical Education Zone
31,682 square feet
Year Built: 1956
Recommendation: Replacement project - Immediate Need
Prior Renovation: 1992

**STRENGTHS**
- Contains a large proportion of open, usable lab space
- Universal space that accommodates multiple users

**WEAKNESSES**
- The original design and construction is incompatible with its current use as a Technical Education facility
- Mezzanine levels do not meet current accessibility requirements
- Exterior and interior finishes are in need of immediate attention/repair
- The ceiling height is inefficient for heating/cooling

**OPPORTUNITIES**
- New classroom and laboratory space could be designed specific to program functional and technological needs
- Consolidate lab space with other technical programs to give students exposure to other skills and programs
- Ensure student success through full integration and exposure to the college environment and experience

**RISKS OF NON-ACTION**
- Operational costs will continue to climb as the building continues to age, further stretching operational budgets
- The program will continue to be segregated from the core of campus, and students will be disadvantaged from vital student services and academic programs
- Functional and technological needs of this progressive program will not be fully realized
- Students may choose colleges with better facilities, updated technology, and nicer amenities

**HISTORY**
Constructed in 1956, the 3300 Building was an original part of Carson Air Force Base and housed heavy aircraft. Other than an upgrade to the boiler system in 2000, minimal renovations have been completed.

**FUTURE OUTLOOK**
Due to its age, condition, and size, the 3300 Building would be more costly to renovate than replace. The facility’s original design is incompatible with its use as a technical education facility. It is recommended for immediate replacement.

Locating Auto Tech in a new Professional and Technical Education Center (PTEC) at the core of campus will ensure the program has the facilities to provide a quality learning environment. This location will also ensure that students are fully integrated into the college experience while receiving access to vital academic programs and student services.
**Facility Master Plan Update 2014**

**Welding Technology 3400**

**Fast Facts:** Technical Education Zone
- 6,580 square feet
- Year Built: 1955
- Recommendation: Replacement project-Immediate need
- Prior Renovation: 1995

**Strengths**
- The Welding program is experiencing continued growth in enrollment.
- The building has some open, flexible lab space.

**Weaknesses**
- The current space is undersized to accommodate program growth.
- The facility is segregated from the campus core.
- Exterior and interior finishes are in need of immediate attention/repair.
- Original design is incompatible with a technical education program.

**Opportunities**
- New classroom and laboratory space could be designed specific to program functional needs, adaptations in technology, and enrollment growth.
- Consolidate lab space with other technical programs to give students exposure to other skills and programs.
- Locating a new facility closer to the campus core will give students more exposure to campus amenities and student services.

**Risks of Non-Action**
- Operational costs will continue to increase as the facility continues to age, further stretching maintenance budgets.
- As enrollment continues to rise, the current space will struggle to meet the functional and technological needs of the program.
- The program will continue to be segregated from the core of campus, and students will be removed from vital student services and academic programs.

**Classroom Scheduling Efficiency**

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSIGNABLE SQ. FT.</th>
<th>STUDENTS PER WEEK</th>
<th>HOURS PER WEEK</th>
<th>CLASSROOM SCHEDULING EFFICIENCY</th>
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</thead>
<tbody>
<tr>
<td>D1</td>
<td>NON SCHED CLASS LAB</td>
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<td>225</td>
<td>2</td>
<td>112.5</td>
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</table>

**Assignable Square Footage:** 5,744

**Total Square Footage:** 6,580

**Efficiency:** 87.3%

**History**
The 3400 building was constructed in 1956 and repurposed as a welding laboratory in the 1970s. Upgrades to the air handling system were made to improve air quality and safety.

**Future Outlook**
The program continues to experience growth in enrollment, making the current facility overcrowded. The age of the building would make renovation more costly than replacement. This facility is recommended for immediate replacement. Relocating welding to a new Professional Technical Education Center at the campus core would afford the program the modern lab and classroom space it needs to serve its growing enrollment. This location will also ensure students are fully integrated into the college experience and provide them access to vital student services and academic programs.
Maintenance Mechanics Technology

3500

**Facility Master Plan Update 2014**

**Current Conditions 4-24**

**STRENGTHS**
- Facility contains some open, adaptable classroom and lab space

**WEAKNESSES**
- Facility contains 56-year-old plumbing systems and lacks a dedicated electrical system
- Restroom facilities do not meet current accessibility requirements
- Exterior and interior finishes are in need of immediate attention/repair
- The original design and construction is incompatible with its current use as a Technical Education facility

**OPPORTUNITIES**
- Consolidate lab space with other technical programs to give students exposure to other skills and programs
- Locate a new FTSC facility closer to the campus core to give students more exposure to campus amenities and student services
- Ensure student success through full integration and exposure to the college environment and experience

**RISKS OF NON-ACTION**
- Operational costs will continue to escalate as the 56-year-old facility continues to age
- The functional and technological needs of the program will not be fully met in a facility ill-adapted to changes in technology and teaching methodologies
- The program will continue to be segregated from the campus core, and students will be removed from vital student services and academic programs

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSAILABLE SQ. FT.</th>
<th>STUDENTS PER WEEK</th>
<th>HOURS PER WEEK</th>
<th>CLASSROOM SCHEDULING EFFICIENCY</th>
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<tbody>
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<td>126</td>
<td>1</td>
<td>126</td>
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<td></td>
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</tbody>
</table>

**ASSIGNABLE SQUARE FOOTAGE**
- 4,469

**TOTAL SQUARE FOOTAGE**
- 4,848

**EFFICIENCY**
- 92.2%

**HISTORY**
The 3500 building was constructed in 1955 and has had minimal maintenance and renovation work since. The facility’s plumbing system is original to the building, and it lacks a dedicated electrical system. The restroom facilities do not meet current accessibility requirements. Exterior and interior finishes have far exceeded their useful lifecycles and are in need of immediate attention and repair.

**FUTURE OUTLOOK**
In its current condition, the building is not serviceable and would be more costly to renovate than replace. The facility’s original design and use are incompatible with a technical education program; therefore, immediate replacement is recommended. Ideally, Maintenance Mechanics Technology will be housed as a component of a new Professional and Technical Education Center.
Facility Master Plan Update 2014

Industrial Electrical Technology
3600
Facts: Technical Education Zone
5,947 square feet
Year Built: 1955
Recommendation: Replacement project
- Immediate need
Prior Renovation: 1995

Current Conditions 4-25

STRENGTHS
- The facility has some open lab space and adequate classroom space

WEAKNESSES
- The original design of the building limits its ability to function as a technical education facility
- Exterior and interior finishes are far beyond their usable lifespan
- Building envelope is inefficient for heating/cooling
- Location is segregated from campus

OPPORTUNITIES
- New classroom and lab space could be designed to fit specific program functions
- Consolidation in a new facility with other technical programs to give students exposure to additional skills
- Ensure student success through full integration and exposure to the college environment

RISKS OF NON-ACTION
- Continued escalation of operational costs as the building continues to age
- Continued segregation of the program from the campus core and distanced from academic and student services
- Functional and technical needs of program will fall behind industry training needs
- Students attend other colleges due to the condition of the facilities

HISTORY
Built in 1955, the 3600 building is a concrete masonry building with a wood framed roof. Electrical and HVAC systems were upgraded in the 1990s.

FUTURE OUTLOOK
Due to its age and condition, the 3600 building would be more costly to renovate than replace. The exterior and interior finishes have aged past their useful lifecycles, and the building envelope is inefficient. Its isolation from the campus core is a detriment to the program’s continued success. It is therefore recommended as a replacement project. Ideally, Industrial Electrical Technology will be integrated into the new Professional & Technical Education Center.
### Carpentry Shop/Paint Shop

**4000**
- **Fast Facts:** Maintenance Zone
- **4,606 square feet**
- **Year Built:** 1955
- **Recommendation:** Replacement - consolidate in future replacement project
- **Prior Renovation:** NA

#### Strengths
- Location is away from campus traffic

#### Weaknesses
- Size
- Condition

#### Opportunities
- Consolidate in future replacement project

#### Risks of Non-Action
- The condition is not a good reflection of the campus culture
- Damages the image of the college
- Limits ability to grow
- Creates potential safety health problems

#### History
This facility originally served as an Air Force Ammunition Bunker. It is constructed of concrete walls and a concrete roof. The facility was built in 1955, and the college began using it in 1970.

#### Future Outlook
Consolidating this facility in a future renovation project will allow the college to start creating a more inviting campus atmosphere.

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>STANDARDS ASSIGNABLE SQ. FT.</th>
<th>STUDENTS PER WEEK</th>
<th>HOURS PER WEEK</th>
<th>CLASSROOM SCHEDULING EFFICIENCY</th>
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<tbody>
<tr>
<td>II</td>
<td>SHOP AREA</td>
<td>4,000</td>
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<td>800</td>
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</tbody>
</table>

---

**Assignable Square Footage:** 4,000

**Total Square Footage:** 4,606

**Efficiency:** 86.8%
Automotive Technology Classrooms
Irrigation Lab
4100
Fast Facts:
- PTEC Zone
- square feet: 4860
- Year Built: 1955
- Recommendation: Replacement project to be included in PTEC, immediate need
- Prior Renovation: 2000

Facility Master Plan Update 2014

**STRENGTHS**
- Interior finishes

**WEAKNESSES**
- Exterior deteriorated
- Floor plan
- Inflexible
- Lighting
- Acoustics
- No program adjacencies
- Insufficient technology infrastructure
- No room for collaborative and outreach opportunities

**OPPORTUNITIES**
- Relocate into future PTEC
- Create an industry training classroom
- Create a demonstration area that allows students to showcase their work
- Create an infrastructure that allows for today's technology and is adaptable and upgradable to tomorrow's
- Bring students into an environment that maximizes student exposure, exchanges and campus life

**RISKS OF NON-ACTION**
- Students may not learn the necessary skills to compete in today's job market
- Students may choose other colleges
- Collaborative opportunities with area business and industry may not evolve
- Economic growth possibilities may not evolve
- Student pride may decrease
- Campus life and culture may decrease

**CLASS**

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSIGNABLE SQ. FT.</th>
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</thead>
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<td>180</td>
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<td>180</td>
</tr>
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</table>

**ASSIGNABLE SQUARE FOOTAGE**
3,791

**TOTAL SQUARE FOOTAGE**
4,860

**EFFICIENCY**
78.0%

**HISTORY**
The facility was originally constructed in 1955 and remodeled in 2000 for the Fine Arts Program. The facility now houses the Automotive Classroom.

**FUTURE OUTLOOK**
Adjusting to the new automotive trends like hybrids and advanced diagnostics requires more classroom time. It is essential that the automotive classroom be reflective of a modern learning environment. Being able to record and play back instruction will be essential for the students. Additionally, classrooms must be flexible and able to adapt to meeting the needs of industry certifications and seminars. Locating the automotive program closer to campus in a "state of the art" facility will allow for increased business and industry outreach and new collaborative opportunities.

Facility Master Plan Update 2014
Facility Master Plan Update 2014

Maintenance and Operations

**4200**

**Fast Facts: Maintenance Zone**
- Square Feet: 9,312
- Year Built: 1955
- Recommendation: Replacement
- Prior Renovation:

**STRENGTHS**
- Location

**WEAKNESSES**
- Thermal comfort
- Security issues with existing restricted access
- Poor lighting
- Unattractive
- Acoustics
- Technology infrastructure
- Exterior
- Adaptability
- Mize

**OPPORTUNITIES**
- Consolidate in future replacement project
- Combine all facility and maintenance operations under one roof
- Create a facility that complements the campus
- Improve campus maintenance capabilities

**RISKS OF NON-ACTION**
- Increased utility usage
- Lower employee morale

---

**CLASS**

**TYPE OF ROOM**

**SQUARE FOOTAGE**

**NUMBER OF ROOMS**

**AVERAGE ROOM SIZE**

**STATIONS**

**AVERAGEAssignable SQ. FT.**

<table>
<thead>
<tr>
<th>Class</th>
<th>Type of Room</th>
<th>Square Footage</th>
<th>Number of Rooms</th>
<th>Average Room Size</th>
<th>Stations</th>
<th>Average Assignable Sq. Ft.</th>
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</thead>
<tbody>
<tr>
<td>II</td>
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<td>9</td>
<td>514</td>
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<tr>
<td>II</td>
<td>Admin Office</td>
<td>141</td>
<td>1</td>
<td>141</td>
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<tr>
<td>II</td>
<td>Conference Room</td>
<td>394</td>
<td>1</td>
<td>394</td>
<td>7</td>
<td>56.29</td>
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</table>

**FLOOR PLAN - EXISTING**

**VICINITY MAP**

**HISTORY**

This facility was built in 1955. It features metal framing and siding. The building has outlived its useful life and is housing the College's Maintenance and Operations.

**FUTURE OUTLOOK**

It is recommended that this building be consolidated with Building 4000 Carpenter and Print Shops in a future replacement project with Aviation Maintenance.

Through strategically replacing deteriorated facilities that have outlived their useful life, the college can decrease its utility usage, decrease its overall square footage, and create a more inviting campus atmosphere.

Current Conditions 4-28

Facility Master Plan Update 2014
### Philips Hall
5000
**Foot Facts:** Student Housing Zone
**Square Feet:** 25,737
**Year Built:** 1963
**Recommendation:** Replacement Project
**Prior Renovation:** NA

#### Strengths
- It is rare for community colleges to have dormitories on campus
- Clean and functional
- Provides housing for summer camps and special events

#### Weaknesses
- Condition
- Fire sprinklers need upgrades
- Unattractive exterior and interior
- Boiler located on 1st Floor
- Shared Bathrooms
- Single-pane glazing
- Not eligible for State funding

#### Opportunities
- Opportunity for private investors to assist in replacing dormitories
- Locate closer to recreational/athletic zone
- Attract students who need housing
- Host summer camps for area K-12 or special programs
- Provide atmosphere more in line with that of the traditional four-year college experience

#### Risks of Non-Action
- Increase in maintenance costs and utility usage
- Students look for other housing opportunities
- Decrease in food service utilization
- Decrease in partnerships and collaborative opportunities

### Floor Plan - Existing

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGE ASSIGNABLE SQ. FT.</th>
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<tbody>
<tr>
<td>J6</td>
<td>DORMITORIES</td>
<td>17,464</td>
<td>74</td>
<td>230</td>
<td>76</td>
<td>230</td>
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<tr>
<td>J6</td>
<td>LOUNGE</td>
<td>1,350</td>
<td>3</td>
<td>450</td>
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<tr>
<td>J6</td>
<td>LOCKER ROOMS</td>
<td>1,600</td>
<td>4</td>
<td>400</td>
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**Assignable Square Footage:** 0

**Total Square Footage:** 25,737

**Efficiency:** N/A

### History
The college hosts two concrete masonry unit (CMU) dormitories that were originally built in 1963. In 1994, ADA upgrades were incorporated to allow for accessible entrances, restrooms, and sleeping quarters.

### Future Outlook
The dorms provide a place for aviation students and others to reside on campus. Big Bend is known for its aviation programs and attracts students from across the state and country.

As more students choose to start their education at community college, the dorms will become more attractive to those wanting the college experience.

Partnering with a private company to build and manage a new dormitory or apartments on campus is a possibility. Additionally, the college’s food service program, in combination with its planned recreational areas, will create an inviting campus atmosphere.
**Viking Hall**

**6000**  
Fast Facts: Student Housing Zone  
Square Feet: 25,737  
Year Built: 1963  
Recommendation: Replacement Project  
Other funding source:  
Prior Renovation: NA

### STRENGTHS
- It is rare for community colleges to have dormitories on campus  
  - Clean & functional  
  - Provides housing for summer camps and special events

### WEAKNESSES
- Condition  
  - Finishes need upgrades  
  - Uninviting exterior and interior  
  - Boiler located in 1970 building  
  - Shared bathrooms  
  - Single-pane glazing  
  - Not eligible for state funding

### OPPORTUNITIES
- Opportunity for private investors to assist in replacing dormitories  
- Locate closer to recreational/athletic zone  
- Attract students who need housing  
- Host summer camps for ages K-12 or special programs  
- Expand atmosphere more in line with that of the traditional four-year college experience

### RISKS OF NON-ACTION
- Increase in maintenance costs and utility usage  
- Students look for other housing opportunities  
- Decrease in food service utilization  
- Decrease in partnerships and collaborative opportunities

### HISTORY
The College built two concrete and concrete masonry unit (CMU) dormitories that were originally built in 1963. In 1994, ADA upgrades were incorporated to allow for accessible entrances, restrooms, and sleeping quarters.

### FUTURE OUTLOOK
The dorms provide a place for aviation students and others to reside on campus. Big Bend is known for its aviation programs and attracts students from across the state and country.  
As more students choose to start their education at community college, the dorms will become more attractive to those wanting the college experience.  
Partnership with a private company to build and manage a new dormitory or apartments on campus is a possibility.  
Additionally, the college's food service program, in combination with its planned recreational area, will create an inviting campus atmosphere.

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
<th>STATIONS</th>
<th>AVERAGEAssignable SQ. FT.</th>
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</thead>
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<tr>
<td>J6</td>
<td>LOCKER/SHOWER</td>
<td>1600</td>
<td>4</td>
<td>400</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ASSIGNABLE SQUARE FOOTAGE: 0  
TOTAL SQUARE FOOTAGE: 25,737  
EFFICIENCY: NA

FLOOR PLAN - EXISTING  
VICINITY MAP
Facility Master Plan Update 2014

BBCC Opportunity Center
7700
Fast Facts: Opportunity, Diversity Zone
Square Feet: BBCC - 8,894 GCECD - 1,122
Year Built: 2009
Recommendation: Renovations or Replacement
Prior Renovation: Unknown

STRENGTHS
- Provides space for the Opportunity Center
- Provides space for Grant County Economic Development Council on campus

WEAKNESSES
- Expensive to maintain
- Thermal comfort
- Acoustics
- Infrastructure inflexible and not upgradeable
- Misuse
- Odd sized spaces

OPPORTUNITIES
- Place in future Global Learning Opportunity Center
- Increase engagement with community
- Provide modern day learning environments and technology

RISKS OF NON-ACTION
- Economic development may choose to relocate
- No place to house Opportunity Center operations
- Foundation effectiveness decreased
- Progressive pedagogy unrealized
- Global Learning opportunities unrealized

HISTORY
This facility is an old church located on the Big Bend Community College Campus. It houses Basic Skills, English as a Second Language, WorkFirst, and Grant County Economic Development Council.

FUTURE OUTLOOK
incorporating the operations of this facility into the future Global Learning Opportunity Center would allow the college to move closer to achieving its goal of providing an outreach center that features educational opportunities. Creating a facility that honors all cultures, teaching styles and methods, and promotes international understanding will allow Big Bend to provide students with the skills they need to compete in the global workforce.

<table>
<thead>
<tr>
<th>CLASS</th>
<th>TYPE OF ROOM</th>
<th>SQUARE FOOTAGE</th>
<th>NUMBER OF ROOMS</th>
<th>AVERAGE ROOM SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>GENERAL CLASSROOM</td>
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<tr>
<td>B4</td>
<td>COMPUTER LABS</td>
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<tr>
<td>F1</td>
<td>FACULTY OFFICE</td>
<td>549</td>
<td>3</td>
<td>183</td>
</tr>
<tr>
<td>B1, B3, B5</td>
<td>CLASS LABORATORY SERV</td>
<td>796</td>
<td>6</td>
<td>133</td>
</tr>
</tbody>
</table>

|              | ASSIGNABLE SQUARE FOOTAGE | 5,429 |
|              | TOTAL SQUARE FOOTAGE      | 8,894 |
| EFFICIENCY   |                           | 63.0% |

FLOOR PLAN - EXISTING
VICINITY MAP
PRIORITIZED APPROACH

Facilities

The facility master plan is based on prioritizing future capital projects. A plan has been created that seamlessly develops both the campus core and defines the campus edge. New facilities are being created to replace those that have outlived their useful life. Facilities placed in service in the 1980s are systematically being renovated to meet the needs of modern instruction. This plan aims to assist the college in creating a plan that will maximize available funding and encourage private partnerships with surrounding industry.

Campus Layout

The College has received funding to replace five of its outdated Professional Technical Education Facilities. Three of these facilities will undergo demolition once the new facility is built. The future of the other two facilities is being explored with the community and surrounding economic development agencies.

Site

The College encourages the following site and facility boundaries:

- Building placement should shield parking lots and other back-of-the-house items from the interior campus environment.
- Back-of-the-house items should also be shielded from public view.
- Clustering of development within the campus core – this approach encourages multiple story facilities, walking, campus boundaries, a variety of open spaces, and preserves the outer edges for future growth, opportunities, and partnerships.
- Buildings should be orientated toward the campus core and encourage use of walkways.
- Coordinate the placement of shared facilities to ease transition and maximize usage of outdoor space.
- Create public gathering areas such as courtyards, art displays, recreational areas, and an amphitheater.
- Allow for accessibility to technology throughout campus.
- Develop a network of open spaces that facilitate reflective, informal, and formal learning.
- Use landscaping and signage to enhance the campus setting.
- Strategically place lighting, landscaping, and walkways to increase safety and security.
- Standardize landscaping – use native habitat as much as possible.
- Create a strong sense of arrival.
- Create a sense of welcoming.
- Orient buildings to maximize passive and active solar technology.
- Preserve green space as much as possible.

Gateways and Entrances

Gateways and Entrances into campus should use the following guidelines:

- Features should be appropriately scaled, constructed of high-quality materials, and well designed.
- Entrances should be reflective of the college’s character and vision.
- Complement the adjacent buildings.
- The main entrance should be dominant over other entrances on campus.

Public Spaces

Connections to the campus from parking areas and street crossings are of core importance. Further development of sidewalks to connect the entire campus with itself and adjacent services should continue. Informal and formal gathering areas should be placed to encourage spur-of-the-moment interactions and a strong sense of community. Further development of recreational areas and surrounding amenities will encourage community interaction and keep people on campus longer. The following pedestrian and public space design elements are encouraged within campus:

- Pedestrian paths should be safe, attractive and inviting, and should provide direct connections between places.
- Informal, visible, and accessible plazas, courtyards, and outdoor gathering areas should be provided between buildings.
- Benches should be placed and oriented to provide refuge and comfort but not impede access or circulation.
- All benches, lighting, bollards, recycling bins, and waste receptacles should be strategically placed, consistent, and complementary.
- Water features are encouraged in visually prominent and/or “special” locations as they contribute to campus character and its sustainability. They may include both water recycling fountains and storm water management facilities.

Interior Design Elements

To promote student, faculty and community interaction, different sizes and types of gathering places are essential throughout the campus and within the buildings. Interior gathering spaces should be provided in each building and enhanced with movable furnishings to allow for multiple configurations and activities.

- The need for adaptable, flexible, and multi-functional rooms has been strongly expressed during meetings with faculty and staff at the college. Creating rooms that are adaptable to the constant changes in technology is critical to the sustainability of the college. Flexible and functional classrooms enable instructors and students to work together in a variety of learning environments.
- Future buildings are envisioned to have spaces that are designed to be thermally, visually, and acoustically comfortable. Creating environments that promote interaction between students, instructors, and the community is highly desirable. Environments that actively engage students and lead to small and large group conversations outside the classroom will greatly enhance the learning experience.
- The location of faculty offices in all buildings is critical in fostering student and instructor interactions. Designs should allow for easy student interactions. Each new building should plan for faculty offices, informal learning areas, and classrooms to be designed to maximize student, instructor, and community interactions.
- Informal learning areas provide thoughtful common spaces for social interactions. Hallways and corridors should be thought of as social areas. Small alcove spaces can be used for small group conversations. Larger areas should provide comfortable and flexible seating, white boards for idea generation, wireless service, power, and proper lighting. Strategic placement of LCD screens and presentation equipment allow for informal group discussions and mini-symposiums.
- Creating interactive areas provide high program visibility that creates high traffic and is popular with students and instructors.
Design Standards
GOALS

Exterior Design Elements
• Consistent in architectural style and pattern language to match existing campus facilities and material
• Use of sustainable materials/construction practices
• Orientation and placement of new facilities (solar orientation, maximizing views, daylighting and campus core).
• Proportion of buildings in keeping with human scale
• Following local, state, and federal building requirements, including accessibility, zoning, codes
• Incorporate elements that lend themselves towards efficiency
• Emergency vehicle and fire access

Campus open spaces give definition to the outdoor environment, connect the buildings, support health/wellness and sustainability goals, provide spaces for outdoor programs and activities and create a "sense of place."

GOALS
In order to support the commitment to the community, Big Bend Community College needs to provide the highest level of academic programs possible and build sustainable facilities. As such, Big Bend Community College facilities aim to convey the "look and feel" as well as embody the inherent construction quality of the best facilities throughout the state at all levels. New buildings are designed to achieve the following goals:

New buildings must "create a place," rather than constitute stand-alone structures, forming social, aesthetic, contextually-sensitive relationships with the larger campus.

1. New buildings reinforce a consistent design framework of classical contextual architecture applied in ways that convey a feeling of permanence and quality, and interpreted in ways that meet the contemporary and changing needs of a modern community college.
2. New buildings employ materials, systems, and design features that will minimize the expense of major maintenance.
3. New buildings will apply "sustainability" principles -- notably, must now meet LEED Silver Certification for State of Washington buildings.
4. Capital construction projects are designed and delivered within the approved project budget, scope, and schedule.

The design consultant's role is vital to the success of the overall campus design and translates the detailed project program into a functional, aesthetically pleasing, and economical reality. The Design Consultant is expected to be sensitive to the work of others who have been involved in other facilities designed and constructed on campus.

The following general goals provide the basis for these general design guidelines:
• Buildings and facilities must accommodate the functional requirements set forth in the detailed project program, while contributing to enhancing the campus environment.

• Landscaping and open spaces must preserve and complement existing features, pedestrian and vehicular traffic, and the outdoor environment.
• Infrastructure systems must integrate/interfere with and/or improve existing systems and jurisdictions.
• Project aesthetics must contribute to the improvement of the institutional image and establish a sense of visual continuity throughout the campus.
• Cost effectiveness, maintainability, life-cycle costs, budget constraints, safety, and the operational aspects of Big Bend Community College facilities must be considered in all cases.

Design Approach and Objectives
It is recognized that the designer of any project is constantly faced with decisions regarding the selection of materials and methods to achieve an economical, aesthetically pleasing, and well-functioning end product. While these objectives may be universally applicable on an industry-wide basis, there are several design objectives for Big Bend Community College projects to which the designer must devote special attention. These objectives are listed below, and they must all be considered of equal importance.

Stakeholder Involvement
Key stakeholders must be involved in all capital planning. Meetings, surveys, interviews and tours of other similar facilities should guide the capital planning process. Successful projects are designed to meet the needs of end users.

Design Integration
Architectural design for the campus facilities must respond to the environmental characteristics and unique opportunities that characterize the Moses Lake Region as a whole. To this extent, all proposed designs must address and justify their aesthetic/stylistic integration into or departure from existing campus facilities.

Overall Economy
While Big Bend Community College constantly seeks ways of reducing its construction costs, the increasing sophistication of building systems often tends to obscure the fact that they require proportionately increasing operation and/or maintenance costs. Because the lowest first cost does not necessarily mean lowest total cost, life-cycle cost analyses will be an important component of the design process.

Resource Efficient Design
The policy of the State of Washington is to have buildings designed that are resource efficient. To that end, the consultant shall comply with Appendix VIII of the Instructions to Architects and Engineers, titled Energy and Environmental Guidelines (Resource Efficient Design).

Maintenance Based Design
Big Bend Community College requires all new and renovated facilities to be designed to be...
Design Standards
GOALS AND SAFETY CONSIDERATIONS

GOALS
Efficiently operated and maintained with minimum expenditure of resources during the useful life of the building. The following is intended to provide general guidance for maintenance based design and construction and is to be used in conjunction with specific campus standards and project specific elements of design as required by BBCC.

- Mechanical equipment shall have sufficient access and working space for safe, convenient operations and maintenance per Article 110 of the National Electrical Code.
- Provisions shall be made for maintenance access to all items of mechanical equipment, such as valves, controls, clean outs, traps, strainers, heaters, filters, heat exchangers, etc.
- Installed equipment should be economical to operate. Avoid discontinued, special order, or high-energy demand equipment that will cost more to replace, repair, and operate than standard materials.
- Lighting fixtures designed for inaccessible locations, such as high ceilings requiring specialized equipment for maintenance, should not be installed; but, if accepted by the owner as part of the design, the project shall provide access and the tools and equipment required to service and maintain fixtures.
- Avoid spatial and functional conflict between HVAC mixing boxes and light fixtures, fire sprinklers, and other systems.

Designers are encouraged to make suggestions for alternative approaches to meet or improve upon these standards as may be justified by engineering factors, operational criteria, or cost. Among the operational factors to be considered in designing building systems are the following:

- Functionality and cost considerations
- Reliability and durability
- Energy conservation
- Maintenance requirements minimization
- Simplicity of operation and adequacy of control systems
- Accessibility and serviceability of mechanical and electrical components
- Availability of replacement parts

Accessibility
All building project improvements are required to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and Washington State Title 51 WAC. When both are applicable; the most stringent controls will apply. Big Bend Community College reserves the right to exceed minimum code requirements. A mandatory ADA design review will be performed by the Division of Engineering & Architectural Services, and the Design lead is expected to participate.

SAFETY CONSIDERATIONS
All college buildings shall be designed with full consideration for the safety of the occupants and maintainers. In occupied buildings, safety and minimizing the disruption to the instructors and students are of primary concern and may involve tightly phased and scheduled planning for both the consultants and contractor. During renovation projects, the architect and contractor will coordinate with each other to ensure removal and disposal of items containing hazardous materials. The contractor is responsible for maintaining the site and completing work in a safe manner and in accordance with the applicable Occupational Health & Safety Administration (OSHA) regulations.

Approvals
It is the A/E’s responsibility to secure the approval of construction documents from all appropriate code authorities. Copies of the approval letters and drawings shall be furnished to the owner’s representative. Additionally, the college will review and approve the final construction documents based on considerations identified during the design process and included in these Design Guidelines.

Corridors
Corridors, means of access and egress, shall be of an appropriate width and configuration to provide safe exiting from the building. Doors swinging into corridors shall be recessed when possible to avoid interference with the flow of pedestrian traffic. Movable furniture and equipment shall be placed, and sometimes secured, as not to obstruct the required width or travel path. Space for corridor/lobby seating adjacent to classrooms shall be included per program to encourage small group discussions and pre and post-group interaction.

Stairs
All enclosed stairways shall have engineered smoke evacuation or mechanical pressurization for smoke control as required by the code. All stairs shall have non-slip tread nosing and shall be built of materials appropriate for the location and installation.

Floors
Floor construction shall be designed for vibration criteria appropriate to the use. In critical installations, vibration analysis may be appropriate. When mechanical equipment is located in a penthouse, special consideration shall be given transmission of vibrations into the building; a proper vibration isolation and structural system provided.

Flooring in laboratories and chemical storage rooms shall be constructed with chemical-resistant, liquid-tight flooring materials, including raised sill not less than 4" in height at all points, and in front and behind cabinets but excluding doorways. Flooring of commercial kitchens shall be constructed of a slip resistant, easily maintained material acceptable to the Health Department. Floors of toilet rooms, showers, greenhouses, and other special use spaces shall have flooring appropriate for the use and as approved by the college’s project manager.
SAFETY CONSIDERATIONS AND BASIS OF DESIGN

Design Standards

SAFETY CONSIDERATIONS AND BASIS OF DESIGN

Doors
When utilized, electro-magnetic holders for rated doors shall be connected to the building smoke detection and alarm system. Doors to all laboratory spaces shall swing toward the corridor and shall have a vision panel as large as allowed by the code. Each room entrance door will be sized to handle double the room capacity to allow simultaneous entrance/exiting during class break periods.

Fire Extinguishers
Fire extinguishers are to be located as required by National Fire Protection Association and local code officials. All aspects of fire extinguisher location and installation shall conform to the currently applicable Uniform Fire Code (UFC), International Fire Code (IFC), title 29 of the Code of Federal Regulations (29 CFR) section 1910.157, other sections in this document and other codes (UFC Standard 10-1, ANSI/NFPA 10-1994, e.g.).
- Fire extinguishers shall be 5-lb type ABC dry chemical, unless otherwise determined by the code officials.
- The Architect is responsible for locating the fire extinguisher cabinets on the drawings.
- Building fire alarm systems shall be connected to the central monitoring network.
- Building exterior and interior designs must identify locations and clear access to the following:
  - Fire and emergency vehicles
  - Hydrant and water supply
  - PIV and Fire Department standpipe
  - Fire alarm annunciator panel(s)
  - Special fire-suppressant agent storage
  - Knox box key and fire plan storage
  - Sprinkler control valve room
  - Emergency exit signage

Fire Protection Sprinkler and Suppression Systems
An automatic fire-suppression system will be required where design and code dictate and when included in the college’s project requirements.
- Provide all commercial kitchen hoods with an approved fire-suppression system.
- In chemical storage rooms, a chemical fire-suppression system, such as “Barricade” or “AFFF” is preferred. In central computer rooms, the college, when required, desires gaseous fire extinguishing systems. “Inergen” shall be considered as the extinguishing material and reviewed with the college’s representative and Information Technology Department.

Eyewash and Safety Showers
Each laboratory shall have at least one plumbed eyewash unit with a floor drain below, that meets or exceeds the requirements for plumbed eyewash units in the most recent printing of the American National Standards Institute Standard Z387.1 American National Standard for Emergency Eyewash and Shower Equipment. The unit shall be properly tested. Eyewash stations shall be installed in all laboratories. Safety showers shall be installed in laboratory buildings as required by applicable codes.

Asbestos Removal
Most college buildings and utility tunnels constructed before 1970 contain asbestos materials in some form or another. The most typical use is mechanical insulation and other building materials. Generally, it is the policy of the college to remove and dispose of these materials whenever a construction project is undertaken to remodel a building or part of the project.

Based on the scope of work established in the Architecture and Engineer (A/E) documents, the college will provide the contractor a written report from a state-certified inspector identifying the areas of concern. The actual removal and disposal will be accomplished by facilities services or an outside contractor prior to the start of the remodeling project or when appropriate to the construction sequence of the project. If the removal project is large enough to require a bidding process, the college may contract with a consultant for preparation of contract documents. These services will be separate and distinct from the A/E’s services. If during the course of remodel construction additional suspicious material is discovered, the contractor shall notify the college’s facilities office immediately. The college, with the contractor’s assistance, will assess the situation and remove the material appropriately.

Use of Asbestos or Products with Asbestos
The use of asbestos or any product containing asbestos banned by the Environmental Protection Agency and Department of Labor’s Occupational Safety and Health Administration is absolutely prohibited from this project. Any contractor installing any product with asbestos shall bear full responsibility and liability for any penalties, damages, suits or loss and shall pay for any and all costs of removal and replacement and also all legal costs if they are involved. Any product specified that unknowingly contains asbestos shall be brought to the attention of the architect in writing prior to its purchase and shall not be used.

BASIS OF DESIGN

User-Friendly Designs
Certain aspects of a campus or building should be more obvious to a layperson than others. Specifically, the building’s main entrance should create a feeling of welcome.

Sensitivity to Cultural Diversity
Big Bend Community College’s intent is to establish a physical environment that stimulates and sustains appreciation of the region’s cultural diversity. Big Bend Community College recognizes that cultural, ethnic minorities strengthen the district and college community as a whole and improve the learning process. Attention to vernacular design solutions can be one way to acknowledge cultural diversity.

Commissioning
It is now required by the State of Washington to have buildings commissioned to ensure that the facility’s mechanical, electrical, and designated systems’ performance meets the design intent and the owner’s functional criteria and operational needs. To that end, the consultant shall comply with Appendix VII of the Instructions to Architects and Engineers, titled Commissioning Guidelines. These guidelines are aimed at delivering a facility that operates as it was intended, meets the needs of Big Bend Community College and occupants, and provides training of facility operators to ensure continued proper operation of the building.
**Design Standards**

**BASIS OF DESIGN**

---

**Energy Life Cycle Cost Considerations**

It is the policy of the State of Washington that major facility designs be based on the total life cycle cost, including the initial construction cost, the cost of the energy consumed, and the costs of the operation and maintenance of the facility over its economic life. To that end, the consultant shall comply with Appendix IX of the Instructions to Architects and Engineers, titled “Energy Life Cycle Cost Guidelines.” These guidelines are for the preparation of an Energy Life Cycle Cost Analysis (ELCCA) for a major facility (defined as having twenty-five thousand square feet or more of usable floor space) that is to be constructed or renovated by any public agency.

**Site Design**

Every project site must blend with its adjacent surroundings. Exterior drainage must flow or connect to storm sewers where possible and drain away from structures and hardscaped areas. Drainage shall not occur across sidewalks. Sheeting, ponding and sedimentation at building entries, walkways, bicycle paths, and other hardscaped areas must be avoided.

**Landscaping**

Although the college assumes responsibility for campus landscape efforts, each campus construction project is expected to include design for landscaping of project site. The landscape design must be an integral component of the project. It shall respect existing site attributes and respond to the surrounding context. Site design must provide adequate access, views, and noise buffers. Within project specifications and drawings, landscaping vocabulary must be compatible with campus-wide elements such as canopies, portals, shaded areas, passageways, and hardscapes. Softscape is generally preferred to hardscape. Landscape design must help orient visitors and contribute to the legibility of the campus layout.

**Acoustical Privacy**

These guidelines apply to all rooms requiring acoustic protection. The items to be considered as general design considerations are as follows:

- All plumbing penetrations in walls must be caulked airtight using acoustical caulk.
- Where recessed fixtures of any type are installed (e.g., fire extinguishers, electric panels, drinking fountains, bookcases, etc.) the design team must ensure that required acoustic wall construction extends behind these elements.
- Installation of noise-generating equipment (such as telephones, drinking fountains, etc.) should be avoided on walls or rooms requiring acoustical protection.
- Use surface mounted rather than recessed lighting fixtures and fans at ceilings of rooms requiring acoustical protection in order to minimize sound transference to adjacent spaces.
- Locate doors to rooms requiring acoustical protection so that neighboring rooms do not have direct adjoining doors and in such a manner that doors on opposite sides of corridors do not face each other. In cases where acoustical isolation is imperative at each side of corridors, all doors should be staggered.
- Avoid placing doors to rooms requiring acoustical isolation opposite to stairwells, elevator lobbies, or bathroom doors.
- Whenever possible, the gap at the bottom of all doors should not exceed 1/2".
- Do not locate toilets (public or private) or lounges directly over rooms requiring acoustical protection, especially rooms having non-carpeted flooring.
- Separate studs, with a structural in-wall air gap, must isolate the jambs of all heavily used corridor doors from any adjacent rooms requiring acoustical isolation.
- Mechanical equipment in spaces above, beside, or below rooms requiring acoustical isolation must be vibration isolated, including piping and conduits from walls, floors, and ceilings.
- Demising walls for general purpose instructional spaces should have a Sound Transmission Coefficient (STC) rating of 50, although higher ratings may be required depending on the room(s) proximity to noise-generating spaces, such as mechanical rooms, elevator(s) shafts, restrooms, etc. Ceiling height and material(s) shall provide a Noise Reduction Coefficient (NRC) of .55 to .65.
- Back-to-back electrical, telephone, and electronic installations shall be avoided. Place these installations one stud spacing apart to avoid sound transmission.

**Building Configuration**

The ratio of surface area of walls and roofing to gross building area will be minimized in order to reduce heat loss and/or heat gain within reasonable design considerations. Roofs will be designed to shed snow, ice, and rain in a controlled manner and away from the path of the building occupants. All entries and exits must be protected from snow and other falling elements by their specific roof design, not by roof-level barriers.

**Glazing and Infiltration**

Appropriate glazing systems will be used to minimize heat gain and reflected glare to adjacent buildings or public areas. The use of projections and roof overhangs is recommended over windows in sunny locations and especially in south and west orientations. The length of the projection shall be calculated to maximize solar gain in winter and shading during the summer. This function may also be achieved by using horizontal shutters, fixed awnings, or other architectural devices.

**Custodial Closets**

One custodial closet must be provided for every twenty thousand (20,000) Net Assignable Square Feet (NASF) of floor area. In multi-story buildings, provide one custodial closet per floor, minimum. Ideally, custodial closets are to be located near elevators, toilets, or centralized among the areas they will service.

Custodial closets will not be located on stair landings. Entrance to custodial closets through restrooms, mechanical and electrical rooms, or similar intermediate spaces and vice versa are not permitted. Components of any telecommunications, electrical or mechanical systems are not to be located in custodial closets. Specifically, the following shall not be located inside custodial closets:

- Desks
- Telephone Panels
- Electrical Panels
- Water Heaters
Design Standards

BASIS OF DESIGN

• Circulation Pumps
• Mechanical Equipment
• Roof Hatches/Access Panels

The typical custodial closet floor area needs to be a minimum of 80 square feet (approximate dimensions = 8’ x 10’) with preferably high ceilings. Fluorescent lighting should provide an average of 40 foot-candles, maintained, at the floor. Doors should open outward. A 40’ wide single door is adequate except in cases where the closet is wide and relatively shallow in depth. In those cases, double doors may be required. Shelving on three walls will be provided for a minimum of 15 linear feet, with a minimum of 14’ clearance measured vertically between shelves. Mop hangers and racks for mops, hoses, or brooms must also be provided. A large capacity floor sink with hot and cold running water and a floor drain must be provided in each custodial closet. Sinks are best located near the door and should be positioned so cleaning machines and equipment can be maneuvered easily and emptied in the sink prior to being refilled.

At least two electrical duplex outlets are required in each custodial closet. Occupancy sensor lighting control is desired, but not imperative. Lighting level design standard should be figured at 50-75 fc.

When occupied, adequate ventilation and exhaust are essential, a minimum of fifteen (15) air changes per hour. Ventilation should provide conditioned air with appropriate exhaust to the building exterior. Mixing with building HVAC should not happen to ensure good indoor air quality. Floors should be either quarry tile or sealed concrete. Wall finishes should be ceramic tile or FRP 8’ above finished floor.

A 120-square-foot custodial supplies storage room shall be provided per building in addition to or combined with the wet custodial closets previously mentioned. In a multi-story building, the preferred location is near elevators.

Equipment Rooms

Access to equipment rooms must never be by means of ship ladders and/or vertical ladders. Access to and from equipment rooms must be clearly diagrammed in the schematic design drawings. Mechanical rooms must be thermal, acoustical, and vibration isolated from adjacent spaces. Adequate circulation around equipment, including valves and accessory piping should be provided. Transformers, boilers, chillers, and other large equipment shall be located to permit easy servicing, operation, and removal. Equipment room layouts must indicate graphically how servicing, operation, and repair clearances are assigned. The graphic representation(s) must include all necessary carrying beams and/or cranes locations, as well as equipment and personnel moving paths from equipment location to point of building egress. Also, clearly delineate all housekeeping pads. Similarly, roofing or roof-mounted maintenance tools and equipment clearances must be considered and graphically illustrated when designing roof access points.

One 125-volts, 20-amps duplex outlet, one telephone and one data outlet shall be provided in each mechanical room, electrical room, substation(s), and penthouse(s). A&E will verify with the college’s project manager which equipment room(s) (if any) will require service sinks. All mechanical equipment rooms and penthouses must have a 3-phase, 50-amps receptacle for welders’ equipment.

Cooling towers and chillers shall be located at ground level. They shall never be roof mounted or enclosed at mid-floor levels.

Maintenance/Materials Storage Room

Every new Big Bend Community College building or major remodeling and/or addition project must provide a maintenance and materials storage room. This room shall be 100 square feet minimum (approximate dimensions 10’ x 10’), with a 9’ high ceiling, and 40’ wide access door. This will be located near the service entrance or as otherwise suggested by the college's project manager.

Two 125-volts, 15-amps GFI duplex outlets must be provided in the maintenance/materials storage room. The maintenance/materials storage room must have heavy-duty/protected lighting fixture(s). Occupancy sensor lighting control is desired, but not imperative.

Trash and Recycling Facilities

All new facilities must consider and incorporate a location for recycling bins and trash receptacles. All buildings shall include a screened area for trash disposal and recycling of materials.

A recycling paper room of approximately 100 square feet (approximate dimensions: 10’ x 10’) must be provided in each facility. The paper recycling room preferred location is near the loading/unloading area or service entrance. Trash and recycling areas shall be sheltered from wind and easily accessible by the custodial staff. Location must consider the unpleasant odors normally generated by these receptacles. Trash pick-up, disposal operations, and vehicular accessibility must be carefully studied and discussed with college members of the design team prior to selection. Screen all trash collection locations with materials compatible with adjacent structures. A hose bib will be provided at all trash collection areas. Schematic design plans must diagram these considerations.

Loading/Unloading Areas

All new facilities shall be provided with adequate loading and unloading areas. The design consultant must verify with the college’s project manager if the loading/unloading zone requires full loading dock capabilities and to which extent these facilities must be accessible to specific vehicle sizes. Access to loading/unloading areas must be clearly diagrammed on the schematic design drawings.

Offices

Faculty offices are to be designed to a 120-square-foot space standard. Project dependent, other office sizes may be required. The college’s project manager should verify space allocation and general guidelines prior to the start of schematic design. When possible, staff and general administration offices are to be designed following an “office suite” concept. That is, several offices are grouped within areas off main corridors. This is to create a sense of place, improve interactivity.
Design Standards

BASIS OF DESIGN

between division staff, and to avoid opening office doors into fire rated exit corridors. All office doors must have an 8” wide vision-lite immediately adjacent to it or a 6” lite in the door itself. Maximum allowable ambient noise level should meet or exceed NC 30-35.

Instructional Spaces

General use classrooms are essential components in the college’s instructional mission. Classrooms have increasingly complex designs and technical requirements. This section is intended to inform the college’s professional design consultants of the college’s expectations and requirements for instructional spaces.

Programming

The following design goals have been established for Big Bend Community College classrooms:

- To provide the most effective learning environments based on desired pedagogy.
- To provide an environment designed to enhance a student’s ability to understand, observe, and participate in active learning.
- To provide an environment that is comfortable for students and instructors, as well as durable, reliable, and easy to maintain.
- To provide a room that is easy for faculty and student equipment operators to use through standardization of controls, layouts, and equipment.

Instructional space is to be designed to meet BBCC accepted standards. Design consultants will reference the Technology in Classrooms handbook when designing an instructional building. All classroom(s) furnishings, accessibility, and required clearances must be diagrammed in the schematic design drawings.

The college requires classroom design to focus on creating comprehensive and flexible teaching environments. In order to do so, all classrooms must have access to technology that instructors need to interact with the student. Closets will be placed in each classroom to provide necessary program storage. The presentation space in the front of the room will allow for simultaneous use of white boards, blackboards, and multiple screens if desired. The front center of the room will accommodate overhead projectors, walking space for pacing instructors, and open space for displays and experiments. White boards will be placed on the sidewalls of the classroom to maximize space for both small and large group activities. Lines of sight, acoustics, and seating space will be of top priority throughout the designing process.

Classroom location

- Large capacity classrooms will be located near the building entrance, to limit impact that concentrated large numbers of students may have on other building occupants.
- Unless the program dictates, locate the classrooms and auditorium on ground and lower floors, convenient to building entrances/ exits, to minimize student travel through the buildings, and provide direct pathways to other instructional and student buildings.
- Informal learning, student study/lounge areas are intended to be near classrooms but not so as to impact class activities or impact students waiting for the next class to begin.
- Indoor noise-generating equipment and activities, such as student lounges/vending machine areas, toilets or labs, where hazardous materials are used will be located away from general classroom spaces. If a classroom adjoins such areas, buffers will be provided between them to minimize class disruption.
- Classrooms shall be buffered from internal building noise and exterior building noise (e.g., loading docks.)

Classroom Footprint

- The ideal configuration of small and large classrooms is square. A rectangle with a length-to-width of no greater than 1 to 1.5 with the instructor area along one of the short walls is an acceptable alternate configuration, if based on program pedagogy; the teaching wall can be rotated 90 degrees easily.
- No seat shall be more than 45 degrees off the center axis of a classroom to ensure adequate viewing of the chalk/white board(s) and projection screen(s).
- Classroom footprint shall accommodate the current interactive pedagogical style. AV equipment requirements and seating type planned for the room use will be compliant with this practice. Consideration shall be given to needed infrastructure and its location (conduits in floor/above ceiling, etc).
- Seminar/breakout rooms are generally recognized to be either rectangular or almost square with little distinction of a “front” side of the room.
- Large classrooms and lab configurations will require specific consideration for acoustical design to ensure effective learning interaction.

Auditorium and classrooms with over 100 seats shall be fan-shaped to provide clear viewing angles and acoustics.

Instructor Area

The instructor’s area will be easily visible from all student seating and provide instructor seating, writing surface, and electronic controls to all audio/visual and lighting systems in the classroom. Adequate space will be allocated to instructor’s area, in addition to student seating areas. The “front” area must be large enough to give a minimum of 42” for instructors to stand behind a podium and/or desk and still allow free movement of students between the front of the podium/desk and the seating. In all technology-enhanced classrooms, the equipment control system touch panel (to control lights, motorized screens, and other remotely controlled equipment), shall be located either on the podium, or a wall location, as specified by BBCC capital projects staff.

Aisles, Spacing, and Clearances

- The preferred convenience aisle width in classrooms is 36” and at a minimum will be full ADA compliant.
- Aisles in large and media presentation classrooms will be evaluated during design to facilitate the optimum viewing areas for students. Side aisles are preferable but will again depend on final design.
- Room layouts will achieve a viewing angle of no more than 45 degrees from either side of the center axis of the room.
Facility Master Plan Update 2014

Basis of Design

Design Standards

Basis of Design

Doors

- Interior doors will be per BBCC standard solid core for durability and sound control, constructed with a Lyptus veneer face or sawn Red Oak.
- Doors must meet ADA requirements of 36” in width at 105 degrees open. 40-inch doors will be placed into rooms with heavy cart or materials transfer.
- Classroom and office doors will have 6” by 30” vision panels.
- The main entry to the classroom should be toward the rear to minimize classroom disruption.
- Classroom corridor doors shall have noise reduced closure mechanisms. Entrance/exit door(s) to the room shall be located to minimize disruptive noise from late comers.
- Doors shall have adequate light seals to prevent light from outside the room striking the door(s) to the room shall be located to minimize disruptive noise from late comers.

Equipment

Typical general-purpose classroom equipment must include, but not be limited to, the following:
- Instructor area: desk and podium.
- Marker boards.
- Tackable display surfaces.
- Student seating. Verify seating type on a room-by-room basis.
- Trash and recycling receptacles near the classroom door.
- Retractable projection screen.
- Telephone/data outlet.
- Broadband video outlet.
- Ceiling-mounted data/video display unit infrastructure.
- General purpose electrical duplex outlets: verify type(s), number, and location for each classroom with the college's project manager.
- Verify specific equipment requirements for special-purpose classrooms, lecture halls, seminar rooms, and computer labs with the college's pre-design committee through the project manager.
- A certain number of classrooms (as a minimum, one of each size in any given facility) must be provided with distance-learning equipment infrastructure. Verify specific requirements with the college's project manager.
- The main entry to the classroom should be toward the rear to minimize classroom disruption.
- Classroom corridor doors shall have noise reduced closure mechanisms. Entrance/exit door(s) to the room shall be located to minimize disruptive noise from late comers.
- Doors shall have adequate light seals to prevent light from outside the room striking the projection screen.

Fixed Equipment

Dry Marker Boards

- Dry marker boards will be placed across entire width of wall in instructor area and along sidewalls for student use. A minimum of 12’ is required.
- Dry marker boards shall be a minimum of 48” high (60” preferably), white or off-white finish with a 25-year warranty.
- Boards may be upward or horizontal sliding.
- Boards shall have a 2” tack strip and map hooks across the full length of the top edge and a continuous tray across the full length of the bottom edge.
- Boards shall be mounted with bottom edge of tray at 34”.

Projection Screens

- Each classroom shall be equipped with one or more projection screens; position screens to allow for simultaneous use with dry marker board.
- Preferred classroom size is 84” X 84”.
- Bottom of viewable area shall be no lower than 48”.
- Screen height should follow the viewing distance formula of 1/5 the distance from the farthest viewer.
- Mount all screens to allow sufficient clearance between the screen and board trays.
- Position all projection screens, so that a minimum of six linear feet of board remains visible in the instructor area when the screen or screens are in use.
- All screens 8’ or more in width shall be motorized.
- All motorized screens shall be recessed into the ceiling and shall have manual wall-mounted switch and an additional switch in the instructor’s space.
- Screens shall be seamless.
- The viewing angle of any screen should be at least 140 degrees.

Overhead Projectors

- Overhead projectors will be mounted overhead in such a manner as to provide best viewing angles for the classroom occupants.
- Locate projector so images are legible from the back of the classroom.
- Projectors and additional multi-media equipment will be installed per the college’s established standards.

Acoustics

Instructional spaces acoustical characteristics are to be as follows:
- Walls to have a minimum Sound Transmission Coefficient (STC) rating of 50.
- Classroom walls will have a STC rating between 55 and 59.
- Additional noise-control strategies will be required when classroom walls adjoin, due to extra generated noise from equipment and activities, such as restrooms, building systems, and vending areas.
- Floor-ceiling assemblies STC rating of 58-60.
- Walls will be designed to distribute sound evenly throughout the classroom.
- The acoustical design must control the sounds and voices in the room, so instructors and students are heard easily and accurately.
- The surface of the ceiling must be designed to accommodate the required acoustical properties of the room. The area of the ceiling with rated acoustical tile should be covered with a .55-.65 Noise Reduction Coefficient (NRC) and a minimum STC of 40 directly related to the ceiling height as follows:
  - Eight feet (8’) clearance: forty to fifty percent (40%-50%).
  - Ten feet (10’) and twelve feet (12’) clearance: fifty to sixty percent (50%-60%).
- Mechanical systems ambient noise level must meet or exceed: NC 25-30.
- Reverberation must be controlled by applying acoustical material to the walls as necessary.
Variations in ceiling height and profile may be required to achieve appropriate acoustical design.

Acoustical reflective ceiling material will be used at instructor area of large classroom.

Background sound and outside noise must be kept from intrusion (i.e. HVAC System).

**Restrooms**

Direct or reflected line of sight into restrooms shall be broken. Lighting shall be provided above all enclosed stalls. Specify wall-mounted toilets and waterless urinals. All wall-mounted fixtures and accessories must have adequate backing. All lavatories shall be ceramic.

Lead-free ceramic tile walls to a minimum of 7’ above finished floor will be provided; full height walls preferred. Floors shall be lead-free ceramic tile with unglazed, sealed, integral dark grout. Twenty-five cent ($.25) sanitary napkin/tampon dispensers shall be located in women’s restrooms. Big Bend Community College may supply some toilet accessories; verify specifics with the college’s project manager.

**Lobbies**

Access to buildings shall be through a central, enclosed and lockable lobby area. Provide a vestibule at all buildings main entries, unless otherwise indicated in the Detailed Project Program. All vestibules must have walk-off carpet as approved by the BBCC Facilities Department.

Corridors and auditorium lobbies shall be sized to accommodate waiting students and encourage post-lecture discussion and impromptu gatherings.

The building lobby shall be designed to contain a building directory and a lockable bulletin board. Entrance doors shall be recessed or protected by canopies and/or wing walls. Servicing and/or replacement of all lighting in lobbies, atriums, and other high-ceiling/high-volume spaces must be carefully studied during schematic design. The placement of any and all fixtures requiring periodic servicing and/or maintenance must be specifically approved by the college’s project manager during the design stage of the project.

**Tele-Data-Distribution Rooms**

Big Bend Community College requires buildings to be highly developed in support of technology and all learning spaces. Each building design must provide at least one tele-data-distribution room per floor. The tele-data-distribution room(s) shall not be shared by other functions and shall be accessible from a public corridor.

Each room shall be designed for future installation of a card-access system for entry. Door strikes are to be locked when de-energized. Individual cooling connection to the emergency generator will be provided for this room(s). Cooling coils will be located outside the tele-data-distribution room(s).

The telephone switching gear and at least one light fixture must also be connected to the emergency generator if provided. The tele-data-distribution room(s) shall be about 120 square feet measuring approximately ten by twelve feet (10’ x 12’). This room(s) shall be centrally located on each floor. Each tele-data-distribution room shall be within 300’ of any communication outlet (telephone, data and TV). Four by eight feet (4’ x 8’), 3/4” thick, fire-retardant painted plywood panels will be placed on all walls. Provide two 120V, 20-amps GFI duplex receptacles, or equivalent wire mold at each tele-data-distribution room. No water lines are allowed in the tele-data-distribution rooms. The tele-data-distribution room(s) shall not be located below restrooms, custodial closets, or any other areas where water spillage may occur.

**Stairs**

Stairs shall be designed to allow easy passage in both directions at the same time. Interior stairways shall have rubber tread covers with integral risers, stringer skirts, and rubber flooring or carpet at landings, or as approved by the college.

All stairs/stairwells lighting fixtures must be accessible from landings using a six-foot ladder maximum. All exit stairs must have hard-surface floor coverings. Any carpeted stairway must be approved by the college’s project manager. One 125-volts, 15-amps GFI duplex outlet at each stairway floor level landing will be provided.

**Miscellaneous Elements Guidelines**

No vending machines shall be located in main public corridors. Space must be allocated in locations approved by the college’s project manager and college design team members.

Specific areas shall be designated for locations for printers and copiers. Spaces for copiers shall have direct ventilation to the exterior of the building. All corridors must have 125-volts, 20-amps GFI duplex outlets located no farther apart than twenty feet from each other. Design consultants must verify corridors, display(s), cabinets and/or bulletin board(s) requirements with the BBCC Administration during the schematic design phase and prior to the schematic design submittal. Roof-mounted equipment shall be minimized. All roof-mounted equipment shall have stair access and be fully screened from street level and other buildings’ views. Exterior doors shall be recessed and/or protected from snow, ice, and water. This requirement may be waived for some emergency exits. Verify specifics with the college’s project manager.
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**Design Standards**

**SPATIAL LAYOUTS - FACULTY OFFICES**

**USE (Functional Description)**

Educational Support

**ADJACENCY (Functional Relationship)**

Adjacent Classrooms, Laboratories, and Informal Learning/Resource Centers

**AREA (Dimensional Requirements)**

Net Program Area:

- Dean's office: 150 s.f.
- Faculty office: 120 s.f.
- PT Faculty office: 80 s.f.

Min. Dimensions:

Varies by program or building

Ceiling Height: 10'-0"

**NARRATIVE:**

Faculty offices provide space to administer the teaching and research activities of a given program. They are also envisioned to be places where faculty can provide support, counseling, and advising to their students relative to their progression through their coursework. These educational support spaces include dean's offices, full and part-time faculty offices.

Faculty offices will be an integral part of the design of all new classroom and laboratory facilities and will continue to be included in the planned renovations of existing buildings. Faculty offices should be strategically located in close proximity to informal gathering spaces, resource centers, and other spaces where faculty-student encounters can occur. Some guiding design principles may include:

- Provide adjacency to other educational support spaces with a similar function (i.e., administration, conference, break room, workroom, recycling).
- Provide adjacency to spaces that promote faculty-student interactions.
- Integrate technology with ease of access for future upgrades.
- Provide infrastructure that supports portable technology.
- Provide access to natural ventilation and daylight.
- Provide acoustical and visual separation from adjoining spaces.

**LEGEND**

A  DESK
B  FILE CABINET
C  OFFICE CHAIR
D  GUEST CHAIR
E  BOOKSHELF
F  NATURAL DAYLIGHT
G  PARTIAL-HEIGHT WALL
**Design Standards**

**SPATIAL LAYOUTS - RESOURCE CENTER**

**USE (Functional Description)**
Educational Support

**ADJACENCY (Functional Relationship)**
Adjacent Classrooms, Laboratories, and Faculty Offices

**AREA (Dimensional Requirements)**
Net Program Area: Varies by program or building
Min. Dimensions: Varies by program or building
Ceiling Height: 10'-0"

**NARRATIVE:**
Resource centers are community learning environments. The centers should provide space for both individual study and engagement in collaborative group discussions with a focus on student-centered learning. The space is adaptable to multiple uses such as lectures, conferences, meetings, seminars and webinars, and tutoring. Faculty offices should be located in close proximity to Resource Centers to encourage faculty-student interactions. Technology will be integrated to allow for presentations with projection screens, smart boards, and white boards. Infrastructure support for portable technology, such as laptops and tablet computers, will be a valuable amenity for the resource center.

It is envisioned that resource centers will be strategically located throughout campus in the design of all new classroom and laboratory facilities, as well as planned renovations of existing buildings. Some guiding design principles include:

- Provide movable partition walls for adaptable-use space.
- Provide flexible, movable furnishings.
- Provide adjustable and task specific lighting.
- Integrate technology with ease of access for future upgrades.
- Provide infrastructure that supports portable technology.
- Provide access to natural ventilation and daylight.
- Provide acoustical separation from adjoining spaces.

**LEGEND**

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**RESOURCE CENTER**
MULTIPLE CONFIGURATIONS
**Design Standards**

**SPATIAL LAYOUTS - CONFERENCE / SEMINAR**

**USE (Functional Description)**
- Educational Support

**ADJACENCY (Functional Relationship)**
- Adjacent Classrooms, Laboratories, Administration, Faculty Offices and Informal Learning/Resource Centers

**AREA (Dimensional Requirements)**
- Net Program Area: 500 s.f. depending on program need
- Min. Dimensions: Varies by program or building
- Ceiling Height: 10’-0”

**NARRATIVE:**
The conference/seminar room is a multi-use space with the flexibility to accommodate a wide range of campus meetings and events. Furnishings can be rearranged for collaborative-based meetings, seminars, faculty training, and student advising. Technology will be integrated allowing for presentations with projection screens and white boards, as well as support for portable technology such as laptops and tablet computers.

In order to maximize space utilization, these conference/seminar rooms should be responsive to current campus needs, while also adapting to changes in use over time. Design considerations include:

- Provide flexible, movable furnishings.
- Provide adjustable lighting.
- Integrate technology with ease of access for future upgrades.
- Provide infrastructure that supports portable technology.
- Provide access to natural ventilation and daylight.
- Provide acoustical separation from adjoining spaces.

**LEGEND**

- A  AUDIO/VISUAL/DATA/LIGHTING EQUIPMENT
- B  WHITEBOARDS
- C  CEILING MOUNTED PROJECTOR
- D  CEILING MOUNTED PROJECTION SCREEN
- E  FLEXIBLE, MOVABLE FURNISHINGS
- F  PORTABLE TECHNOLOGY SUPPORT
Design Standards
SPATIAL LAYOUTS- GENERAL CLASSROOM

**USE (Functional Description)**
Educational Support

**ADJACENCY (Functional Relationship)**
Adjacent Classrooms and Laboratories,

**AREA (Dimensional Requirements)**
Net Program Area: 900 - 1,500 s.f. depending on program need
Min. Dimensions: Varies by program or building

**Ceiling Height:** 10'-0"

**NARRATIVE:**
The classroom is the platform for effective instruction and active learning. A simple room with space for tables and chairs is no longer adequate in motivating a student towards academic success. The classroom must be adaptable to changing teaching methodologies and accommodate different group dynamics. This flexibility should allow for instructor-led learning and for student-to-student collaborations with the emphasis on student-centered learning. Technology will be integrated, allowing for presentations with projection screens and white boards, as well as provide support for portable technology, such as laptops and tablet computers.

Design standards aim to provide guidance in the design and development of new classroom space, as well as the renovation of existing classrooms to accommodate the above goals. Some guiding design principles include:

- Provide open floor space for multiple configurations of student workspace.
- Provide flexible, movable furnishings.
- Provide unobstructed views to the front of the space.
- Provide adjustable lighting.
- Integrate technology with ease of access for future upgrades.
- Provide infrastructure that supports portable technology.
- Provide access to natural ventilation and daylight.
- Provide acoustical separation from adjoining spaces.

**LEGEND**
A AUDIO/VISUAL/DATA/LIGHTING EQUIPMENT
B WHITEBOARDS
C CEILING MOUNTED PROJECTOR
D CEILING MOUNTED PROJECTION SCREEN
E FLEXIBLE, MOVABLE FURNISHINGS
F PORTABLE TECHNOLOGY SUPPORT
G INSTRUCTOR STATION
**Design Standards**

**SPATIAL LAYOUTS- COMPUTER LABORATORY**

**USE (Functional Description)**
Instruction/Education and Educational Support

**ADJACENCY (Functional Relationship)**
Adjacent Classrooms and Laboratories

**AREA (Dimensional Requirements)**

- **Net Program Area:** 900 - 1,500 s.f. depending on program need
- **Min. Dimensions:** Varies by program or building
- **Ceiling Height:** 10'-0"

**NARRATIVE:**
The computer lab is a vital link in support of effective instruction. These spaces must accommodate continual, progressive changes in technology and support systems. While the need for specialized computer labs for certain programs will remain constant, increase in student ownership of computers will change the composition of the traditional computer lab. Labs may become more virtual, less dependent on dedicated spaces, and may take the form of informal gathering spaces. Therefore, new and renovated computer labs should be designed as flexible spaces able to accommodate changing uses.

Traditional and informal computer lab space should be planned for in all new classroom and laboratory facilities as well as the renovation of existing buildings. Design considerations for computer labs include:

- Provide flexible, movable furnishings.
- Provide spaces for both individual and collaborative study.
- Integrate technology with ease of access for future upgrades.
- Provide infrastructure that supports portable technology.
- Provide access to natural ventilation and daylight.
- Provide acoustical separation from adjoining spaces.

**LEGEND**

- **A** AUDIO/VISUAL/DATA/LIGHTING EQUIPMENT
- **B** WHITEBOARDS
- **C** CEILING MOUNTED PROJECTOR
- **D** CEILING MOUNTED PROJECTION SCREEN
- **E** FLEXIBLE, MOVABLE FURNISHINGS
- **F** INSTRUCTOR STATION
- **G** PORTABLE TECHNOLOGY SUPPORT
- **H** NATURAL VENTILATION/DAYLIGHT
- **I** NETWORKED COMPUTER MONITOR
- **J** LOUNGE FURNITURE
Recommendations

PROJECT PRIORITIES

Recommendations

The foundation of Big Bend Community College’s Academic and Facility Master Plan is the Student Success. Creating a campus focused on student success requires a layered, multi-functional and adaptable campus. A 21st-century campus must be both physical and virtual. Engaging students with the campus will yield both short and long-term success. The growth of lifelong learning increases the likelihood that students will return to the college again and again for educational and skill upgrades. Creating strong ties will ensure future funding and growth for the college.

David Thornburg, a leader in campus environments, believes that in order to maximize learning opportunities, campuses should provide the following environments:

1. The Camp Fire
2. The Watering Hole
3. The Cave
4. Life

The camp fire consists of space where students listen and learn. The watering hole is space where students gather informally to discuss and discover what they have learned. The cave is where students retreat and work on their own. Life is where students put into practice what they have learned. This facility master plan strives to infuse all of these elements into a layered campus environment. Interior and exterior environments must welcome learners of all ages and levels.

Flexible

To keep pace with the changes that are occurring both in education methodologies and the surrounding community, adaptation and flexibility are crucial. Learning spaces must be inviting and be able to serve both formal and informal learning environments of various sizes simultaneously. Access to instructors, resources, and fellow students must be immediate and ongoing. Programs need to offer both physical and virtual learning opportunities and resources to be successful. Students are demanding 24/7 access. They want to be able ask questions, seek guidance, and complete projects on a flexible schedule.

Moreover, students want to feel as if they belong. Creating environments that encourage students to engage in discussions and activities outside of the classroom, increases student involvement and their attachment to their own learning processes and outcomes. Facilities must discreetly encourage collaboration, innovation, and learning.

Connectivity

BBCC must offer space for community, industry, faculty, staff, and students to connect. Space should display student work and create opportunities that allow students to learn firsthand from those from whom they are likely to seek employment. Project-based learning is becoming more and more essential as lecture moves from the classroom to hybrid and e-learning instruction. Ultimately, this trend will allow instructors to develop methodologies that will shift the learning process from passive to active. The STEM Center in the 1200 Building is a strong example of this methodology. The future PTEC facility is envisioned to host project-based learning. Future facilities and renovations need to incorporate active learning space into their design.

Collaborative

BBCC’s success will rely on creating and delivering customized educational curriculum and services. Students and surrounding industry and businesses are demanding customization. Turnaround time for curriculum development and delivery will drive program success. Continual instructor development and skill enhancement will become mandatory. Space for instructors to learn from one another and collaborate on interdisciplinary opportunities will enhance student learning. Demand for modular or stackable credits will increase. Students will likely plug in and out of college as needed for skill upgrades. It is likely that employers will work hand-in-hand with the college to develop this curriculum for these programs.

The infrastructure must mold to this criteria. Embracing technology and incorporating it into the campus core is essential to providing students with modern learning experiences and environments. Spaces will need to encourage gathering, exploring, and sharing of ideas. Programs will partner with higher education, K-12, the community, and the industry. Processes will be streamlined and lend to developing result-oriented programs that train students in the skills that businesses are demanding.

Engaging

Increased collaboration and program customization will lead to students returning to college for skill upgrades and lifelong educational pursuits. The campus needs to serve education: both students and instructors must feel welcome and free to explore new ideas and challenges. Through the creation of high-quality interior and exterior learning environments, both student and instructor engagement with the campus will increase.

Increased campus engagement will assist in retention and elevate learning outcomes. The STEM Center is actively engaging students and instructors in the teaching and learning process. Students are forming learning groups and learning from one another.

Exterior gathering spaces have also been created; a great example of this includes the area outside of the 1800 ATEC Building. The vast amount of green space and concrete work is inviting and often used by students as a place to sit and study. The strategically placed benches are welcoming and used by students. The Master Plan focuses on continuing this effort and aims at creating an interactive campus that is welcoming, community-centered, and easily accessible and understood.

Comprehensive

Over the last ten years, progress has been made toward achieving a comprehensive campus infrastructure and a unique BBCC culture. Exterior gathering areas, informal learning environments, improved classrooms and labs have been created to increase student success. Standards are being developed to create more inviting facilities, easy access to instructors, and increased natural daylighting. Although tremendous progress has been made, there remains a shortage of high-quality classroom space, modern science labs, informal learning areas, and quiet learning environments. Additionally, several buildings on campus are rapidly deteriorating and in need of renovation and/or replacement. Throughout this master plan several major and minor capital projects are identified. Tools used to prioritize projects include surveys, facility evaluations, focus groups, and team meetings. Through this process the following major capital priorities have been identified:

1. Professional Technical Education Center
2. Allied Health/Wellness/Fitness Center
3. Computer Science Building
4. Global Learning Opportunity Center
5. Hangar Addition and Renovation 3300
### Major Capital Project Priorities

The design team, campus planning committee, and 2013 facility condition survey (FCS) have identified the following major capital needs, in order of priority (Over $5,000,000). Costs are given in 2014 dollars and should be escalated accordingly:

<table>
<thead>
<tr>
<th>Priority</th>
<th>Major Project</th>
<th>Demo SF</th>
<th>Renovated Space</th>
<th>New Space</th>
<th>Total SF</th>
<th>Cost per SF</th>
<th>2014 Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pending</td>
<td>Professional Technical Education Facility</td>
<td>76,549</td>
<td>0</td>
<td>76,140</td>
<td>76,140</td>
<td>New $293</td>
<td>$22,309,020</td>
</tr>
<tr>
<td>Pending</td>
<td>Allied Health/Wellness Center</td>
<td>24,464</td>
<td>4,000</td>
<td>64,000</td>
<td>68,000</td>
<td>New $300 Renov $225</td>
<td>$20,100,000</td>
</tr>
<tr>
<td>1</td>
<td>Computer Science/BBT</td>
<td>24,468</td>
<td>30,000</td>
<td>30,000</td>
<td>New $300</td>
<td>$9,000,000</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Global Learning Opportunity Center</td>
<td>8,000</td>
<td>69,585</td>
<td>69,585</td>
<td>New $293</td>
<td>$20,388,405</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Aircraft Hangar 3100 Renovation &amp; Addition</td>
<td>0</td>
<td>30,251</td>
<td>9,688</td>
<td>39,939</td>
<td>New $230 Renov $180</td>
<td>$9,417,260</td>
</tr>
<tr>
<td>4</td>
<td>Performing Arts Center</td>
<td>13,180</td>
<td>0</td>
<td>20,000</td>
<td>20,000</td>
<td>New $330</td>
<td>$6,600,000</td>
</tr>
<tr>
<td>5</td>
<td>Business Incubator 3300</td>
<td>0</td>
<td>31,682</td>
<td>0</td>
<td>31,682</td>
<td>Renov $180</td>
<td>$5,702,760</td>
</tr>
<tr>
<td>6</td>
<td>Diesel and Agriculture</td>
<td>0</td>
<td>30,000</td>
<td>30,000</td>
<td>New $293</td>
<td>$8,790,000</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Student Housing</td>
<td>51,474</td>
<td>0</td>
<td>80,000</td>
<td>80,000</td>
<td>New $260</td>
<td>$20,800,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>198,135</td>
<td>65,933</td>
<td>379,413</td>
<td>445,346</td>
<td></td>
<td>$129,047,505</td>
</tr>
</tbody>
</table>

### Minor Capital Project Priorities

The design team, campus planning committee, and 2013 facility condition survey (FCS) have identified the following minor capital needs (Under $5,000,000). Costs are estimated using 2014 construction costs and should be escalated accordingly:

<table>
<thead>
<tr>
<th>Priority</th>
<th>Minor Project</th>
<th>&lt; $2,000,000</th>
<th>Additional Sf</th>
<th>2014 Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pending</td>
<td>1400 Student Services Renovation</td>
<td>NA</td>
<td></td>
<td>$320,000</td>
</tr>
<tr>
<td>Pending</td>
<td>SIM Tech Lab</td>
<td>NA</td>
<td></td>
<td>$185,000</td>
</tr>
<tr>
<td>1</td>
<td>Irrigation Well</td>
<td>NA</td>
<td></td>
<td>$1,000,000</td>
</tr>
<tr>
<td>2</td>
<td>Batting Cages/Field House</td>
<td>NA</td>
<td></td>
<td>$700,000</td>
</tr>
<tr>
<td>3</td>
<td>HVAC Gymnasium</td>
<td>NA</td>
<td></td>
<td>$2,000,000</td>
</tr>
<tr>
<td>4</td>
<td>Exterior Improvements &amp; Signage</td>
<td>NA</td>
<td></td>
<td>$800,000</td>
</tr>
<tr>
<td>5</td>
<td>Unmanned Aircraft Program Space</td>
<td>NA</td>
<td></td>
<td>$700,000</td>
</tr>
<tr>
<td>6</td>
<td>1200 Science Lab Upgrades</td>
<td>NA</td>
<td></td>
<td>$1,000,000</td>
</tr>
<tr>
<td>7</td>
<td>1200 Planetarium</td>
<td>2,200</td>
<td></td>
<td>$1,800,000</td>
</tr>
<tr>
<td>8</td>
<td>1300 Childcare Replacement/Renovation</td>
<td>NA</td>
<td></td>
<td>$1,300,000</td>
</tr>
<tr>
<td>9</td>
<td>Athletic Upgrades - Tennis Courts and Soccer Fields</td>
<td>NA</td>
<td></td>
<td>$350,000</td>
</tr>
<tr>
<td>10</td>
<td>Athletic Support Building</td>
<td>5,000</td>
<td></td>
<td>$500,000</td>
</tr>
<tr>
<td>11</td>
<td>Campus Circulation/Parking Upgrades - Ongoing</td>
<td>NA</td>
<td></td>
<td>$850,000</td>
</tr>
<tr>
<td>12</td>
<td>Maintenance Facilities Replacement</td>
<td>NA</td>
<td></td>
<td>$1,500,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5,000</td>
<td></td>
<td>$11,505,000</td>
</tr>
</tbody>
</table>
Recommendations

PROJECT PRIORITIES

Project Priority #1

Allied Health, Wellness & Fitness Facility (Replace 1700 & Add to 2000)

Project Drivers:
- Student Need
- Emerging Programs
- Deteriorating Facility
- Industry & Community Connections
- Promoting Wellness & Healthy Lifestyles
- Functional Instruction Space

Allied Health

The Allied Health program focuses on the health of the individual, the family, and the community. The condition of Big Bend Community College’s Allied Health Facility is poor. Promoting the program and assisting the community in achieving healthier lifestyles is limited. In order to grow the program and effectively provide for the healthcare needs of the surrounding community, BBCC needs to replace the existing facility with a state-of-the-art teaching and learning environment that sends a strong message regarding the importance of wellbeing and living a healthy lifestyle. An effective way to accomplish this is to create a multipurpose facility that combines state-of-the-art Allied Health Learning Environments with a Wellness and Fitness Center. The most cost-effective way to achieve this goal is to renovate and add on to the existing gymnasium.

Wellness & Fitness Center

Research over the past decade increasingly shows the benefits of lifetime fitness. Lack of exercise and poor nutrition has been linked with mental as well as physical decline. A Wellness Center will assist students and the community in achieving healthier lifestyles. The facility can effectively promote nutrition and physical exercise through a variety of activities and classes. This can be an effective way of increasing students’ quality of life and lowering their future healthcare costs.

Recommendations 6-3

Project Priority #2

Computer Science & BBT

Program Drivers:
- Student Need
- Facility Condition
- Emerging Programs
- Community & Industry Connections
- Campus Infrastructure
- Safety & Security

BBCC has revamped its computer science program to meet industry needs.

Fundraising efforts are underway to house the program in the new Professional Technical Education Center. The program will occupy the second floor and be in proximity to Big Bend’s Technology Department.

The computer science department will benefit greatly from being able to share space with PTE Programs. Many of the PTE Programs are becoming high tech with overlapping skill sets. By locating computer science next to aviation maintenance, industrial electrical technology, automotive, agriculture, welding and maintenance mechanics cross-pollination and innovation will occur.

Computer sciences will also be in close proximity to the 1200 building, which will maximize adjacencies with science, technology, engineering, and mathematics (STEM).
<table>
<thead>
<tr>
<th>Biennium</th>
<th>Project</th>
<th>Category</th>
<th>Goals</th>
<th>Project History</th>
<th>Other Actions</th>
</tr>
</thead>
</table>
| 2019-2021 | #1 Priority - Allied Health, Fitness and Wellness Center | Growth | X | X | X | Student Success  
Teaching and Learning Opportunities  
Safe, Accessible, Sustainable Campus  
Create a Sense of Identity  
Enhance Partnerships |
|  |  | Repair |  |  |  | Currently, the Allied Health Program is in the 1700 Building. The 1700 Building was scheduled to be demolished over ten years ago. The facility has accessibility issues, inadequate HVAC capacity, leaking plumbing, failing roof, and an elevator car that is in need of replacement. The space is nonfunctional and does not offer 21st-century learning environments. The condition and function of the facility limits program expansion and engagement opportunities with the surrounding community. Replacement of building 1700 has been the second priority of the College for the last 10 years. Now that PTEC has been tentatively funded, the project has become Big Bend's number-one priority. The building needs to be replaced as soon as possible. |
|  |  | Minor |  |  |  |  |
| 2021-2023 | #2 Priority - Computer Science | Growth | X | X | X | Student Success  
Teaching and Learning Opportunities  
Safe, Accessible, Sustainable Campus  
Create a Sense of Identity  
Enhance Partnerships |
|  |  | Repair |  |  |  | Currently, the program is running in the 1500 Building. The 1500 Building was originally a cafeteria and has been renovated to serve the Computer Science program. Spaces are small and cramped. Ceiling heights do not allow for modern instruction. Program recruitment is difficult due to the poor condition of the facilities. The 1500 building is not welcoming and does not engage with rest of campus. The program needs to be brought into the campus core, so that the program can benefit from program overlap and joint project learning opportunities. The roof is in poor condition, and the exterior is exhibiting signs of stress. This building should be replaced as soon as possible. |
|  |  | Minor |  |  |  |  |
| 2023-2025 | #3 Priority - Global Learning Center | Growth | X |  |  | Student Success  
Teaching and Learning Opportunities  
Safe, Accessible, Sustainable Campus  
Create a Sense of Identity  
Enhance Partnerships |
|  |  | Repair |  |  |  | The college envisions creating a facility that is student centered in which students enhance their intrapersonal and interpersonal skills as well as their global environmental awareness. The facility will seek to create environments where students and community can gather, interact, learn and problem solve with cultures throughout the world. Creating a technology hub that brings the world’s cultures into one facility will allow the college to celebrate diversity and focus on teaching the skill sets necessary to overcome communication barriers, enhance intercultural awareness, and immerse students into world citizenship. |
|  |  | Minor |  |  |  |  |
| 2025-2027 | #4 Priority - Aircraft Hangar 3100 | Growth | X |  |  | Student Success  
Teaching and Learning Opportunities  
Safe, Accessible, Sustainable Campus  
Create a Sense of Identity  
Enhance Partnerships |
|  |  | Repair |  |  |  | Once PTEC is realized and buildings 3400, 3500 & 3600 are demolished and 3100 & 3200 are put into private service, Building 3100 will become the worst scoring building on campus. The facility is in poor condition and currently used to house aircraft. Future use will include housing AMT curriculum that cannot be moved from the runway and emerging programs such as the unmanned aerial vehicle program. The facility exhibits metal wall panel deterioration, accessibility issues, exterior entrance and glazing deterioration, and general aging throughout. It is expensive to maintain and in need of a comprehensive renovation. |
|  |  | Minor |  |  |  |  |
| 2027-2029 | #5 Priority - Performing Arts Center | Growth | X | X | X | Student Success  
Teaching and Learning Opportunities  
Safe, Accessible, Sustainable Campus  
Create a Sense of Identity  
Enhance Partnerships |
|  |  | Repair |  |  |  | The 1100 building shows its age. Exterior entrances and glazing are deteriorating. The layout does not function for modern instruction. The theater lacks the lighting and technological infrastructure necessary for modern performing arts. Renovations done to this facility have not improved function and done little to increase the life of this facility. The facility needs to be replaced. |
|  |  | Minor |  |  |  |  |
| 2029-2031 | #6 Priority - Business Incubator 3300 | Growth | X |  |  | Student Success  
Teaching and Learning Opportunities  
Safe, Accessible, Sustainable Campus  
Create a Sense of Identity  
Enhance Partnerships |
|  |  | Repair |  |  |  | Creating incubator space on the campus will provide the college with space to assist startups with workspace and business development services. The space can also be used to increase entrepreneurship opportunities. By creating space where like-minded people can tinker and work together in a collaborative atmosphere, innovative ideas and advanced methodologies will emerge. |
|  |  | Minor |  |  |  |  |
### Recommendations

**SHORT TERM**

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**LEGEND**

- 1000 - TESTING CENTER
- 1100 - WALLENSTIEN PERFORMING ARTS CENTER
- 1200 - SCIENCE, MATH, ENGINEERING
- 1300a - EARLY CHILDHOOD DEVELOPMENT CENTER
- 1300b - CHILD CARE CENTER
- 1400 - STUDENT CENTER
- 1500 - COMPUTER SCIENCE - SMITH HALL
- 1600 - BUSINESS & LIBERAL ARTS
- 1800 - LIBRARY & GRANT COUNTY ADVANCED TECHNOLOGIES EDUCATION CENTER (ATEC)
- 1900 - FINE ARTS
- 2000 - PETER D. DEVRIES ACTIVITY CENTER
- 3000 - AVIATION FLIGHT TRAINING CENTER
- 3300 - AIRCRAFT HANGAR
- 3200 - AVIATION MAINTENANCE TECHNOLOGY
- 3320b - AMT ENGINE RUN STATION
- 5300 - AUTOMOTIVE TECHNOLOGY
- 5400 - WELDING TECHNOLOGY
- 5900 - MAINTENANCE MECHANICS TECHNOLOGY
- 3600 - INDUSTRIAL ELECTRICAL TECHNOLOGY
- 4500 - CARPENTRY SHOP/PAINT SHOP
- 5500 - AUTOMOTIVE TECHNOLOGY CLASSROOM & IRRIGATION LAB
- 4520 - MAINTENANCE & OPERATIONS BUILDING
- 4300 - STORAGE
- 4500 - GROUNDS BUILDING
- 4600 - VAN GARAGE
- 5300 - PHILIPS HALL
- 6000 - ACKER HALL
- 7700 - BBCC FOUNDATION OPPORTUNITY CENTER
- 7700 - BBCC FOUNDATION OPPORTUNITY CENTER
- 7700 - BBCC FOUNDATION OPPORTUNITY CENTER

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**Project Category**

- PyTEC - PROFESSIONAL TECHNICAL EDUCATION CENTER
- AIRTEC - AVIATION TECHNICAL EDUCATION CENTER
- ANWMC - ALLIED HEALTH/WELLNESS CENTER ADDITION
- GLOC - GLOBAL LEARNING OPPORTUNITY CENTER

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**Big Bend Community College**

**Recommendations 6-5**

**Facility Master Plan Update 2014**
Recommendations

MEDIUM TERM

LEGEND

STATE CAPITAL MAJOR
STATE CAPITAL MINOR
PRIVATE MAJOR
PRIVATE MINOR
MATCH MAJOR
MATCH MINOR

Recommendations 6-6

Facility Master Plan Update 2014
Recommendations

CIRCULATION PEDESTRIAN

Objectives:
To address the concern of campus identity, the first objective will be to develop a main vehicular entrance to campus. The intersection of 28th Ave and Randolph Road has already been identified as the desired point of arrival and provides a link to the campus transit stop. Improvements to the signage and landscaping at this location will help define it as a main campus entrance. Secondary entrances to campus can also be improved to give a cohesive look to the campus border.

Substantial investment has been made in the development of the College Parkway as a campus edge. This roadway can be further enhanced by increasing the density of landscaping elements and improving signage and wayfinding. The corridor can become more pedestrian friendly by including a vegetative buffer between traffic lanes and sidewalks.

Vehicular Circulation:
The Big Bend service district extends approximately 70 miles in each direction, and 70% of students have commuting times ranging between 10 and 30 minutes. This heavy reliance on cars can be reduced with more reliance on public transportation. As the campus develops, additional transit stops can be built to serve more areas. As new facilities are constructed, parking for these projects will need to be carefully planned. To maintain a pedestrian-friendly campus, parking lots should be located at the perimeter of building clusters in order to maintain pathways and open space in the heart of campus. New parking lots should be designed with tree islands, integrated sidewalks, and designed in smaller blocks that relate to human scale.

Road improvements will also support vehicle circulation. Beyond defining the eight entry points, there are underdeveloped roads on campus that can be improved by including them in the scope of future building projects. Future road improvements should follow campus design standards for fenestration, include pedestrian amenities such as crosswalks, and provide signage that promotes wayfinding.

Campus parking lots can be made safer through effective lighting strategies and by reducing the chances of vehicular-pedestrian conflicts. Lighting should sufficiently illuminate all areas of parking during planned use. Traffic-calming devices can help protect pedestrians and include raised or variegated material crosswalks, landscape bulb outs, reduced speed limits near crosswalks, or pedestrian activated crosswalk signals.

Pedestrian Circulation:
To further ensure pedestrian safety, locations where pedestrians cross parking lots and streets need to be improved. Including traffic-calming devices, marked crosswalks, integrated sidewalks and signage will increase pedestrian safety. Defining areas where roads and parking can be vacated in favor of pedestrian access is another strategy to consider.

Campus pedestrian paths should be welcoming and provide features that encourage
Recommendations

CIRCULATION VEHICULAR

their use. Plazas, courtyards and benches provide spaces for informal gathering and help create a sense of place in the landscape. The landscaping plan shows grand pedestrian boulevards that create linkages between points of arrival and main campus buildings. More than a sidewalk, the boulevards will include raised planter beds, tree islands, integrated benches and plazas at key intersections with other paths.

An important objective of the landscaping plan is to ensure that all campus zones are an integral part of the campus community. Even though distances between buildings cannot be changed, we can plan for stronger connections from the center of campus to the outlying areas. This can be accomplished by increasing the density of trees and plantings and planning for sidewalks along the paths to the disconnected campus zones. The biennium maps detail the strategic location of new facilities in open spaces between existing buildings. This type of infill development will help establish a more densely developed campus core.

Implementation – Recommendations

The landscaping plan seeks to create a people-oriented campus that promotes sustainability, social interaction, and strong connections with surrounding industries. This can be accomplished by developing special places on campus that enhance student life and create space to strengthen community ties.

Vehicular Circulation

To reduce reliance on personal cars, the college should work with GTA in determining locations for additional transit stops. Some recommended locations along College Parkway include the intersections of 30th Avenue and the east end of Bolling Street. These locations afford better access to the Aviation facilities and the planned student housing east of the DeVries Center.

A key element in planning for vehicle circulation is deciding where cars will be allowed. As the campus core develops and connections are made with outlying zones, it will become increasingly critical to protect the pedestrian nature of campus. It is recommended that the core of campus between both east and west edges of 26th Avenue and 30th Avenue, and stretching between Bolling Street to the north and Chanute Street to the south, remain a more pedestrian dominated zone. Pedestrian pathway improvements have already occurred along the Chanute Street corridor and could include a future pedestrian boulevard as shown on the landscaping plan. Improvements to create a pedestrian boulevard then could also be mimicked running between the ATEC and the Administration building.

The Bolling Street corridor is an excellent candidate for the creation of a campus main street. The landscaping plan depicts tree islands, integrated sidewalks and crosswalks with varying materials. Signage, banners and lighting along the street could add to the main street feel. Since this roadway serves as the main access point to the ATEC building and future athletic facilities, it follows that the importance of this campus linkage should be celebrated and enhanced.
Recommendations

PARKING: CONSOLIDATED & NEW

Parking lots have been redistributed throughout the campus perimeter to better serve the campus zones. Their proportions are kept smaller to help reduce the amount of heat generated by the asphalt as it is exposed to the sun. Design elements will include integrated tree islands and sidewalks, appropriate lighting, considerations for drainage and filtration, and traffic-calming devices. The landscaping plan shows new parking lots for the future Performing Arts Center, Professional Technical Education Center, Diesel and Agriculture, the Soccer Fields, Allied Health & Wellness Center, the Disk Golf Course, and Student Housing. Improvements for existing parking lots are shown for the Global Learning Opportunity Center, the Business Incubator, Science and Engineering, Aviation, and the Childhood Development Center. A key consideration in the design of future parking lots is the mitigation of possible vehicle-pedestrian conflicts.

Pedestrian Circulation

The main concept in accommodating pedestrians is the development of the campus core as a pedestrian-friendly zone. The landscaping plan shows pedestrian boulevards serving as main linkages between points of arrival and main building clusters. Examples include the east-west corridor of Chanute Street, east from the courtyard to the western end of Allied Health & Wellness Center, and the north-south axis from the transit station to ATEC. Some design elements of the boulevards include raised planter beds with integrated benches, pavilions, plazas and courtyards, and varied materials at intersections. It is the intent of these paths not only to find a primary means of access but to offer places for informal gatherings between students and their instructors.

Additional informal gathering spaces are planned for at the location north of the DeVries Center after the Allied Health and Wellness Center is constructed and along both pedestrian boulevards. The open space between ATEC and the Business and Liberal Arts center contains the only existing campus quad and plaza, and therefore shows excellent potential for the development of more outdoor gathering space.
It should be noted that quality outdoor space must include ample open green space and consider the engagement of the community. The landscaping plan strives to provide this by improving existing lawns, creating green space where it formerly did not exist, offering a disc golf course northeast of campus to engage the community, and by including green space as part of the scope of new capital projects. These will become critical areas for recreation, campus events, and attracting community residents.

Along roadways, pedestrian paths will be separated from traffic with vegetative buffers. Traffic-calming devices at intersections and parking lots will also facilitate pedestrian safety. The landscaping plan shows new pedestrian paths as an integral part of planned capital projects. These paths are planned to connect these new facilities with the campus core and to integrate the outlying campus zones.

Parking Growth
For most community colleges, students typically commute and require available parking on campus. Given the location of the campus, adequate parking lots are a necessity. During the development of the Master Plan, parking spaces will increase by 299%. That is an increase of at least 1,584 parking stalls on campus with a single-story parking lot. With the new parking lots, there would be an increase of 2,114 total parking stalls. Not only are they conveniently located, but the lots to the North have the potential of becoming parking garages as the campus grows and requires more parking.
Recommendations

FUTURE CAMPUS ZONING
Recommendations

LANDSCAPING

Introduction:
A campus landscape is a type of urban park. The mix of recreation fields, green spaces, paths, and plantings make them the ideal place to study, reflect, or just relax in nature. Our perception of how beautiful a campus is can be linked to how well the natural and built environments relate to each other. This landscaping plan looks at current issues, while forecasting items that may arise as the campus continues to develop. Site-specific elements, vehicular and pedestrian circulation are the key points of this master plan.

When addressing circulation, it is important to consider how people will arrive on campus and how they will navigate the landscape once they have arrived. Vehicle and pedestrian concerns drive the planning process in providing a network of roads, parking lots, walkways, and outdoor environments that are welcoming and safe.

The Big Bend campus is blessed with an abundance of space, both developed and open. Green space has the potential of development of beautiful scenic landscapes. However, there are apparent issues that should be addressed when considering how growth on campus will affect ease of circulation.

Known Issues:
Site - From a general site perspective, the campus has ample open space. Space between buildings and developed zones is plentiful with good access to parking. Yet there are campus zones that are removed from the core of campus and as a result are disconnected from vital campus services. These areas include the Aviation, Technical Education, and testing centers.

The campus also lacks a strong sense of identity as a place of higher education due to its former use as a military base and distance from the downtown district. There are no meaningful arrival points to campus that signify it as a special place. Since relocation of the campus is not a viable option, improving upon the campus image is central to the landscaping plan. Also, there is a lack of formal connection between the college and its near neighbors. The Port, Housing Authority, the Economic Development Agency, and neighboring industries would all benefit from stronger connection with Big Bend.

Another Site element of concern is the underdeveloped campus perimeter or edge. Although substantial investment has been made in the development of the College Parkway, it requires an increased level of definition if it is to serve as a campus boundary.

The open generous size of the campus is both a blessing and a curse. Campus growth can occur while still maintaining the open space. Yet large expanses of the campus green are left underdeveloped and
lack the charm and inviting qualities one would expect of a college campus. Irrigation costs are a primary reason for the undeveloped landscaping. The college is in the process of trying to transfer water rights to secure affordable irrigation.

Site
Integrating the many campus zones into a cohesive fabric is the first step in place-making. To make stronger connections to the campus core, the landscaping plan includes increased density of plantings and pathways between the campus core and the Aviation facilities. New recreational fields, tennis courts, and disc golf course will infill the underdeveloped area north of the campus core. New facilities such as the Global Learning Opportunity Center (GLOC) and the Professional Technical Education Center (PTEC) will bring the Work Force Training and Technical Education programs closer to the center of campus. Planned developments should occur within the existing campus boundary. This sustainable practice will help lessen the environmental impact of campus development. Increasing campus density will also help the college maintain open space within its border.

Campus identity will be strengthened by refining the main and secondary vehicle access points. A main campus entrance is planned for along Randolph Road with enhanced signage and wayfinding. The additional seven secondary vehicle entrances along the College Parkway can also be treated with improved signage and landscaping. On a larger scale, the college should also consider its partnerships with its neighbors by collectively planning to develop the entrance to the greater College, Port, and Airport area. The intersections of Randolph Road with both highway 17 and Patton Boulevard are key locations to consider.

Planning for a consistent landscape will also help the college to create a sense of arrival and identity. Adoption of design standards in the density, grouping and species of plantings will aid the development of a mature landscape. As capital projects are constructed, approved landscaping plans should fit within the desired campus form. Special places such as courtyards, pedestrian boulevards, intersections, vehicle entrances and designated streets can be differentiated from the landscape to signify their importance. Other landscaping features such as sidewalks, benches and light poles should have a consistent finish across the entire campus.

The College Parkway is another area where campus identity can be improved. Design elements that increase the profile of this area should include planting density, vegetative strips, special lighting, banners and signage, and varied materials at key intersections.
LANDSCAPING

- Native trees
- Existing 1800 building
- Future business incubator building
- Permeable pavers - Type 3
- Benches for gathering & leisure
- Conc. slab-on-grade sidewalk
Wayfinding is a term devised in 1960 by architect Kevin Lynch. The term was meant to utilize signs, maps, and other forms of graphics to illustrate location and directions to travelers along a path. While many believe this to be most useful within a building, it is most necessary when planning a campus.

Utilizing signage as a tool serves as an efficient system for movement throughout a campus. It also helps to provide additional convenience in persuading students to be on time and even come to class. It allows the motor vehicle to be directed easily and efficiently, and it allows for convenience and understanding to students, visiting prospective students, members of the community, staff, and faculty.

Big Bend Community College is currently lacking a clear understanding of wayfinding throughout campus. Signage needs to be installed in a clear and cohesive way. Signage should be incorporated in five different methods:

- Campus Entrance Signage
- Building Main Entrance Signage
- Pedestrian Signage
- Vehicular Signage
- Parking Lot Signage
- Flag Banner Signage

Campus Entrance Signage should be prominent and convey an image of permanence. It should also be the largest scale in terms of hierarchy of signage. This type of signage should give the viewer a sense of entry into campus. Signage at this scale can offer congregation spaces to pedestrians and help to activate the campus to the motor vehicle.

Building Main Entrance Signage should maintain a prominent and permanent image just as the Campus Entry signs do. However, they will reduce in size as they cater more to a pedestrian scale than vehicular. The signage can also offer seating and promote congregation at entrances to buildings.

Pedestrian Signage should be catered to the pedestrian. Maps should be shown in clear form and provide an easily understood graphic to help the pedestrian on foot move throughout campus.

Vehicular Signage should be mainly catered to the motor vehicle. However, it should be visible by the pedestrian as well. It should be a simplified sign with minimal text and arrows pointing in the direction of the buildings being identified. If there is too much text, drivers will not be able to read without slowing or congesting traffic.
Parking Lot Signage should help direct motor vehicles as to where they are allowed parking. These should be tall pole signs that are easily viewed. Campuses utilize this type of sign when offering paid parking or aiding with parking security.

Flag Banner Signage is a very convenient tool in creating a cohesive college campus. It helps to create an image within the campus. It becomes an aid to the pedestrian and motor vehicle of being within campus limits. It helps to create school pride and bonding on a campus. Flag banners help to solidify a college campus in our modern era.
Recommendations

PEDESTRIAN & VEHICULAR SIGNAGE
Recommendations
PARKING LOT SIGNAGE
Recommendations
CAMPUS BANNER SIGNAGE
Recommendations

CAMPUS BANNER SIGNAGE

A

B

C

D

E
Recommendations
AIRPLANE ROUNDBOUT
Recommendations
AIRPLANE ROUNDBOAT

VEGETATION TO FRAME AIRPLANE SCULPTURE
15 MINUTE PARKING
STREET BOLLARDS TO ENSURE NO VEHICULAR OBSTRUCTION
BENCHES FOR GATHERING & LEISURE
PEDESTRIAN CROSSWALKS

PLANTER BEDS W/ BUILT-IN SEATING
VEGETATION ALONG PEDESTRIAN CORRIDOR
AIRPLANE SCULPTURE
BENCHES FOR GATHERING & LEISURE
ADA ACCESSIBLE WALKWAYS
EXISTING CONC. SLAB-ON-GRADE SIDEWALK

BEAUTIFIED PTEC PARKING LOT
POCKET PARK W/ VISITOR’S CENTER KIOSK
NATIVE SHRUBS

REFERENCES:
SC0.6
Recommendations

EXTERIOR COLOR OPTIONS

Option A - North Elevation

Option A - South Elevation
Recommendations

EXTERIOR COLOR OPTIONS

Option B - North Elevation

Option B - South Elevation
Recommendations

EXTERIOR COLOR OPTIONS

Option C - North Elevation

Option C - South Elevation
Recommendations

EXTERIOR COLOR OPTIONS

Option D - North Elevation

Option D - South Elevation
Recommendations

EXTERIOR COLOR OPTIONS

Option E - North Elevation

Option E - South Elevation
Recommendations

EXTERIOR COLOR OPTIONS

Option F - North Elevation

Option F - South Elevation
Recommendations
INTERIOR COLOR OPTIONS

Existing

Option A

Option B

Option C
IMMEDIATE NEEDS
Professional Technical Education Center

Overview

Facility Master Plan Update 2014

Professional Technical Zone
Recommendation: Growth project for Short Term.
(PENDING)

Legend:
- Professional Industry Training
- Enhanced Learning Classroom
- Administration/Faculty
- Other/Support

Main Floor Program Spaces:
- Automotive
- MMT
- IET
- Composites
- Innovation Lab
- Ag. Science
- Advanced Manufacturing Fabrication
- Welding
- (2) Tools
- AMT
- (12) Classrooms
- (3) Restrooms
- Resource Center
- Industry
- Admin
- Testing
- Part-Time Faculty
- Counseling
- Work Room
- (16) Offices

Upper Floor Program Spaces:
- (9) Classrooms
- (3) Restrooms
- (20) Offices
- Part-Time Faculty
- Work Room
- Admin
- Conference
- Computer Lab
- Innovation Lab
Facility Master Plan Update 2014

Overview 1-4

MAIN FLOOR PROGRAM SPACES
- (3) COMPUTER LABS
- (3) INFORMAL LEARNING AREAS
- (8) COMPUTER SCIENCE CLASSROOMS
- (2) RESTROOMS
- (14) OFFICES
- (2) PART-TIME FACULTY OFFICES
- BIG BEND TECHNOLOGY EQUIPMENT STORAGE
- TESTING CENTER
- CONFERENCE
- STORAGE

LEGEND
- COMPUTER LAB
- ENHANCED COMPUTER SCIENCE LEARNING CLASSROOM
- INFORMAL LEARNING / LEARNING SHOWCASE
- TESTING CENTER
- ADMINISTRATION / FACULTY
- BIG BEND TECHNOLOGY
- OTHER/SUPPORT
- LOBBY / DEMONSTRATION / CIRCULATION

Computer Science - Big Bend Technology

Computer Science Zone
Recommendation: Growth project for Short Term.

Floor Plan - Schematic