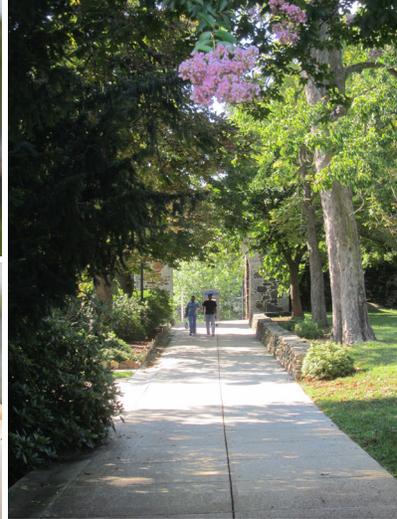


CCBC Facilities Master Plan 2016

CCBC Catonsville

February, 2016



Community College of Baltimore County

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Community College of Baltimore County

Facilities Master Plan

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INTRODUCTION

Purpose, Scope

This Master Plan was undertaken to establish a framework for the physical growth and change that can be anticipated for the Community College of Baltimore County. It provides projected enrollment growth and establishes space needs by discipline.

Capital projects are identified as Short Term (0-5 years), Intermediate Term (6-10 years) or "To be Implemented as Funds Become Available". For each major project that proceeds, the master plan will need to be followed by programming, design, and construction, unless programming or design have been undertaken already. The master plan does not attempt to design projects, but it does provide a campus development plan for the Catonsville, Dundalk, and Essex campuses, identifying locations and establishing relationships of major components.

The Facilities Master Plan should be regarded as a working document, which will need to be periodically reviewed and updated; it is recommended that the update should occur not later than 2020. As a 10-year master plan, the space needs are projected 10 years from the most recent Fall semester for which data is available, which is 2014. The nominal planning horizon used in this report is 2025.

This report is both a master plan and facilities assessment. The facilities assessment component provides an inventory and evaluation for the site infrastructure, buildings, and building systems for each CCBC campus. This provides the foundation for the evaluation, both quantitatively and qualitatively, of the facilities and for recommendations for improvements to the site and buildings.

Because of inevitable unforeseen changes in programs, priorities, policies, and funding, this Facilities Master Plan should be viewed as a fluid document that is a conceptual tool and guide for making decisions regarding the College's physical resources. This document integrates academic and physical planning on a campus-wide basis; as facility and site development needs change or are newly identified, they must be incorporated into subsequent plan updates.

The planning process for development of this Facilities Master Plan results in a long-range planning document that addresses a broad range of subjects:

- Review of the College's vision, mission, functional and instructional program emphases, and organizational structure.
- Description of the students in terms of credit participation and choice of academic programs.
- Academic programs and projections of institutional growth.
- Inventory of existing facilities and patterns of physical development.
- Identification of projects that are needed to support the programs, personnel, and students of the College for the next ten years.

The information contained in this Facilities Master Plan serves various purposes. It affords the College a written reference that can be used to facilitate communication within the CCBC community and with representatives of local and state review agencies. This document provides the rationale for physical improvements and serves as the basis for long-range capital development.

Inventory data concerning the existing facilities are collected and presented. Alternative actions to deliver improved educational facilities are presented. Recommendations are provided for renovation, replacement, and/or new construction as necessary, and priorities are suggested for the recommended facilities actions.

In brief, this document aggregates the inventory of existing facilities and physical resources, identifies current and future facility needs of CCBC, and then provides a framework for achieving the required additional facilities.

Methodology

The Master Plan was developed during 2015. Information gathering began with the College providing information on the facilities, institutional history, enrollment, programs and operations. Serving as the basis for current and future space needs, the enrollment and projected enrollment were established by CCBC, incorporating MHEC projections and planned program expansion. Using MHEC formulae, space needs were determined and allocated according to HEGIS code. Interviews, focus groups, and workshops were conducted with staff, faculty, and the steering committee for the master plan to solicit input from the College community.

Parallel to these efforts, the buildings were documented photographically and in floor plan. Previous reports were examined, considered, and incorporated with the consultant team's more current evaluations. Site conditions were evaluated in the same way. The consultants visited the campus and assessed the condition of all buildings and the site, combined with the evaluations by CCBC. Combining considerations of formula-driven space needs calculations, as well as qualitative factors, the consultant team and College developed a list of recommended capital projects and other initiatives recommended by the consultant team for consideration by the College. Alternative site development plans were developed for Catonsville, Dundalk, and Essex to accommodate capital projects, including both renovations and proposed new construction. A preferred plan for each campus was selected and refined, ultimately becoming the selected development plan for this report.

Organization of the Report

Chapter 1	Executive Summary
Chapter 2	Overview of the College
Chapter 3	Space Needs
Chapter 4	Facilities Assessment
Chapter 5	Looking Towards the Future
	Appendix

ACKNOWLEDGEMENTS

The consultant team acknowledges the input and constructive support from the following CCBC personnel:

- Jerry Kramer, CCBC Senior Director, Capital Projects
- Melissa Hopp, Vice President of Administrative Services
- Fred Schanken, Executive Director, Facilities Management
- Katrina Crook, Director, Capital Finance
- Tim Burton, Director, Business Services and Facility Management
- Joan Swiston, Catonsville Campus Director
- Bill Wingerd, Catonsville Assistant Director Facility Operations
- Tanya Jones, Dundalk Campus Director
- Barbara McDonald, Dundalk Assistant Director Facility Operations
- Jaime Alvarez, Essex Campus Director
- Bill DeLauder, Essex Assistant Director Facility Operations
- Maria Oberle, Administrative Assistant to Mr. Kramer

Mr. Kramer served as manager for the master plan on behalf of the College.

The consultant team was led by the following firms and individuals:

- Hord Coplan Macht, Inc.
Bruce Manger
Matthew Fitzsimmons
- Facilities Planning Associates
Rich Watkins
Al Robinson
- Morris Ritchie and Associates
Sean Davis
- Gipe Associates, Inc.
Neal Cluck
Dina Dixon

Chapter 1

Executive Summary

EXECUTIVE SUMMARY

CCBC NOW

Since the 2010 Master Plan, the higher education landscape for CCBC has changed measurably. In the past five years, Community College of Baltimore County enrollment has changed course from significant growth to moderate decreases in enrollment, about 1.4% per year. While federal, state and local support has been reduced for community colleges in general and for CCBC, tuition has remained affordable. The aging facilities keep aging, and deferred improvements have been deferred further.

The College has continued to enhance the technology in its instructional spaces and supporting infrastructure. Learning support continues to be made available to students of varying needs. Planning, construction, renovation and occupancy of facilities continue, including the completion of two new extension centers, a new Mathematics and Science Hall at Catonsville and a major renovation to the Dundalk library and student center. And, the College has continued to attract and retain competent faculty and staff while maintaining a can-do spirit charged with making the students' learning experiences as fulfilling as possible. Despite thin budgets, the College has done a remarkable job in keeping its facilities going.

Still, the College's needs are greater than ever. While enrollment is expected to continue a modest decline in the near term, it is projected to continue to grow by 22% over the next 10 years. Space needs are significant now and will increase as enrollment grows. As the facilities continue to grow older and to be used, the need for renovations increases correspondingly. Given the very limited existing available area on all campuses with little-to-no "swing" space, renovations will generally need to be phased, which adds to the time and cost of each renovation project. To the extent possible, renovations should be comprehensive, not piecemeal. As demands and expectations of CCBC's graduates become more complex, the College's curricula, operations, and facilities will need to be correspondingly more sophisticated. This applies to the College's resources as they exist today as well as to future changes and development. As markets and demographics shift, so will the need for the College to be nimble in response to those changes, with corresponding flexibility in its learning facilities.

PLANNING OBJECTIVES

The objectives of this plan are consistent with the College's mission, vision, and strategic directions described in the 2014-2016 Strategic Plan. The following objectives should be considered together. Some are dependent on the execution of others in order for their own execution to be effective or, in certain cases, possible. These objectives establish a framework for the development and follow-through of recommended projects.

CCBC COLLEGE-WIDE PLANNING OBJECTIVES

- Provide settings to best fulfill the mission and vision of the College.
- Support the College's strategic academic plan.
- Maintain existing programs and plan to accommodate expanded and new programs.
- Make learning, visiting and working on each campus a positive experience.
- Enhance settings to facilitate learning; enhance the strengths of each campus and help remedy weaknesses.

- Acknowledge and support CCBC as a unified college and each campus and extension center as a unique learning center and environment within the College.
- Understand and identify enrollment patterns and project and anticipate enrollment growth.
- Accommodate orderly growth:
 - New facilities
 - Site infrastructure
 - Additions and renovations to existing facilities
- Provide for flexibility in future expansion.
- Identify ways to reduce or save operating costs.
- Evaluate mechanical, electrical and telecommunications systems.
- Accommodate training and educational needs of business and industry.
- Examine transportation alternatives to automobile commuting patterns.
- Satisfy parking demand.
- Mitigate and, where possible, eliminate pedestrian-vehicle conflicts.
- Develop safe, usable routes and storage facilities for bicycles on each campus.
- Establish clear definition of spaces.
- Establish clear identity of entrances to facilities.
- Create memorable spaces.
- Improve accessibility.
- Inform state and local agencies and political leadership of the positive aspects and needs of the CCBC.
- Respect realities of state and local budgets.
- Respect realities of state and local requirements.
- Respect environmental and community issues and constraints. Incorporate sustainable strategies in the plan for each campus.
- Establish priorities and sequence of development for capital projects during planning periods.

CCBC Catonsville Planning Objectives

- Upgrade aging and deteriorating electrical infrastructure.
- Accommodate space needs within a site with limited development opportunities. Long term growth demands with most significant impact are new building construction and parking.
- Restore historic structures and spaces; incorporate them into the fabric of the plan.
- Create new campus spaces by defining and creating quadrangles.
- Protect existing mature landscaping.
- Provide for coordinated architectural aesthetic in future buildings.
- Improve athletic fields and introduce amenities to serve participants and spectators.

CCBC Dundalk Planning Objectives

- Accommodate space needs within a site with limited development opportunities.
- Maintain accessible and pedestrian scale of this relatively small campus.
- Maintain unified architectural character of the buildings.
- Accommodate growth while respecting impact on the adjacent residential community.
- Accommodate anticipated consolidation of CCBC fleet maintenance and storage on campus.
- Protect landscaping created in part by on-campus horticulture program.
- Maintain intimate scale of outdoor spaces.
- Create new campus spaces by defining and creating quadrangles.
- Eliminate temporary storage facilities.

CCBC Essex Planning Objectives

- Upgrade aging and deteriorating electrical infrastructure.
- Accommodate space needs on the campus with the largest growth projections.
- Maintain wooded character of campus.
- Maintain unified architectural character of the buildings.
- Maintain and enhance programmatic and physical relationships with Franklin Square Hospital.
- Create new campus spaces by defining and creating quadrangles.
- Improve main quadrangle to be softer, reducing hardscape and increasing green, shaded areas.
- Improve vehicular circulation entering and exiting the campus.

THE PLANNING TEAM

Led in a collaborative effort by Hord Coplan Macht and CCBC, the planning team included the following consultants:

- Hord Coplan Macht, Inc: prime consultant, facilities evaluation, master planning
- Facilities Planning Associates: facility planning, space needs
- Morris Ritchie Associates, Inc: civil engineering consultation
- Gipe Associates, Inc: mechanical, electrical, special systems consultation

OVERVIEW OF THE COLLEGE

The Community College of Baltimore County (CCBC) is an open-door two-year public community college providing courses, programs, and services to the citizens of Baltimore County and the central Maryland region. The College originated as three separate colleges. Catonsville Junior College and Essex Junior College each were founded in 1957. Dundalk Community College opened in 1971. These colleges were restructured in October 1998 as the Community College of Baltimore County with main campuses at Catonsville, Dundalk, and Essex.

The Board of Community College Trustees exercises general control over the Community College of Baltimore County (Code Education Article, §16-101 through §16-103). The Board members are appointed to five-year terms by the governor with Senate advice and consent.

The Community College of Baltimore County (CCBC) is ranked among the number one providers of undergraduate education, workforce development, technology training, and lifelong learning/life enrichment in the State of Maryland. Nationally recognized as a leader in innovative learning strategies, CCBC educates nearly 65,000 students each year, including more than half of all Baltimore County residents attending undergraduate college. CCBC's School of Continuing Education is a preferred training partner for Maryland businesses, serving more than 100 employers annually with customized employee development training. Over the last four years, the College has enrolled an average unduplicated headcount of about 34,000 credit and 34,000 continuing education and workforce development students at its three main campuses, major extension centers in Hunt Valley, Owings Mills, and Randallstown, and teaching sites in numerous community centers and local schools.

This *CCBC Facilities Master Plan Update* is published as three volumes, one for each of CCBC's three main campuses. Detailed analyses and plans not included with the Executive Summary are contained in those three volumes.



MISSION

The Community College of Baltimore County provides an accessible, affordable, and high-quality education that prepares students for transfer and career success, strengthens the regional workforce and enriches our community.

VISION

We will be the institution of choice for students, where together we make teaching purposeful, learning powerful, completion primary, and community paramount.

VALUES

- **Commitment:** We want our students to succeed and make progress toward the completion of their educational goals through degree or certificate attainment, transfer, workplace certification, career enhancement or personal enrichment.
- **Learning:** We are committed to ensuring our students grow as active learners, develop a passion for life-long learning, and use what they have learned to their benefit.
- **Innovation:** We value innovation and support a climate of discovery. We encourage students, faculty and staff to explore new ideas, methods and processes.
- **Responsibility:** We have high expectations for the work of our employees, the academic rigor of our offerings, the scholarship of our students, and the involvement of the community and the workplace in the College's future.
- **Integrity:** We inspire public trust by maintaining ethical and collaborative relationships with our faculty, students, staff, alumni and communities. We share our achievements and challenges honestly and openly.
- **Inclusiveness:** We celebrate the differences and similarities of our students, employees and the communities we proudly serve. We value the diversity of people, cultures, ideas and viewpoints and we honor the dignity of all persons. We insist on open and honest communications, fairness, mutual respect, collegiality and civility at all times. We are committed to preparing students to be active citizens, ready to meet the challenges of an increasingly diverse world and a changing global marketplace.
- **Excellence:** We emphasize quality as a standard for all we do and consistently look for ways to improve organizational efficiency and effectiveness.

- **Stewardship:** We support sustainable practices and prudently manage resources dedicated to advancing the College's mission and strategic directions.
- **Collaboration:** We encourage continuous dialogue among students, faculty and staff, and support ongoing cooperative relationships with our partners in the community regarding their educational, cultural, recreation and workforce needs.

STRATEGIC DIRECTIONS

- **Student Success:** CCBC provides the highest quality instruction and student services, positioning all students to maximize their performance. The College assists students in achieving their completion goals, leading to a degree or certificate, obtaining transfer credits, developing specific skills, expanding employment opportunities, or enriching their personal lives.
- **Teaching and Learning Excellence:** CCBC promotes the academic and professional success of students by offering relevant, adaptive, responsive and inclusive curricula, supporting the teaching and professional achievement of faculty and making high-quality learning support services available.
- **Organizational Excellence:** CCBC encourages an organizational culture that emphasizes innovation, quality, continuous improvement, excellence, entrepreneurship, service and success. The College supports individuals and teams involved with and responsible for providing and managing the College's human, capital, financial, technical, academic and technological resources.
- **Community Engagement:** CCBC values community support, respect, commitment and engagement.

GOVERNANCE AND ORGANIZATION

The Board of Trustees of the Community College of Baltimore County comprises 15 members – one at-large and two from each of the county's seven councilmanic districts. Members are appointed by the Governor of Maryland with advice and consent of the Maryland Senate.

The Board maintains general oversight over CCBC. Its responsibilities include adopting rules and regulations for College operations, approving the college budget, considering and approving CCBC's academic programs and long-range plans, approving major purchases and the construction and renovation of college facilities, and more.

The president shares day-to-day operation of the College with four vice-presidents, each with a broad range of responsibilities for Instruction, Enrollment and Student Services, Administrative Services, and Institutional Advancement, which comprise the President's Staff.

FACULTY AND STAFF

During the academic year 2014-2015 CCBC employed 1,336 full-time faculty, administrative, and support staff. In addition, the College employed 1,487 part-time faculty and staff. The following table illustrates the distribution of personnel who are critical to the mission, strategic priorities and learning experience at The Community College of Baltimore County.

Table 2-3: Current Faculty and Staff

CCBC	Category	Full-Time	Part-Time	Total
	Faculty (Credit)	436	929	1,365
	Faculty (Non-Credit)	0	558	558
	Staff	900	0	900
	Totals	1,336	1,487	2,823

Data Source: Community College of Baltimore County Office of Planning, Research and Evaluation



STUDENT ENROLLMENT

In the fall semester of 2014 The Community College of Baltimore County enrolled 23,136 students who generated 196,715 credit hours of enrollment. The following table shows the enrollment distribution of on-campus, off-campus and distance learning credit enrollments.

Table 2-2: Current Credit Enrollment Distribution (Fall 2014)

Location	Credit Hours	FTES	Percent
On Campus			
CCBC Catonsville	60,917	4,061	31%
CCBC Dundalk	17,476	1,165	9%
CCBC Essex	75,920	5,061	39%
Off Campus Sites			
CCBC Hunt Valley	1,706	114	1%
CCBC Owings Mills	9,951	663	5%
CCBC Randallstown	108	7	<1%
Other Distributed Sites	8,929	595	5%
Online/Distance Learning	21,708	1,447	11%
Total CCBC	196,715	13,114	100%

Data Source: Community College of Baltimore County Office of Planning, Research and Evaluation

In the 2014 fiscal year, 34,255 students also enrolled in non-credit continuing education courses at the three main campuses and the Hunt Valley, Owings Mills and Randallstown extension centers.

INSTRUCTIONAL PROGRAMS OVERVIEW

As a public comprehensive, open admissions two-year suburban community college, CCBC serves the Baltimore County community by offering a wide range of programs leading to associate degrees and certificates in specialized areas. The College offers associate degree programs designed to provide the first two years of baccalaureate education (transfer programs) in preparation of transfer in addition to programs of study designed to prepare the students for direct entry into the workforce (career programs). In addition to its credit program offerings, CCBC provides its community numerous continuing education and personal development education programs and courses to upgrade skills, develop new skills, or just for special interest.

Not only are credit and non-credit programs offered at the three main campuses and extension centers, but also at various public libraries and community centers throughout Baltimore County and online. Through non-traditional course formats, students can access a broadened learning environment, develop a new kind of relationship with academic faculty, and pursue a personalized approach to study which is tailored to fit their individual situations and learning styles. Examples of non-traditional learning formats available at CCBC include: online courses, individual study, independent study, service learning, interactive video, and tele-courses. As of fall semester 2014, CCBC is fully accredited by the Middle States Commission on Higher Education. The following specialized programs are also fully approved or accredited by organizations recognized by the Council for Higher Education Accreditation and/or the United States Department of Education:

Automotive	Mental Health	Physician Assistant
Business Administration/Business Management	Mortuary Science	Practical Nursing (Licensed)
Dental Hygiene	Music Production and Audio Recording Technology	Radiation Therapy
Education (All)	Music Transfer Programs	Radiography
Emergency Medical Technology	Nursing / RN	Respiratory Care Therapist
Health Informatics and Information Technology	Occupational Therapy Assistant	Theatre
Massage Therapy	Paralegal Studies	Veterinary Technology

FACILITIES OVERVIEW: ALL CAMPUSES

In order to support quality learning, the facilities of the campuses and extension centers must provide learning spaces that allow students to engage in independent, collaborative and creative learning experiences. Although information is increasingly available to students through various other vehicles, the *campus* remains essential to higher education learning systems. The facilities of CCBC must provide sufficient space and appropriate, current technology to enable the faculty and staff to deliver their product in the most productive and efficient way and to enable the students to have ready access to that information.



Although the CCBC staff have done a remarkable job in keeping the multi-faceted CCBC institution working and moving in a forward direction, there is still much need for improvement. With limited exceptions in partial renovations, older, original buildings have not been renovated to keep pace with requirements of today's higher education instruction. And, new buildings, while providing excellent learning environments, have not been erected fast enough to keep up with enrollment demand. Construction and renovations like the recently completed Catonsville Mathematics and Science Hall and renovations to the Dundalk College Community Center are needed to overcome the deficits that exist.



Over a long period of time, several capital projects previously recommended and important to the mission of the College have not been funded or have been deferred. These projects were justified pursuant to State guidelines and formulae for determining eligibility for capital funding. Over the last five years, the College has undertaken several smaller projects to improve CCBC's facilities and infrastructure; several, like the solar canopies in the parking lots, will help to reduce operations costs.

In addition to the objective, fact-based, and formula-driven data that this report presents in support of the qualitative and quantitative deficits, there are other considerations that should be weighed in evaluating the capital needs of the CCBC campuses. The CCBC environment must be attractive so each campus or extension center is able to attract students and so the students will stay after they arrive. From a planning perspective, it is necessary for the College to provide the quality and amount of instructional and support spaces to attract those potential students and keep them coming back to the CCBC campus of their choice. This includes not only well equipped science labs and classrooms, but clean and comfortable student lounges and dining facilities.

This report substantiates space needs in various categories: classroom, labs, office, food service, maintenance shops, and others. The empirical experience of each campus supports the conclusions drawn from the tabular data. In addition to new and renovated buildings, support facilities such as new or expanded roadways, infrastructure, and parking are also recommended. By all measures, CCBC needs improved facilities of every type across the spectrum of its campuses.

The capital needs for all campuses are significant. The short and intermediate term projects correspond to the College's Capital Improvement Plan. The remaining projects are also important to fulfilling the mission of each campus but are beyond current funding projections. To the extent that additional capital funds become available or if/as priorities change, projects may be selected from the latter category for implementation when feasible.

ISSUES AFFECTING SPACE NEEDS AND CAPITAL PROJECTS

- The existing building area is significant: about 1.7 million gross square feet in campus buildings and extension centers.
- Aging facilities and infrastructure on all three campuses require on-going attention in addition to the need for new buildings. Electrical infrastructure on the Catonsville and Essex campuses is especially at risk and must be upgraded as soon as possible to avoid a shutdown.
- While the College has undertaken certain initiatives to reduce operating costs, such as the solar canopies project, there is more that can be done. The aging buildings and building systems, built at a time when energy costs were low and building technology was not sophisticated, are candidates for upgrades to building envelopes, electric/lighting, HVAC and energy management systems. Energy audits and other studies are needed to determine where operating savings can be achieved by upgrades to those systems.
- Recently completed construction and renovation projects, particularly Catonsville and Dundalk, have established strong standards for accommodating programs, function, energy efficiency, formal and informal spaces, and technology.
- While the campuses are pleasant, the “Collegiate” feeling on each campus – appearance of site and buildings – can be improved. Recent construction projects have improved this condition.
- Interior spaces should be functional, equipped with appropriate technology, and aesthetically pleasing.
- Instructional technology, including AV and telecommunications, has been regularly improved and updated in virtually all buildings on all campuses and extension centers.
- Transportation between campuses is still time-consuming. Mass transit rail serves Owings Mills and Hunt Valley but not the main campuses or Randallstown. Transit bus connections between campuses are circuitous and lengthy, requiring at least one transfer. Automobile access between campuses usually requires the use of I-95 and I-695; when either is congested, the drive time is lengthened, affecting timely arrival for classes, meetings, and events. The College operates a shuttle service that travels among the main campuses to alleviate some of the public bus transit shortcomings.

PROGRAMS AND OPERATIONS

- Like most community colleges, enrollment has dropped moderately in the past five years, averaging about 1.4% per year, but is expected to regain 2010 levels by about 2020.
- The need for reading, writing, and math remediation is likely to continue to be significant.
- The ratio of full-time to part time faculty for credit course is approximately 1:2; a goal of the College is to get to 1:1 parity.
- The College needs a home for its truck-driver training program, tentatively planned for Sparrow Point redevelopment property, which will finally at least be in Baltimore County.
- The College has kept tuition affordable.
- CCBC offers unique state-wide programs such as, but not limited to, aviation management, geospatial mapping, and mortuary science.
- Continuing Education:
 - Demand for CEED courses is strong and expected to continue.
 - There are very limited numbers of dedicated CEED instructional facilities (mostly rooms, not buildings) on each of the three campuses.

- Regular need to facilitate custom classes for corporate training quickly.
- Market continues to exist for large clients needing large venues.
- “Flex” space desirable to be able to change from year-to-year.
- There are no CEED facilities close to Towson, where the population is the most dense and a corporate market needs to be fulfilled.
- Major challenges in next 5-10 years:
 - Improve quality of instruction while maintaining affordable tuition
 - Increasing private support for the College
 - Improve quality of student life and corresponding facilities
 - Spaces to encourage and support development of new academic programs.

SUMMARY: CCBC CATONSVILLE

HISTORY AND CHARACTER

The Catonsville Campus (CCBC Catonsville) is located on a 142 acre site at 800 South Rolling Road, near the intersection of Rolling Road and Valley Road in southwestern Baltimore County. The campus is accessible by two public bus transportation lines.

Created by the Baltimore County Board of Education on April 12, 1956, Catonsville Community College (CCC) began operations in September 1957. CCC offered its initial courses to 53 students in the basement of the Catonsville Senior High School building during the late afternoon and evening hours. The Baltimore County Council and the state provided funds for a separate campus in 1961. State legislation transformed the Board of Education into a Board of Trustees for the new college and provided details for its financing and operations.

In March 1962, the Board of Trustees bought part of the Knapp Estate (an old dairy farm) on Rolling Road near Bloomsbury Avenue, as a campus for Catonsville Community College. In 1972, an additional parcel was added to the campus. The campus core, consisting of approximately 16 acres inside the perimeter road, contains 17 of the 20 permanent buildings, 2 temporary buildings, 1 trailer and the majority of parking surface at Catonsville. Five of the 20 buildings were part of the original Knapp Estate, and four of the five were built during the 1800's. The former manor/farm house (Hilton) was added to the National Register of Historical Places in 1980.

In 1998, Catonsville Community College was unified with Dundalk Community College and Essex Community College to become, what is now, The Community College of Baltimore County (CCBC).

A dynamic campus blending education, technology, history and charm, Catonsville offers education and accessibility. In addition to the historic buildings still in active use, campus walkways framed by stone walls and beautiful gardens, connect old and new buildings to the inner workings of advanced technology classrooms. Other unique features of this campus include historic stone buildings, a clock tower that chimes on the hour, a view of Baltimore's Inner Harbor and the Key Bridge, a planetarium, and high-tech training labs for learning the latest in computer-aided design, computer-automated manufacturing, microcomputer software, computer graphics and computer-driven automotive technology.

SPACE NEEDS

The growth of existing programs and the establishment of new programs suggest significant growth in enrollment and a need for specific, specialized facilities. The demand for transfer and workforce skills will drive program offerings in the coming years. Many of these programs, health sciences in particular, require specialized classrooms, labs and other facilities that can be flexibly adjusted for a variety of teaching / learning settings. This demand is considered in subsequent sections to identify space needs and suggests future physical development

The purpose of space needs analysis is to assess the extent to which the current total amount of academic and other space is adequate for use in support of future enrollments. The ultimate outcome of this assessment is to provide estimates of the supply of types and amounts of space likely to be needed to accommodate Catonsville's projected fall 2024 demand in terms of academic programs and their ensuing enrollments and staffing levels.

The base year for this analysis is fall 2014. Student headcount of 9,973 reflects the total number of students taking credit courses at CCBC Catonsville. FTES / FTDES are calculated from credit hours earned at CCBC Catonsville. Faculty and staff are the result of allocations based on primary assignment.

Planning Assumptions (Catonsville)

CCBC Catonsville	Student Headcount ^a	FTES	FTDES	Full-Time Faculty	Part-Time Faculty	Full-Time Staff
Fall 2014	9,973	4,061	3,061	188	525	401
Fall 2024	11,374	4,954	3,734	229	641	481
Percent Change 2014-2024	14%	22%	22%	22%	22%	20%
Average Annual Growth Rate	1.3%	2.0%	2.0%	2.0%	2.0%	1.8%

2014 Enrollment, Faculty and Staff Data Source: CCBC Office of Planning, Research and Evaluation

2024 Enrollment Data Source: CCBC Office of Planning, Research and Evaluation

2024 Staff Data: Community College of Baltimore County Office of Facilities

^astudents taking courses at this location

ENROLLMENT TRENDS

Fall semester credit FTDE enrollment trends for students attending CCBC Catonsville during the past five years has declined at an annual rate of 1.5%.

SUMMARY OF KEY FINDINGS

Although occupancy of a new Mathematics and Science Hall in fall 2015 as well as planned renovations to the existing Hilton Mansion will address some of the 2014 deficits in instructional space, significant deficits are projected in this classification for 2024 as well as for office, study, food facilities, open laboratory and shop/storage space.

The 2014 Catonsville space inventory, excluding extension centers, was 427,411 net assignable square feet (NASF). The College anticipates a 2024 space inventory of 441,027 NASF as the base or supply against which the need, generated by the demand of future enrollments at Catonsville, would be quantified.

When space deficits and surpluses were computed as a result of comparing enrollment and staffing projections against the projected space inventory, the outcome was a projected 2024 overall space deficit of 55,898 NASF. Quantitative indicators suggest immediate and long-term need for facilities to support space classifications showing significant deficits.

Projected (Fall 2024) Space Deficits and Surpluses (Catonsville)

CCBC Catonsville (Fall 2024)					
Use	Space Classification	Deficit NASF	Use	Space Classification	Surplus NASF
310	Office / Conference	42,748	210	Class Laboratory	43,252
410	Study	14,649	420-30	Stack / Study	14,138
110	Classroom	12,348	520	Athletic	2,157
630	Food Facility	8,766	660	Merchandising	1,552
220	Open Laboratory	8,496	440-55	Processing / Service (Library)	1,400
720-40	Shop / Storage	8,178	680	Meeting Room	1,227
650	Lounge	6,311	710	Data Processing	786
530	Media Production	6,068		Total	64,512
610	Assembly	5,353			
320	Testing /Tutoring	2,617			
750	Central Service	1,751			
800	Health Care	947			
620	Exhibition	928			
580	Greenhouse	875			
760	Hazmat Storage	375			
	Total	120,410			

THE CAMPUS

Endowed with a sense of history and an estate-like setting, the CCBC Catonsville campus conveys a character that reflects its agrarian, domestic roots. At 142 acres and 693,400 square feet in 20 buildings, and containing the largest amount of building area in the CCBC system, the campus has nonetheless managed to hold on to its historic character. This should not be lost.

The credit student population of 9,973 (fall 2014 headcount) is drawn to the campus by a large variety of programs, anchored by certain major fields of study, including building technology and engineering, automotive technology, aviation technology, computer/information systems, and visual arts. The extent of course offerings reinforces the critical mass of programs, which tends to both stabilize and expand the academic program and corresponding enrollment. Enrollment is expected to grow to 11,374 by 2024.

The large enrollment has created a need for more space in new buildings, primarily office, study, classroom, food service, open labs, and shop/storage facilities. Through 2024, the enrollment justifies a need for 120,400 net square feet of new space in HEGIS categories that contain deficits. This roughly corresponds to 198,700 gross square feet of new space that does not yet exist. Most of that need for new space exists now.

The College’s Capital Improvement Plan (CIP) moves toward laying the groundwork for future program spaces in new construction and renovation. In addition to smaller projects and systemic upgrades, several major projects are recommended through 2024. They include the following: Hilton Mansion Renovation, Electrical service and switchgear upgrade/replacement, Facilities Operations Building renovation and addition, Student Services partial renovation and addition, Wellness Center renovation, Classroom & Lab Building renovation and addition, Automotive Building Addition, turf field and comfort station, historic buildings & site restoration and improvements, parking garage on Lot 3 (north), and a new classroom building west of the library.

Projects to be implemented as funds become available include systemic upgrades to sprinkler, HVAC, fire alarm, and other building systems; Middle College building; Arts Building renovation; bridge over the loop road connecting the Classroom * Lab Building with the Arts Building, HTEC renovation, and a second parking garage on Lot 7 (south).

Site and infrastructure improvements are required to support the proposed building program and to improve the function, safety, and efficiency of the campus plant operations. Parking is primarily inconvenient for students and visitors. As new projects are undertaken, the parking supply should be increased to meet expanded future needs. Some of the existing parking will be eliminated with new facilities, including two new parking structures.

Taken together, these projects will require storm water management measures. This need will be addressed on a project-by-project basis, incorporating State standards for storm water management and sediment and erosion control. Unified designs for paving, site amenities, and site lighting are recommended, to set standards for future projects affecting these components.

The campus is currently served by 2 roadways from Rolling Road: Campus Drive and Collegiate Drive. The main entrance, Campus Drive, is most heavily used as the primary entrance road. Use of the Rolling Road intersection has not materially changed in the last five years, and is not anticipated in the short term. As the campus expands in the future, however, the safety and utilization of this intersection will need to be evaluated.

This plan edition also explores the need to accommodate bicycles, including bikeways and bike parking facilities, connecting the public roads with internal pedestrian networks. Refer to the appendix for recommendations and the proposed plan.

The suburban scale and density of the campus should not be exceeded. The development plan illustrated in this report accommodates growth reasonably. Buildings are shown to be limited to 3 floors, and parking structures to 4-5 levels and integrated into the topography. The physical growth of the campus is accommodated by expanding the campus core to the north to unify the ARTS building with the campus core and along the east-west axis to define a second major quadrangle, embrace the library, and reinforce the sense of campus community. Alternatives to additional physical growth, such as on-line offerings, should continue to be explored. As suggested in previous master plans, a coordinated, comprehensive strategy with local government should be undertaken to address campus growth, access, impact on the surrounding community, and transportation alternatives.

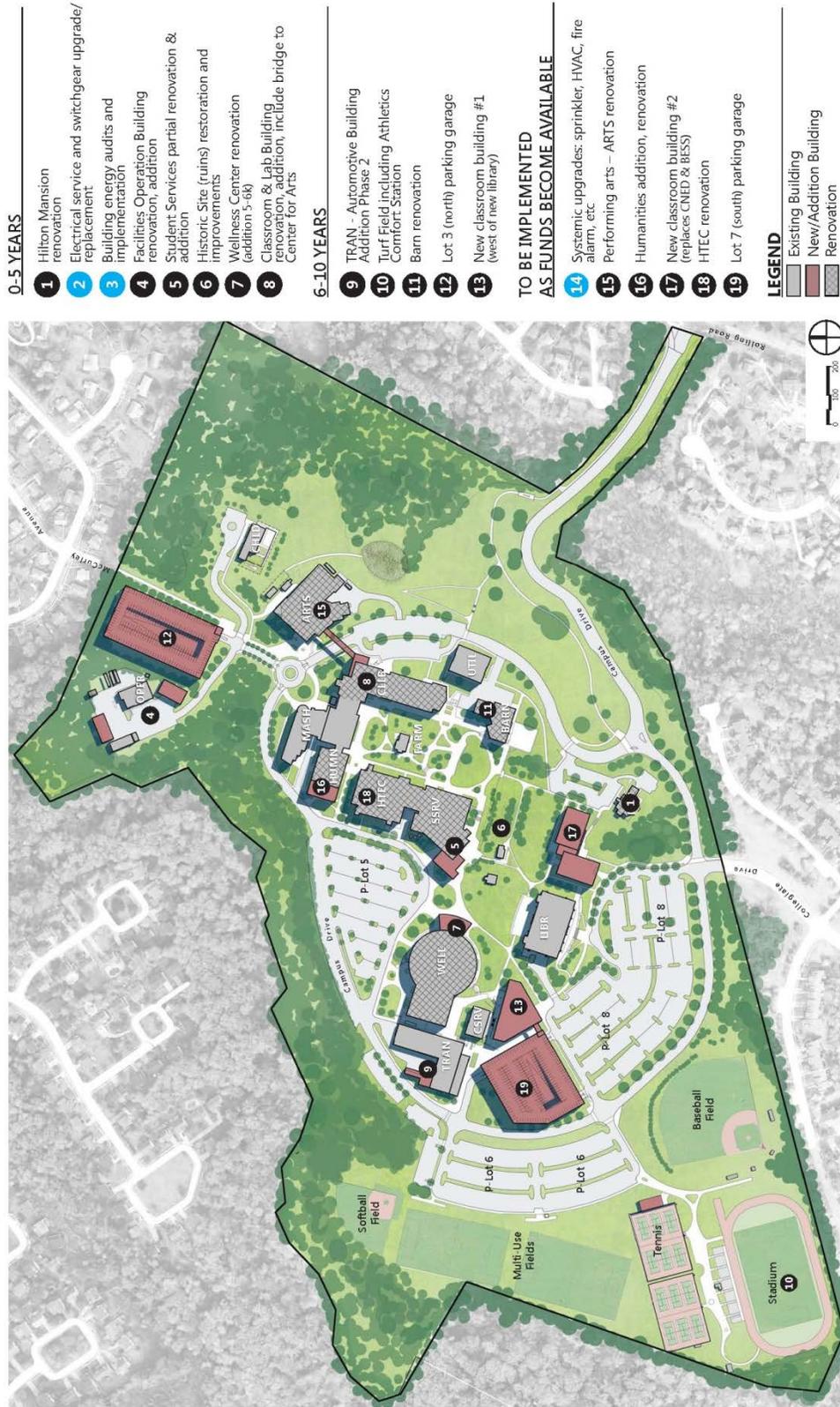
Site utilities are generally satisfactory. New water service and an upgraded internal campus loop are complete, as is a second electric service feeder providing better quality and more dependable electric service. Most immediate and "mission critical" is the need to replace aging electrical switchgear and related electrical infrastructure.

New building design should acknowledge the historical references of the older buildings while incorporating contemporary functions and aesthetics.

RECOMMENDED MAJOR PROJECTS – CCBC CATONSVILLE

Proposed Major Capital Projects 2016-2025 - Catonsville						
Building Designation		No. of Spaces -	Parking Garage or Lot	GSF Renovation	GSF New	
Proposed Projects: 0-5 Years 2016-2020						
HILT	Renovation (Administration - Mansion)			16,898		
	Switchgear, campus feeder, bldg meter upgrade/replacement					
	Roof Membrane Replacements (CHLD)					
OPER	Renovation/Add'n (Facil. Maint. & Operations; incl temp bldgs relocation)			6,265	9,000	
SSRV	Partial Renovation and Addition (Student Services-Lower Level)			25,000	10,000	
	Historic Area Safety/Wall Restoration (Ruins)					
WELL	Renovation/Addition (Athletic, Wellness Center)			92,385	6,000	
CLLB	Renovation/Addition (addition includes bridge over loop road to ARTS)			70,845	6,000	
	Total: 2016-2020			211,393	31,000	
Proposed Projects: 6-10 Years 2021-2025						
TRAN	Renovation/Addition (Automotive, Occupational Training)			8,000	3,000	
	Roof Membrane Replacements (HUMN, SSRV, HTEC, OPER)					
	Turf Field and Athletics Comfort Station				3,000	
BARN	Renovation (Barn)			14,890		
	Lot 3 (north) Parking Garage		924			
	Classroom Building 1 - west of Library				60,000	
	Total: 2021-2025			22,890	66,000	
Projects to be Implemented as Funds Become Available						
	Systemic upgrades: sprinkler, HVAC, fire alarm, etc.					
	Replace CCBC Natural Gas Piping					
	Middle College (renovation option - location to be determined)			41,250		
ARTS	Performing Arts Renovation			54,560		
HUMN	Humanities Hall Renovation/Addition			25,904	10,000	
HTEC	HTEC Renovation			92,385		
	Classroom Building 2 - replace BESS, CNED				62,000	
	Lot 7 (west) Parking Garage		1310			
	Total			214,099	72,000	
	TOTAL - ALL PROJECTS			448,382	169,000	

PROPOSED CAMPUS DEVELOPMENT – CCBC CATONSVILLE



0-5 YEARS

- 1** Hilton Mansion renovation
- 2** Electrical service and switchgear upgrade/ replacement
- 3** Building energy audits and implementation
- 4** Facilities Operation Building renovation, addition
- 5** Student Services partial renovation & addition
- 6** Historic Site (ruins) restoration and improvements
- 7** Wellness Center renovation (addition 5-6k)
- 8** Classroom & Lab Building, renovation, addition, include bridge to Center for Arts

6-10 YEARS

- 9** TRAN - Automotive Building Addition Phase 2
- 10** Turf Field including Athletics Comfort Station
- 11** Barn renovation
- 12** Lot 3 (north) parking garage
- 13** New classroom building #1 (west of new library)

TO BE IMPLEMENTED AS FUNDS BECOME AVAILABLE

- 14** Systemic upgrades: sprinkler, HVAC, fire alarm, etc.
- 15** Performing arts – ARTS renovation
- 16** Humanities addition, renovation
- 17** New classroom building #2 (replaces CNED & BESS)
- 18** HTEC renovation
- 19** Lot 7 (south) parking garage

LEGEND

- Existing Building
- New/Addition Building
- Renovation

SUMMARY: CCBC DUNDALK

HISTORY AND CHARACTER

CCBC Dundalk is located at 7200 Sollers Point Road, near the intersection of Sollers Point Road and Merritt Boulevard in southeastern Baltimore County. The campus is accessible by public bus transportation.

The smallest and most recently built of the Community College of Baltimore County's three main campuses, Dundalk began offering classes in 1971 at Dundalk Senior High School until the first building was completed on the Dundalk Community College campus. In 1972 the College took occupancy of the Administration/ Classroom Building. Since then, the campus has added facilities, which have become the 11-acre academic core, to include a total of 10 permanent buildings, 2 temporary buildings, 2 trailers and 6 storage containers. Outside of this core are parking surfaces, athletic fields, vehicular circulation and vacant land.

In 1998, Dundalk Community College was unified with Catonsville Community College and Essex Community College to become, what is now, the Community College of Baltimore County (CCBC).

With a strong tradition of service, CCBC Dundalk is a vital part of its southeast Baltimore County community. Educating generations of residents, CCBC Dundalk mirrors the hometown neighborhood it serves. CCBC Dundalk is known for its championship baseball teams, internationally recognized community theater and impressive art gallery exhibits. Landscaped by horticulture students, the campus is characterized by tranquil courtyards. Water gardens, fish ponds complete with lily pads, bubbling fountains and rustic gazebos dot the landscape.

CCBC Dundalk is home for the Baltimore County Police Academy and also supports instruction for the Baltimore County Fire Department.

SPACE NEEDS

The growth of existing programs and the establishment of new programs suggest significant growth in enrollment and a need for specific, specialized facilities. The demand for transfer and workforce skills will drive program offerings in the coming years. Many of these programs, health sciences in particular, require specialized classrooms, labs and other facilities that can be flexibly adjusted for a variety of teaching/learning settings. This demand is considered to identify space needs and suggests future physical development.

The purpose of space needs analysis is to assess the extent to which the current total amount of academic and other space is adequate for use in support of future enrollments. The ultimate outcome of this assessment is to provide estimates of the supply of types and amounts of space likely to be needed to accommodate Dundalk's projected fall 2024 demand in terms of academic programs and their ensuing enrollments and staffing levels.

The base year for this analysis is fall 2014. Student headcount reflects the total number of students taking credit courses at CCBC Dundalk. FTES / FTDES are calculated from credit hours earned at CCBC Dundalk. Faculty and staff are the result of allocations based on primary assignment.

Planning Assumptions (Dundalk)

CCBC Dundalk	Student Headcount ^a	FTEs	FTDES	Full-Time Faculty	Part-Time Faculty	Full-Time Staff
Fall 2014	4,200	1,165	903	47	115	178
Fall 2024	4,738	1,421	1,102	57	140	214
Percent Change 2014-2024	13%	22%	22%	22%	22%	20%
Average Annual Growth Rate	1.2%	2.0%	2.0%	2.0%	2.0%	1.8%

2014 Enrollment, Faculty and Staff Data Source: CCBC Office of Planning, Research and Evaluation

2024 Enrollment Data Source: CCBC Office of Planning, Research and Evaluation

2024 Staff Data: Community College of Baltimore County Office of Facilities

^astudents taking courses at this location

The 2014 campus space inventory was 176,857 net assignable square feet (NASF). Since there are no building projects currently programmed at Dundalk, the projected 2024 space inventory is also shown at 176,857 NASF. This is the base or supply against which the need, generated by the demand of future enrollments at Dundalk, would be quantified.

When space deficits and surpluses were computed as a result of comparing enrollment and staffing projections against the projected space inventory, the outcome was a projected 2024 overall space deficit of 51,348 NASF. Quantitative indicators suggest immediate and long-term need for facilities to support space classifications showing significant deficits.

Projected (Fall 2024) Space Deficits and Surpluses (Dundalk)

CCBC Dundalk (Fall 2024)		Deficit			Surplus
Use	Space Classification	NASF	Use	Space Classification	NASF
310	Office / Conference	13,015	210	Class Laboratory	3,305
110	Classroom	11,675	660	Merchandising	1,004
680	Meeting Room	6,000	580	Greenhouse	490
720-40	Shop / Storage	5,067		Total	4,799
400	Study	2,949			
520	Athletic	2,786			
610	Assembly	2,722			
750	Central Service	2,487			
710	Data Processing	1,840			
220	Open Laboratory	1,589			
530	Media Production	1,600			
320	Testing /Tutoring	1,500			
650	Lounge	1,129			
620	Exhibition	793			
800	Health Care	500			
630	Food Facility	336			
760	Hazmat Storage	159			
	Total	56,147			

With respect to parking needs, there is an available supply of 975 spaces. Seventy six (76) spaces are reserved for public safety, service and fleet vehicles and one space is for motorcycles. The motorcycle space is sized for motorcycles only and do not meet guideline allowance for cars. Therefore, the available supply of regular parking spaces at Dundalk is 974. All existing parking is on surface lots as there are no parking structures at CCBC Dundalk.

ISSUES AFFECTING SPACE NEEDS AND CAPITAL PROJECTS

- The CCBC Dundalk campus is noted for its pleasant, attractive landscaping
- Some students expressed discomfort walking through campus and to their cars at night.
- Larger classrooms are needed.
- Requests for computer labs are increasing.
- The observatory is regularly used by the community.
- Criminal justice role-play rooms are now in the Wellness Center; it is preferable for them to be together with other criminal justice programs in the Staten Building, space permitting. The School of Justice would like to have a moot court.
- A 2013 renovation of the College Community Center now provides more appropriate space for the library and student center functions
- Science offerings have expanded with labs in both Mathematics & Science Hall and the Career Building. Some labs need to be upgraded to take advantage of uniform curricula developed by faculty, especially in chemistry.

SPACE UTILIZATION RECOMMENDATIONS

- Accommodate the Police Academy's requests for additional space.

PROGRAMS AND OPERATIONS

- Intensive evening use is in both credit and non-credit
- The historic focus on arts and heavy industry diminishing.
- Administrative areas on the second level of the Student Services Building need to be renovated to make better use of space and to facilitate modernization of building-wide HVAC AHUs and to complete installation of the automatic fire suppression system. This project should also include renovations to the link.
- The campus has the opportunity to be the social and cultural heart of the Dundalk community.

THE CAMPUS

Occupying 273,000 gross square feet in 11 permanent buildings on 70 acres, the campus is the smallest of CCBC's three main campuses. Like CCBC Essex, its buildings generally conform to a unified, contemporary architectural character, so that they are relatively small in scale (not exceeding 2 stories), appropriate to the size of the site.

The student population of 4,200 (fall 2014 headcount) has declined since 2010, but is expected to grow to 4,738 by 2024 (a lower projection than in the 2010 Facilities Master Plan). The Dundalk campus has been serving the diverse educational needs of recent high school graduates, working adults who want to upgrade skills or retrain, unemployed adults seeking marketable job skills, and special populations such as seniors.

Besides offering Associate's Degree programs in Liberal Arts, Business, Technology and Mathematics, and Science, Health and Human Services, and Criminal Justice and Paralegal studies, CCBC Dundalk offers extensive continuing education courses and carefully tailored training programs for business and industry. The campus hosts facilities for the Baltimore County Police Academy and supports the Academy's training programs for police recruits and for the entire County Police Department. In addition, the campus provides instruction for other public safety personnel from Baltimore County and other jurisdictions. CCBC Dundalk houses the School of Justice. The School oversees all criminal justice and paralegal course offerings across the three campuses and extension centers.

Through 2024, the enrollment justifies a need for approximately 56,600 net square feet of new space in HEGIS categories that contain deficits. This corresponds to roughly 93,300 additional gross square feet. The major needs for additional space include office, classrooms, meeting rooms, and shop/storage.

The College's Capital Improvement plan moves toward laying the groundwork for future program spaces in new construction and renovation. In addition to miscellaneous smaller projects and systemic upgrades, five major building projects are projected through 2024. They include: new operations building and compound, renovation of the second floor and link of the Student Services building, Wellness Center renovation and addition, and a new classroom building, parking lot and reconfiguration of the entrance road around a proposed south quadrangle. As funds become available, systemic upgrades to sprinkler, HVAC, fire alarm and other building systems, Career Building renovation, and a second classroom building at the new south quad should be implemented.

The site infrastructure requires miscellaneous repairs and improvements. Generally, except for low water service pressure from the public main on Sollers Point Road, the utilities are adequate and in relatively good condition. The low water pressure condition will need to be further investigated and reconciled, possibly requiring upgrade to the service, before further new construction may occur. The existing storm water management pond is at capacity; new storm water management facilities will be needed at such time as new impervious site coverage (buildings, parking) is constructed.

Parking is in adequate supply for now, but should be increased to serve the proposed new buildings as they are constructed. The existing parking bays are laid out to facilitate future expansion by maintaining the existing driveway-parking-building sequence which steers clear of pedestrian-vehicular conflicts. There are 975 parking spaces distributed among various primary and secondary lots, including 48 for disabled persons and one for motorcycles. All existing parking is on surface lots as there are no parking structures, and none are anticipated in future development.

Reconfiguration of the secondary entrance road closest to Sollers Point Road is suggested to allow for safer entry into the campus parking areas. Access is illustrated to serve a future development at the south part of the campus, with limited service vehicle access to the Operations Building compound. The new south quadrangle will be reinforced by new academic buildings and will complement existing open spaces by providing a large flexible open space which is currently lacking on the campus.

The pedestrian, even intimate, scale of the CCBC Dundalk campus is a major attribute and should be maintained in any future expansion work. The small scale open spaces that exist between buildings should be maintained, while establishing a large quad area in the proposed south development. The proposed site development plan suggests such spaces.

RECOMMENDED MAJOR PROJECTS – CCBC DUNDALK

Proposed Major Capital Projects 2016-2025 - Dundalk					
Building Designation			No. of Spaces - Parking Lot	GSF Renovation	GSF New
Proposed Projects: 0-5 Years 2016-2020					
OPER	Renovation OPER + Replacement for Maintenance			3,576	5,000
SSRV	Renovation (Student Services 2nd floor incl link)			10,300	
	Roof Membrane Replacements (STAT, WELL (flat))				
	Additional Parking Extend Lot 4		112		
WELL	Renovation/Addition (Wellness & / Athletic Center)			55,913	10,000
	Total: 2016-2020			69,789	15,000
Proposed Projects: 6-10 Years 2021-2025					
	New Parking Lot; Reconfigure Secondary Entrance Road around New South Quad: allowance (lot includes 96 spaces)				
	Classroom Building (at New South Quad)				35,000
	Total: 2021-2025			-	35,000
Projects to be Implemented as Funds Become Available					
	Systemic Upgrades: sprinkler, HVAC, fire alarm, etc.				
MASH	Math & Science Hall Renovation w/ HVAC Upgrades			24,127	
CRBL	Career Building Renovation			31,279	
	Classroom Building 2 (at New South Quad)				35,000
	Total			55,406	35,000
TOTAL - ALL PROJECTS				125,195	85,000

EXISTING CAMPUS – CCBC DUNDALK



SUMMARY: CCBC ESSEX

HISTORY AND CHARACTER

The Essex Campus (CCBC Essex) is located on 143 acres of land at 7201 Rossville Boulevard, about one-half mile northwest of Franklin Square Drive in eastern Baltimore County. The campus is accessible by public bus transportation.

Essex Community College opened in temporary quarters at Kenwood High School in 1957. In February 1961, the College moved its day program to Dorsey Avenue in Essex. The library and faculty offices moved to the Dorsey site in 1962. The present campus was opened to 2,000 students in the spring of 1968. The campus opened with three permanent buildings: Administration Building, Power Plant, and the Planetarium (AV Building). The campus now contains a total of 14 permanent buildings, 7 trailers/sea containers, and one temporary building.

In 1998, Essex Community College was unified with Catonsville Community College and Dundalk Community College to become, what is now, The Community College of Baltimore County (CCBC).

The contemporary look and feel of the Essex campus invites learning. Bordered by beautiful wooded areas and open space, the campus buildings are connected by spacious plazas and lawns bordered by seasonal gardens. Noted for its strong allied health programs, Essex offers students the ability to complete clinical training next door at Franklin Square Hospital, with which it has created a "healthy" partnership, or at one of the many highly regarded health care institutions in Baltimore.

SPACE NEEDS

The growth of existing programs and the establishment of new programs suggest significant growth in enrollment and a need for specific, specialized facilities. The demand for transfer and workforce skills will drive program offerings in the coming years. Many of these programs, health sciences in particular, require specialized classrooms, labs and other facilities that can be flexibly adjusted for a variety of teaching / learning settings. This demand is considered to identify space needs and suggest future physical development.

The purpose of space needs analysis is to assess the extent to which the current total amount of academic and other space is adequate for use in support of future enrollments. The ultimate outcome of this assessment is to provide estimates of the supply of types and amounts of space likely to be needed to accommodate Essex's projected fall 2024 demand in terms of academic programs and their ensuing enrollments and staffing levels.

The base year for this analysis is fall 2014. Student headcount of 11,100 reflects the total number of students taking credit courses at CCBC Essex. FTES / FTDEs are calculated from credit hours earned at CCBC Essex. Faculty and staff are the result of allocations based on primary assignment.

Planning Assumptions (CCBC Essex)

CCBC Essex	Student Headcount ^a	FTES	FTDES	Full-Time Faculty	Part-Time Faculty	Full-Time Staff
Fall 2014	11,100	5,061	4,040	201	289	321
Fall 2024	12,756	6,174	4,929	245	353	385
Percent Change 2014-2024	15%	22%	22%	22%	22%	20%
Average Annual Growth Rate	1.4%	2.0%	2.0%	2.0%	2.0%	1.8%

2014 Enrollment, Faculty and Staff Data Source: CCBC Office of Planning, Research and Evaluation

2024 Enrollment Data Source: CCBC Office of Planning, Research and Evaluation

2024 Staff Data: Community College of Baltimore County Office of Facilities

^astudents taking courses at this location

The 2014 campus space inventory was 368,975 net assignable square feet (NASF). This excludes Ridge Road Annex which is classified as a temporary building. The College anticipates a 2024 space inventory of 412,136 NASF as the base or supply against which the need, generated by the demand of future enrollments at CCBC Essex, would be quantified. Through 2024, the enrollment justifies a need for approximately 147,100 net square feet of new space in HEGIS categories that contain deficits. This corresponds to roughly 242,700 additional gross square feet, the largest need of any of the three campuses. The major needs for additional space include study, office, classrooms, food service, shop/storage, and open laboratory facilities. Quantitative indicators suggest immediate and long-term need for facilities to support space classifications showing significant deficits:

Projected Space Deficits and Surpluses

CCBC Essex (Fall 2024)					
Use	Space Classification	Deficit NASF	Use	Space Classification	Surplus NASF
400	Study	27,226	210	Class Laboratory	41,546
110	Classroom	25,280	610	Assembly	3,507
310	Office / Conference	23,230	660	Merchandising	1,158
630	Food Facility	15,532		Total	46,211
720-40	Shop / Storage	11,488			
220	Open Laboratory	10,082			
520	Athletic	6,222			
680	Meeting Room	6,041			
650	Lounge	5,384			
530	Media Production	4,314			
320	Testing /Tutoring	3,215			
620	Exhibition	3,215			
750	Central Service	1,658			
710	Data Processing	1,628			
800	Health Care	1,186			
580	Greenhouse	1,000			
760	Hazmat Storage	393			
	Total	147,094			

With respect to parking needs, there is an available supply of 2,592 spaces for parking on campus. Given this supply, there is a computed current deficit of 973 spaces. Computations suggest a projected deficit of 1,598 parking spaces by fall 2024.

These building and parking space needs are reinforced by consideration of qualitative evaluations of configuration and condition of existing spaces.

ISSUES AFFECTING SPACE NEEDS AND CAPITAL PROJECTS

- Both Larger and smaller classrooms are needed.
- Allied health programs and facilities are spread out over three buildings; this will be improved to two buildings via construction of the HTEC addition and renovation.
- Suitable meeting rooms for large groups, Board meetings, etc, are lacking.

PROGRAMS AND OPERATIONS

- Dance studio space suitable in quantity and quality are needed for national accreditation
- Back of the house food service space is inadequate for the needs of the campus
- A tentative home for the truck driver training program seems to have been found at the Sparrow Point Redevelopment area.
- The College should explore the possibility of a purchase of a nearby farm property for program expansion purposes.

THE CAMPUS

Now nearly 50 years old, the CCBC Essex Campus was originally conceived to be a unified architectural composition of buildings. The original modern aesthetic has been maintained in subsequent development resulting in a cohesive architectural character. While there are both advantages and disadvantages to this unity, it establishes a contemporary, recognizable character for most of the campus buildings.

The 143-acre campus contains 573,000 gross square feet in 14 buildings, and is similar in size to the CCBC Catonsville campus. The most memorable impression of the campus is generally its wooded setting, although along its southern boundary, the reality of the proximity of its large institutional neighbor, Franklin Square Hospital, is apparent, and there is a more open feeling.

The student population of 11,100 (fall, 2014 headcount) pursues a variety of programs, including accounting; business management; early childhood development; and nursing and allied health, the largest of all. Enrollment is projected to increase to 12,756 through 2024. Through the Allied Health program, CCBC Essex has formed relationships with Franklin Square and other health-care providers throughout the community.

The College's Capital Improvement Plan moves toward laying the groundwork for future program spaces through new construction and renovation. Major projects proposed through 2024 include the following: Health Careers & Technology Building renovation and addition; reconfiguration of the entrance and loop road (west portion of loop road); electrical service and switchgear upgrade and replacement; veterinary technology facility; Wellness Center addition; Business, Education & Social Sciences Hall renovation; College Community Center addition for bookstore and food service; Library addition & renovation; Wellness

Center renovation; parking garage near the Arts & Humanities building; classroom building adjacent to Arts & Humanities; and Operations building renovation and addition.

Projects which should be considered as funds become available include the following: systemic upgrades to sprinkler, HVAC, fire alarm and other building systems; land acquisition; College Community Center renovation + addition; classroom building between the College Community Center and Wellness Center; parking garage near the Health Careers & Technology Building, and a third classroom building, between Business, Education & Social Sciences Hall and Mathematics & Science Hall.

Several of the existing buildings exhibit a relatively dark, dim, closed-in feeling in the public spaces. Some of these spaces are what remains from larger, more open spaces of the original design. Renovations should open and re-open these areas to create a more pleasant, welcoming sense of space. Indeed, new construction and additions should create similar areas as well.

Site and infrastructure improvements are required to support the proposed building program and to improve the aesthetics, functionality, and efficiency of the campus plant operations. Site utilities are generally satisfactory and will continue to meet campus demand for the foreseeable future, except for the "mission critical" upgrade and replacement of electrical switchgear and related equipment.

Generally, new campus growth will be accommodated by expanding the campus core in two directions. An expansion to the west will create a new quad defined by existing and proposed academic buildings, supported by a major parking structure. Expansions to the east and south will create other quad spaces defined by new and existing buildings and will also be supported by a second major parking structure.

Parking is currently insufficient at peak periods and should be increased soon to meet demand created by enrollment increases and new building construction. Some reconfiguration and expansion of existing parking areas will partially satisfy the projected increase of demand, but structured parking will be needed to support the planned building projects.

Taken together, all of the proposed projects will require storm water management measures. This can be addressed on a project-by-project basis as drainage areas and topography dictate.

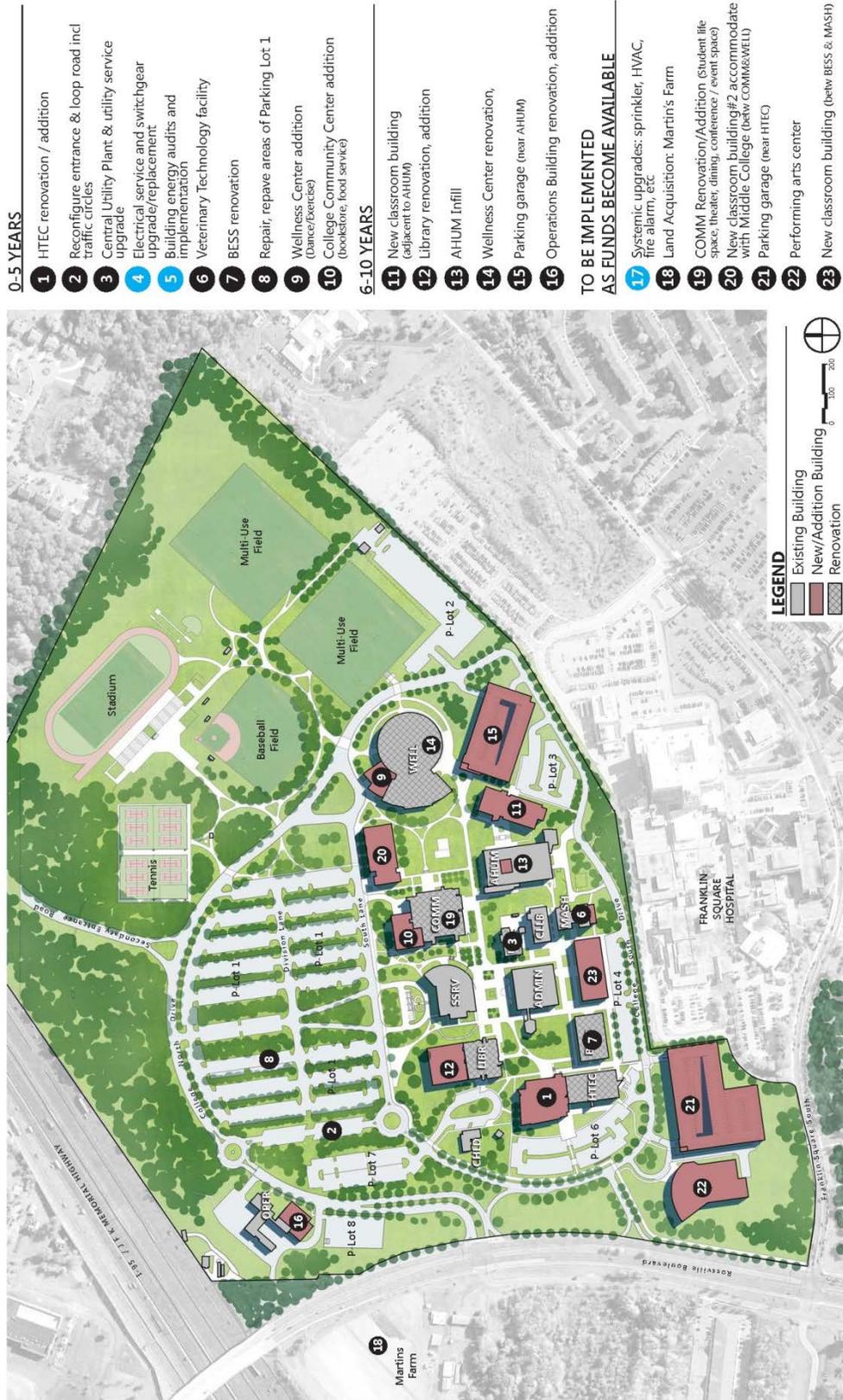
RECOMMENDED MAJOR PROJECTS – CCBC ESSEX

Proposed Major Capital Projects 2016-2025 - Essex					
Building Designation			No. of Spaces - Parking Garage or Lot	GSF Renovation	GSF New
Proposed Projects: 0-5 Years 2016-2020					
HTEC	HTEC Renovation/Addition/Site (SoHP, Continuing Education, SAIT) - also includes reconfigured loop road and new parking lot			51,500	70,525
	Switchgear, campus feeder, bldg meter upgrade/replacement				
CLLB	Exterior Skin Replacement & Build Clay Mixing Room				300
MASH	Veterinary Technology Facility(Renov Exist + Addition)			2,500	1,500
	Rehabilitate Lot 1 Parking Facility				
WELL	Addition to Athletic & Wellness Center/Dance Studio Alterations			3,000	8,000
BESS	Renovation (BESS)			50,048	
COMM	College Community Center Renovation/Addn (bookstore, food service)			6,000	22,000
	Total: 2016-2020			113,048	102,325
Proposed Projects: 6-10 Years 2021-2025					
	Roof Membrane Replacements (MASH,ADMN)				
LIBR	Renovation/Addition (Library)			40,280	46,000
AHUM	In-Fill (AHUM Courtyard)				6,000
WELL	Renovation/Addition (Athletic & Wellness Center)			84,500	
	East Parking Garage (near AHUM)		1068		
	Classroom Building 1 - near AHUM Building				60,000
OPER	Renovation/Addition (Facilities Operations / Maintenance)			11,706	19,000
	Total: 2021-2025			136,486	131,000
Projects to be Implemented as Funds Become Available					
	Systemic Upgrades: sprinkler, HVAC, fire alarm, etc.				
	Replace CCBC Natural Gas Piping				
	Land Acquisition: Martin's Farm (cost to be determined)				
COMM	College Community Center Renovation (student life, dining, conf/event)			44,000	
	Classroom Building 2 (betw COMM & WELL; incl Middle College)				40,000
	West Parking Garage Phase 1		1000		
	West Parking Garage Phase 2		434		
	Performing Arts Center				75,000
	Classroom Building 3 (Lot 4)				60,000
	Total			44,000	175,000
	TOTAL - ALL PROJECTS			293,534	408,325

EXISTING CAMPUS – CCBC ESSEX



PROPOSED CAMPUS DEVELOPMENT – CCBC ESSEX



COLLEGE-WIDE PROJECTS

The following projects are planned by the College and affect all campuses unless noted otherwise

- Central Hot/Chilled Water Facility Upgrades
- Multi-Building Re-Roofing
- ADA Alterations
- Capital Maintenance & Renovations
- Asbestos Abatement
- Building Energy Audits (study) and implementation of capital investment or performance contracting resulting in energy and cost savings.

EXTENSION CENTERS

Currently, CCBC administers programs at three leased extension centers – Owings Mills, Hunt Valley, and Randallstown. The Owings Mills Center, approximately 70,000 square feet of a 120,000 square foot building shared with the Baltimore County Public Library and offering credit and non-credit courses, has surpassed expectations for growth; additional space will likely be needed to meet demand within the next ten years. The Hunt Valley Center, at 19,900 square feet, also offers credit and non-credit classes in a facility on Beaver Dam Road in the Hunt Valley business park. The Randallstown Workforce Development Center occupies about 26,400 square feet in a County-owned facility on Offutt Road.

PLANNING FOR TOMORROW

As described by the CCBC Mission, “The Community College of Baltimore County provides an accessible, affordable and high-quality education that prepares students for transfer and career success, strengthens the regional work force and enriches our community”. By extension, this master plan, too, provides the framework for accessible, affordable, and high-quality facilities to serve the students, faculty, staff and all others embraced in the CCBC community. Still strong, the College is positioned to continue to be a source of pride for the County and for the communities which the campuses and extension centers serve. The challenges are great, and so are the opportunities. This master plan makes the case for need, lays out a framework for development, and envisions a future of excellence for the College, making the celebration of learning more achievable.



Chapter 2

Overview of the College

Mission, Vision, Values
Strategic Directions
Governance and Organization
Students, Faculty and Staff
Instruction
Main Campus
Extension Centers

CHAPTER 2 OVERVIEW OF THE COLLEGE

The Community College of Baltimore County (CCBC) is an open-door two-year public community college providing courses, programs, and services to the citizens of Baltimore County and the central Maryland region. The College originated as three separate colleges. Catonsville Junior College and Essex Junior College each were founded in 1957. Dundalk Community College opened in 1971. These colleges were restructured in October 1998 as the Community College of Baltimore County with main campuses at Catonsville, Dundalk, and Essex.

The Board of Community College Trustees exercises general control over the Community College of Baltimore County (Code Education Article, §16-101 through §16-103). The Board members are appointed to five-year terms by the governor with Senate advice and consent.

The Community College of Baltimore County (CCBC) is ranked among the number one providers of undergraduate education, workforce development, technology training, and lifelong learning/life enrichment in the State of Maryland. Nationally recognized as a leader in innovative learning strategies, CCBC educates nearly 65,000 students each year, including more than half of all Baltimore County residents attending undergraduate college. CCBC's School of Continuing Education is a preferred training partner for Maryland businesses, serving more than 100 employers annually with customized employee development training. Over the last four years, the College has enrolled an average unduplicated headcount of about 34,000 credit and 34,000 continuing education and workforce development students at its three main campuses, major extension centers in Hunt Valley, Owings Mills, and Randallstown, and teaching sites in numerous community centers and local schools.

This *CCBC Facilities Master Plan Update* is published as three volumes, one for each of CCBC's three main campuses. Detailed analysis and plans contained in this volume pertain to the CCBC Catonsville Campus.

Community College of Baltimore County Campus and Extension Center Locations



MISSION

The Community College of Baltimore County provides an accessible, affordable, and high-quality education that prepares students for transfer and career success, strengthens the regional workforce and enriches our community.

VISION

We will be the institution of choice for students, where together we make teaching purposeful, learning powerful, completion primary, and community paramount.

VALUES

- **Commitment:** We want our students to succeed and make progress toward the completion of their educational goals through degree or certificate attainment, transfer, workplace certification, career enhancement or personal enrichment.
- **Learning:** We are committed to ensuring our students grow as active learners, develop a passion for life-long learning, and use what they have learned to their benefit.
- **Innovation:** We value innovation and support a climate of discovery. We encourage students, faculty and staff to explore new ideas, methods and processes.
- **Responsibility:** We have high expectations for the work of our employees, the academic rigor of our offerings, the scholarship of our students, and the involvement of the community and the workplace in the College's future.
- **Integrity:** We inspire public trust by maintaining ethical and collaborative relationships with our faculty, students, staff, alumni and communities. We share our achievements and challenges honestly and openly.
- **Inclusiveness:** We celebrate the differences and similarities of our students, employees and the communities we proudly serve. We value the diversity of people, cultures, ideas and viewpoints and we honor the dignity of all persons. We insist on open and honest communications, fairness, mutual respect, collegiality and civility at all times. We are committed to preparing students to be active citizens, ready to meet the challenges of an increasingly diverse world and a changing global marketplace.
- **Excellence:** We emphasize quality as a standard for all we do and consistently look for ways to improve organizational efficiency and effectiveness.
- **Stewardship:** We support sustainable practices and prudently manage resources dedicated to advancing the College's mission and strategic directions.
- **Collaboration:** We encourage continuous dialogue among students, faculty and staff, and support ongoing cooperative relationships with our partners in the community regarding their educational, cultural, recreation and workforce needs.

STRATEGIC DIRECTIONS

- **Student Success:** CCBC provides the highest quality instruction and student services, positioning all students to maximize their performance. The College assists students in achieving their completion goals, leading to a degree or certificate, obtaining transfer credits, developing specific skills, expanding employment opportunities, or enriching their personal lives.
- **Teaching and Learning Excellence:** CCBC promotes the academic and professional success of students by offering relevant, adaptive, responsive and inclusive curricula, supporting the teaching and professional achievement of faculty and making high-quality learning support services available.
- **Organizational Excellence:** CCBC encourages an organizational culture that emphasizes innovation, quality, continuous improvement, excellence, entrepreneurship, service and success. The College supports individuals and teams involved with and responsible for providing and managing college's human, capital, financial, technical, academic and technological resources.
- **Community Engagement:** CCBC values community support, respect, commitment and engagement.

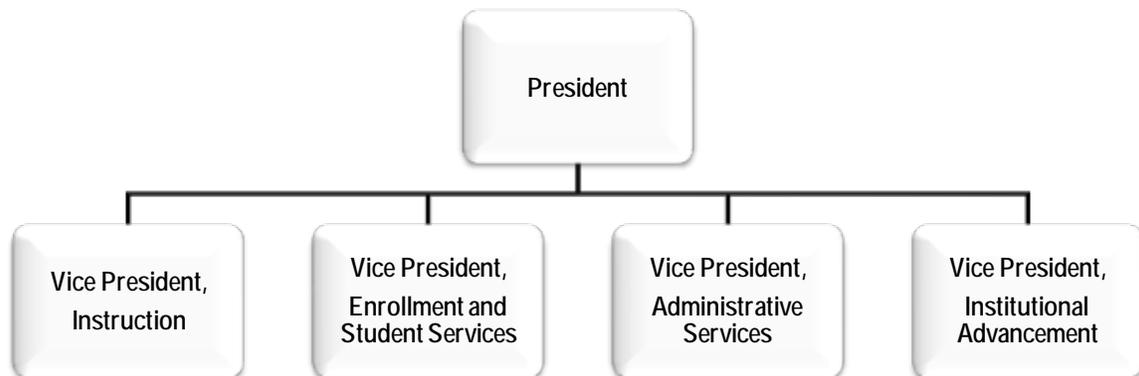
GOVERNANCE AND ORGANIZATION

The Board of Trustees of the Community College of Baltimore County comprises 15 members – one at-large and two from each of the county's seven councilmanic districts. Members are appointed by the Governor of Maryland with advice and consent of the Maryland Senate.

The Board maintains general oversight over CCBC. Its responsibilities include adopting rules and regulations for College operations, approving the College budget, considering and approving CCBC's academic programs and long-range plans, approving major purchases and the construction and renovation of College facilities, and more.

The president shares day-to-day operation of the College with four vice-presidents, each with a broad range of responsibilities for Instruction, Enrollment and Student Services, Administrative Services, and Institutional Advancement, which comprise the President's Staff.

President's Staff



STUDENT GOVERNMENT

The Community College of Baltimore County Student Government Association (SGA) and when appropriate followed by a campus delineation (e.g., CCBC SGA Catonsville) established a constitution for the Student Government Association. The upholders of the constitution provide a voice for all students by maintaining open lines of communication between all of its constituents. The upholders work with and give recommendations to the administration for the enhancement of Student Life.

The affairs of the SGA are managed by an Executive Board which acts as the principal student governing board of the Community College of Baltimore County, with all other student organizations subsidiary to it. The SGA Executive Board consists of eight (Catonsville and Essex) or six (Dundalk) elected members. Their roles as student leaders begin officially on October 1 of the year following student elections. If there are any vacant positions in the fall after the student elections are held, any interested student may apply for an SGA representative position. The SGA Executive Board at the Catonsville and Essex campuses will be composed of the following: President, Vice-President, Chief of Staff, Secretary, two returning student delegates, and two first-year delegates. The SGA Executive Board at the Dundalk campus will be composed of: President, Vice-President, Chief of Staff, Secretary, one returning student delegate, and one first-year delegate.

The objectives of the Student Government Association Executive Board are the following:

- Serve as the governing body for all CCBC students
- Serve as advocates for students regarding policies and regulations that affect students' collegiate experience
- Promote and encourage student involvement in co-curricular activities
- Oversee and support the development of student organizations funded by the Student Government Association
- Ensure that student organizations adhere to College policies and guidelines
- Provide programming and workshops that support student organization members' personal, social, and leadership development
- Develop and support programming that supports the academic, personal, and social development of CCBC students, faculty, and staff members
- Collaborate with the Office of Student Life as well as other departments to develop programming that supports the needs of CCBC students
- Provide a learning environment that values diversity, multiculturalism and inclusiveness

STUDENT BODY CHARACTERISTICS

The CCBC student body is comprised of individuals with a wide variety of experiences, goals and educational backgrounds. The following table illustrates the diversity of the student body in the fall semester of 2014. The College is a community of 23,000 credit and 34,000 non-credit continuing education learners.

Headcount Credit and Non-Credit Enrollment Characteristics (Fall 2014)

	Credit Students (23,136)		Non-Credit Students (34,255) ^a	
Full-Time	7,301	32%	na	0%
Part-Time	15,835	68%	na	0%
Female	14,042	61%	18,141	53%
Male	9,094	39%	13,717	40%
Unknown	0	0%	2,397	7%
<20	6,932	30%	1,619	5%
20-29	10,118	44%	6,408	19%
30-39	3,319	14%	5,913	17%
40-59	2,355	10%	11,288	33%
60 and Over	407	2%	9,027	26%
Other/Unknown	5	0%	0	0%
African-American	9,118	39%	7,572	22%
Asian	1,513	7%	792	2%
Hispanic	1,116	5%	1,398	4%
Native American	97	0%	87	0%
White	10,318	45%	13,588	40%
Other/Unknown	974	4%	10,818	32%
In-County	17,199	74%	20,096	59%
Out-of-County	5,459	24%	9,872	29%
Out-of-State	216	1%	4,287	13%
International	262	1%	0	0%
Other/Unknown	0	0%	0	0%

Source: CCBC Office of Planning, Research and Evaluation

^aFiscal Year 2014 Data

STUDENT ENROLLMENT

In the fall semester of 2014 the Community College of Baltimore County enrolled 23,136 students who generated 196,715 credit hours of enrollment. The following table shows the enrollment distribution of on-campus, off campus and distance learning credit enrollments.

Current Credit Enrollment Distribution (Fall 2014)

Location	Credit Hours	FTES	Percent
On Campus			
CCBC Catonsville	60,917	4,061	31%
CCBC Dundalk	17,476	1,165	9%
CCBC Essex	75,920	5,061	39%
Off Campus Sites			
CCBC Hunt Valley	1,706	114	1%
CCBC Owings Mills	9,951	663	5%
CCBC Randallstown	108	7	<1%
Other Distributed Sites	8,929	595	5%
Online/Distance Learning	21,708	1,447	11%
Total CCBC	196,715	13,114	100%

Data Source: Community College of Baltimore County Office of Planning, Research and Evaluation

In the 2014 fiscal year, 34,255 students also enrolled in non-credit continuing education courses at the three main campuses and the Hunt Valley, Owings Mills and Randallstown extension centers.

FACULTY AND STAFF

During the academic year 2014-2015 CCBC employed 1,336 full-time faculty, administrative, and support staff. In addition, the College employed 1,487 part-time faculty and staff. The following table illustrates the distribution of personnel who are critical to the mission, strategic priorities and learning experience at the Community College of Baltimore County.

Current Faculty and Staff

CCBC			
Category	Full-Time	Part-Time	Total
Faculty (Credit)	436	929	1,365
Faculty (Non-Credit)	0	558	558
Staff	900	0	900
Totals	1,336	1,487	2,823

Data Source: Community College of Baltimore County Office of Planning, Research and Evaluation

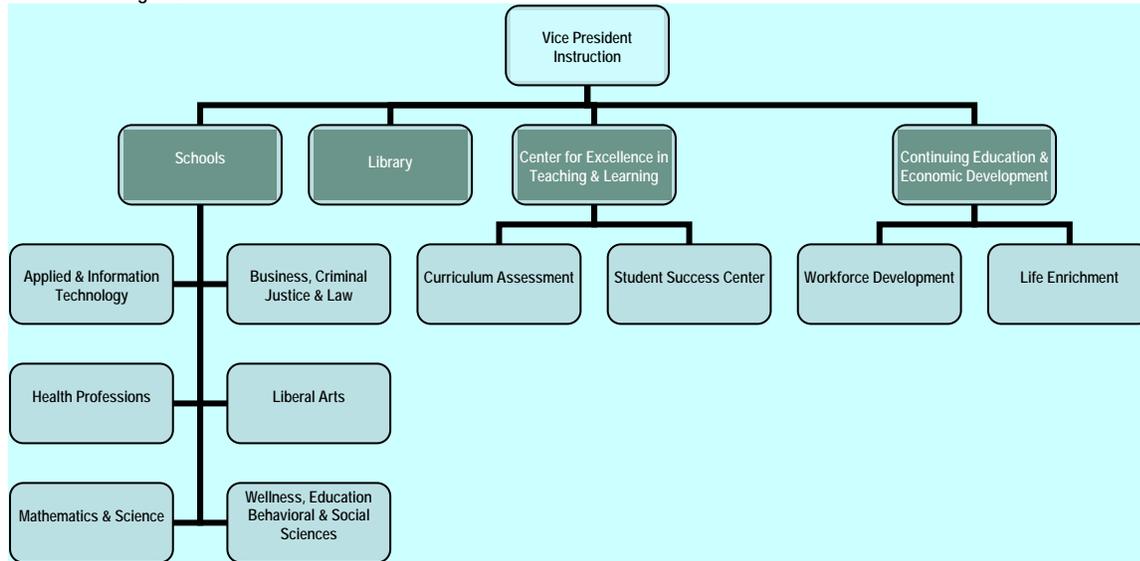
INSTRUCTIONAL ORGANIZATION

The Community College of Baltimore County's (CCBC) instructional organization is tailored to specifically meet the demands and challenges of the county's increasingly vibrant and diverse population, and is responsive to the needs of the Baltimore County community, businesses and workforce. The organization, administered by the Vice President of Instruction, is comprised of two primary instruction functions: Schools, and within the School of Continuing Education: Continuing Education and Economic Development (CEED), and two instruction support functions: Library and Center for Excellence in Teaching and Learning.

Credit instruction leading to degrees and certificates is provided by six schools:

- School of Applied and Information Technology
- School of Business, Criminal Justice, and Law
- School of Health Professions
- School of Liberal Arts
- School of Mathematics and Science
- School of Wellness, Education, Behavioral and Social Sciences

Instructional Organization



Through its two divisions of Workforce Development and Life Enrichment (formerly Community Education), Continuing Education and Economic Development (CEED) serves the residents and business community of the Baltimore metropolitan area. CEED offers opportunities for personal growth and business development by providing non-credit courses, contract credit courses and professional services to individuals and employers. These courses and services are tailored specifically for the adult learner.

INSTRUCTIONAL PROGRAMS OVERVIEW

As a public comprehensive, open admissions two-year suburban community college, CCBC serves the Baltimore County community by offering a wide range of programs leading to associate degrees, certificates and letters of recognition in specialized areas. The College offers associate degree programs designed to provide the first two

years of baccalaureate education (transfer programs) in preparation of transfer in addition to programs of study designed to prepare the students for direct entry into the workforce (career programs).

In addition to its credit program offerings, CCBC provides its community numerous continuing education and personal development education programs and courses to upgrade skills, develop new skills, or just for special interest.

Not only are credit and non-credit programs offered at the three main campuses and extension centers, but also at various public libraries and community centers throughout Baltimore County and online.

Associate Degree Designations

Associate degree programs require completion of a minimum of 60 credits including an established set of requirements for graduation. The Associate degree often parallels the first two years of study at a four-year college or university. Students need only two additional years of study to complete a Bachelor degree. The Associate degree is also suitable for career exploration, advancement and skills upgrading.

The Associate of Arts (A.A.) degree focuses in the liberal arts and humanities. The Associate of Fine Arts (A.F.A.) degree emphasizes skill building in areas of Dance, Theater, Music or Art. Scientific and technical studies are the focus of students pursuing the Associate of Science (A.S.) degree. The Associate of Applied Science (A.A.S.) degree focuses on specific occupational areas, and is intended to provide students with entry-level employment skills, instruction for employed students seeking to upgrade skills, and training for students preparing for a career change. The Associate of Arts in Teaching (A.A.T.) degree certifies and prepares students interested in teaching to transfer to Maryland state four-year colleges and universities.

Continuing Education and Economic Development

Continuing Education and Economic Development (CEED) provides programs and non-credit course offerings designed to create opportunities for personal growth, professional development, and life enrichment. In addition to preparing adult learners to meet licensure/certification requirements of various professions, CEED provides customized, flexible programs designed to meet the specific training needs of employers throughout the Baltimore region. CEED works closely with businesses, government agencies, and professional associations to identify training needs for the people of Baltimore County.

A wide range of courses to upgrade skills, develop new skills, or just for special interest are offered year-round at all CCBC campus sites, at numerous community locations and online. Designed specifically with adult learners in mind, courses are offered in areas such as: art, boating and water safety, career development, consumer awareness, history, languages, health and safety, parenting skills, professional childcare various technical skills, and more. Some course offerings are designed specifically for special populations, such as senior citizens, or talented and gifted youth.

To meet the ongoing demand for language training by a growing immigrant population, the College offers both credit and non-credit courses in English as a Second Language which prepares non-native English speaking students for academic success in their major field of study.

The following table represents Community College of Baltimore County (CCBC) data showing that non-credit courses accounted for over 22% of CCBC's state-funded FTE enrollment In Fiscal Year 2015. Although Maryland space planning models do not provide for consideration of continuing education student enrollment data when computing space needs, it is rather obvious that the implications of this statistic on CCBC's facilities needs could be significant.

State-Funded FTE Enrollment (FY 2010-FY 2015)

	Fiscal Year					
	2010	2011	2012	2013	2014	2015
Credit FTE	14,478	15,493	15,447	14,730	14,173	13,472
Non-Credit FTE	4,841	4,632	4,506	4,280	4,079	3,883
Total FTE	19,319	20,125	19,953	19,010	18,252	17,355
Non-Credit %	25.1%	23.0%	22.6%	22.5%	22.3%	22.4%

Data Source: Community College of Baltimore County Office of Planning, Research and Evaluation

Non-Traditional Studies

The Community College of Baltimore County offers a variety of opportunities for students to earn college credits through non-traditional course formats and individualized program advising. These formats are oriented toward self-directed students who either have encountered obstacles in meeting their educational goals through conventional academic scheduling, or who prefer the flexibility afforded through these options.

Through non-traditional course formats, students can access a broadened learning environment, develop a new kind of relationship with academic faculty, and pursue a personalized approach to study which is tailored to fit their individual situations and learning styles. Examples of non-traditional learning formats are available at CCBC include: online courses, individual study, independent study, service learning, interactive video, and telecourses.

In addition to the program formats offered by CCBC, various statewide programs are available to Baltimore County residents at other Maryland community colleges. County students enrolled in these programs are eligible for in-county tuition rates at the host institution. Eligible high school juniors and seniors may earn college credits while still in high school under CCBC's Parallel Enrollment Program (PEP). College credits earned by PEP students can often be applied toward high school graduation requirements and, in all cases, will be a part of the student's permanent college record.

Specialized Program Accreditations

As of fall semester 2014, the Community College of Baltimore County is fully accredited by the Middle States Commission on Higher Education. Programs within the College are currently fully approved or accredited as follows:

Specialized Program Accreditations

CCBC Program	Accrediting Body
Automotive	NATEF National Automotive Teachers' Education Foundation
Business Administration/Business Management	Association of Collegiate Business Schools and Programs (ACBSP)
Dental Hygiene	American Dental Association Commission on Dental Accreditation
Education (All)	National Association for the Education of Young Children
Emergency Medical Technology	Commission on Accreditation of Allied Health Education Programs and recognized by the Council for Higher Education Accreditation; Maryland EMS Board
Health Informatics and Information Technology	American Health Information Management Association (AHIMA)
Massage Therapy	Commission on Massage Therapy Accreditation
Mental Health	Council for Standards in Human Service Education
Mortuary Science	American Board of Funeral Service Education Committee on Accreditation
Music Production and Audio Recording Technology	National Association of Schools of Music Commission on Community/Junior College Accreditation
Music Transfer Programs	National Association of Schools of Music Commission on Accreditation
Nursing / RN	National League for Nursing Accrediting Commission recognized by the Council for Higher Education Accreditation and the U.S. Department of Education
Occupational Therapy Assistant	Accreditation Council for Occupational Therapy Education
Paralegal Studies	American Bar Association
Physician Assistant	Accreditation Review Commission on Education for the Physician Assistant
Practical Nursing (Licensed)	Maryland Board of Nursing recognized by the U.S. Department of Education
Radiation Therapy	The Joint Review Committee on Education in Radiologic Technology and recognized by the U.S. Department of Education
Radiography	The Joint Review Committee on Education in Radiologic Technology and recognized by the U.S. Department of Education
Respiratory Care Therapist	Commission on Accreditation of Allied Health Education Programs and recognized by the Council for Higher Education Accreditation
Theatre	National Association of Schools of Theatre Commission on Accreditation
Veterinary Technology	American Veterinary Medical Association Committee on Veterinary Technician Education and Activities

MAIN CAMPUSES

The three main campuses of the Community College of Baltimore County are each strategically located around the county just outside the Baltimore Beltway (Interstate 695) in the communities of Catonsville, Dundalk and Essex (see the graphic on page 2-1). A brief of the history and character of the CCBC Catonsville Campus, a location map of the Catonsville community, and a programmatic building summary are provided below. Detailed information relative to each building is provided in Chapter 4.

History and Character of Catonsville Campus

The Catonsville Campus (CCBC Catonsville) is located on a 142 acre site at 800 South Rolling Road, near the intersection of Rolling Road and Valley Road in southwestern Baltimore County. The campus is accessible by two public bus transportation lines.

Baltimore County / CCBC Catonsville Vicinity Map



Created by the Baltimore County Board of Education on April 12, 1956, Catonsville Community College (CCC) began operations in September 1957. CCC offered its initial courses to 53 students in the basement of the Catonsville Senior High School building during the late afternoon and evening hours. The Baltimore County Council and the state provide funds for a separate campus in 1961. State legislation transformed the Board of Education into a Board of Trustees for the new college and provided details for its financing and operations.

In March 1962, the Board of Trustees bought part of the Knapp Estate (an old dairy farm) on Rolling Road near Bloomsbury Avenue, as a campus for Catonsville Community College. In 1972, an additional parcel was added to the campus. The campus core, consisting of approximately 16 acres inside the perimeter road, contains 17 of the 20 permanent buildings, the 2 temporary buildings, 1 trailer and the majority of parking surface at Catonsville. Five of the 20 buildings were part of the original Knapp Estate, and four of the five were built during the 1800's. The former manor/farm house (Administration Building) was added to the National Register of Historical Places in 1980. A brief programmatic overview of the permanent buildings is presented in the table on the next page with more detailed discussion of each facility presented in subsequent chapters.

In 1998, Catonsville Community College was unified with Dundalk Community College and Essex Community College to become, what is now, the Community College of Baltimore County (CCBC).

A dynamic campus blending education, technology, history and charm, Catonsville offers education and accessibility. In addition to the historic buildings still in active use, campus walkways framed by stone walls and beautiful gardens, connect old and new buildings to the inner working of advanced technology classrooms. Other unique features of this campus include historic stone buildings, a clock tower that chimes on the hour, a view of Baltimore's Inner

Harbor and the Key Bridge, a planetarium, and high-tech training labs for learning the latest in computer-aided design, computer-automated manufacturing, microcomputer software, computer graphics and computer-driven automotive technology.

Permanent Buildings (CCBC Catonsville)

Building	Code	Built	GSF	NASF	Primary Use
Barn	BARN	1920	14,890	8,992	Assembly, Recreation, Office
Business, Education and Social Sciences Hall	BESS	1977	26,270	14,996	Office
Center for the Arts	ARTS	1978	54,560	35,382	Instruction, Assembly, Meeting, Exhibit
Central Utility Plant	UTIL	2006	12,270	3,276	Mechanical, Storage, Office
Children's Learning Center	CHLD	1992	5,563	4,440	Child Care
Classroom and Laboratory Building	CLLB	1967	70,845	40,491	Instruction
College Services Center	CSRV	2006	11,750	7,261	Office, Cental Services
Continuing Education	CNED	1994	7,140	4,614	Continuing Education Offices
Facilities Operations Building	OPER	1976	6,265	5,677	Shops, Storage
Farm House	FARM	1825	3,925	2,604	Student Offices
Health Careers and Technology Building	HTEC	1974	92,385	57,806	Instruction, Data Processing, Meeting
Hilton Mansion	HILT	1853	16,898	9,069	Office, Meeting
Humanities Hall	HUMN	1970	25,904	15,572	Instruction
Library	LIBR	2011	78,000	49,246	Library
Mathematics and Science Hall ^a	MASH	1967	54,627	35,818	Under Renovation (as of fall 2014)
Stone Cottage	SCOT	1853	1,838	1,280	Unfinished Area
Student Services Center	SSRV	1972	60,894	36,689	Office, Dining, Bookstore, Meeting
Transportation Technology Center	TRAN	1988	38,213	31,809	Instruction
Tudor House	TUDR	1852	1,756	634	Office
Wellness and Athletic Center	WELL	1972	92,777	61,755	Athletics/Physical Education/Wellness
Totals: CCBC Catonsville			676,770	427,411	

Data Source: CCBC Facilities

^aSince this fall 2014 inventory was taken, the old Library Building was converted and expanded to become the new Mathematics and Science Hall.



Catonsville Administration Building (Hilton)

EXTENSION CENTERS

The Community College of Baltimore County leases or owns approximately 120,000 square feet of facilities to house programs at two off-campus sites, and jointly owns the Owings Mills Facility with Baltimore County Public Library and Baltimore County Government. These sites, administered by CCBC Catonsville, are located in Hunt Valley, Randallstown, and Owings Mills. The College offers both credit and non-credit continuing education courses at these locations. Brief descriptions, site location maps and programmatic building summaries are also provided for each of the three CCBC extension center locations.

CCBC Hunt Valley

CCBC Hunt Valley is located at 11101 McCormick Road in the Hunt Valley Business and Industrial Park. A total of 12,026 net assignable square feet of rented space is used by CCBC for instruction and instructional support. Another 3,070 square feet is used by other Baltimore County agencies.

Baltimore County / CCBC Hunt Valley Vicinity Map



Buildings (CCBC Hunt Valley)

Building	Code	Built	GSF	NASF ^b	Primary Use
CCBC Hunt Valley ^a	HV	na	19,933	12,026	Instruction
Totals			19,933	12,026	

Data Source: CCBC Facilities

^aFunctions housed in off-campus leased facilities

^bRepresents portion of the facility occupied by CCBC



CCBC Hunt Valley

CCBC Owings Mills

CCBC Owings Mills is located at 10300 Grand Central Avenue in Owings Mills 21117. This new location is co-located with a new branch of the Baltimore County Public Library. At 49,368 net assignable square feet, this College-owned facility includes science labs, computer labs, smart classrooms, offices, a bookstore, food services, study areas, and storage areas.

Baltimore County / CCBC Owings Mills Vicinity Map



Buildings (CCBC Owings Mills)

Building	Code	Built	GSF ^b	NASF ^b	Primary Use
CCBC Owings Mills ^a	OM	2014	70,000	49,368	Instruction
Totals			70,000	49,368	

Data Source: CCBC Facilities

^aFunctions housed in off-campus facility jointly owned by CCBC, Baltimore County Public Library and Baltimore County Government

^bRepresents portion of the facility occupied by CCBC

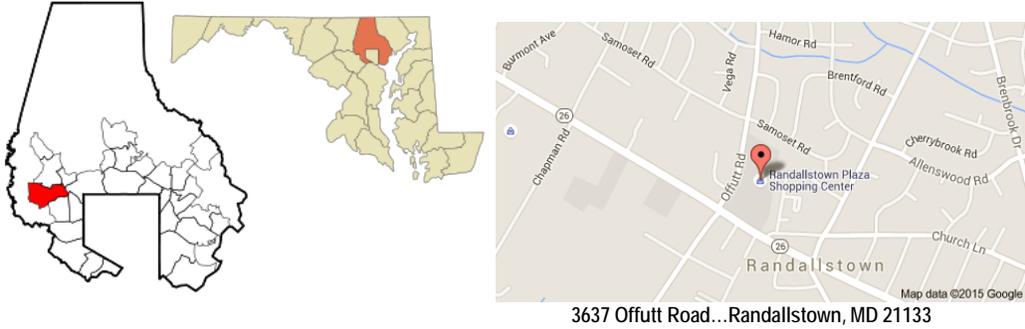


CCBC Owings Mills

CCBC Randallstown

CCBC Randallstown occupies approximately 30,000 square feet of space at 3637 Offutt Road 21133 in the Randallstown Plaza Shopping Center. This leased space, primarily serving the needs of CCBC's Division of Continuing Education and Economic Development (CEED), focuses on allied health programs, the construction trades, and Adult Basic Literacy. The center also provides some general education credit programs such as Parallel Enrollment Program (PEP) to serve the high schools along the Liberty Road corridor.

Baltimore County / CCBC Randallstown Vicinity Map



Buildings (CCBC Randallstown)

Building	Code	Built	GSF	NASF	Primary Use
CCBC Randallstown ^a	RT	na	26,382	20,837	Instruction
Totals			26,382	20,837	

Data Source: CCBC Facilities

^aFunctions housed in off-campus leased facilities



CCBC Randallstown

Chapter 3

Space Needs

Space Needs
Glossary of Terms
Existing Space, Demand
Quantitative Indicators of Need
Qualitative Indicators of Need
Summary

CHAPTER 3 SPACE NEEDS ANALYSIS

The growth of existing programs and the establishment of new programs suggest significant growth in enrollment and a need for specific, specialized facilities. The demand for transfer and workforce skills will drive program offerings in the coming years. Many of these programs, health sciences in particular, require specialized classrooms, labs and other facilities that can be flexibly adjusted for a variety of teaching/learning settings. This demand is considered in subsequent sections to identify space needs and suggests future physical development.

The need for facilities should also be viewed in the context of how the process of learning may evolve over time. Demand for critical skills in top growth occupations, amplified need for developmental education programs and services, flexibility in contract and workforce training with their unique learning environments, veterans, international students, and aging of the general population will be the primary drivers for future program offerings and enrollments.

As the College's student body continues to change in size and diversity, there will be greater demands placed on resources devoted to developmental education. It is expected that over the next ten years the Community College of Baltimore County, as with most community colleges, will need enhanced programs and services for a student population increasingly composed of the under prepared.

Improved literacy and refinement of technology in educational institutions dictates the provision of instructional spaces that are designed for both unique and/or shared functions. These spaces will further require adequate consistency with a global reconfiguration that increases the utilization efficiency ratio. The lack of sufficient numbers of contemporary, flexible instructional and learning spaces has directly and indirectly curtailed the College's ability to fully develop the inherent potential of its credit and non-credit course offerings.

"The county must serve the employment needs of its existing employers, helping them grow. ... Providing a steady stream of well-trained workers will be job one."

– Kevin Kamenetz
Baltimore County Executive

Continuing Education and Economic Development (CEED) does not offer "programs", as such, but "market-driven" courses. Since CEED's offerings must be extremely flexible, course changes are continuous. This flexibility is essential in order to meet the ever changing needs of its unique market. As the general population ages, it is expected that a maturing workforce will create greater demand for continuing education and personal enrichment opportunities.

Workforce development programs will require highly flexible specialized learning environments for a variety of trade skills. These types of programs often necessitate large unique commercial and industrial type specialty spaces, utilizing interior and exterior open areas. Such spaces, or groupings of spaces, are intended to maximize efficiency and flexibility of use in terms of highly specialized tasks, tools, materials, and equipment.

Due to ever changing technology for both teaching and learning, much of higher education must rethink its learning environments. Although the lecture/lab instructional delivery mode will continue to be used, colleges and universities will increasingly supplement that delivery methodology with specialized learning environments that allow for both scheduled and unscheduled instruction and learning in discipline-related simulated environments.

Future environments should be such that the distinction between a computer lab and a lecture classroom will disappear because the technology and furnishings will be unobtrusive but available on demand. All furnishings will be easily movable or the instructional area will automatically be able to configure the furnishings based upon immediate need.

With the exception of science labs, physical education spaces, and some visual and performing arts studios, the idea of rooms belonging exclusively to an instructional area will disappear. Credit classrooms would be available to Continuing Education learners and vice versa.

Electronic presentation that allows integration and manipulation of complex data into the learning environment is becoming more and more the norm. Teleconferencing and online capabilities will make learning partnerships with other schools and businesses, even ones in other countries, commonplace. Modernization of instructional delivery requires that instructional spaces be configured relative to future disciplinary/programmatic goals whose objectives and functions dictate more efficient organization and utilization of space.

Contemporary learning environments are required in order for the College to continue to successfully attract and retain a representative level of Baltimore County's available student population.

SPACE NEEDS

The purpose of space needs analysis is to assess the extent to which the current total amount of academic and other space is adequate for use in support of future enrollments. The ultimate outcome of this assessment is to provide estimates of the supply of types and amounts of space likely to be needed to accommodate Catonsville's projected fall 2024 demand in terms of academic programs and their ensuing enrollments and staffing levels.

The College provided a room-by-room facility space inventory, course enrollment data, and staffing data for the fall semester of 2014 which formed the basis for analyzing CCBC's space needs. The consultant team then applied elements of the data to the Maryland Higher Education Commission's *Space Allocation Guidelines for Community Colleges* (COMAR Title 13B) to provide quantitative indicators of current space needs.

Definitions and room use codes are those provided by the taxonomy found in the *Postsecondary Education Facilities Inventory and Classification Manual (FICM) 2006 Edition* published by the U.S. Department of Education in cooperation with the National Center for Education Statistics. For the most part, room use codes and classifications referenced in this analysis refer to the primary activity space plus support space that directly services the primary activity. Furthermore, the space inventory data in this section is presented in such a way as to satisfy the requirements of the *Guidelines*.

For this space needs analysis, data relating to facilities refers to permanent on-campus buildings at the Catonsville Campus only. Buildings classified as temporary structures are excluded from these data and analyses.

Need Determinants

The need for space via new or renovated facilities is typically calculated with respect to hours of instruction and the number of students, employees, and library volumes to be accommodated. Projections of total space need are based on an anticipated number of student enrollments, faculty and staff, and volumes for fall semester 2024. For this master planning process, the enrollment assumption is that the projected mix of academic disciplines maintains the program distributions for fall semester 2014.

Space deficits and surpluses are identified based on applying the *Space Allocation Guidelines* to inventories of various categories of space and projected student enrollments. However, guidelines are not to be used as the only determining factor when making decisions about facilities needs. A variety of qualitative or non-statistical indicators of space need, along with utilization analyses, offer augmentation to any statistical calculations.

Planning Assumptions

The base year for this analysis is fall 2014. Student headcount of 9,973 reflects the total number of students taking credit courses at CCBC Catonsville. FTES / FTDES are calculated from credit hours earned at CCBC Catonsville. Faculty and staff are the result of allocations based on primary assignment.

Planning Assumptions (Catonsville)

CCBC Catonsville	Student Headcount ^a	FTES	FTDES	Full-Time Faculty	Part-Time Faculty	Full-Time Staff
Fall 2014	9,973	4,061	3,061	188	525	401
Fall 2024	11,374	4,954	3,734	229	641	481
Percent Change 2014-2024	14%	22%	22%	22%	22%	20%
Average Annual Growth Rate	1.3%	2.0%	2.0%	2.0%	2.0%	1.8%

2014 Enrollment, Faculty and Staff Data Source: CCBC Office of Planning, Research and Evaluation

2024 Enrollment Data Source: CCBC Office of Planning, Research and Evaluation

2024 Staff Data: Community College of Baltimore County Office of Facilities

^astudents taking courses at this location

While the use of static demographics may not be realistic for micro-level planning, such as individual project programming where population movement needs to be considered and planned for, macro-level analysis and estimates of future student populations often using static demographic data have shown to be a relatively reliable tool for facilities master planning purposes.

When student population movement is projected by means of comprehensive academic planning and/or expressions of institutional policy, such considerations are incorporated into space planning guidelines applications to set priorities for campus development and to compute campuswide allowances for each category of space. In instances where such is not the case, static data for student enrollments, faculty and staff levels, and library collections are appropriately used as the basis for computing future campuswide need for space.

Summary of Key Findings

Although planned construction and occupancy of a new Mathematics and Science Hall as well as renovations to the existing Hilton Mansion will address some of the 2014 deficits in instructional space, significant deficits are projected in this classification for 2024 as well as for office, study, classroom, food facilities, open laboratory and shop/storage space.

The 2014 campus space inventory, excluding extension centers, was 427,411 net assignable square feet (NASF). The College anticipates a 2024 space inventory of 441,027 NASF as the base or supply against which the need, generated by the demand of future enrollments at Catonsville, would be quantified.

When space deficits and surpluses were computed as a result of comparing enrollment and staffing projections against the projected space inventory, the outcome was a projected 2024 overall space deficit of 55,898 NASF as shown by the following tables. Quantitative indicators suggest immediate and long-term need for facilities to support space classifications showing significant deficits.

Projected (Fall 2024) Space Deficits and Surpluses (Catonsville)

CCBC Catonsville (Fall 2024)					
Use	Space Classification	Deficit NASF	Use	Space Classification	Surplus NASF
310	Office / Conference	42,748	210	Class Laboratory	43,252
410	Study	14,649	420-30	Stack / Study	14,138
110	Classroom	12,348	520	Athletic	2,157
630	Food Facility	8,766	660	Merchandising	1,552
220	Open Laboratory	8,496	440-55	Processing / Service (Library)	1,400
720-40	Shop / Storage	8,178	680	Meeting Room	1,227
650	Lounge	6,311	710	Data Processing	786
530	Media Production	6,068		Total	64,512
610	Assembly	5,353			
320	Testing /Tutoring	2,617			
750	Central Service	1,751			
800	Health Care	947			
620	Exhibition	928			
580	Greenhouse	875			
760	Hazmat Storage	375			
	Total	120,410			

A comprehensive computation of space needs is summarized in the following table.

CCBC Facilities Master Plan Update 2015 CCBC Catonsville

Summary Guideline Calculations (Catonsville)

CCBC Catonsville		Base Year (2014)				2015-2024		Projected Year (2024)			
Use Code	Use Classification	Inventory	Guideline	Surplus	Inventory as a	Additions ^a	Deletions ^a	Inventory	Guideline	Surplus	Inventory as a
				(-) Deficit	% of Guideline					(-) Deficit	% of Guideline
100	Classroom Facilities	47,679	58,952	-11,273	80.9%	11,894	0	59,573	71,921	-12,348	82.8%
200	Laboratory Facilities	96,031	72,497	23,534	132.5%	27,172	0	123,203	88,447	34,756	139.3%
210	Class Laboratory	88,844	59,641	29,203	149.0%	27,172	0	116,016	72,764	43,252	159.4%
220	Open Laboratory	7,187	12,856	-5,669	55.9%	0	0	7,187	15,683	-8,496	45.8%
300	Office Facilities	98,055	124,581	-26,526	78.7%	14,635	7,906	104,784	150,149	-45,365	69.8%
310/50	Office / Conference	98,055	122,300	-24,245	80.2%	14,635	7,906	104,784	147,532	-42,748	71.0%
320	Testing / Tutoring	0	2,281	-2,281	0.0%	0	0	0	2,617	-2,617	0.0%
400	Study Facilities	29,506	26,216	3,290	112.5%	3,057	0	32,563	31,674	889	102.8%
410	Study	5,632	19,131	-13,499	29.4%	3,057	0	8,689	23,338	-14,649	37.2%
420/30	Stack / Study	20,092	5,061	15,031	397.0%	0	0	20,092	5,954	14,138	337.5%
440/55	Processing / Service	3,782	2,024	1,758	186.9%	0	0	3,782	2,382	1,400	158.8%
500	Special Use Facilities	58,622	55,332	3,290	105.9%	0	0	58,622	63,408	-4,786	92.5%
520/23	Athletic	58,497	49,610	8,887	117.9%	0	0	58,497	56,340	2,157	103.8%
530	Media Production	0	4,722	-4,722	0.0%	0	0	0	6,068	-6,068	0.0%
580	Greenhouse	125	1,000	-875	12.5%	0	0	125	1,000	-875	12.5%
600	General Use Facilities	45,665	56,743	-11,078	80.5%	126	912	44,879	63,458	-18,579	70.7%
610	Assembly	11,115	15,122	-4,007	73.5%	0	0	11,115	16,468	-5,353	67.5%
620	Exhibition	1,689	2,281	-592	74.0%	0	0	1,689	2,617	-928	64.5%
630	Food Facility	10,621	15,926	-5,305	66.7%	0	0	10,621	19,387	-8,766	54.8%
640	Day Care	4,208	4,208	0	100.0%	0	0	4,208	4,208	0	100.0%
650	Lounge	487	5,688	-5,201	8.6%	126	0	613	6,924	-6,311	8.9%
660	Merchandising	4,269	2,381	1,888	179.3%	0	0	4,269	2,717	1,552	157.1%
670	Recreation	3,137	3,137	0	100.0%	0	0	3,137	3,137	0	100.0%
680	Meeting Room	10,139	8,000	2,139	126.7%	0	912	9,227	8,000	1,227	115.3%
700	Support Facilities	14,755	22,587	-7,832	65.3%	1,619	251	16,123	25,641	-9,518	62.9%
710	Data Processing	3,286	2,500	786	131.4%	0	0	3,286	2,500	786	131.4%
720-740	Shop / Storage	9,220	15,772	-6,552	58.5%	1,619	251	10,588	18,766	-8,178	56.4%
750	Central Service	2,249	4,000	-1,751	56.2%	0	0	2,249	4,000	-1,751	56.2%
760	Hazmat Storage	0	315	-315	0.0%	0	0	0	375	-375	0.0%
800	Health Care Facilities	0	812	-812	0.0%	0	0	0	947	-947	0.0%
000	Unclassified	37,098	37,098	0	100.0%	0	35,818	1,280	1,280	0	100.0%
Totals		427,411	454,818	-27,407	94.0%	58,503	44,887	441,027	496,925	-55,898	88.8%

Data Source: Compiled by Facilities Planning Associates from data provided by CCBC Facilities and Office of Planning, Research and Evaluation

^aAdditions and Deletions represent inventory gains and losses upon completion of the new Mathematics & Science Hall and renovations to the Hilton Mansion per the FY 2016 Capital Budget.

In summary, space needs analysis is the process of estimating the needed supply of learning, support and resource space given a projected demand of academic programs, disciplines and student enrollments. Thus, space needs analysis begins the transitioning from the language of academic planning to the language of facilities planning.

GLOSSARY OF TERMS

This glossary contains brief definitions of generic terms related to educational facilities planning and explanations of the acronyms and abbreviations referred to in this Space Needs Analysis.

Bound Volume Equivalent (BVE)	The physical space required to accommodate a variety of library materials in amounts equal to one single typical book
Class Laboratory	Spaces that are used primarily for formally or regularly scheduled classes that require special purpose equipment for a specific room configuration for student participation, experimentation, observation, or practice in an academic discipline
Classroom	Spaces that are not tied to as specific subject or discipline by equipment or room configuration
Core Space	Space necessary because of existence of the institution or program without regard to other factors
Credit Hour	A numerical value awarded a student for successfully completing a course
Facilities Inventory	Room-by-room and building-by-building listing of assignable spaces, their primary use, their size and their capacity
Full-Time Equivalent Faculty (FTEF)	A base factor statistic equal to a full-time faculty plus 25% of all part-time faculty Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the FTEF computed for budgetary or other reporting purposes.
Full-Time Equivalent Student (FTE or FTES)	The total number of on-campus credit hours taught during a given semester, divided by 15 Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the FTE computed for budgetary or other reporting purposes.
Full-Time Day Equivalent Student (FTDE or FTDES)	The total number of on-campus credit hours taught before 5:00 p.m. during a given semester, divided by 15 Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the FTDE computed for budgetary or other reporting purposes.
Gross Square Feet (GSF)	The sum of square feet of space in a building included within the outside faces of exterior walls for all stories or areas that have floor surface Included are all structural, mechanical, service and circulation areas.
Net Assignable Square Feet (NASF)	The sum of all areas on all floors of a building assigned to, or available for assignment to an occupant for specific use Excluded are spaces defined as structural, mechanical, service and circulation areas.
On-Campus	Refers to CCBC's Catonsville, Dundalk or Essex campuses only
Student Contact Hour	A measure of time of scheduled interface between students and teacher that is usually expressed in terms of Weekly Student Contact Hour (WSCH), which is the number of hours per week of required interface Note: This statistic is used in this document for facilities planning purposes only, and the calculation may differ from the WSCH computed for budgetary or other reporting purposes.

HISTORICAL TRENDS

Students

By analyzing an institution's student body composition during the past few years, it is possible to deduce trends in the numbers and types of students enrolled, number of credit hours generated and choices among continuing programs.

Examination of the table below shows that fall credit FTDE enrollment trends for students attending CCBC Catonsville during the past six years has declined at an annual rate of 1.5%.

Enrollment Trends (Catonsville)

CCBC Catonsville	Fall Semester						Net Change 2009-2014	Annual Rate 2009-2014
	2009	2010	2011	2012	2013	2014		
FTDE	3,306	3,481	3,692	3,509	3,328	3,061	-7.4%	-1.5%

Data Source: Community College of Baltimore County Office of Planning, Research and Evaluation

Faculty and Staff

Since 2009, CCBC's student to faculty ratio has improved from 20:1 to 17:1 as the College experienced a gradual increase in the number of faculty. With respect to the numbers of staff, CCBC has experienced a five year annual increase rate of 1.2%. Through the first three years (2009 through 2012) there was relatively little change (.4% annual increase). However, during the most recent two years (2013 and 2014) staff has increased at an annual rate of 2.4%. The following table presents faculty and staff trends for the combined CCBC campuses.

Faculty and Staff Trends (CCBC)

	Fall Semester						Net Change 2009-2014	Annual Rate 2009-2014
	2009	2010	2011	2012	2013	2014		
Full-Time Faculty	403	415	426	427	443	436	8.2%	1.6%
Part-Time Faculty	845	905	990	952	943	929	9.9%	1.9%
Faculty Totals	1,248	1,320	1,416	1,379	1,386	1,365	9.4%	1.8%
Full-Time Staff	834	840	857	851	909	900	7.9%	1.5%
Part-Time Staff	13	15	12	7	0	0	-100.0%	-100.0%
Staff Totals	847	855	869	858	909	900	6.3%	1.2%

Data Source: Maryland Association of Community Colleges (Faculty) and Community College of Baltimore County Office of Planning, Research and Evaluation (Staff)

EXISTING SPACE

Facilities Inventory

A room-by-room inventory of assignable space in each building was prepared by the College and given to the consultant team. This inventory of existing spaces serves as the baseline data against which computed space needs are compared.

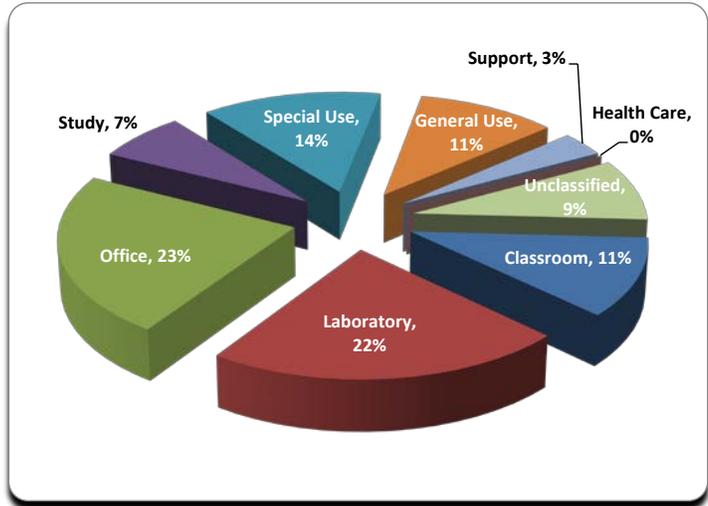
The inventory utilizes the space taxonomy found in the *2006 Postsecondary Education Facilities Inventory and Classification Manual (FICM)* published by the U.S. Department of Education in cooperation with the National Center for Education Statistics. Furthermore, the space inventory data in this chapter is presented in such a way as to satisfy the requirements of the Maryland Higher Education Commission's *Space Allocation Guidelines for Community Colleges*. More detailed attention is devoted to each of the College's building structures later in this document.

In determining the base inventory to be used in calculating permanent space needs, inventoried net assignable square footage (NASF) is designated as either "permanent" or "overflow." Only "permanent" space is used to determine space needs. Space contained in temporary structures and space in facilities at locations other than a main campus is considered "overflow" and is not included in the base calculations.

As depicted in the accompanying table and graphic, 33% of CCBC Catonsville's assignable space is classified as classroom and laboratory instruction (classroom 11%, laboratory 22%), 23% as office, 7% as study (library), and the remaining 37% is a combination of special use, general use, support and unclassified spaces.

Distribution of Existing Space by Room Use Classification (Catonsville)

Use Code	Classification	NASF
100	Classroom	47,679
200	Laboratory	96,031
300	Office	98,055
400	Study	29,506
500	Special Use	58,622
600	General Use	45,665
700	Support	14,755
800	Health Care	0
000	Unclassified	37,098
	Total	427,411



Parking Facilities

There are 2,298 parking spaces distributed among eight primary lots as well as various secondary sites at CCBC Catonsville. Seventy seven (77) spaces are reserved for disabled individuals. Sixty nine (69) spaces are reserved for public safety, service and fleet vehicles and two are for motorcycles. These motorcycle spaces are sized for motorcycles only and do not meet guideline allowance for cars. Therefore, the available supply of regular parking spaces at Catonsville is 2,296. All existing parking is on surface lots as there are no parking structures at CCBC Catonsville.

Distribution of Existing Parking Space (Catonsville)

Catonsville Parking Area	(White)		(Red)	Handicap	Visitor	(Green)			Totals
	General Use	Faculty / Staff				Service	Motorcycle	Other	
Lot #1 - (In front of Mansion)	1	52	5	5	6	0	0	1	65
Rear of Barn	0	0	5	5	0	7	0	0	12
Lot #2 - (In front of CLLB Bldgs.)	0	105	3	3	0	1	2	0	111
Lot #3 - (ARTS Bldg. Parking)	209	0	0	0	0	0	0	0	209
Lot #4 - (Deleted for new MASH Bldg)	0	0	0	0	0	0	0	0	0
Lot #5 - (HTEC, SSRV, WELL Parking)	130	184	38	38	0	7	0	0	359
Lot #5 - (Angled Parking new)	53	0	0	0	0	0	0	0	53
Lot #6 - (Athletic Fields)	366	0	0	0	0	0	0	0	366
Lot #7 - (TRAN Bldg)	210	27	6	6	0	23	0	6	272
Lot #7 - (Angled Parking new)	34	0	0	0	0	0	0	0	34
Lot #8 - (betw LIBR & BESS)	0	74	9	9	0	1	0	10	94
Lot #8 - (old orig)	121	0	2	2	0	0	0	0	123
Lot #8 - (New Sections)	433	0	0	0	0	0	0	8	441
Childcare Area	3	13	1	1	0	0	0	0	17
Cental Receiving Area	0	37	0	0	0	0	0	0	37
Campus Drive (Between Lots 1 & 2)	23	0	0	0	0	0	0	0	23
Campus Drive (from Lots 5 - 8 [no angle])	62	0	0	0	0	0	0	0	62
Library - (service side)	0	0	0	0	0	2	0	0	2
ARTS Bldg. Front	0	7	4	4	0	0	0	0	11
ARTS Bldg. Rear	0	0	2	2	0	3	0	0	5
ARTS Side (Xfinity)	0	0	2	2	0	0	0	0	2
Totals	1,645	499	77	77	6	44	2	25	2,298

Data Source: Community College of Baltimore County Office of Facilities

DEMAND AGAINST EXISTING SPACE

The base year for this analysis is 2014. Current demands against existing space reflect the actual situation during the fall semester of 2014 while the data projected to 2024 are statistically based and are, for the most part, assumptions made by the College. Summary explanations of the data assumptions for the input items are as follows:

- **Student Data** (FTDE) are calculated from course credit hours. Credit Hour and Contact Hour Data are derived from current enrollment course data provided by Community College of Baltimore County's Office of Planning, Research and Evaluation; and projections were then calculated based on enrollment projections developed by the College.
- **Faculty and Staff Data** for 2014 are provided by Community College of Baltimore County's Office of Planning, Research and Evaluation. Information about the projected number of faculty is obtained by maintaining the current student/faculty ratio. Information about the projected number of staff is based on a conservative anticipated average annual growth rate of 1.8% over the next ten years.
- **Parking Space Data** is provided by Community College of Baltimore County's Office of Facilities. Information about the projected number of parking spaces derived by applying planned adjustments over the next ten years to the existing parking space inventory. Demand against that inventory is generated by the numbers of projected students, faculty and staff.

Student Enrollments

Headcount enrollments and full-time equivalent student (FTE or FTES) enrollments are the primary measures of student population. Although the headcount is most commonly used when referring to enrollments, this measure is generally not used for facility planning purposes. The most generally accepted method of counting students for the purposes of assessing facilities needs is the FTE. However, it is useful to analyze trends in headcount enrollments with particular attention given to the mix of full-time versus part-time students. Because full-time students have more needs for space than do part-time students, a sizeable shift in the ratio of full-time to part-time could have a significant impact on FTE generation, and consequently, on overall space needs.

Space needs analysis primarily focuses upon academic activities that occur during the prime hours before 5:00 p.m. (Day), and will be engaged by full-time and part-time students, faculty and staff. Students enrolled during these hours are referred to as full-time day equivalent students (FTDES).

While presenting various measures of FTES is important, of prime significance is establishing a stable foundation of planning tools upon which the effectiveness and quality of instructional environments necessary for learning can be predicted. For those purposes, projections of weekly student contact hours (WSCH) are also presented.

The College estimates that the total daytime on-campus WSCH will reach 77,275 by fall 2024. Of this total, approximately 64,794 WSCH will be generated by lecture segments and approximately 12,481 WSCH are expected to occur in laboratory segments for courses offered before 5:00 p.m.

The table below presents an overall distribution of projected credit/contact hours for fall semester of 2024 in comparison with fall 2014 enrollments. The table isolates those on-campus credit hours, FTDES and weekly student contact hours expected to be generated on campus during the day before 5:00 p.m.

Projected Enrollments by Headcount, Credit Hours, FTES, FTDES and WSCH: Fall 2024 (Catonsville)

CCBC Catonsville	Full-Time Headcount ^a	Part-Time Headcount ^a	Total Headcount ^a	Credit Hours	FTES	ON-CAMPUS DAY ONLY (Before 5:00 pm)			
						Credit Hours	FTDES	WSCH Lecture	WSCH Laboratory
Fall 2014	1,906	8,067	9,973	60,917	4,061	45,918	3,061	53,110	10,230
Fall 2024	2,420	8,954	11,374	74,310	4,954	56,015	3,734	64,794	12,481
% Change 2014-2024	27.0%	11.0%	14.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Average Annual Growth Rate	2.4%	1.0%	1.3%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%

Data Source: Community College of Baltimore County Office of Planning, Research and Evaluation

^astudents taking courses at this location

Determination of program and course content ten years out is difficult at best. However, given an anticipated number of students to be enrolled, projections of weekly student contact hours generated, as well as the number of classroom and laboratory sections, general estimations of space need can be calculated. These projections of weekly student contact hours form the basis for planning for future instructional spaces.

Projections of enrollments for fall 2014 through fall 2024 represent the recommendations developed by Community College of Baltimore County in keeping with the pursuit of CCBC’s mission through the year 2024.

Faculty and Staff

The College expects to maintain its current student/faculty ratios of 17:1 for the year 2024. For master planning purposes, a conservative annual increase of 1.8% is projected for staff.

Current and Projected Faculty and Staff Summary (Catonsville)

CCBC Catonsville	Faculty (Credit)				Staff		
	Full-Time	Part-Time	Total	FTEF	Full-Time	Part-Time	Total
Fall 2014	188	525	713	319	401	0	401
Fall 2024	229	641	870	389	481	0	481
% Change 2014-2024	21.8%	22.1%	22.0%	21.9%	20.0%	0.0%	20.0%
Average Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	1.8%	0.0%	1.8%

Data Source: Community College of Baltimore County Office of Planning, Research and Evaluation

Library Volumes

Use of Bound Volume Equivalents (BVE) is a generally accepted determinant of need for overall library or study space. The BVE concept provides for conversion of a variety of collections materials such as e-books, audio-visual materials, and electronic reference sources into amounts equal to on typical book. Although the term bound volume equivalent is used to reference the measure of overall library collections, it should not be construed that growth in BVE’s necessarily means a corresponding growth in actual “book” resources. Although gradual acquisition of electronic formats is a goal for libraries and will begin to reduce some storage needs long term, particularly for journals, reference books, and government documents, these new formats will not obviate the need for stack space.

The learning landscape is constantly and dramatically changing in terms of the ways by which people learn and the technologies that can facilitate the learning process. Increasing use of technology that facilitates teaching, learning, and accessing and processing information creates demands for library spaces that bring together information resources. Technology also affects other kinds of space needs. Accommodating the added space needed for computer workstations and other technology often comes at the expense of space for collections or services.

Just as the use of static demographics is generally accepted as reliable in macro-level planning for people-driven space requirements, the use of book equivalents is a generally accepted methodology for estimating long-range library and study space needs. At the time of actual programming for future library/study facilities, as for other facilities, more timely consideration can be given to actual planning for design that is contemporary.

Current and Projected Library Collections (Catonsville)

CCBC Catonsville	BVE ^a
Fall 2014	50,610
Fall 2024	59,540
% Change 2014-2024	18%
Average Annual Growth Rate	1.6%

Data Source: Community College of Baltimore County Office of Facilities

^aBound Volume Equivalent (BVE): the physical space required to accommodate a variety of library materials in amounts equal to one single typical book.

QUANTITATIVE INDICATORS OF SPACE NEED

Computation of quantitative need for space is based primarily on the projected program of instruction and the number of weekly student contact hours (WSCH) that it generates. Determinations of current and projected space surpluses and/or deficits are driven by current space inventory and anticipated changes, current enrollment and projected enrollments, and current and anticipated staffing levels.

The consultant team used the space guidelines model developed by the State of Maryland and published under Title 13B of the Code of Maryland Regulations (COMAR). These guidelines, *Space Allocation Guidelines for Community Colleges*, provide an initial assessment of campus-wide facilities needs.

By applying information about the type of space required to teach the various courses to the current and projected enrollments previously presented, it is possible to determine the approximate amount of space that is needed using the guidelines. Then by applying current space inventory data, it is possible to determine the current and projected space surplus and/or deficit.

The assumptions made for the application of the formulae-driven space computations for fall 2024, as shown in the following table, were presented earlier and are shown again for easy reference and are applied to the existing campus space inventory.

Guidelines Planning Assumptions (Catonsville)

CCBC Catonsville	FTES	FTDES	WSCH Lecture	WSCH Laboratory	Full-Time Faculty	Part-Time Faculty	Full-Time Staff	Full-Time Librarians	Library Volumes
Fall 2014	4,061	3,061	53,110	10,230	188	525	401	10	50,610
Fall 2024	4,954	3,734	64,794	12,481	229	641	481	12	59,540
Percent Change 2014-2024	22%	22%	22%	22%	22%	22%	20%	20%	18%
Average Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	1.8%	1.8%	1.6%

2014 Enrollment, Faculty and Staff Data Source: CCBC Office of Planning, Research and Evaluation

2024 Enrollment Data Source: CCBC Office of Planning, Research and Evaluation

2024 Staff Data: Community College of Baltimore County Office of Facilities

Space Guidelines Application and Analysis (Buildings)

With respect to current and projected space surpluses and deficits as the result of the *Guidelines* application, review of the individual data elements reveals the following:



Classroom (110): Facilities used for classes and that are also not tied to a specific subject or discipline by equipment in the room or the configuration of the room. This category includes general purpose classrooms, lecture halls, seminar rooms, and support rooms that directly service classroom activity.

Guideline allowance assumes 27 hours per week target room utilization; 66.7% seat occupancy rate; and 20 NASF per student station.

Given the current inventory of classroom space, application guideline suggests a current deficit of 11,273 NASF and a deficit of 12,348 NASF by 2024.

The College currently owns 80% of the space allowance in this classification. The data suggests that by 2024, the College will own 83% of its computed space allowance.

CLASSROOM								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Classroom	47,679	58,952	-11,273	11,894	0	59,573	71,921	-12,348

Class Laboratory/Open Laboratory (210/220): A class laboratory or teaching laboratory (210) is space used primarily for formally or regularly scheduled instruction (including associated mandatory, but non-credit-earning laboratories) that requires special purpose equipment or a specific space configuration for student participation, experimentation, observation, or practice in an academic discipline. Included in this category are spaces generally called teaching laboratories, instructional shops, art studios, computer laboratories, drafting rooms, band rooms and similar specially designed or equipped rooms, and support rooms that directly service class laboratory activity.



An open laboratory (220) is used primarily for individual or group instruction that is informally scheduled, unscheduled, or open. An open laboratory is designed for or furnished with equipment that serves the needs of a particular discipline or discipline group for individual or group instruction. Included in this category are spaces generally called music practice rooms, language laboratories used for individualized instruction, studios for individualized instruction, special laboratories or learning laboratories if discipline restricted, individual laboratories, and computer laboratories involving specialized restrictive software or where access is limited to specific categories of students.

Class Laboratory guideline allowance assumes 18 hours per week target room utilization; 60% seat occupancy rate; 50 NASF per student station for natural and social science labs; and 115 NASF per student station for technical and career labs. The allowance assumes 80% of lab contact hours are generated in natural and social science labs, and 20% in technical and career labs. Open Laboratory guideline allowance assumes a space factor of 4.2 NASF/FTDE.

Given the current inventory of laboratory space, application of the Class Laboratory and Open Laboratory guidelines to the College's enrollment data suggests a current surplus of 29,203 NASF for Class Laboratory and a deficit of 5,669 NASF for Open Laboratory. By 2024, Class Laboratory will have a surplus of 43,252 NASF and Open Laboratory will have a deficit of 8,496 NASF.

The College currently owns 133 % of the space allowance in this combined classification. The data suggests that by 2024, the College will own 139 % of its computed space allowance.

CLASS LABORATORY / OPEN LABORATORY								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Class Laboratory	88,844	59,641	29,203	27,172	0	116,016	72,764	43,252
Open Laboratory	7,187	12,856	-5,669	0	0	7,187	15,683	-8,496
Totals	96,031	72,497	23,534	27,172	0	123,203	88,447	34,756



Office (300): Office facilities are individual, multi-person, or workstation spaces specifically assigned to faculty, staff, or students in academic, administrative, and service functions of a college or university. This category also includes conference rooms, file rooms, break rooms, kitchenettes, copy rooms, and testing/tutoring space. The guideline allows:



- 166 NASF per individual requiring office space, plus 1,120 NASF core space for student offices
- 1,500 NASF core space, plus 0.5 NASF/FTDE in excess of 1,500 FTDE for testing and tutoring

Given the current inventory of office space, application guideline suggests a current deficit of 24,245 NASF in Office/Conference space and a deficit of 2,281 NASF in Testing/Tutoring space. By 2024, these deficits are projected to be 42,748 NASF and 2,617 NASF respectively.

The College currently owns 79% of the space allowance in this combined classification. The data suggests that by 2024, the College will own 70% of its computed space allowance.

OFFICE								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	2015-2024 Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Office / Conference	98,055	122,300	-24,245	14,635	7,906	104,784	147,532	-42,748
Testing / Tutoring	0	2,281	-2,281	0	0	0	2,617	-2,617
Totals	98,055	124,581	-26,526	14,635	7,906	104,784	150,149	-45,365

Study (400): In this analysis, study space refers to, individually or collectively, three space categories:

- **Study (410):** A room or area used by individuals to study at their convenience and not restricted to a particular subject or discipline by contained equipment. It includes rooms or areas located in the library or other buildings. Study spaces are primarily used by students or staff for learning at their convenience.
- **Stack (420):** A space used to house arranged collections of educational materials for use as a study resource.
- **Processing/Service (440):** A room or area devoted to processes and operations in support of library functions. Included are card and microfiche areas, reference desk and circulation desk areas, bookbinding rooms, multimedia materials processing areas, interlibrary loan processing areas, and other areas with a specific process or operation in support of library functions.



Guideline allowance assumes a combination of three separate space factors:

- Seating: 25 NASF per seating station for 25% of FTDE
- Stack: .1 NASF per Bound Volume Equivalent
- Processing/Service: 40% of Stack space plus a core of 1,200 NASF.



Given the current inventory of study space, application guideline suggests a current surplus of 3,290 NASF and a surplus of 889 NASF by 2024.

The College currently owns 113 % of the space allowance in this classification. The data suggests that by 2024, the College will own 103% of its computed space allowance.

STUDY								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Study	5,632	19,131	-13,499	3,057	0	8,689	23,338	-14,649
Stack / Study	20,092	5,061	15,031	0	0	20,092	5,954	14,138
Processing / Service	3,782	2,024	1,758	0	0	3,782	2,382	1,400
Totals	29,506	26,216	3,290	3,057	0	32,563	31,674	889



Athletics / Physical Education (520): A room or area used by students, staff, or the public for athletic or physical education activities. Athletics / Physical Education space includes gymnasias, basketball courts, handball courts, squash courts, wrestling rooms, weight or exercise rooms, racquetball courts, indoor swimming pools, indoor putting areas, indoor ice rinks, indoor tracks, indoor stadium fields, and field houses. This category includes spaces used for dancing and bowling.

Guideline allowance assumes 10 NASF/FTDE beyond 1,500 plus a core of 34,000 NASF.

Given the current inventory of physical education space, application guideline suggests a current surplus of 8,887 NASF and a surplus of 2,157 NASF by 2024.

The College currently owns 118% of the space allowance in this classification. The data suggests that by 2024, the College will own 104% of its computed space allowance.

ATHLETICS / PHYSICAL EDUCATION								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Athletics / Physical Education	58,497	49,610	8,887	0	0	58,497	56,340	2,157

Media Production (530): A space used for the production or distribution of multimedia materials or signals. This classification Includes spaces generally called TV studios, radio studios, sound studios, photo studios, video or audio cassette and software production or distribution rooms, and media centers.



Guideline allowance assumes 0.8 NASF/FTDE beyond 1,500 plus a core of 1,600 NASF.

Given the current inventory indicates no space classified as media production, application of guidelines suggests a current deficit of 4,722 NASF and a deficit of 6,068 NASF by 2024.

The College currently owns no space with this classification. The data suggests that by 2024, the College will still own no space with this classification.

MEDIA PRODUCTION

	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Media Production	0	4,722	-4,722	0	0	0	6,068	-6,068



Greenhouse (HEGIS 580): A building or room usually composed chiefly of glass, plastic, or other light transmitting material, which is used for the cultivation or protection of plants or seedlings for research, instruction, or campus physical maintenance or improvement purposes.

Guideline allowance assumes a minimum core of 1,000 NASF

Given the current inventory of greenhouse space, application guideline suggests a current deficit of 875 NASF and a continued deficit of 875 NASF

by 2024.

The College currently owns 13% of the space allowance in this classification. The data suggests that by 2024, the College will still own 13% of its computed space allowance.

GREENHOUSE

	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Greenhouse	125	1,000	-875	0	0	125	1,000	-875

Assembly (610): A space designed and equipped for the assembly of many persons for such events as dramatic, musical, devotional, livestock judging, or commencement activities. Includes theaters, auditoria, concert halls, arenas, and chapels that are used primarily for general presentations (speakers), performances (dramatic, musical, dance), and devotional services.



Guideline allowance assumes 2 NASF/FTDE beyond 1,500 plus a core of 12,000 NASF.

Given the current inventory of assembly space, application guideline suggests a current deficit of 4,007 NASF and a deficit of 5,353 NASF by 2024. The College is currently below the core guideline allowance for assembly space.

The College currently owns 74% of the space allowance in this classification. The data suggests that by 2024, the College will own 68% of its computed space allowance.

ASSEMBLY

	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Assembly	11,115	15,122	-4,007	0	0	11,115	16,468	-5,353

Exhibition (620): A room or area used for exhibition of materials, works of art, artifacts, etc., and intended for general use by faculty, students, staff, and the public. This includes both departmental and institution-wide museums, galleries,



and similar exhibition areas that are used to display materials and items for viewing by institutional population and the public.

Guideline allowance assumes 0.5 NASF/FTDE beyond 1,500 plus a core of 1,500 NASF.

Given the current inventory of exhibition space, application guideline suggests a current deficit of 592 NASF and a deficit of 928 NASF by 2024.

The College currently owns 74% of the space allowance in this classification. The data suggests that by 2024, the College will own 65% of its computed space allowance.

EXHIBITION								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Exhibition	1,689	2,281	-592	0	0	1,689	2,617	-928

Food Facility (630): Rooms intended for the consumption of food, and rooms that provide direct service. This category includes dining halls, cafeterias, snack bars, restaurants, kitchens, food serving areas, food storage, dishwashing, and cleaning areas. Also included are such facilities located in residence halls.

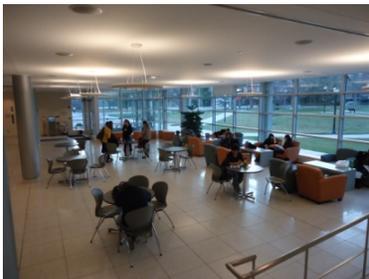


Guideline allowance assumes 8.4 NASF times Planning Headcount (50% FTDE, FTEF, and FT Staff).

Given the current inventory of food facility space, application guideline suggests a current deficit of 5,305 NASF and a deficit of 8,766 NASF by 2024.

The College currently owns 67% of the space allowance in this classification. The data suggests that by 2024, the College will own 55% of its computed space allowance.

FOOD FACILITY								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Food Facility	10,621	15,926	-5,305	0	0	10,621	19,387	-8,766



Lounge (650): Lounge space used for rest and relaxation that is not restricted to a specific group of people, unit, or area. A lounge facility is typically equipped with upholstered furniture, draperies, and carpeting, and may include vending machines.

Guideline allowance assumes 3.0 NASF times Planning Headcount (50% FTDE, FTEF, and FT Staff).

Given the current inventory of lounge space, application guideline suggests a current deficit of 5,201 NASF and a deficit of 6,311 NASF by 2024.

The College currently owns 9% of the space allowance in this classification. The data suggests that by 2024, the College will continue to own 9% of its computed space allowance.

LOUNGE								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Lounge	487	5,688	-5,201	126	0	613	6,924	-6,311

Merchandising (660): This classification is for areas used to sell products or services. Examples include bookstores, student supply stores, campus food stores, barber and beauty shops, walk-away vending areas, and central ticket outlets.



Guideline allowance assumes 0.5 NASF/FTDE beyond 1,500 plus a core of 1,600 NASF.

Given the current inventory of merchandising space, application guideline suggests a current surplus of 1,888 NASF and a surplus of 1,552 NASF by 2024.

The College currently owns 184% of the space allowance in this classification. The data suggests that by 2024, the College will own 159% of its computed space allowance.

MERCHANDISING								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Merchandising	4,269	2,381	1,888	0	0	4,269	2,717	1,552

Meeting Room (680): A room that is used by the institution and is also available to the public for a variety of non-class meetings.



Guideline allowance assumes a core of 8,000 NASF

Given the current inventory of meeting space, application guideline suggests a current surplus of 2,139 NASF and a surplus of 1,227 NASF by 2024.

The College currently owns 127% of the space allowance in this classification. The data suggests that by 2024, the College will own 115% of its computed space allowance.

MEETING ROOM								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Meeting Room	10,139	8,000	2,139	0	912	9,227	8,000	1,227



Data Processing (710): A space used as a data or telecommunications center with applications that are broad enough to serve the overall administrative or academic primary equipment needs of a central group of users, department, college, school, or entire institution.

Guideline allowance assumes 0.75 NASF/FTDE beyond 4,500 plus a core of 2,500 NASF.

Given the current inventory of data processing space, application guideline suggests a current surplus of 786 NASF and a maintained surplus of 786 ASF by 2024.

The College currently owns 131% of the space allowance in this classification. The data suggests that by 2024, the College will own 109 % of its computed space allowance.

DATA PROCESSING								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Data Processing	3,286	2,500	786	0	0	3,286	2,500	786



Physical Plant (720-760): Support facilities, which provide centralized space for various auxiliary support systems and services of a campus, help keep all institutional programs and activities operational. While not as directly accessible to institutional and community members as General Use Facilities (Code 600 series), these areas provide a continuous, indirect support system to faculty, staff, students, and the public. Support facilities are centralized in that they typically serve an area ranging from an entire building or organizational unit to the entire campus. Included are centralized areas for shop services, general storage and supply, vehicle storage (720-745); central services e.g., printing and duplicating, mail, shipping and receiving, environmental testing or monitoring, laundry, or food stores (750), and hazardous materials areas (760/770).

Guideline allowance assumes a combination of three room use categories:

- Central Services: 1.0 NASF/FTDE beyond 4,500 plus a core of 4,000 NASF.
- Shops/Storage/Vehicle Storage/Repair: 4% of all other campus inventory
- Hazardous Materials Storage: 2% of existing shops/storage/vehicle storage/repair NASF

Given the current inventory of physical plant facilities, application guideline suggests a current deficit of 8,618 NASF and a deficit of 10,304 NASF by 2024.

The College currently owns 57 % of the space allowance in this classification. The data suggests that by 2024, the College will own 55 % of its computed space allowance.

PHYSICAL PLANT								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Shop / Storage	9,220	15,772	-6,552	1,619	251	10,588	18,766	-8,178
Central Service	2,249	4,000	-1,751	0	0	2,249	4,000	-1,751
Hazmat Storage	0	315	-315	0	0	0	375	-375
Totals	11,469	20,087	-8,618	1,619	251	12,837	23,141	-10,304

Health Care Facilities (800): Space used for patient care areas that are located in separately organized and budgeted health care facilities: student infirmaries and centers, teaching hospitals, stand-alone clinics run by these hospitals, and veterinary and medical schools.

Guideline allowance assumes 0.2 NASF/FTDE beyond 1,500 plus a core of 500 NASF.



Given the current inventory indicates no space classified as health care facilities, application of guidelines suggests a current deficit of 812 NASF and a deficit of 947 NASF by 2024.

The College currently owns no space with this classification. The data suggests that by 2024, the College will still own no space with this classification.

HEALTH CARE FACILITIES								
	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Health Care Facilities	0	812	-812	0	0	0	947	-947

Space Guidelines Application and Analysis (Parking)

Maryland's *Space Allocation Guidelines for Community Colleges* are also used to compute parking allowances. The Guidelines allow 300 square feet per car and a number of spaces to accommodate 75% of full-time faculty, staff, and eligible full-time day equivalent students with regular parking. In addition to regular parking spaces, the Americans with Disabilities Act (ADA) requires reserved spaces for disabled individuals.

There are 2,298 parking spaces distributed among eight primary lots as well as various secondary sites at CCBC Catonsville. Seventy seven (77) spaces are reserved for disabled individuals. Sixty nine (69) spaces are reserved for public safety, service and fleet vehicles and two are for motorcycles. These motorcycle spaces are sized for motorcycles only and do not meet guideline allowance for cars. Therefore, the available supply of regular parking spaces at Catonsville is 2,296. All existing parking is on surface lots as there are no parking structures at CCBC Catonsville.

When the guidelines input data assumptions are applied to current parking inventory data, it is possible to determine the number of allowable parking spaces. The current parking inventory was presented earlier and calculations of allowance are provided in the following table.

Current and Projected Parking Surpluses / Deficits (Catonsville)

CCBC Catonsville Parking Category	Factor	Allowance Current	Inventory 2014	Surplus/ (Deficit)	Allowance 10 Years	Inventory 2024	Surplus/ (Deficit)
FTDE-T	0.75	2,297			2,801		
FT-Faculty and FT Staff	0.75	442			533		
Visitors	0.02	55			67		
Reserved Accessible (ADA)	Required	38			44		
Total Spaces		2,831	2,296	(535)	3,444	2,296	(1,148)

The campus currently owns 81% of guidelines allowed parking spaces. The data suggests that by 2024, the campus will own 67% of its computed parking space allowance.

QUALITATIVE INDICATORS OF SPACE NEED

A variety of qualitative or non-statistical environmental characteristics impact the space needs of the Community College of Baltimore County. These global space needs are summarized and referenced throughout this document.

Unlike quantitative analysis, qualitative analysis is very subjective. Qualitative indicators of current conditions and program characteristics and future space needs/desires are the result of observations by the consultants and of views expressed by College personnel during interviews with the consultants and/or via written statements.

SUMMARY

It is often said that inferior spaces equal inferior environments equal perceived inferior service. Qualitative facilities problems often stem from the impact of quantitative problems on the physical campuses as a whole and the absence of certain necessary spaces.

The data leading up to and including the computed and qualitative needs establishes the necessity for renovated and/or additional facilities at the Community College of Baltimore County to meet its present and future requirements for space. Potential strategies for meeting these identified space requirements are addressed, in physical terms, by the capital projects outlined later in this *Facilities Master Plan Update*.

The next chapter begins the evaluation of buildings and campus site to determine their suitability to support existing and future programs.

Chapter 4

Facilities Assessment

Buildings

Campus-Wide Systems

Site Infrastructure

Site analysis

BUILDINGS

Index to Buildings

Building Designation and Description		NASF	GSF
HILT	Hilton Mansion	9,069	16,898
BESS	Business, Education & Social Sciences Hall	14,996	26,270
BARN	Barn	8,992	14,890
UTIL	Central Utility Plant	3,276	12,270
CLLB	Classroom & Laboratory Building	40,491	70,845
MASH	Mathematics and Science Hall (Fall 2015)	48,992	78,000
HUMN	Humanities Hall	15,572	25,904
HTEC	Health Careers & Technology Building	57,806	92,385
FARM	Farm House	2,604	3,925
SSRV	Student Services Center	36,689	60,894
LIBR	Library	49,246	78,000
WELL	Wellness & Athletics Center	61,755	92,777
TUDR	Tudor House	634	1,756
OPER	Facilities Operations Building	5,677	6,265
SCOT	Stone Cottage	1,280	1,838
ARTS	Center for the Arts	35,382	54,560
TRAN	Transportation Technology Center	31,809	38,213
CHLD	Children's Learning Center	4,440	5,563
CNED	Continuing Education	4,614	7,140
CSRV	College Services Center	7,261	11,750
Total		440,585	700,143

Hilton Mansion

Building Description

Building Designation	HILT
Number of Floors	4
Net Assignable Square Feet	9,069
Gross Building Area - GSF	16,898
Net-to-Gross Efficiency	53.7%
Year Constructed	1853
	1977 Safety and HVAC equipment added
	1985 Major exterior repairs
Renovations	1998 Misc. interior and exterior
	1999 Misc. Interior and exterior
Additions	None
Contains	Offices and staff for CCBC Vice President, Campus Dean, PRE, Executive Office of Continuing Education, Student Development Dean, Instructional Technology staff
General Condition	In need of extensive restoration and renovation
Adequacy of Space	Irregular layout makes good utilization unachievable
Sprinkler System	None
Accessibility	Not accessible

General / Architectural and Structural

The original mansion from the former estate enhances – indeed, establishes – the historic character of the campus and is its administrative offices. It is one of five historic structures and it is listed with Federal and Maryland historic preservation organizations. The building envelope is sound but not thermally adequate. The roof slates are in regular need of replacement. An easement was granted to the Maryland Historical Trust in return for their funding contribution toward capital repairs made in 1985.

Although there are a number of well-kept and gracious spaces with the building, the lack of handicapped access to the upper floors makes them less than useful. In addition, there are many small, cramped offices in the wings and the attic. The building would be more useful and more attractive if the smaller offices were reorganized into fewer individual rooms or larger shared work spaces.

This 4-story, stone masonry structure was constructed in 1858. Renovations to the building were last accomplished in 1998/9. The building is scheduled to undergo a comprehensive interior and exterior restoration/renovation in 2016.

Mechanical

Existing Systems:

- a. The entire building, with the exception of the Vice-President's Office, is heated and cooled by individual unit ventilators.
- b. Hot water and chilled water are supplied to the building by the boilers and chillers located in Central Utility Plant through the connections to the Business, Education and Social Science Building (Boiler Room No. 6).
- c. The Vice-President's Office utilizes the original hot water convectors for heating and window air conditioners for cooling.

Reported Problems/Deficiencies:

- a. Fan coils are the original (1977) and need to be replaced.
- b. AHU pipe up from basement occasionally leaks.
- c. Lack of elevator.
- d. Old plumbing fixtures.
- e. Poor HVAC Controls

Recommendations:

- a. Install an automatic sprinkler system in the facility as part of a comprehensive renovation.

Electrical

Existing Systems:

- a. The main electrical Distribution Panelboard (MDP) is a Square "D" HCM Catalog No. 44-52709-3A, 120/208 volt - 3 phase - 4 wire - 350 ampere Panelboard.
- b. A diesel powered emergency generator was recently added to serve life safety branch circuits serving the building.
- c. Lighting protection

Reported Problems/Deficiencies:

- a. The MDP is obsolete and filled to capacity.
- b. Fire alarm system does not comply with ADA (Americans with Disabilities Act).

Recommendations:

- a. Upgrade existing fire alarm system in accordance with latest NFPA (National Fire Protection Association) codes. Reinstall existing fire alarm manual pull stations with mounting heights in accordance with latest ADA requirements. The fire alarm system should be sized to accommodate the addition of a new Automatic Sprinkler System.
- b. The MDP (Main Distribution Panelboard) should be replaced with a new MDP with spare capacity to accommodate any future renovations, additions, or HVAC systems upgrades. Provide sub-meter for the building electric service to verify energy usage.
- c. Provide a thermo-graphic study of the existing building to identify any hot wiring that requires upgrade

Information Technology

Existing Systems:

- a. One data cabinet serving the entire building is located in A101A First Floor, served by 8 fiber strands (4CW/4CCW).
- b. There is no audio-visual infrastructure in the Pullen Conference Room.
- c. The existing switches have been replaced with new Cisco network switches.

Reported Problems/ Deficiencies:

- a. None.

Recommendations:

- b. None.

Photographs



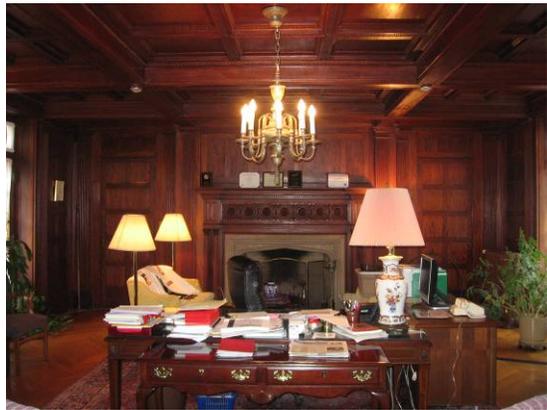
Building Exterior



Building Exterior



Pullen Conference Room



Executive Office

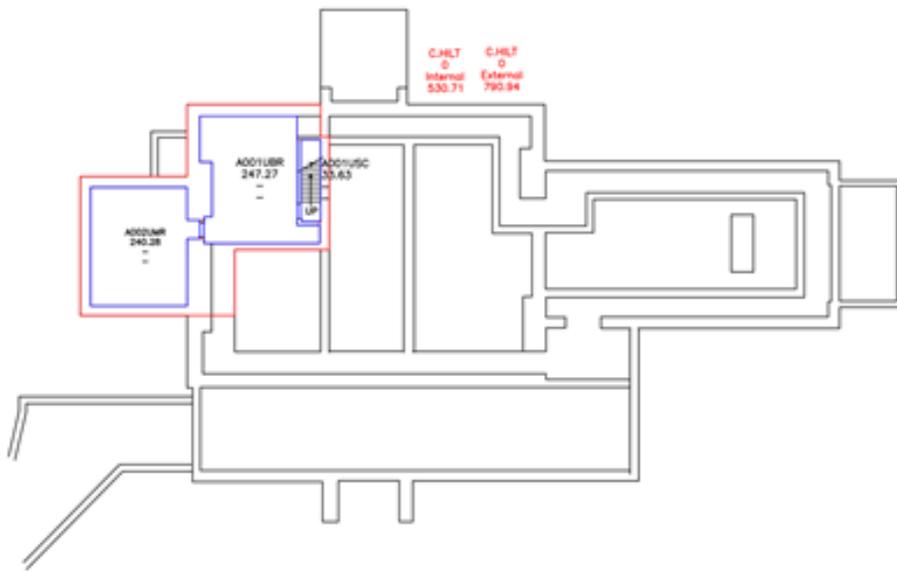


Ground Floor Office

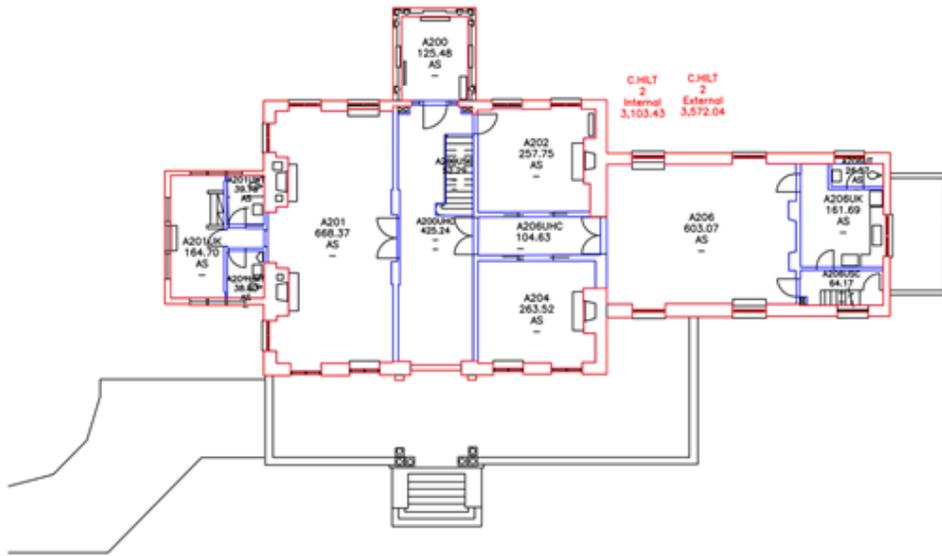


Windows in Need of Replacement

Floor Plans

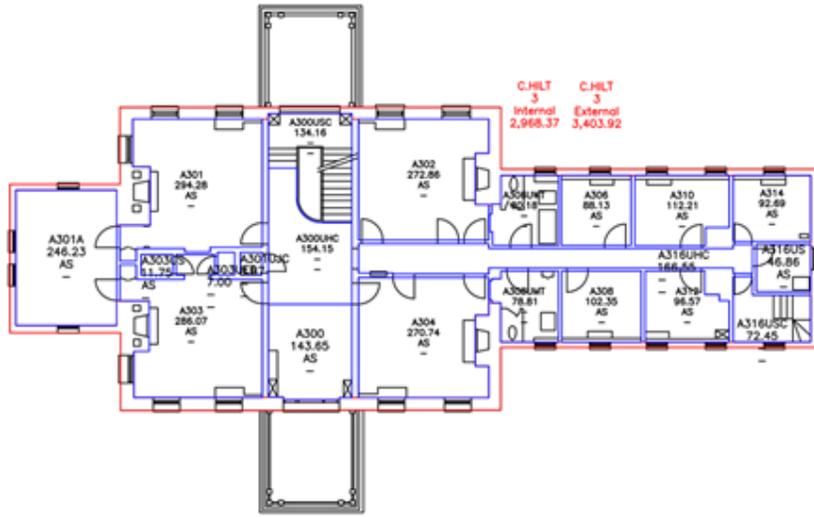


HILTON MANSION (HILT) - FOUNDATION PLAN
SCALE: 1/16" = 1'-0"



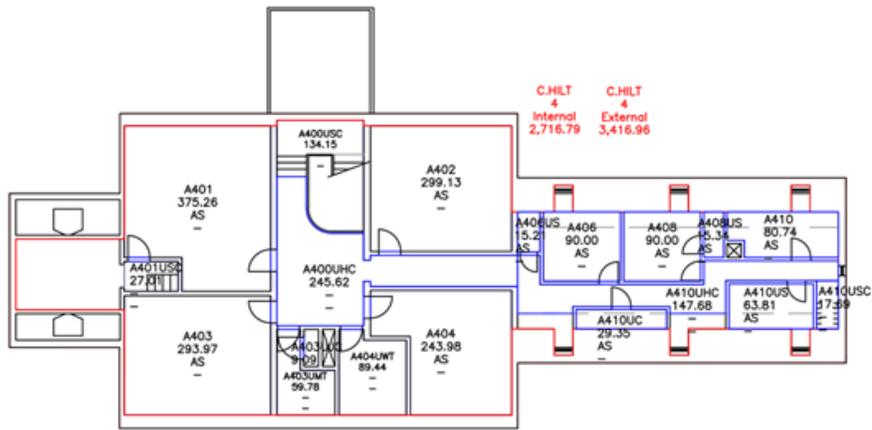
HILTON MANSION (HILT) - SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"





HILTON MANSION (HILT) -- THIRD FLOOR PLAN

SCALE: 1/16" = 1'-0"



HILTON MANSION (HILT) -- FOURTH FLOOR PLAN

SCALE: 1/16" = 1'-0"



Business, Education and Social Sciences Hall

Building Description

Building Designation	BESS
Number of Floors	3
Net Assignable Square Feet	14,996
Gross Building Area - GSF	26,270
Net-to-Gross Efficiency	57%
Year Constructed	1977
Renovations	1997 CCBC Executive System Offices 1999 New chiller, Human Resources Offices, new roof Various years Restroom renovations
Additions	None
Contains	Office, Continuing Education, Institutional Equity, Human Resources, Classrooms, Faculty Offices for Wellness and Social Sciences, Faculty Offices for Business. Criminal Justice & Law
General Condition	Fair
Adequacy of Space	Spaces are tight and storage space is lacking
Sprinkler System	Partial in storage rooms only
Accessibility	Mostly accessible

General / Architectural and Structural

The Business, Education and Social Science Building (BESS) was built to house the expanding need for office space within the college community. This brick building is connected to the mansion whose style is not compatible with the mansion but serves as a background structure juxtaposed with the mansion.

This facility functions well as an office building, its primary role. There is a lack of storage space on all floors. The information desk and surrounding area should provide a more positive role in greeting visitors. With the opening of the new Mathematics and Science Hall (MASH) and space vacancy in the Classroom and Laboratory Building (CLLB), an opportunity exists to relocate at least some faculty from BESS up to CLLB which is in the academic core space for the campus. Administrative functions in the Hilton Center (HILT) could then be relocated to BESS either permanently or just temporarily for the impending HILT renovation project which should commence in Spring 2016.

The building is a 3-story, steel framed structure with exterior masonry walls which was constructed in 1977. The building was partially renovated in 1999. There have been repairs made to some nominal cracking of brick veneer and several lintels are rusted. Windows are in need of upgrade or replacement. Unit ventilators are noisy, interfering with conversations. Any replacement of UVs should be coordinated with window replacement as the UVs are always beneath the windows. Regular maintenance is needed. The overall condition of the building is fair. The campus development plan targets the strategic location of the BESS and adjacent CNED buildings for a future academic building (long term).

Mechanical

Existing Systems:

- a. The building is heated and cooled utilizing unit ventilators around the perimeter of the building and an air handling unit serving the building core. The building is currently divided into three zones.
- b. This building houses Boiler Room No. 6, which also feeds the Hilton Center. Major equipment contained in Boiler Room No. 6 includes:
 - 1) AHU-1 which is now 37 years old.
 - 2) Six (6) hot water circulators, replaced in 1999.
 - 3) Chilled water pump, installed in 1977.
- c. Sewage Ejector Pumps are original.
- d. The building was connected to the Central Utility Plant in 2011

Reported Problems/ Deficiencies:

- a. Outside air changes are insufficient.
- b. Pneumatic controls are not reliable
- c. Rooftop unit for supplemental cooling is aging and periodically fails.

Recommendations:

- a. Replace rooftop cooling unit.
- b. Install sprinkler system.
- c. HVAC upgrades to include new ductwork, air handlers, DDC controls, and unit ventilators.
- d. Provide proper ventilation.
- e. No redundancy for AHU.

Electrical

Existing Systems

- a. The existing switchboard is a 36" deep by 84" wide, 1000 ampere, 277/480 volt, 3 phase, 4 wire, manufactured by Square "D", Model VV-52709-1, Type PS-2.
- b. A diesel powered emergency generator was recently added to serve the life safety branch circuits serving this building, as well as the HILT building and the PBX in this building.
- c. Lighting systems utilize primarily T8 fluorescent lamps

Reported Problems/ Deficiencies

- a. Fire alarm system does not comply with ADA.
- b. Almost all panels are at capacity

Recommendations:

- a. Upgrade existing fire alarm system in accordance with latest NFPA (National Fire Protection Association) codes. Reinstall existing fire alarm manual pull stations with mounting heights in accordance with latest ADA requirements. The fire alarm system shall be sized to accommodate the addition of a new Automatic Sprinkler System.
- b. Provide new sub-panels to facilitate small scale adds/moves/ changes and add new panels in support of potential renovations that will support new occupants in the building.
- c. Provide sub-metering of building service to verify energy usage.
- d. LED lighting should be considered with flexible lighting controls compliant with current energy codes, as funding becomes available.
- e.

Information Technology

Existing Systems

- a. The Main Campus Telephone Switch is located on the First Floor of this building.
- b. Two data cabinets (one network switch rack, one passive rack) are located in the Main Telephone Room served by 16 fiber strands (8CW/8CCW).
- c. The existing switches have been replaced with new network switches.

Reported Problems/ Deficiencies

- a. None.

Recommendations:

- a. None.

Photographs



Building Exterior



Building Exterior and Link to Mansion



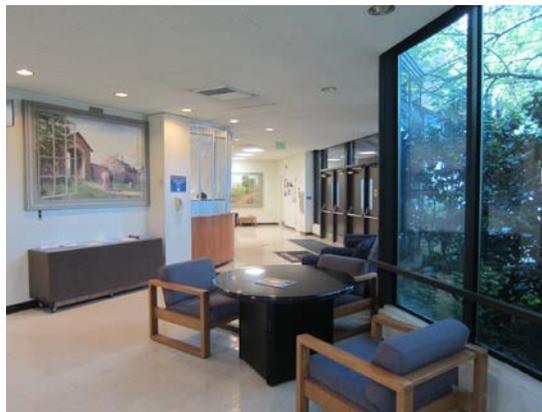
Office Support



Open Office Interior



Classroom



Former Link to BESS

Barn

Building Description

Building Designation	BARN
Number of Floors	2
Net Assignable Square Feet	8,992
Gross Building Area - GSF	14,890
Net-to-Gross Efficiency	60.4%
Year Constructed	1920 after a fire burned the old barn
Renovations	1966 complete renovations 1992 arched window replacement, JP Stevens Roof (low-slope portion) 1996 barn acoustical ceiling, asbestos fireproofing abatement 1997 new boiler 2004 new copper roof (steep-slope), storm drain leader improvements 2005 Emergency generator set installed to support future fire pump and other uses in this and CLLB 2009 boilers removed 2010 2 nd feeder from BGE was installed in primary switchgear 2012 Sprinkler system installed throughout the building; finishes restored extensively in concert with sprinkler work 2012 Exterior concrete stair replaced with steel switchback stairs 2012 Fountain/Courtyard area renovated 2013 AHUs, piping in penthouse replaced; VFDs added 2014 Veteran's Center created in lower level 2015 New flat roof areas have new MB BUR installed replacing the JPS single-ply roof.
Additions	1966 boiler facility built
Contains	Student recreation space, Small theater/assembly area, Offices,
General Condition	Fair
Adequacy of Space	Multiple functions; adequacy is more a campus-wide issue
Sprinkler System	
Accessibility	Partial

General / Architectural and Structural

The barn theater is one of the existing buildings from the original Knapp property / Hilton estate. Lighting is inadequate in the student union and the multi-purpose theater. The building envelope appears sound but requires periodic maintenance expenditures.

Although the theater space is interesting and useful, the building does not function well as a student union. The offices in the building are not directly related to student activities. This facility is too remote from the daily activities of the campus and the exterior patio is oriented toward the administrative buildings, not the quad, where students actually gather in good weather. The offices have been partially renovated. The previous utility plant in the rear wing has been mostly dismantled and may now only be viable as a storage facility.

Functionally, student activity offices would be better tenants for a space that wants to attract students. To do this, the interiors would need to be renovated and the current occupants relocated to space closer to the administrative or business functions of the campus. This work is a future, long term project.

The building is a 2-story, wood and steel framing structure with exterior masonry walls constructed in 1920, renovated in 1966, a new roof installed over the theatre in 2004 and new roof installed over the 1960s additions in 2015. Previous termite damage has been repaired and treated with no further problems. The patio, fountain, and surrounding stone wall had been deteriorating and has been recently renovated. Regular maintenance is needed. The concrete framed exterior stair has been replaced with a steel stair unit since the existing concrete was too badly damaged by age. The overall condition of the building is fair.

Mechanical

Existing Systems:

- a. The boiler and chiller have been removed from the building. Heating is being provided by boilers in central plant and cooling is being provided by chillers in the Central Utility Plant as well.
 - 1) Two (2) chilled water pumps, installed in 1997.
 - 2) Four (4) hot water circulating pumps, installed in 1965.

Reported Problems/Deficiencies:

- a. Heating and chilled water pumps are constant flow and original to the building. They do not support wise energy management in the facility.

Recommendations:

- a. Recommend replacing individual constant flow pumps with variable flow multi-pump packages. Relocate heating pumps to be near chilled water pumps. And relocate heating water line from center of room to facilitate installation of grated floor above present floor for increased storage.

Electrical

Existing Systems:

- a. Main switchboard serves boiler plant. Electrical panels in old boiler room were replaced but not others in the building.
- b. Electrical switch yard has S&C 13.2KV rated sectionalizing switches which are now fifty years old.

Reported Problems/ Deficiencies:

- a. Electrical panels that are original are failing from time to time and breakers/parts are difficult to obtain.
- b. Main medium voltage switchgear was damaged in hurricane Isabel and requires follow up improvements beyond emergency repairs made after the storm.

Recommendations:

- a. Replace medium voltage sectionalizing switchgear at this location with design to accommodate future service expansion.
- b. Provide sub-metering at main switchboard to monitor energy usage.
- c. Replace older panels within building.

Information Technology

Existing Systems:

- a. An existing data cabinet is located in Room B-100US served by 16 fiber strands (4CW/4CCW). A total of 16 strands are terminated (6 for each ring and 4 for Building "C").
- b. The building is equipped with new Cisco network switches.

Reported Problems/ Deficiencies:

- a. No spare fiber capacity.

Recommendations:

- a. Upgrade existing fiber optic cables to provide spare capacity for future additions. Directional drilled conduit to from MH2 a C.O. to T/I Phase.

Photographs



Barn Theater Exterior



Office Space



Theater Space



Lower Level Studio

Central Plant Central Utility Plant

Building Description

Building Designation	UTIL
Number of Floors	1 + mezzanine
Net Assignable Square Feet	3,276
Gross Building Area - GSF	12,270
Net-to-Gross Efficiency	N/A
Year Constructed	2006
Renovations	2009 First two chillers were installed along with cooling towers and piping to new library 2013 Two chillers were installed along with cooling towers and piping to main campus buildings not already connected
Additions	None
Contains	3 boilers, 4 chillers, facilities & maintenance office space
General Condition	Excellent
Adequacy of Space	Space is available for future expansion of heating and cooling equipment
Sprinkler System	Fully sprinklered
Accessibility	Accessible

General / Architectural and Structural

Housing the central heating and cooling plant for the campus, this building sits on the site of the previous campus printing facility. A pre-engineered metal building, it affords generous and appropriate space for the mechanical equipment and supporting spaces. However, the exterior architectural character is incongruous with the other proximate and historic campus buildings. Landscape screening would help to soften its impact.

Mechanical

Existing Systems:

- a. (3) 350 HP Flex Tube Boilers, Dual Fuel
- b. (4) 600 Ton Chillers
- c. (3) – Primary Pumps with VFDs
- d. (3) – Secondary Pumps with VFDs

Reported Problems/Deficiencies:

- a. None

Electrical

Existing Systems:

- a. The main Panelboard "C" is a 120/208 Volt - 3 Phase - 4 Wire Panelboard.

Reported Problems/Deficiencies:

- a. None reported.

Recommendations:

- a. Provide sub-metering of the electric service to the building to monitor energy usage..

Information Technology

Existing Systems:

- a. Existing wall data cabinet being sub-fed from Barn by 4 strands of fiber optic cable.
- b. The existing network switches are relatively new and by Cisco..

Reported Problems/ Deficiencies:

- a. None.

Recommendations:

- a. None.

Photographs



Building Exterior



Break Room



Control Room



Electrical Room

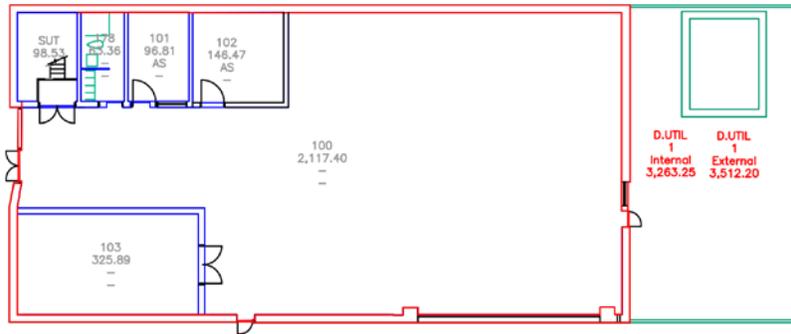


Main Bay - Heating

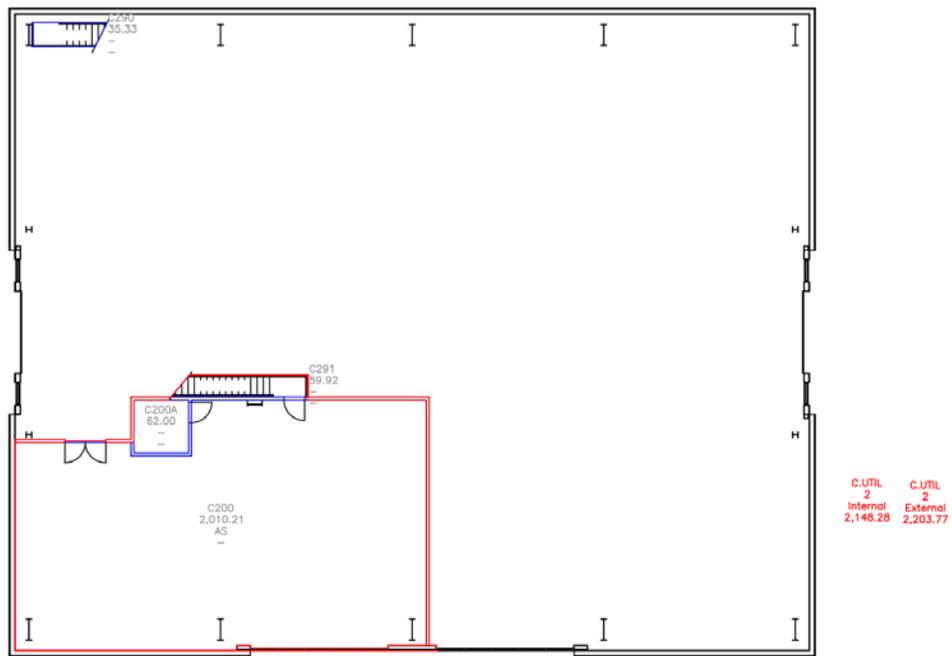


Main Bay / to Mezzanine

Floor Plans



CENTRAL UTILITY PLANT (UTIL) – FLOOR PLAN



CENTRAL UTILITY PLANT (UTIL) – SECOND FLOOR PLAN

SCALE: 1/16" = 1'-0"

Classroom & Laboratory Building

Building Description

Building Designation	CLLB
Number of Floors	2
Net Assignable Square Feet	40,491
Gross Building Area - GSF	70,845
Net-to-Gross Efficiency	57.2%
Year Constructed	1967
Renovations	1990 J.P. Stevens membrane roof 1997 Repairs to chemistry labs, lighting upgrade 1997 Replaced corridor VAT, classroom conversion to bio-tech, micro-biology lab renovation, planetarium projector replaced. 1997 Lighting upgrade 2003 ADA restroom alterations 2004 Fire alarm ADA improvements 2005 Emergency generator set installed to support future fire pump and other uses in BARN and this building 2011 Roof replaced with a cold process MB product by Soprema 2012 AHU replaced 2012 Thorough restroom renovations performed 2012 Finishes upgraded in corridors and offices 2012 Office Technology spaces renovated 2013 mini Grab&Go food counter created in lobby 2014 Tiered lecture hall renovated (ceiling, lighting, tables/seating, flooring)
Additions	None
Contains	Planetarium, lecture halls, offices, classrooms, greenhouse, and labs
General Condition	Fair
Adequacy of Space	Inadequate to house current programs
Sprinkler System	Partial; corridors and some classrooms
Accessibility	Partial – e.g. limited access from classrooms to lecture/planetarium wing

General / Architectural and Structural

This two-story brick, steel frame building is one of the original facilities built at the inception of the college in 1967. All spaces are still in use. However, equipment is old and the piping and ventilation services are failing due to age. The building still functions, and the finishes have been updated but the guts of the M&E systems need to be brought up to date with current technology and codes. Faculty offices are located on each floor but the offices are crowded and can't expand without taking classroom space. Some office space is occupying former lab prep rooms. Public space for a student lounge is inadequate between the planetarium and the science labs.

Most of the science classroom and office needs have been fulfilled in the new MASH facility. However, a comprehensive plan for complete renovation is needed. Even with the recent finishes upgrades, the building feels old and stuffy which does not help the image that the College wants to project.

While the building shell is sound and well maintained, there are a number of minor issues ranging from the presence of asbestos, building systems which are not functioning well, outdated equipment and inadequate lab space. The HVAC system utilizes the corridors as a return air plenum which is no longer allowed by code. Correcting this will be a major endeavor and a simple equipment replacement will not suffice. Sciences will have vacated their spaces during summer 2015. Many of the classrooms utilize computers which will require upgraded HVAC and wiring to function properly. Several building systems are beyond or approaching the end of their expected useful life. The mechanical system, in particular, requires significant work (upgrade and replacement) and should be undertaken as a systemic renovation or as part of a general building renovation. This building should receive new finishes, primarily ceilings, in conjunction with required improvements to mechanical and electrical systems. This building still needs a comprehensive renovation effort, likely a long term future project.

A new roof was installed in 2011. The metal soffit panels around the perimeter of the building have experienced varying levels of corrosion with some minor rusting. The overall condition of the building is fair.

Mechanical

Existing Systems:

- a. Heating water and chilled water for this building is provided from Central Utility Plant. The building has three (3) air handling units, two of which are located in the Planetarium Mechanical Room and one is located on the roof. Ductwork is distributed down through the building serving perimeter induction units with re-heat.
- b. This building houses Mechanical Room No. 2. This boiler room serves Buildings F and G as well. Major equipment contained in Boiler Room No. 2 includes:
 - Fire pump serving MASH and Humanities Hall with provision to add more buildings from the outlet header
 - Two (2) chilled water pumps, installed in 1997.
 - Eight (8) hot water circulating pumps, installed in 1967.
- c. The building is cooled/heated by perimeter induction units. Cooling problems are reported throughout the building. Rooms such as 101, 103, 105, 107, and 201 were originally standard classrooms but are now computer labs, requiring additional cooling.

Reported Problems/Deficiencies:

- a. Many rooms have added heat loads from computer equipment, including the Science Labs. Odors are noticeable in the building, suggesting that the building is under-ventilated. Supplementary exhaust systems have been added in several labs and appear to have inadequate makeup air. This may contribute to reported infiltration problems near the building entrances.
- b. Additionally, in this building, as in most other buildings, corridors and lobbies are used as Student Lounges. These spaces were not designed for such person loads and are inadequately cooled and ventilated.
- c. The existing equipment in the Boiler Room No. 2 is old, and in need of constant repair. Since the central utility plant has been completed, most of the large mechanical equipment in Boiler Room No. 2 have been removed.
- d. Corridors are used as return plenums and have no direct conditioning. This results in over-heating of the corridors when the classrooms are occupied, during the Spring, Fall and Winter.

- e. The building is not protected with a complete automatic sprinkler system.
- f. Much of the steam piping and mechanical fitting insulation in the building contains asbestos. It is managed in place and removed when construction or major maintenance is required.
- g. The building is not protected with a complete automatic sprinkler system.

Recommendations:

- a. Develop an occupancy/use plan for this building, then CCBC should renovate/upgrade entire HVAC System including the addition of DDC controls.
- b. Install a full-coverage sprinkler system in conjunction with the renovation.
- c. Provide a large AHU with low-ambient cooling to resolve the cooling problems in the building.
- d. Perform comprehensive asbestos abatement in the building when other major renovations are scheduled to occur.

Electrical

Existing Systems:

- a. The existing Main Distribution Panelboard is a Westinghouse Type CDP-MSAB-3P/4, 277/480 volt - 3 phase – 4 wire, with 350 amp main circuit breaker.
- b. The 120/208 volt loads are served by a 600 ampere, 3 phase, 4 wire distribution Panelboard. The Panelboard is a Westinghouse Type AH647919.
- c. The existing Panelboard SP is a 120/208 Volt - 3 Phase - 4 Wire Panelboard manufactured by Square D, Model QBL-43029, Type NQOB.
- d. Emergency lighting is connected to a generator located in B-building Courtyard.
- e. Lighting system utilizes primarily T8 fluorescent lamps.

Reported Problems/Deficiencies:

- a. The Main Distribution Panelboard and individual panels are obsolete and filled to capacity.

Recommendations:

- a. Replace the Main Distribution Panelboard with a 277/480 V, 3 Phase, 4 Wire, 800 Ampere Main Distribution Panelboard and provide sub-metering.
- b. Replace the 480 Volt – 3 phase – 3 wire to 120/208 Volt – 3 phase – 4 wire dry type Transformer with a new K-rated 300 KVA dry type Transformer.
- c. Replace the 600 Amp, 120/208 Volt – 3 phase – 4 wire Distribution Panelboard with a new 120/208 Volt – 3 phase – 4 wire 800 Ampere Distribution Panelboard.
- d. Upgrade existing fire alarm system in accordance with latest NFPA (National Fire Protection Association) codes. Reinstall existing fire alarm manual pull stations with mounting heights in accordance with latest ADA requirements. The fire alarm system shall be sized to accommodate the addition of a new Automatic Sprinkler System.
- e. Replace all panels with new and larger units with spare capacity .
- f. LED lighting should be considered with flexible lighting controls compliant with current energy codes, as funding becomes available

Information Technology

Existing Systems:

- a. One Data Room D100U contains two data cabinets served by 12 fiber strands (6CW/6CCW). Thirty-two (32) total fiber terminations including fibers are used to serve Buildings Q and N.
- b. Rooms D001 & D002 contain Smart Classroom technology.

- c. The existing network switches have been replaced with new Cisco units .
- d. There is a fiber remote node in this building that connects to the PBX in BESS. Phone lines can originate/terminate at the node which is much easier than pulling conductor all the way to BESS through clogged conduits.

Reported Problems/ Deficiencies:

- a. No spare fiber capacity.

Recommendations:

- a. Upgrade existing fiber optic cables to provide spare capacity for future renovations and additions. All data systems in this room are being supported from new generator set..

Photographs



Building Exterior – Quad Side



Building Exterior – Parking Lot Side



Computer Lab



Mortuary Science Classroom



Lounge



Tiered Lecture Hall

February, 2016

Floor Plans



Lower Level



Upper Level

Mathematics and Science Hall

Building Description

Building Designation	MASH
Number of Floors	4
Net Assignable Square Feet	48,992
Gross Building Area - GSF	78,000
Net-to-Gross Efficiency	62.8%
Year Constructed	1967
Renovations	2015 Comprehensive renovation and addition
Additions	2015 major wing added to existing structure
Contains	Science labs, faculty offices for Science and Math faculty, Dean of SOMS office, planetarium, tiered 50-person lecture halls, flat floor lecture halls, Math Center for SI and tutoring
General Condition	Excellent
Adequacy of Space	Adequate
Sprinkler System	Full coverage
Accessibility	Complete

General / Architectural and Structural

The original building is a 4-story, concrete framed structure with 2 way concrete floor slabs and exterior masonry walls constructed in 1967. A new 3-story addition was built in 2015. The upper level of the existing building has been repurposed as a major mechanical room. The addition includes a rooftop mechanical penthouse serving most of the laboratories. The planetarium 'drum' includes a mechanical level at the top which services only the planetarium.

Mechanical

Existing Systems:

- a. Heating water and chilled water is provided to this building from Central Utility Plant via the adjacent Boiler Room No. 2, located in former Building E.

Reported Problems:

- a. None

Recommendations:

- a. None

Electrical

Existing Systems:

- a. The MASH is served by a 480/277 volt - 3 phase - 4 wire, 700 Ampere Main Distribution Panelboard, Square D Type MLH-5669B.

Reported Problems:

- a. None

Recommendations:

- a. None

Information Technology

Existing Systems:

- a. The building has been outfitted with new Cisco switches in each of 6 data closets. They are stacked 3 high in the original building and also in the addition.

Reported Problems/ Deficiencies:

- a. None.

Recommendations:

- a. None.

Photographs



Building Exterior – Quad Side



Building Exterior – North Side



Entrance Hall



Lecture Hall

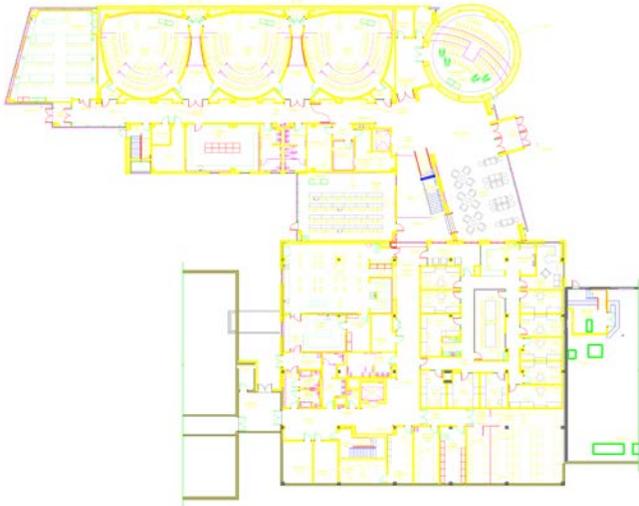


Laboratory



Green Roof

Floor Plans



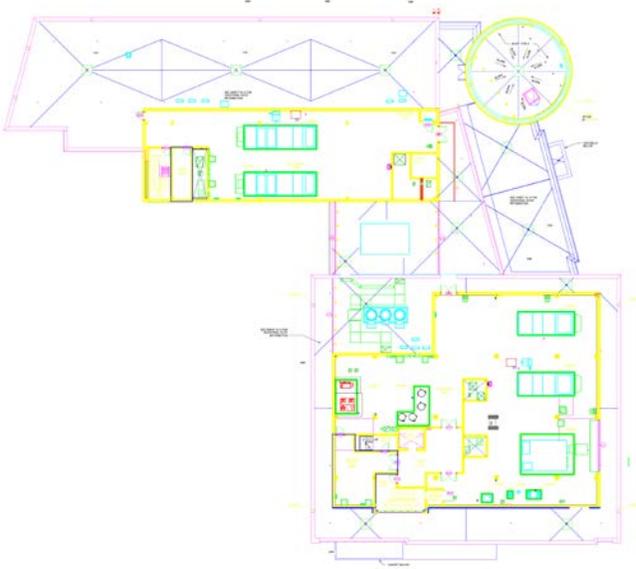
MATHEMATICS AND SCIENCE HALL (MASH) – FIRST FLOOR PLAN



MATHEMATICS AND SCIENCE HALL (MASH) – SECOND FLOOR PLAN



MATHEMATICS AND SCIENCE HALL (MASH) – THIRD FLOOR PLAN



MATHEMATICS AND SCIENCE HALL (MASH) – FOURTH FLOOR PLAN

Humanities Hall

Building Description

Building Designation	HUMN
Number of Floors	2
Net Assignable Square Feet	15,572
Gross Building Area - GSF	25,904
Net-to-Gross Efficiency	60.1%
Year Constructed	1972
Renovations	1995 Single-Ply PVC roof installed 1990 Unit ventilators replaced 1997 Lighting upgrade to T-8 lamps 2003 Elevator added, unisex ADA restrooms added. 2008 AHUs in rooftop Mech Penthouse were replaced 2009 TV studio converted to 2 classrooms, renovated faculty offices, corridors, restrooms, storage, floors and ceilings replaced.
Additions	None
Contains	Classrooms, faculty offices for Humanities/ Communications/English and Liberal Arts
General Condition	Good
Adequacy of Space	Adequate for functions contained; adequacy is overall campus issue
Sprinkler System	Yes
Accessibility	Full

General / Architectural and Structural

This building was built as part of the first expansion of the campus. It is of brick construction which is compatible with the original buildings forming the quad. The building envelope is in good condition. Built as a classroom building, it still serves this purpose, with rooms that are primarily lecture type classrooms. There are no lounges or student break spaces. The building has experienced termite infestations and has had recurrent mold growth on floor tiles in several lower level classrooms, which appear to have been remedied.

Due to consolidation of TV studio spaces at CCBC Essex, the old studio spaces in this building were freed up to enable the construction of a mezzanine and 2 new classrooms. This building is still very functional, albeit with plain, interior spaces. Repairs identified in the previous Facilities Condition Assessment should be undertaken, with the understanding that, if funding permits, a comprehensive general renovation would be preferable.

The building is a 2-story, steel framed structure with masonry walls constructed in 1972. A new roof was installed in 1995. The overall condition of the building is fair.

Mechanical

Existing Systems:

- a. Heating water and chilled water is provided to this building from Central Utility Plant through Boiler Room No. 2 located in former Building E.
- b. Perimeter offices and upper level classrooms are heated and cooled using classroom unit ventilators. Lower level classrooms are served from induction units. Office unit ventilators have recently been replaced. Classroom UV's are 1990 vintage. Classroom induction units are original.
- c. Interior spaces are served by (2) two air handling units with a ducted system. The air handlers have recently been replaced but the two chilled water pumps and two heating water pumps located in the Mechanical Room are the original.
- d. Building HVAC controls are largely pneumatic with some AHUs equipped with DDC controls.
- e. The building is fully sprinklered.

Reported problems:

- a. Unit ventilators in upper classrooms are having control problems and leak problems. Induction units in lower level classrooms are inefficient and are now 45 years old.
- b. Water valves for domestic and HVAC units do not hold.
- c. Pneumatic controls are semi-functional and make good control impossible.

Recommendations:

- a. Recommend removing unit ventilators to free up more floor space for students and replace with ducted system from air handling units.
- b. Install variable frequency drives on air handling units and replace constant volume induction units with variable air volume units in classroom ceilings.
- c. Recommend replacing all water valves in the building
- d. Replace pneumatic controls with DDC controls.

Electrical

Existing Systems:

- a. The existing Panelboard A is a 277/480 Volt - 3 Phase- 4 Wire- 225 Ampere Panelboard manufactured by Westinghouse #BA-67750.
- b. Lighting system utilize primarily T8 fluorescent lamps.

Reported problems:

- a. Circuit breaker panels are old and insufficient for new loads.

Recommendations:

- a. Replace panels and increase capacity for new unanticipated loads.
- b. Provide sub-metering at electric service to monitor energy usage. LED lighting should be considered with flexible lighting controls compliant with current energy codes, as funding becomes available.

Information Technology

Existing Systems:

- a. The existing switches are upgraded Cisco network switches.

Reported Problems/ Deficiencies:

- a. None.

Recommendations:

- a. None.

Photographs



Building Exterior



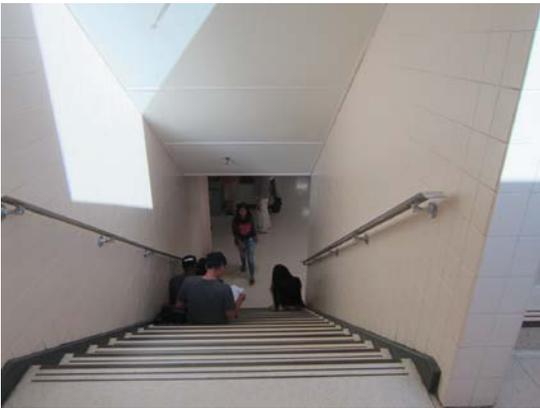
Building Exterior – Quad Side



Classroom

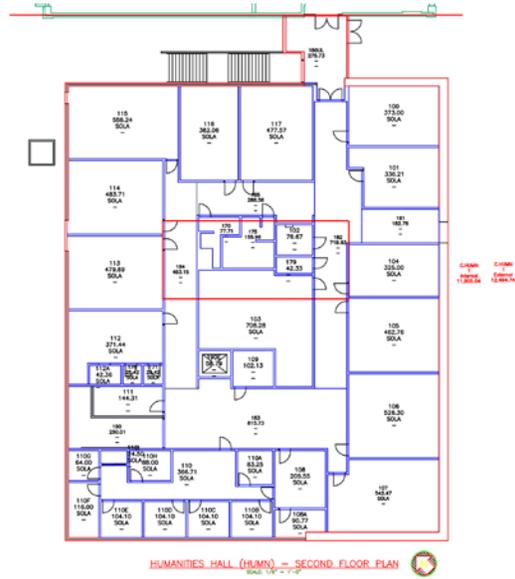
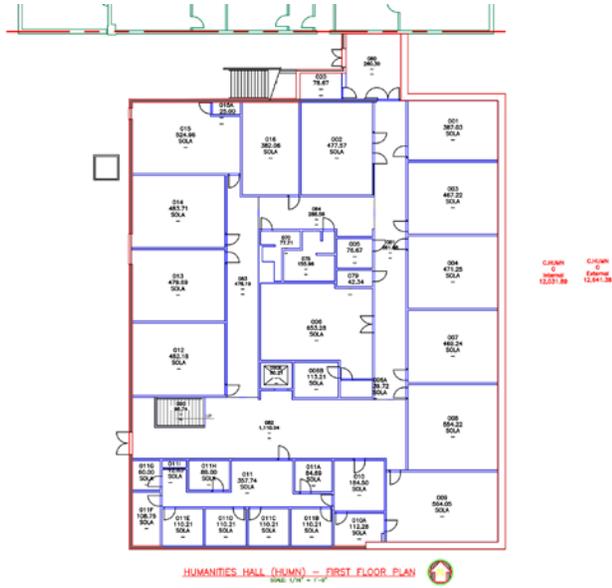


Computer Classroom



Stairs, also used as study space

Floor Plans



Health Careers and Technology Building

Building Description

Building Designation	HTEC
Number of Floors	3
Net Assignable Square Feet	57,806
Gross Building Area - GSF	92,385
Net-to-Gross Efficiency	62.6%
Year Constructed	1974 (54,416 GSF)
Renovations	1990 J.P. Stevens roof 1997 Lighting upgrade 2006 unit ventilators replaced 2007 controls for UVs updated and enhanced 2009 Student Lounge converted into a classroom 2011 1974 building had roof replaced with a cold process MB BUR by Soprema 2012 HVAC (cooling) upgraded for Aviation areas
Additions	1998 (37,969 GSF)
Contains	College computer center, , classrooms, labs, and offices for the Nursing program, School of Applied Information Technology , CADD labs, computer labs, Aviation Management / Air Traffic Controller Training, manufacturing technology labs and conference/meeting rooms.
General Condition	Good
Adequacy of Space	Inadequate
Sprinkler System	Yes
Accessibility	Complete

General / Architectural and Structural

This original building was built in a third wave of expansion and it completed the enclosure of the central quad. The brick design is compatible with the main campus and the new addition updates its identity and front door on the quad side. The entrance from the parking lot is marked with a blue canopy. However, this side of the building is cluttered with, communication antennas and the adjacent loading dock.

The original building is primarily general classrooms with faculty offices. The offices are small, with no room for expansion. The computer center and the main frame computer occupy space in the heart of the building.

The addition contains state of the art computer teaching labs, manufacturing labs, SAIT offices, a large divisible meeting/conference room, and a modest teleconferencing classroom. With the exception of finishes in individual spaces, this building is in good shape.

The existing building received significant renovations with the addition. However, the mechanical systems are still considered inadequate and will require new equipment to fix functional problems. Some finishes will also need to be addressed with this work.

The building is a 3-story, masonry structure constructed in 1974 and an addition constructed in 1998. A new roof was installed in 1990. The overall condition of the building is good. Vertical expansion over the roof portion of the second level near K Building may be considered thanks to additional structural capacity in the framing of the 1998 addition.

Mechanical

Existing Systems:

- a. Heating water and chilled water is provided to this building from Central Utility Plant through Boiler Room No. 3 located in former Building K. The building has an independent supplemental cooling system for the main frame computer room. Perimeter offices and classrooms are heated and cooled using classroom unit ventilators with a damper intake. Portions of the HVAC systems date to 1974 and portions to 1998. The 1974 unit ventilators for these areas were replaced in 2006. Air handling systems dating 1974 require replacement (1 penthouse).
- b. Interior spaces are served by air handling units and ducted system. The air handler is original, as are the two chilled water pumps and two heating water pumps located in the Mechanical Room.

Reported Problems/Deficiencies:

- a. Air handling unit #1 is now 40 years old. Air handling units #2 and #3 speed controllers are failing. Control problems exist in the building, which is evident by the over-cooling of offices and classrooms on the First Floor.
- b. Many of the HVAC building controls are pneumatic.
- c. Unit ventilators (in 1998 portion of the building) are old and starting to have control problems.
- d. First floor induction units are over 30 years old and need to be replaced.

Recommendations:

- a. Recommend replacing air handling unit #1 with added variable speed controller. Replace outdated variable speed controllers on air handling units #2 and #3 with updated versions.
- b. Recommend removing unit ventilator and fan coil units and replace with variable air volume units connected to air handling units or with newer and quieter units.
- c. Replace the first floor induction units with appropriate technology.
- d. Convert all HVAC controls in this building to DDC type.

Electrical

Existing Systems:

- a. The existing main switchboard "SWBD" is a 480/277 Volt - 3 Phase - 4 Wire, 1600 ampere switchboard manufactured by Cutler-Hammer/Westinghouse, Model #HLY12719.
- b. Lighting systems utilize primarily T8 lamps.

Reported Problems/Deficiencies:

- a. Circuit breaker panels are old and insufficient for new loads

Recommendations:

- a. Recommend replacing all electric panels in the building and increase capacity for new loads. Provide sub-metering of electric service to building.

- b. LED lighting should be considered with flexible lighting controls compliant with current energy codes, as funding becomes available.

Information Technology

Existing Systems:

- a. The Main Campus Computing Center is located in H204 multiple cabinets serve the network switches for the Campus.
- b. All 186 campus fibers (96 CW/90CCW) terminate in Room H204.
- a. The existing switches in this building have been replaced with new Cisco network switches.

Reported Problems/ Deficiencies:

- a. None.

Recommendations

- a. None.

Photographs



Building Exterior – Quad Side



Building Exterior – Facing Humanities



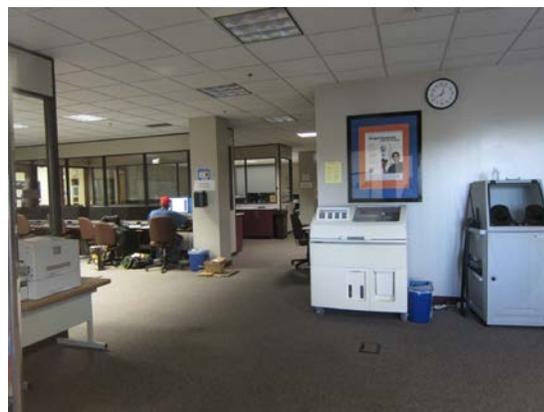
Classroom



Tiered Classroom

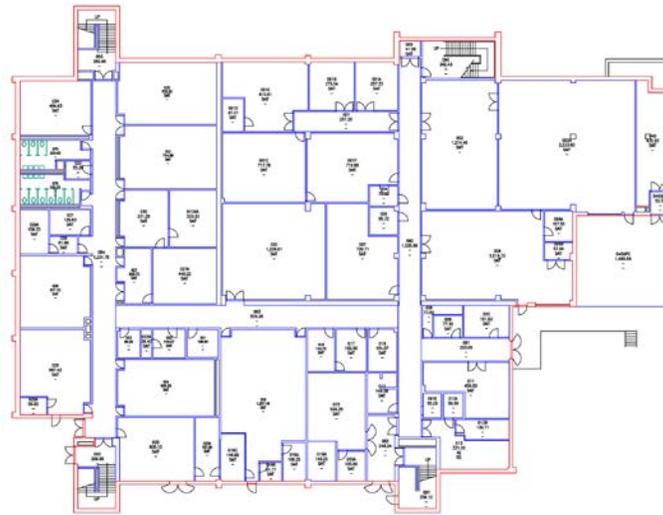


Nursing Lab



Computer/CAD Lab

Floor Plans



HEALTH CAREERS & TECHNOLOGY BUILDING
(HTEC) - LOWER LEVEL PLAN



Lower Level

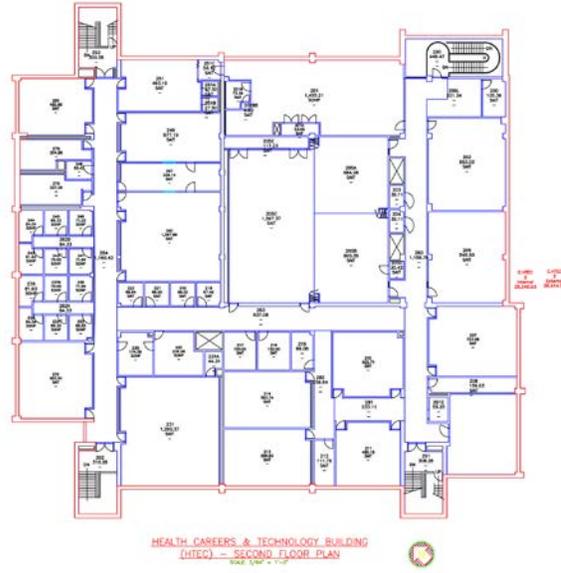


HEALTH CAREERS & TECHNOLOGY BUILDING
(HTEC) - FIRST FLOOR PLAN



First Floor

February, 2016



Second Floor

Farmhouse

Building Description

Building Designation	FARM
Number of Floors	3
Net Assignable Square Feet	2,604
Gross Building Area - GSF	3,925
Net-to-Gross Efficiency	66.3%
Year Constructed	1825
Renovations	1999 Asphalt shingle roof 1999 Rebuilt side porch
Additions	None
Contains	Offices for faculty, staff and student activities, student meeting rooms, student radio station
General Condition	Fair
Adequacy of Space	Very Inadequate
Sprinkler System	None
Accessibility	Not Accessible

General / Architectural and Structural

This building was part of the original Hilton Estate and it is listed with the Maryland Historical Trust. The Trust has some say over what can be done to the exterior of the building, but the interiors are directly controlled by the College. This historically significant building has handicap and life safety issues which need to be addressed. The building is typically used for office functions, now awaiting its next makeover.

The building is a 3-story, wood framed structure with stone masonry walls constructed in 1825. A new asphalt shingle roof was installed in 1999, including the reconstruction of the side porch roof. Regular maintenance is needed. The overall condition of the building is fair.

Mechanical

Existing Systems:

- a. The building is heated and cooled by zoned heat pumps. One heat pump serves each level of the building. This system replaced the old hot water radiator system, which was abandoned about 1993.

Reported Problems/Deficiencies:

- a. Toilet facilities in this building are not adequate for the number of people in the building.
- b. Heat pumps are inefficient.
- c. Flex duct from the two DX systems which heat and cool the building were destroyed by animals.

Recommendations:

- a. Add toilet facilities.
- b. Heat pumps should be replaced by AHUs that utilize gas heat with a ducted system.
- c. Recommend that ductwork be rigid metal duct and installed inside office rooms instead of crawl space.

Electrical

Existing Systems:

- a. The existing Panelboard is a 120/208 Volt - 3 Phase - 4 Wire, 600 Ampere Federal Pacific Panelboard (FPE) Type ECTB.

Reported Problems/Deficiencies:

- a. The existing Panelboard has reached the end of its life expectancy.

Recommendations:

- a. Replace the existing Panelboard with a new 120/208 Volt - 3 Phase - 4 Wire - 800 ampere Panelboard and provide sub-meter.
- b. Building wiring needs to be redone to allow capacity for modern equipment

Information Technology

Existing Systems:

- a. Three-quarter height data cabinet is served by 4 fibers (2CW/2CCW).
- b. The existing stackables were replaced with new Cisco network switches.

Reported Problems/ Deficiencies:

- a. None.

Recommendations:

- a. None

Photographs



Building Exterior



Stair

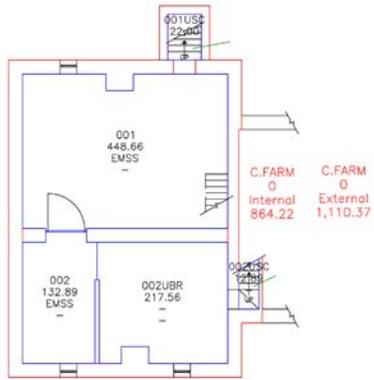


Office Dismantled

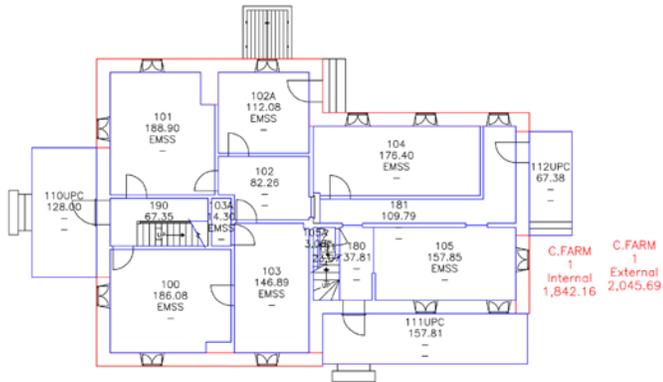


Office Dismantled

Floor Plans

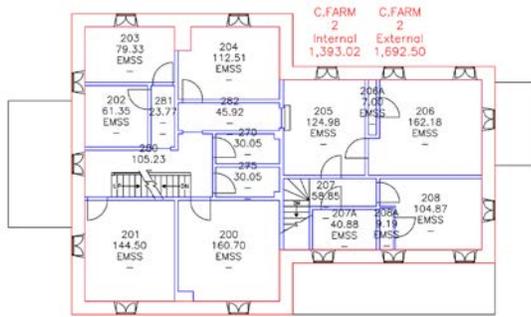


FARMHOUSE (J) - BASEMENT FLOOR PLAN
SCALE: 1/8" = 1'-0"

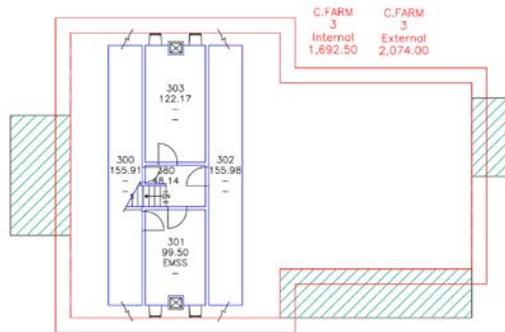


FARMHOUSE (J) - FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"





FARMHOUSE (J) - SECOND FLOOR PLAN



FARMHOUSE (J) - THIRD FLOOR PLAN



Student Services Center

Building Description

Building Designation	SSRV
Number of Floors	2
Net Assignable Square Feet	36,689
Gross Building Area - GSF	60,894
Net-to-Gross Efficiency	60.3%
Year Constructed	1972 (32,894 GSF)
Renovations	1987 Asbestos plaster abatement 1996, 2015 New roof 1997 Lighting upgrade 1997 Admissions/Financial Aid space planning 2000 Air intake location change, chilled water piping modifications 2003 Bursar/Records alterations, Bookstore upgrade 2011 Enrollment Services area altered and updated 2013 AHU coil Replacement
Additions	1988 (28,000 GSF)
Contains	Admissions, registration, financial aid, counseling, student records, career center, testing & assessment, faculty offices, kitchen/cafeteria/dining, bookstore, large meeting room.
General Condition	Fair
Adequacy of Space	Inadequate
Sprinkler System	Yes
Accessibility	Accessible

General / Architectural and Structural

The original building was built in the first expansion of the campus. The addition provided increased student admissions services, a cafeteria and kitchen.

The circulation in the building is somewhat confusing, especially between the two levels. The amount of space available for peak use times at student services has been improved due to the 2011 renovation. The irregular shape of the addition creates inefficient offices and clerical space. The bookstore and the offices for staff are small, with little room for expansion. The dining room has potential to be a pleasant space, but suffers from overcrowding and excessive noise. There is some outdoor space available for eating during warm weather.

The building provides many amenities for the student in one location. Many of the finishes have been upgraded. There is a projected deficit for food service which can be accommodated by a building expansion. This would expand food service and help to improve other student services in the building. The scope of this work should be increased to make necessary changes to the layout of student services. This is a future, 0-5 year project.

The building is a 2-story, steel framed structure with masonry walls constructed in 1972 with an addition constructed in 1988. A new roof was installed over the 1972 building in 2015. Various repairs and upgrades

are needed, especially on the lower level. Some repairs have been made; however, the need for maintenance will increase until the building is renovated. The overall condition of the building is fair.

Mechanical

Existing Systems:

- a. The building is conditioned by four (4) air handling units, two of which serve the original structure and two of which serve the 1988 Addition.
- b. The perimeter of the building is equipped with finned-tube radiation.
- c. The HVAC System is an overhead ducted system.
- d. The original building utilizes terminal reheat units, while the Addition utilizes VAV boxes.
- e. This building houses Boiler Room No. 3. This Boiler Room also serves Building H. Major equipment contained in Boiler Room No. 3 includes:
 - boiler, dual fuel, 250 HP, installed in .
 - One (1) primary chilled water pump, installed in 1998.
 - One (1) secondary chilled water pump, installed in 1972.
 - One (1) chilled water pump, installed in 1998.
 - One (1) chilled water pump, installed in 1992.
 - Eight (8) hot water circulating pumps, installed in 1972, 1987, and 1998.
- f. The outdoor air intakes for the building were relocated to the end of the building.

Reported Problems/Deficiencies

- a. Air handling units 1 and 2 are 43 years old and do not have heating coils in them to help temper discharge air temperature.
- b. Water valves throughout the building are not holding.
- c. Building controls are old and not functioning properly. The original building and the addition cannot be simultaneously controlled in a proper fashion.
- d. Sprinklers need to be modified when the building water service is changed to the new loop.
- e.

Recommendations:

- a. Recommend replacing air handling units and add variable speed controls. Replace ceiling induction units with variable air volume units.
- b. Replace all water valves throughout the building.
- c. Recommend replacing pneumatic controls with electronic control (DDC).
- d. Sprinkler modifications, to be coordinated with renovations and off-campus water system improvements.

Electrical

Existing Systems:

- a. The main electrical Switchboard is a Westinghouse 277/480 Volt - 3 Phase - 4 Wire, 1600 ampere Switchboard. The switchboard is the original equipment installed in 1972.

Reported Problems/Deficiencies:

- a. The main electrical switchboard has reached the end of its life expectancy.
- b. Most electrical panels are old and do not have any spare capacity.

Recommendations:

- a. Replace the main electrical switchboard with a new 2000 ampere 277/480 Volt – 3 phase – 4 wire switchboard with sub-meter.
- b. Replace panels to provide spare capacity for the future needs of the college.

Information Technology

Existing Systems:

- a. The existing switches have been replaced with new Cisco network switches.

Reported Problems/ Deficiencies:

- a. None.

Recommendations

- a. None.

Photographs



Building Exterior – Quad Side



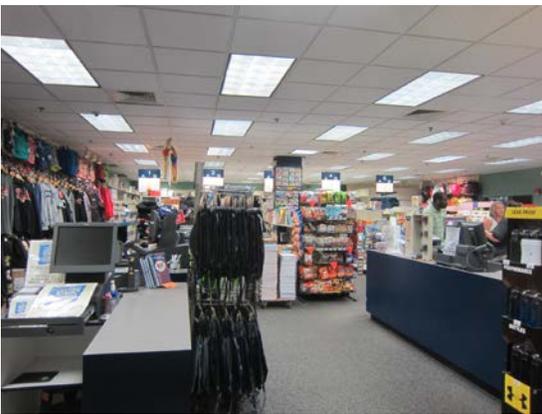
Building Exterior at Lower Level



Admissions/Enrollment Services



Dining

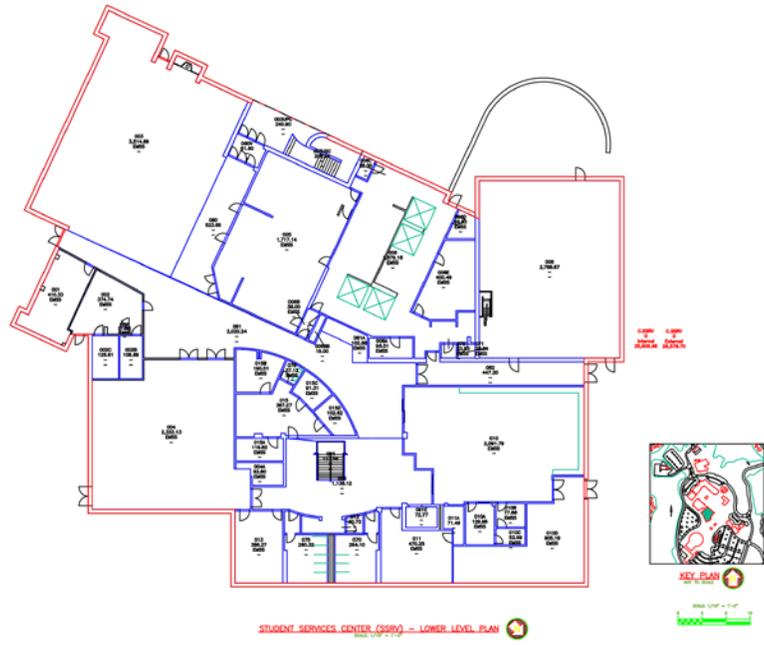


Bookstore

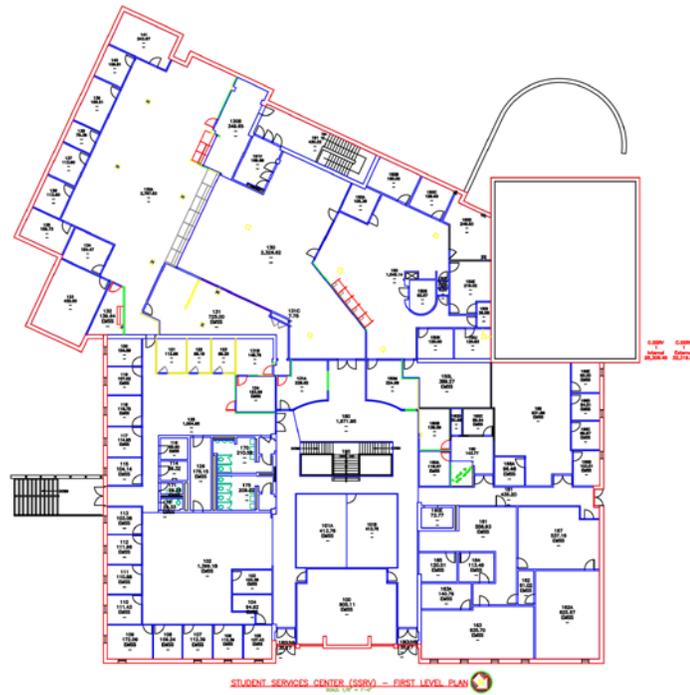


Enrollment Services

Floor Plans



Lower Level



Upper Level

Library

Building Description

Building Designation	LIBR
Number of Floors	3
Net Assignable Square Feet	49,246
Gross Building Area - GSF	78,000
Net-to-Gross Efficiency	63.1%
Year Constructed	2011 (U&O issued Oct 2010)
Renovations	None
Additions	None
Contains	Library functions, classrooms and class labs, office, student success center
General Condition	Excellent
Adequacy of Space	Appropriate and adequate
Sprinkler System	Fully sprinklered
Accessibility	Accessible

General / Architectural and Structural

Constructed during the previous facilities master plan, the library replaced an outdated and undersized facility. Located southwest of the traditional campus core, the library is at once accessible to the CCBC community and to visitors to the campus. The building is a three-story steel framed structure with exterior brick, curtain wall and storefront. Interior spaces are primarily dedicated to library functions supplemented by library support services. As the second-newest building on the Catonsville campus, the library is in excellent condition.

Mechanical

Existing Systems:

- a. 2 variable speed AHU's per floor on upper levels and 1 variable speed AHU for lower level. VAV's throughout as terminal units. All AHU's served w/ heating and chilled water from Central Utility Plant. Atrium smoke evacuation system installed. Building was commissioned and LEED Silver.
- b. Sanitary discharge is to gravity main; low flow plumbing fixtures installed.
- c. Full coverage automatic sprinkler system with fire pump; fire hydrants added to a secondary water main looping around this building off the 12" main campus loop; domestic pressure booster pump installed in the building.
- d. Building was outfitted with a condensing summer boiler after 2 summers of experience with no hot water from the central plant.

Reported Problems/Deficiencies:

- a. No problems reported

Recommendations:

- a. No recommendations at this time

Electrical

Existing Systems:

- a. Building served by a 1200 KVA transformer situated in an architectural stone surround NE of the building. Service enters building at a partial basement level via a concrete encased ductbank system.
- b. Emergency power provided by a pad mounted generator; systems powered include: fire pump and fire alarm system, emergency lighting, atrium smoke exhaust, powered doors, data closets, card access, and elevator.
- c. This building has a lightning protection system installed.
- d. Some lighting is fed through a panel that can be controlled by the campus BAS; other is on occupancy sensor.

Reported Problems/ Deficiencies:

- a. Seems like there are too many light fixtures on the security/night circuit.
- b. Some stacks have lighting always on.

Recommendations:

- a. Evaluate security lighting level for compliance with code-mandated minimum level and reduce accordingly.
- b. Install occupancy sensors on circuits supplying lighting to areas not always accessed by personnel.

Information Technology

Existing Systems:

- a. Data communication conduits in ductbank travel to the basement level of Tudor House and then go back to the computer center.
- b. Copper voice lines travel to the PBX room in the nearby BESS Building.
- c. Data closets in the building are stacked and equipped with switches and UPS devices; building is served by wireless antennae throughout.

Reported Problems/ Deficiencies:

- a. No problems reported.

Recommendations:

- a. No recommendations at this time

Photographs



Library Exterior



Open Circulation



Reference



Periodicals

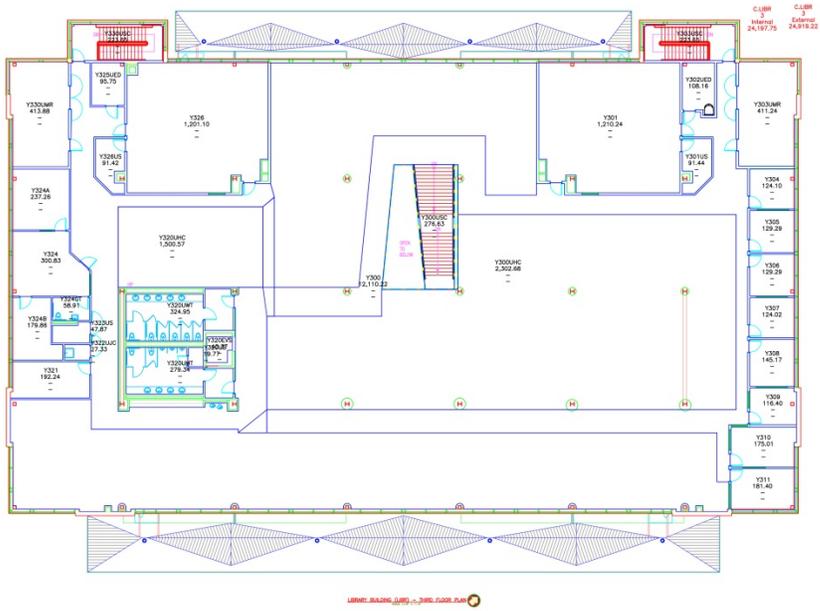


Check-out



Study

Floor Plans



Third Floor

Wellness and Athletics Center

Building Description

Building Designation	WELL
Number of Floors	2 plus office mezzanine
Net Assignable Square Feet	61,755
Gross Building Area - GSF	92,777
Net-to-Gross Efficiency	66.6%
Year Constructed	1972
Renovations	1994 Dome roof 1998 Synthetic gym floor 2002 Restroom ADA alterations 2003 Pool wall repair 2005 Elevator and lift addition 2005-06 Main Arena Restroom Renovations 2007 Convert L-116 from Office to Classroom 2008 Replaced 1-350 HP boiler with 2-50 HP CI sectional boilers 2009 Replaced several sections of indoor bleachers 2010 Locker room and pool major improvements 2013 Replaced pool balancing tank and filters 2013 Replaced emergency generator (serves 3 buildings now) 2013 installed domestic water booster pump 2013 Altered water service to new 12" water main 2014 Gym floor resurfaced 2015 Main gym HID lighting replaced with dimmable LED fixtures 2015 Exterior doors to main arena replaced
Additions	1976 Pool addition
Contains	Gym, pool, lockers, nautilus weights, fitness room, storage, offices for physical education department and coaching staff, wellness center, classrooms, and handball courts.
General Condition	Fair
Adequacy of Space	Adequate
Sprinkler System	None
Accessibility	Substantial

General / Architectural and Structural

This building was built in the first expansion of the campus. The dome roof announces the large space available for sporting events and large gatherings for the college and community. The pool is an important amenity, along with fitness rooms, for students and staff.

The building now has an elevator and a lift which together make the faculty offices on the upper level accessible. While the lockers and pool may be accessed directly from the exterior, they are now accessible to handicapped individuals from inside the building. Offices are crowded and there is no room for expansion on the existing mezzanine level.

Classrooms have been created from locker rooms and storage rooms on the lower level. They are small, poorly ventilated, and not air-conditioned. Roofing is high on the list of items to replace. Some exterior concrete stairs are chronic problem areas with at least one stair being closed to traffic while a repair scheme is worked out and executed.

Mechanical systems will need to be improved to provide air conditioning to more of the secondary spaces and simply to replace aging components. Humidity and ventilation control is very important in the pool to control decay of building materials. An elevator could also allow for expansion space in a mezzanine above the Nautilus room for office, classroom or storage. This is a future, long term project.

The repairs and upgrades recommended in the 2004 Facility Condition Assessment are numerous and extensive. Systemic upgrades appear to be feasible as individual, phased projects, which may also be limited to one part of the building at a time. The College recently completed renovation of the pool and locker areas, with some HVAC improvements to both spaces.

The building is a 2-story, concrete, masonry and steel structure with an office mezzanine, constructed in 1972. A new roof was installed over the dome in 1994. The overall condition of the building is fair, and a comprehensive renovation is in order.

Mechanical

Existing Systems:

- a. The building has its own boiler plant with two high-efficiency cast iron boilers, installed in 2008.
- b. A small portion of the building is air-conditioned, utilizing three direct expansion units.
- c. There are 13 AHUs in this building and all of them are original. Boilers generate steam and the coils in the AHUs are designed accordingly.
- d. The center arena cupola contains relief/ventilating dampers and louvers.

Reported Problems/Deficiencies:

- a. Many of the mechanical systems that provide services for the pool are reaching the point where they may require major retrofit or repairs in the future.
- b. There is no dehumidification in the pool area.
- c. HVAC systems are not properly zoned. Offices/Classrooms overheat because they are on the same zone as Locker Rooms (in fact they used to be part of the locker rooms).
- d. The DX units have a lot of age on them and should be replaced.
All AHUs and piping to them needs to be replaced and designed for hot water and not steam and also chilled water; then the building can be served from the Central Utility Plant
- e. The dampers in the center cupola are inoperable and need to be restored to functional status
- f. Building controls are many times non-responsive
- g. water valves in this building either are inoperable or do not hold
- h. water to site drinking fountains comes through this building; there are several problems:
 - pressure is inadequate
 - there is lead (Pb) detected in some fountains and so those have been taken out of service
 - possible inadequate soil cover over the lines serving athletic fields causing breaks in line
- i. There are no lavatory facilities at the stadium/playing fields area

Recommendations:

- a. Add dehumidification in the pool area with proper ventilation and heat recovery (designed, awaiting funding). Deterioration of building continues to worsen as the project awaits funding.

- b. Upgrade HVAC to provide proper zoning and control (designed, awaiting funding) to remove classrooms from locker room zone.
- c. Add full-coverage sprinkler system to building to comply with ISO guidelines for fire water supply quantity.
- d. Need to re-zone some of the HVAC so that units serve like functional areas.
- e. Replace DX units so that some spaces are at least minimally air-conditioned.
- f. Create major project to replace all AHUs and interconnecting piping and thus provide a/c to many of the spaces in this building.
- g. Repair/replace the dampers in the cupola and investigate adding a power ventilator atop the cupola to provide better draft flow.
- h. Replace all HVAC controls with DDC type.
- j. Replace all water valves in the building perhaps starting with major isolation valves to limit maintenance shutdown of the entire building for minor water system repairs.
- k. Eventually replace all water valves in the building as time and opportunity presents itself.
- l. Investigate and solve the problems associated with drinking water to the athletic fields; ideally:
 - connect to domestic booster pump outlet
 - run new piping inside the building
 - test pit water line; run new line with no water being trapped when line is drained for winter.

Electrical

Existing Systems:

- a. The existing Panelboard is located in Boiler Room L203UBR requires replacement.

Reported Problems/Deficiencies:

- a. Electric panels throughout the building are at capacity
- b. Panel and contactors for site lighting are old and problematic at times
- c. Motor control center needs to be replaced

Recommendations:

- a. Replace electric panels as funds and opportunity is available.
- b. Replace panelboard in boiler room and provide sub-meter for building service, replace motor control center.
- c. Replace panel and contactors serving all site lighting from this building.

Information Technology

Existing Systems:

- a. Room L201A contains one light duty rack served by 4 fibers (2CW/2CCW) of a 36 fiber cable.
- b. Room L300 UMR contains one light duty rack served by 4 fibers (2CW/2CCW), of a 36 fiber cable.
- c. The existing switches have been replaced with new Cisco network switches

Reported Problems/ Deficiencies:

- a. Data Rooms require heavy duty data racks.

Recommendations:

- a. Replace existing data racks with heavy duty data racks.

Photographs



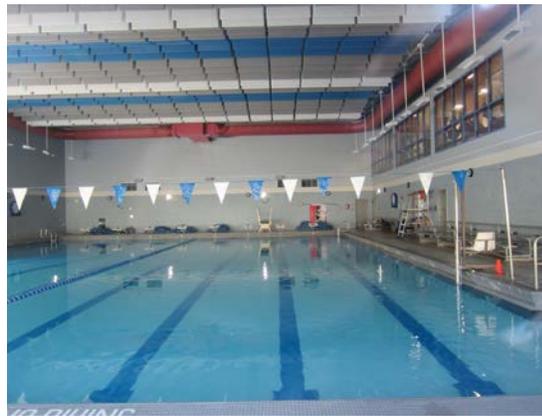
Building Exterior



Building Exterior



Gymnasium



Pool

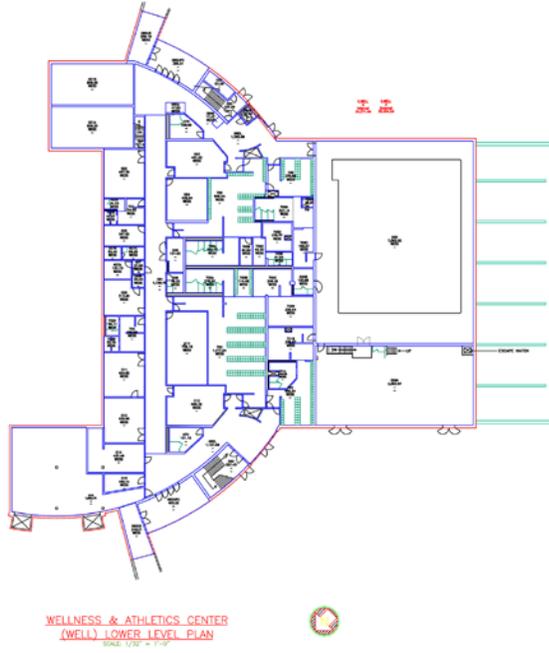


Fitness Room

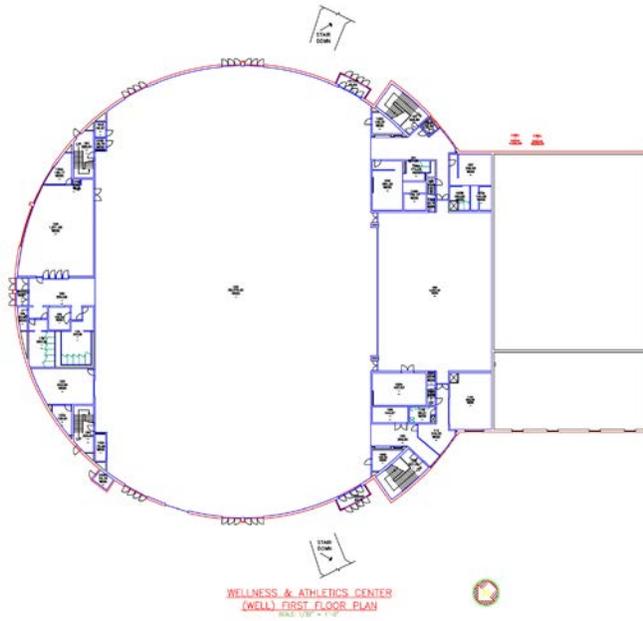


Classroom

Floor Plans



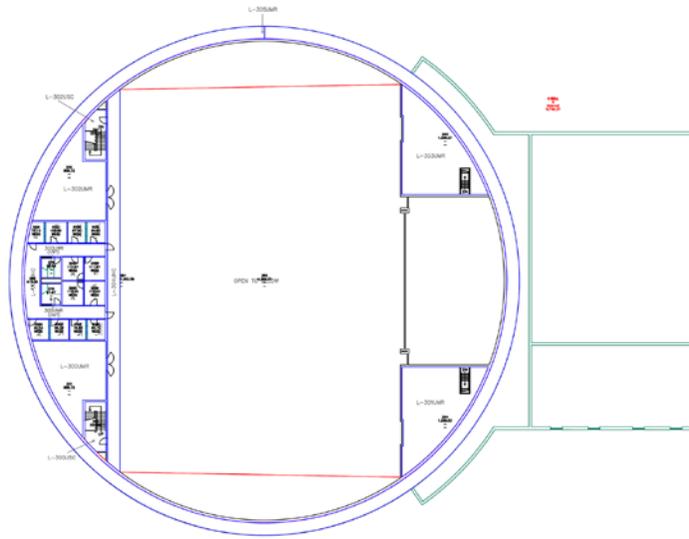
Lower Level



First Floor

February, 2016

Floor Plans



PHYSICAL DEVELOPMENT CENTER (L) - THIRD FLOOR PLAN
(UPPER LEVEL PLAN)
SCALE: 1/8" = 1'-0"

Second Floor

Tudor House

Building Description

Building Designation	TUDR
Number of Floors	2
Net Assignable Square Feet	634
Gross Building Area - GSF	1,756
Net-to-Gross Efficiency	36.1%
Year Constructed	1852
Renovations	1989 New roof shingles 2013 Replaced windows 2013 Replaced rotted flooring and structural supports 2013 Corrected gutter/downspout/flashing/drainage issues around building 2013 Renovated space for some Instr Tech staff prior to start of MASH construction
Additions	None
Contains	Offices and Storage for Instructional Technology staff (AV)
General Condition	Fair
Adequacy of Space	Adequate, but should be viewed in overall campus space needs
Sprinkler System	None
Accessibility	Not accessible

General / Architectural and Structural

This is an attractive building due to its exterior Tudor style, which is in good condition. It was part of the original Hilton Estate and is historic. It is not compatible with the general style of the main campus buildings, but it does serve as a pleasant counter point. The interior is functional, but the second floor is underutilized. This is due to a lack of exit capacity, which prevents anything but storage above the first floor.

This historically significant building needs an additional exit from the second floor to allow for more office space. This building, along with the nearby Stone Cottage and stone ruins, are appropriate to address as a bundled improvement project. Additional funding from other sources would help this area become the centerpiece for a new courtyard which should be developed on the south side of the existing wall. Converting the stone ruins to a landscaped exterior space would create an ideal gathering place adjacent to an expanded food service area in Student Services. This is a future, long term project.

The building is a 2-story, wood framed structure with stone masonry walls constructed in 1852 and renovated in 1989. Regular maintenance, as well as stucco repair is needed. The overall condition of the building is fair.

Mechanical

Existing Systems:

- a. The building is heated by a gas-fired furnace and hot water radiators.
- b. The building has no central air conditioning.

Reported Problems:

- a. None.

Recommendations:

- a. None.

Electrical

Existing Systems:

- a. The existing Panelboard is a 120/208 Volt - 3 Phase - 4 Wire, 225 ampere Panelboard manufactured by Westinghouse, Model #1561-11265.

Reported Problems:

- a. None reported.

Recommendations:

- a. None.

Information Technology

Existing Systems:

- a. The existing switch has been replaced with a new Cisco network switch.

Reported Problems/ Deficiencies:

None.

Recommendations

None.

Photographs



Building Exterior

Facilities Operations Building

Building Description

Building Designation	OPER
Number of Floors	1
Net Assignable Square Feet	5,677
Gross Building Area - GSF	6,265
Net-to-Gross Efficiency	90.6%
Year Constructed	1976
Renovations	1998 Replaced building boiler 1999 New roof 2005 Shed in style of a pole barn constructed for vehicle storage 2010 Low pressure sewage ejector pump system installed Various years – U/G storage tanks upgraded or replaced
Additions	None
Contains	Maintenance offices, shops and storage Trailers: receiving office, misc. storage
General Condition	Fair
Adequacy of Space	Inadequate for central services needs
Sprinkler System	Yes
Accessibility	Partial

General / Architectural and Structural

This facility has reached critical mass with every available space filled including the metal mezzanines added to expand the building capacity. The receiving office is in an adjacent temporary office. Numerous storage trailers in varying stages of decay are located on the perimeter of the service yard to house surplus items. The loading dock overhang needs to be expanded to provide more cover.

There is a projected need for storage and shop space which demonstrates justification for a building addition for this facility. A new structure to provide storage for supplies and vehicles would help eliminate the wide variety of trailers that exist in the service yard. Despite the pressing need for new space, this is a long term project.

The main building is a 1-story, steel framed structure with masonry walls constructed in 1976. A new roof was installed in 1999. Some out-buildings are metal-clad, wood-framed structures. There are cracks in the exterior walls which appear to be the result of settlement and/or expansion. The overall condition of the building is fair.

This facility also includes nearby fueling stations and fuel storage tanks; some are above ground while gasoline is currently below ground. The college is planning to remove the u/g gasoline tank and replace it with an above ground tank and containment basin. Also near the building are open storage cribs for road salt that should be covered to mitigate runoff drainage contamination.

Mechanical

Existing Systems

- a. The 1998 Weil McLain boiler provides hot water to the mechanical and HVAC Systems which are reported to be in good working order.
- b. 10,000 gallon underground gas tank

Reported Problems/Deficiencies:

- a. This building is heated by oil.
- b. The Weil McLain boiler is starting to cause problems and generally being unreliable.

Recommendations:

- a. Consideration should be given to extending gas service to the building to replace the oil heat.
- b. Replace the Weil McLain boiler with a duplex boiler arrangement for improved reliability or consider installing an inexpensive HWS & HWR line set to the building from a central heating manhole nearby.

Electrical

Existing Systems

- a. The existing electrical service is a main service switch, which sub feeds three loads. Panelboard A is a 120/208 Volt - 3 Phase - 4 Wire - 200 ampere Square D Model 44-53310-2A Panelboard. Panelboard B is a 120/208 Volt - 3 Phase - 4 Wire- 200 ampere, Square D Model 44-53310-2B. The trailer service is served by a 240 Volt, 225 ampere Cutler Hammer unit circuit breaker.

Reported Problems/Deficiencies:

- a. Fire alarm system does not comply with ADA.
- b. Electric panels are full and original to the building

Recommendations:

- a. Upgrade existing fire alarm system in accordance with latest NFPA (National Fire Protection Association) codes. Reinstall existing fire alarm manual pull stations with mounting heights in accordance with latest ADA requirements.
- b. Replace panels with larger ones to provide spare capacity especially in shop areas.

Information Technology

Existing Systems:

- a. The existing device has been replaced with new Cisco network device.

Reported Problems/ Deficiencies:

- a. None.

Recommendations

- a. None.

Photographs



View of Compound



Building Exterior



Office Interior



Vehicle/Equipment Storage

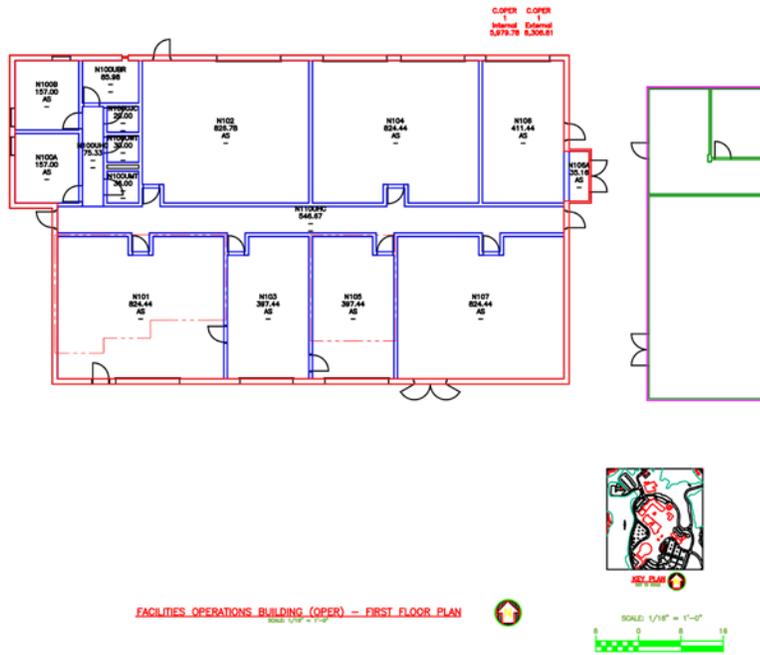


Small Vehicle Maintenance Shop

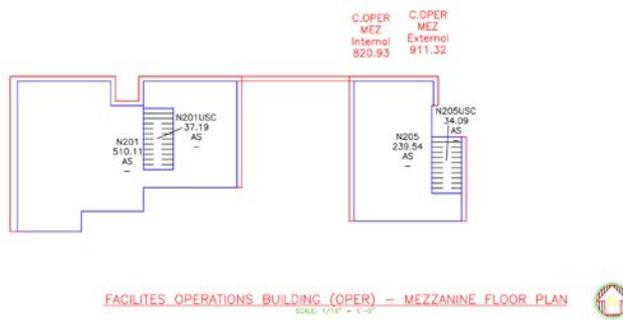


Storage Bay

Floor Plans



First Floor



Mezzanine

Stone Cottage

Building Description

Building Designation	SCOT
Number of Floors	1 with basement
Net Assignable Square Feet	1,280
Gross Building Area - GSF	1,838
Net-to-Gross Efficiency	69.6%
Year Constructed	1853
Renovations	1987 Moved to present site 1999 New roof installed 2013 Abated lead paint and asbestos hazmats 2014 Replaced windows and exterior doors
Additions	None
Contains	N/A
General Condition	Poor
Adequacy of Space	Adequate, but should be viewed in overall campus space needs
Sprinkler System	None
Accessibility	Not accessible

General / Architectural and Structural

This building was relocated to accommodate the addition to Student Services. It was part of the original Knapp Estate; however, it is not listed by either the federal or Maryland historic preservation organizations. The building envelope needs to be repaired to prevent its decay from neglect. The interior needs to be completed including all plumbing, electric and mechanical services.

The building interior should be renovated with a proposed use as meeting space/classroom for students, faculty or the community. Its location may suggest a programmatic connection with the library and, further, would help to anchor the "historic district" on the south side of the campus. This is a future, long term project and should be bundled with the Tudor House and stone ruins / historic garden area as one project.

The building is a 2-story, wood framed structure with stone masonry walls, constructed in 1853. The exterior stone walls are in unsatisfactory condition with numerous cracks and open mortar joints. All cracks and loose mortar should be raked out and repointed. The exterior wood needs to be painted and/or replaced. The wood railings at the porch and areaway wall need to be removed and replaced to meet current codes. Regular maintenance is needed. The overall condition of the building is poor.

Mechanical

Existing Systems:

- a. Building is heated by an electric-fired furnace.
- b. Building is cooled by split system DX units.

Reported Problems/Deficiencies:

- a. Electric heat is expensive.

Recommendations:

- a. Consideration should be given to extending gas to the building to replace electric heat with gas heat in the future.

Electrical

Existing Systems:

- a. No telephone service is serving this building.

Reported Problems/Deficiencies:

- a. None reported.

Recommendations:

- a. None at this time.

Information Technology

Existing Systems:

- a. No Information Technology service is serving this building.

Reported Problems/ Deficiencies:

- a. None reported.

Recommendations:

- a. None.

Photograph



Building Exterior

Floor Plan

(Floor plan is not available)

Center for the Arts

Building Description

Building Designation	ARTS
Number of Floors	3
Net Assignable Square Feet	35,382
Gross Building Area - GSF	54,560
Net-to-Gross Efficiency	64.8%
Year Constructed	1978
Renovations	1997 Lighting upgrade 2004 New roof 2008 Renovations for art studio, office, ceramics annex, "Q lounge", ceilings, lighting. 2009 ADA restrooms, finishes, ramp & parking 2011 Asbestos abatement of old boiler breeching and heat exchanger 2011 Demolished boiler and breeching 2014 Restroom renovations lower level 2014 Reworked Theatre lighting system and necessary electrical infrastructure to support same
Additions	1997 Art gallery expansion
Contains	Theater, offices and classrooms for performing and visual arts, art gallery
General Condition	Good
Adequacy of Space	Adequate for performing and visual arts programs, except for theater back-of-house support space
Sprinkler System	Partial, Theater and support
Accessibility	Accessible

General / Architectural and Structural

Although known as the Humanities Building, this building is much more an arts building with 8-10 classrooms available for instruction. An unusual geometry and definition of spaces still tends to allow usable room layouts. The backstage has insufficient space for storing and building stage sets, with a storage trailer being required outside. The sculpture and clay studios also have outside space in a new steel-framed metal siding structure. The dividing wall in the theater seating provides flexibility for breakout space behind the seating.

This building is generally in good condition with only minor issues to be addressed. A 2009 partial renovation – for instructional space and offices – has greatly improved the character of the building. Storage for stage props should be addressed in a more permanent structure. Necessary mechanical revisions have been completed to connect with the new power plant.

The building is a 3-story, steel framed structure with masonry walls constructed in 1978. A new roof was installed in 2004. There are cracks in the interior masonry walls at the corners of the stair towers. The cracks should be raked out and repointed.

Mechanical

Existing Systems:

- a. This building houses Boiler Room No. 7. (Equipment is not active, building is connected to the Central plant). This Boiler Room serves only Building Q. Major equipment contained in Boiler Room No. 7 includes:
 - 1) One (1) chilled water pump, installed in 1997.
 - 2) Two (2) hot water circulating pumps, installed in 1977.
- b. Heating and cooling are provided by fourteen (14) air handling units with some terminal reheat units. More detail follows:
 - 1) AHUs #1, 2, 3, 4, and 5 are old and original to the building.
 - 2) AHUs #6, 7, 8, 9 and 10 are located in the ceiling on the first floor.
 - 3) AHUs #11 and 12 are located in the ceilings of two storerooms on the lower level.
- c. Art classrooms are served by exhaust fans.

Reported Problems/Deficiencies:

- a. There are problems cooling the Q-209 complex which was converted from Offices to a Computer Lab.
- b. AHUs #1-5 are unreliable with coil and condensate pan problems and are on pneumatic controls
- c. AHUs #6, 7, 8, 9 and 10 which are located in the ceiling on the first floor are almost unserviceable.
- d. AHUs #11-12 cannot be serviced and valve leakage has rendered those storerooms unusable for storing musical instruments and music sheets.
- e. Art room exhaust fans are deteriorated.

Recommendations:

- a. Replace AHUs #1-5 and provide with VFDs and DDC controls.
- b. AHUs #6-10 should be replaced with a larger unit installed in the old boiler room space.
- c. AHUs #11-12 should be added to the new AHU (above) feeding first floor units.
- d. Replace all exhaust fans not already replaced in last 5 years.
- e. Modify sprinkler system when building is connected to a new fire main. Consider sharing a fire pump with a nearby building.

Electrical

Existing Systems:

- a. The Main Switchboard, located in the Boiler Room, is a 277/480 Volt - 3 Phase - 4 wire - 1600 ampere Switchboard manufactured by Westinghouse, Type CDP.

Reported Problems/Deficiencies:

- a. The Main Switchboard has reached the end of its life expectancy.
- b. Almost all electric panels are full and original to building.

Recommendations:

- a. Replace the existing Main Switchboard with a new 277/480 Volt – 3 Phase – 4 wire 2000 ampere Switchboard. (service is oversized since HVAC is supplied from Central plant) and provide integral sub-meter
- b. Upgrade existing fire alarm system in accordance with latest NFPA (National Fire Protection Association) codes. Reinstall existing fire alarm manual pull stations with mounting heights in accordance with latest ADA requirements.
- c. Replace electric panels with new units of a greater capacity.
- d. LED lighting should be considered for replacement of older fixtures with flexible lighting controls compliant with current energy codes, as funding becomes available.

Information Technology

Existing Systems:

- a. The existing switches have been replaced with new Cisco network switches.

Reported Problems/ Deficiencies:

- a. None Reported.

Recommendations:

- a. None.

Photographs



Building Exterior



Office



Art Gallery



Multi-Purpose Space



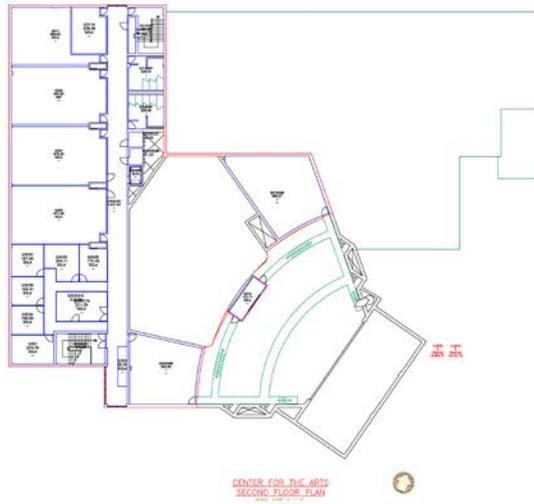
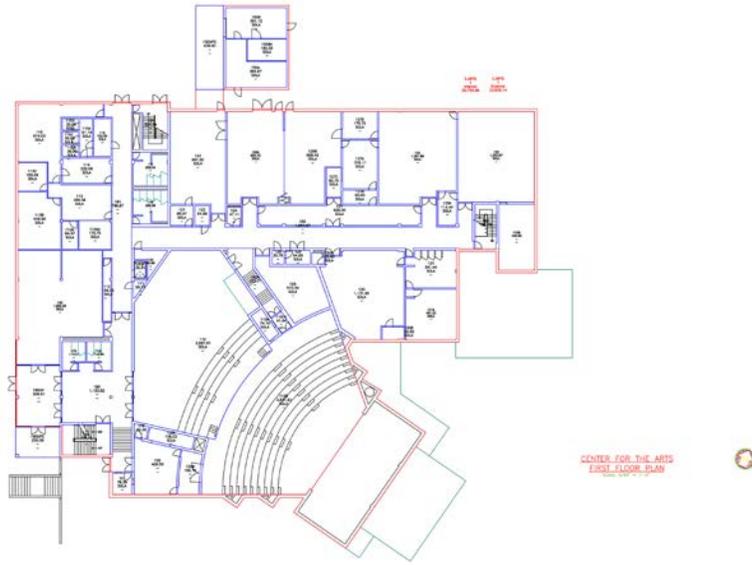
Classroom



Studio

Floor Plans





Transportation Technology Center

Building Description

Building Designation	TRAN
Number of Floors	2
Net Assignable Square Feet	31,809
Gross Building Area - GSF	38,213
Net-to-Gross Efficiency	83.2%
Year Constructed	1988
Renovations	1999 Rooftop units replaced on wings, machine lab converted to auto lab 2010 Rooftop unit replaced on central building, corridor finishes renewed.
Additions	2013 Addition to automotive bays and classroom 2013 Generator set installed between this and WELL and serves both buildings plus CSRV building 2013 Fire pump and small building constructed adjacent to generator
Contains	Office, classrooms, computer classrooms for OTC/Bookkeeping; offices, classrooms and labs for Vocational Technology (automotive)
General Condition	Good, except for classrooms and offices
Adequacy of Space	Inadequate for automotive program growth
Sprinkler System	Partial: ordinary hazard, quick response automatic sprinkler system installed in one-story laboratory wings
Accessibility	Partial

General / Architectural and Structural

This building is stylistically different from the rest of the campus. However, the metal clad building is compatible with its primary function for teaching automotive technology.

The automotive classes expanded into the space vacated by the machine tool classrooms which moved to the Tech Arts building. Additional space should also be made available for planned automotive program expansion. The building's location is appropriate for the automotive training occurring in the building; however, the location is not convenient for students also needing to attend classes in the academic core area. Compound space for vehicle storage is very limited. The computer classrooms are functional. Faculty and clerical offices are located in this building for availability to students but are in need of upgrade.

The building appears to have minimal insulation which will affect the mechanical services needed for computer classrooms and the specialized automotive classrooms.

The building is a 2-story / high bay single story, pre-engineered steel framed structure with limited EIFS and metal walls constructed in 1988. The addition is of similar metal wall and roof materials. The overall condition of the building is good. A second addition is recommended to occur in the next five years, to provide additional automotive bay space.

Mechanical

Existing Systems:

- a. The heating and cooling for the central core of the building is provided by a packaged unit serving VAV boxes with electric heat. The College is in the process of switching units over to gas heat.
- b. The two wings are served by gas-fired packaged rooftop units, which were replaced in 1999.
- c. Electric baseboard heat is also utilized.
- d. Five small automotive classrooms are served by Carrier split system air conditioners.

Reported Problems/Deficiencies:

- a. Currently, the large automotive classroom and machine tooling labs are not air conditioned.
- b. Central core package unit cannot use gas until variable air volume units in rooms are replaced and system redesigned.
- c. The building has experienced numerous mechanical problems and leaks. The painting of the ductwork has also performed poorly and was corrected in 2010.

Recommendations:

- a. Air condition the five (5) automotive classrooms.
- b. Recommend new variable air volume units served from a new rooftop air handling unit.

Electrical

Existing Systems:

- a. The existing double-width Panelboard B is a 120/208 Volt - 3 Phase - 4 Wire, 400 ampere panel manufactured by General Electric, Type NLAB.

Reported Problems/Deficiencies:

- a. Fire alarm does not comply with ADA.

Recommendations:

- a. Upgrade existing fire alarm system in accordance with latest NFPA (National Fire Protection Association) codes. Reinstall existing fire alarm manual pull stations with mounting heights in accordance with latest ADA requirements.
- b. Provide sub-meter for electric service to building.

Information Technology

Existing Systems:

- a. The existing switch has been replaced with new Cisco network switch.

Reported Problems/ Deficiencies:

None.

Recommendations:

None.at this time

Photographs



Building Exterior



Building Exterior with Recent Addition



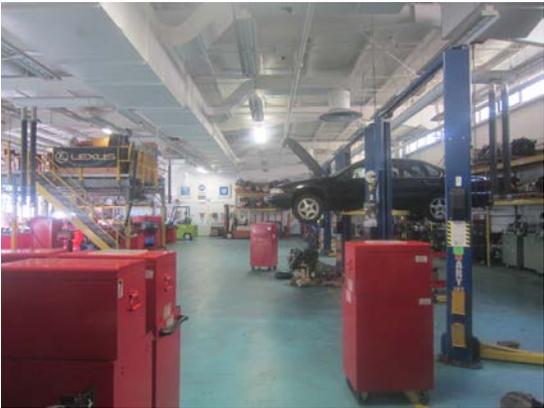
Office Space



Classroom

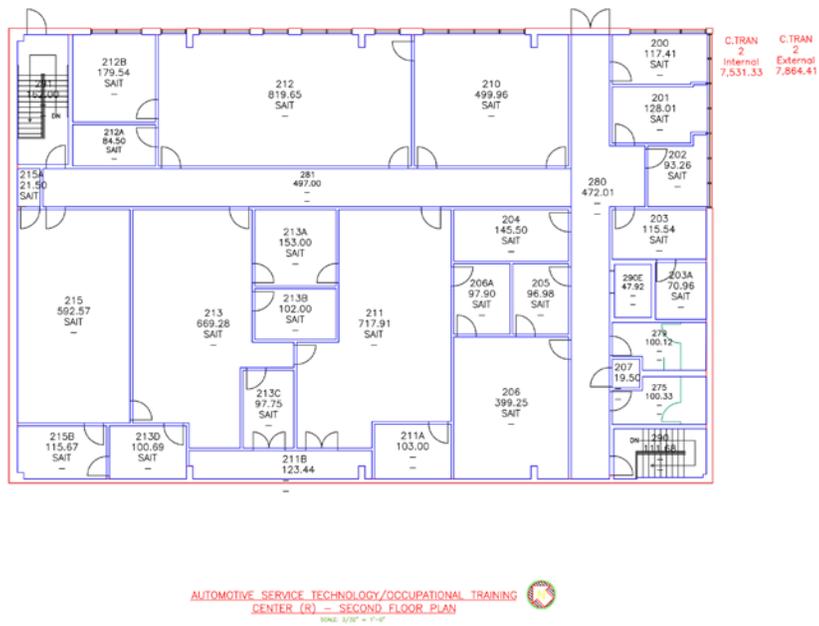
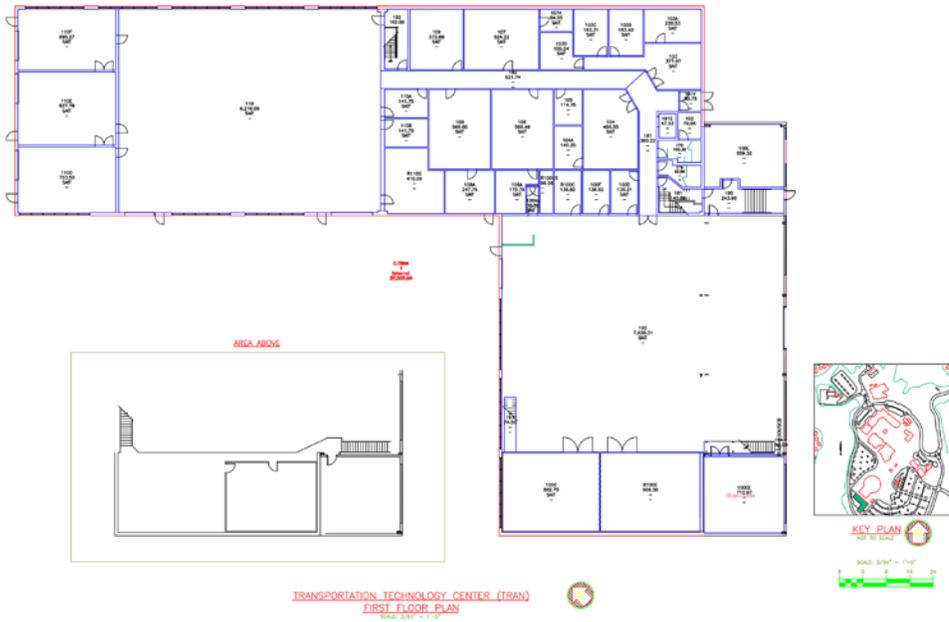


Automotive Bay



Automotive Bay

Floor Plans



Children’s Learning Center

Building Description

Building Designation	CHLD
Number of Floors	1
Net Assignable Square Feet	4,440
Gross Building Area - GSF	5,563
Net-to-Gross Efficiency	79.8%
Year Constructed	1992
Renovations	None
Additions	None
Contains	Child care center and early childhood development program
General Condition	Good
Adequacy of Space	Adequate for current programs
Sprinkler System	None
Accessibility	Accessible

General / Architectural and Structural

This building uses masonry detailing which is stylistically different than the rest of the campus to identify its function as a child care center; however, its remote location does not place it in proximity to the more traditional buildings at the campus core. The relatively young age of the building suggests that the insulation in the envelope is adequate. Storage space and break areas for the staff are too small. All spaces are fully occupied by the children enrolled in the programs.

The projected growth of this campus logically suggests that this facility needs to grow as well, in order to meet the demands for child care of an expanding population. Therefore, an additional classroom should be planned for with increased support space and storage for the staff. This is a future, long term project.

The roof on this building is an asphalt BUR and should be replaced in 2-3 years.

The building is a 1-story, steel framed structure with masonry and metal-stud walls constructed in 1992. The overall condition of the building is good.

Mechanical

Existing Systems:

- a. The building is heated and cooled by a gas-fired, packaged roof-top unit located on grade and ducted into the building. Unit was replaced in 2007 and now provides sufficient cooling.

Reported Problems/Deficiencies:

- a. None reported.

Recommendations:

- a. None reported.

Electrical

Existing Systems:

- a. The existing load center RP is a Cutler Hammer 120/208 Volt - 3 Phase - 200 ampere load center, Model #CC3200.
- b. Lighting systems utilize primarily T8 lamps.

Reported Problems/Deficiencies

- a. None reported.

Recommendations:

- a. LED lighting should be considered with flexible lighting controls compliant with current energy codes, as funding becomes available.

Information Technology

Existing Systems:

- a. The existing switch has been replaced with a new Cisco network switch.

Reported Problems/ Deficiencies:

- a. No spare capacity.

Recommendations

- a. Provide additional patch panels and fiber optic cable to provide additional spare capacity.

Photographs



Building Exterior



Playground



Reception Area



Classroom

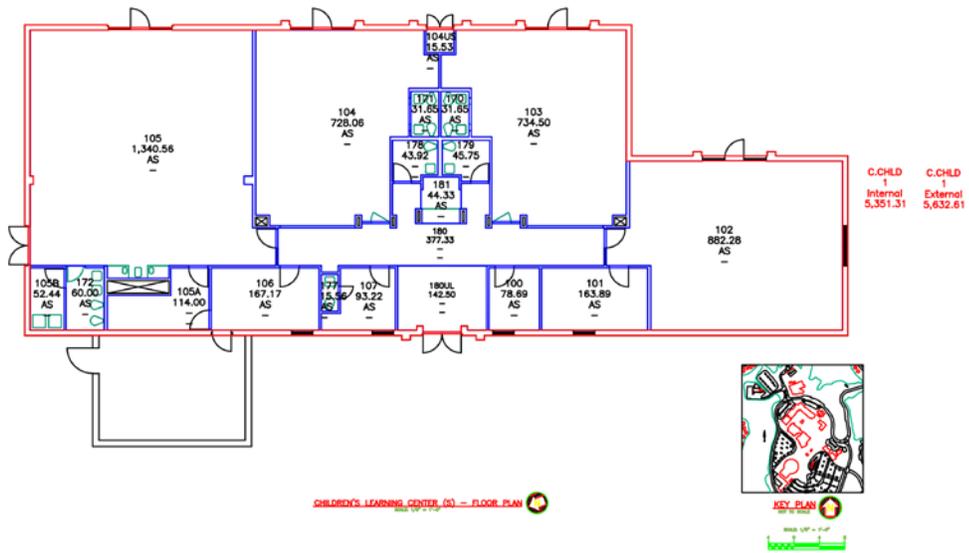


Classroom



Classroom

Floor Plan



Continuing Education

Building Description

Building Designation	CNED
Number of Floors	1
Net Assignable Square Feet	4,614
Gross Building Area - GSF	7,140
Net-to-Gross Efficiency	64.6%
Year Constructed	1994
Renovations	None
Additions	None
Contains	Continuing education faculty offices and conference room
General Condition	Good
Adequacy of Space	Inadequate for current needs
Sprinkler System	None
Accessibility	Accessible

General / Architectural and Structural

The Administrative Annex is a very utilitarian building built to solve an immediate demand for office space. It is a modular building with simple residential scale and detailing, different in character from other campus buildings. The mechanical and electrical systems are in good working order. The building envelope appears to meet current insulation standards.

The building is full and in need of expansion to meet staffing and storage space needs. It houses the offices of the Continuing Education department, serving most of the space needs of the department ; additional space is needed for office and records storage` .

The building is a 1-story, modular structure with EIFS (Dryvit-type) exterior, constructed in 1994. The overall condition of the building is good.

Mechanical

Existing Systems:

- a. The building is heated and cooled by five (5) electric heat pumps.

Reported Problems/Deficiencies:

- a. The five (5) heat pumps are now 21 years old and should be slated for replacement with more efficient units. This is more of a scheduled item, as there are no mechanical problems that have been reported.

Recommendations:

- a. Replace the five (5) heat pump units according to current code and include outdoor heat exchanger in the scheme.

Electrical

Existing Systems:

- a. There are four existing Panelboards: A, B, C, and D. Panelboard "A" is 120/208 Volt - 3 Phase - 4 Wire, 200 ampere panelboard manufactured by Cutler Hammer, Model CHH3200.
- b. Lighting systems utilize primarily T8 fluorescent lamps.

Reported Problems/Deficiencies:

- a. None reported.

Recommendations:

- a. LED lighting should be considered with flexible lighting controls compliant with current energy codes, as funding becomes available.

Information Technology

Existing Systems:

- a. The existing switch has been replaced with a new Cisco network switch.

Reported Problems/ Deficiencies:

- a. None reported.

Recommendations:

- a. None.

Photographs



Building Exterior



Open Office Area

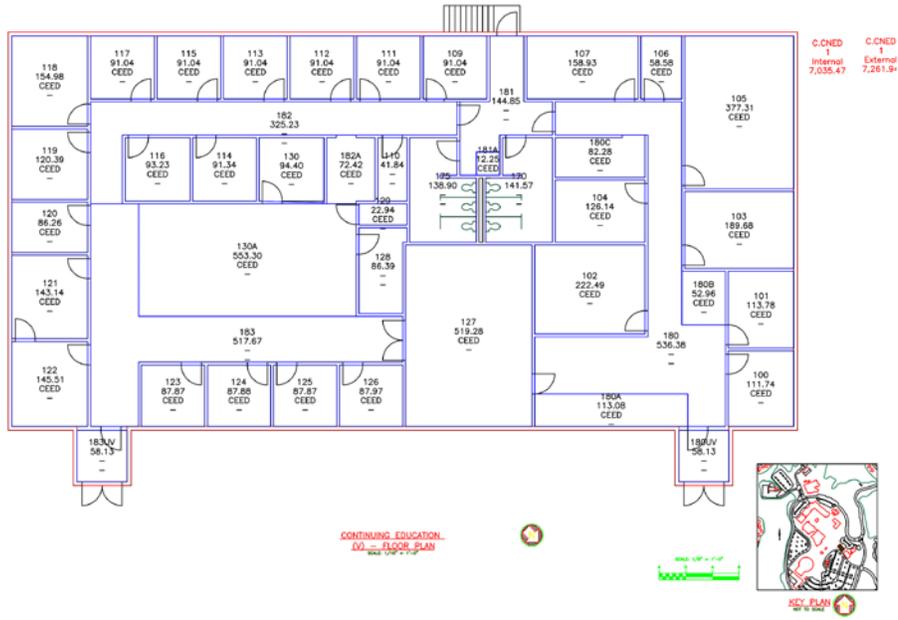


Open Office Area



Passage

Floor Plan



College Services Center

Building Description

Building Designation	CSRV
Number of Floors	2
Net Assignable Square Feet	7,261
Gross Building Area - GSF	11,750
Net-to-Gross Efficiency	61.8%
Year Constructed	2005
Renovations	2013 Added emergency power to building for Public Safety and Facilities Management areas to serve as a command center in crisis situations (Unit also serves TRAN and WELL)
Additions	None
Contains	Office Space for Facilities Maintenance, Printing, Public Relations, and Public Safety
General Condition	Excellent
Adequacy of Space	Adequate for current needs
Sprinkler System	Sprinklered
Accessibility	Accessible

General / Architectural and Structural

Constructed to meet growing departmental office needs, this pre-engineered building houses office-type space. Located between the gym and automotive tech buildings, Building W is remote from the main campus core, but this is not problematic given the functions housed inside. The architecture is not compatible with most other campus buildings but, given its location, is not in conflict with them

Mechanical

Boiler is working but has experienced problems.
 AHU on upper level is above ceiling and difficult to service
 Other systems are operating satisfactorily.

Recommendations:

Options: Replace boiler; add a 2nd boiler in an expanded mechanical room; connect to Central heating Loop
 For upper level AHU – consider creating an AHU space on the 2nd level by eliminating some other space.

Electrical

Systems are operating satisfactorily.

Information Technology

Systems are operating satisfactorily.

Photographs



Building Exterior



Open Office Area

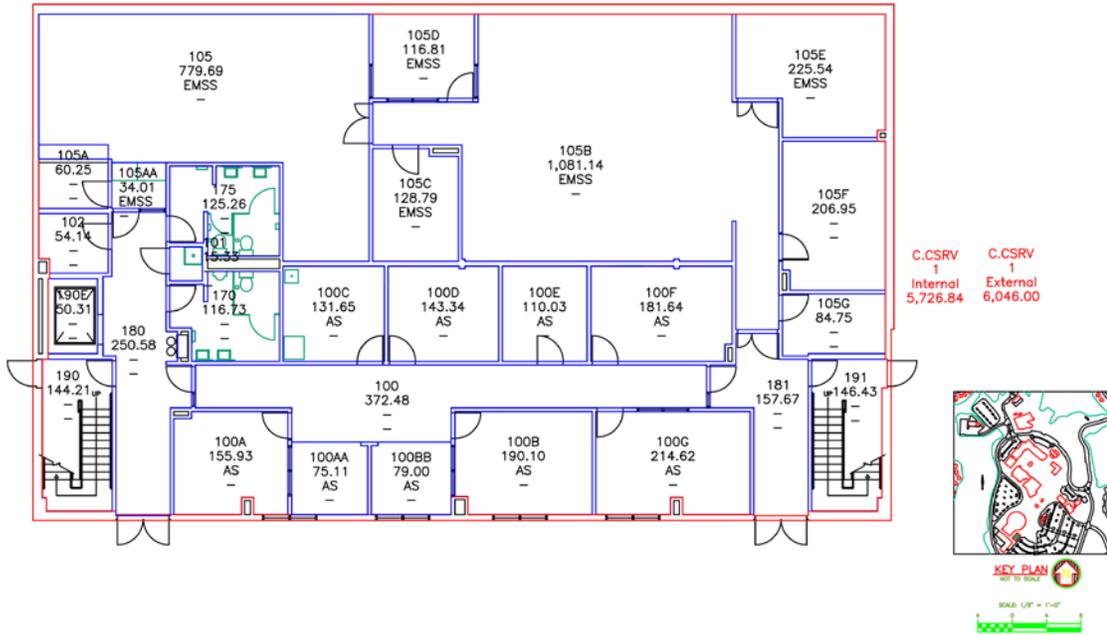


Office

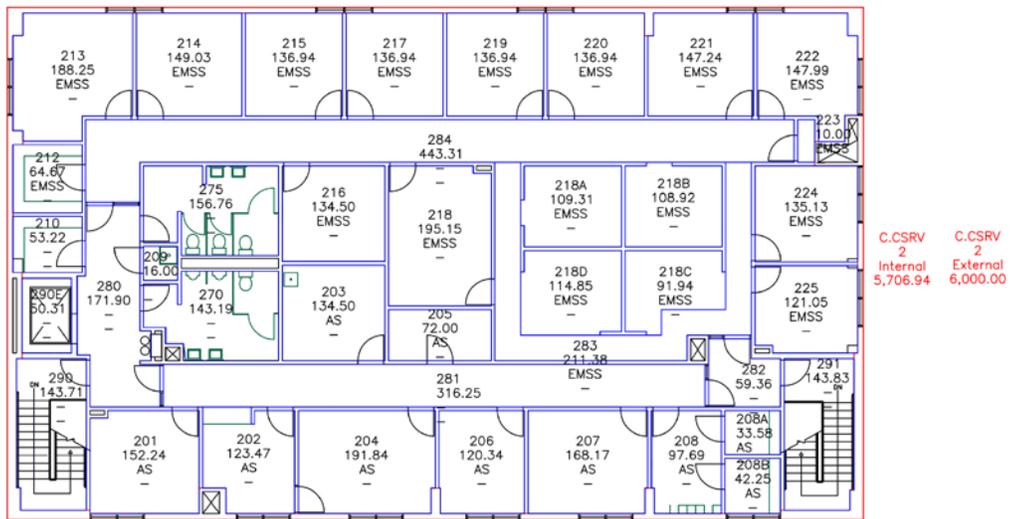


Print Room

Floor Plans



COLLEGE SERVICES CENTER (W) – FIRST FLOOR PLAN



PRINTSHOP/PUBLIC SAFETY BUILDING (W) – SECOND FLOOR PLAN

CAMPUS-WIDE SYSTEMS

ELECTRICAL

Existing Systems & Reported Problems/Deficiencies:

- a. The existing campus site lighting system is very old and has reached the end of its life expectancy, although newer LED site lighting has been installed around the Math and Science Building.
- b. All existing site lighting branch circuits contain direct burial conductors and are not installed in conduit. Branch circuits are constantly cut by landscape workers which requires repair.
- c. Although the parking lots and building exteriors are provided with exterior lighting, the pathways or pedestrian sidewalks are not illuminated.
- d. The central "Quad" area of the campus has the poorest condition and quality of site lighting.
- e. There is an existing emergency call system at the campus. The system performs well and needs no attention at this time.
- f. A second BGE primary feeder and tie switch has been installed on the campus. The existing primary sectionalizing switchgear is original to the campus and, despite recent repairs, should be replaced.
- g. Primary campus feeders have been replaced piecemeal over time. Replacement cable sections do not always match the existing.

Recommendations:

- a. The existing campus site lighting system should be replaced with new parking lot and pedestrian site lighting consisting of pole mounted lighting fixtures to serve the parking lots and attractive luminaries on 12- foot poles to serve the pedestrian pathways. This would improve the appearance of the campus at night and would provide a more secure campus for all faculty and students who attend evening courses.
- b. The new site and pedestrian lighting system should be provided with branch circuit wiring in PVC conduit to eliminate the maintenance and unreliability of direct burial conductors.
- c. Branch circuits should be divided up on the campus so two levels of illumination can be provided so half of the site lighting fixtures can be de-energized at off peak hours of operation to save energy.
- d. The new site and pedestrian lighting system should be provided with a state of the art automatic lighting control system to eliminate unreliable photocells and manual operation. Today's systems can be equipped to provide off site lighting control utilizing the internet.
- e. The primary sectionalizing switchgear is recommended to be replaced, preferably within a building, and configured for future expansion.
- e. Maintenance testing of campus primary feeders and replacement of any defective cabling is recommended. A complete replacement of any defective feeder is recommended.
- f. IR scanning of pad-mount transformers is recommended.

INFORMATION TECHNOLOGY

Existing Systems & Reported Problems/Deficiencies:

None.

Recommendations:

None.

SITE: INFRASTRUCTURE

OVERVIEW

CCBC Catonsville is located at 800 South Rolling Road in southwestern Baltimore County just outside the Baltimore Beltway I-695 off the Wilkens Avenue exit. The campus is bounded by Rolling Road to the north, residential neighborhoods to the east and south and the Patapsco State Park to the west. The property is zoned DR-2, Density Residential - 2.0 dwelling units per acre.

A visual review and cursory assessment of the CCBC Catonsville site infrastructure was completed during 2015 by Morris & Ritchie Associates, Inc. (MRA). Several campus visits were made during which our professional staff observed existing conditions and reviewed problem areas that were identified by CCBC Staff during a series of stakeholder interviews. We also researched utilities with Baltimore County Department of Public Works (DPW), traffic control with Baltimore County Department of Transportation (DOT) and private suppliers such as Baltimore Gas & Electric (BGE), Verizon and Comcast.

According to current Maryland Department of Assessments and Taxation records, CCBC Catonsville exists on Map 101/Grid 20/Parcel 518 and Map 101/Grid 19/Parcel 1682. Parcel 518 has an account number of 0102572062 and represents 105.20-acres. Parcel 1682 has two account numbers 0102000053 (5.31-acres) and 1600007399 (31.90-acres). Both accounts of Parcel 1682 list Baltimore County as Owner. As part of the last Master Plan update, the consultant contacted Baltimore County Land acquisitions to verify this information. According to Mr. Rockel, the State tax maps are incorrect in that the 31.90-acre parcel of land is owned by the Board of Trustees of CCBC; however the 5.31-acre land was taken over by Baltimore County in 1927 because of non-payment of taxes. The SDAT information remains the same today as it was during the last update. It is recommended that CCBC prepare a letter of inquiry to Baltimore County Department of Land Acquisition to verify, and perhaps rectify, this ownership information. Note that parcel 1682 map reflects that CCBC property contains a 30 foot wide access from Facilities Operation Building to Newburg Avenue, representing the old Dairy Avenue roadbed. According to the above Maryland Taxation records, the total campus area therefore represents 142.41-acres.

The topography of the academic core area is a plateau, which slopes downward to the various parking and recreational areas surrounding all 360 degrees around the core area. Steep slopes exist to the north, south and west. Large areas of woods surround the site. MRA prepared a base map for the Catonsville Campus utilizing GIS information provided by Baltimore County. This base map was provided to the Campus Master Planner, Hord/Coplan/Macht (HCM), to use for their site analysis.

Overall, the condition of the visual portions of the CCBC Catonsville site infrastructure was found to be in good condition. While specific areas of deferred maintenance existed, such as cracked sidewalks and areas of failed (alligatored) pavement, the campus is generally well maintained.

INFRASTRUCTURE REVIEWED

Sanitary Sewer

Baltimore County Sanitary Sewer Key Sheet H S.E. indicates that the campus is connected to two 8" sanitary sewer lines that discharge to Baltimore County DPW's 18" Bulls Branch Interceptor along the east side of the campus. Based on Baltimore County DPW guidelines for colleges with non-residential students:

Peak Flow = 57.8 gallon/day/student and 0.36 gallon/sf/day for offices

For CCBC Catonsville, this reserve translates into capacity for 118,166 additional students or 18,972,222 square feet of additional space.

Water System

Baltimore County Main Key Map H S.E. indicates that the campus is bisected by the boundaries of two service zones - the Catonsville 4th and Western 3rd. This location, at the fringe of two service zones combined with the age of many county mains, has resulted in Baltimore County DPW constructing a 16" water line in 2008 running along Campus Drive then over to Collegiate Drive off the Rolling Road 16" water main. A water meter vault was installed near the front entrance directory along with water service piping to selected buildings and red-colored fire hydrants. The older orange-colored fire hydrants are still connected and function as back-ups to the newer hydrants.

These improvements have been completed since Baltimore County DPW had determined that the CCBC Catonsville was located within a water deficient area. The new 16" main and campus water service piping do not appear to have substantially increased water supply to the campus. While the deficient water supply warrants more study, there appears to be adequate quantities of water to sprinkler 2 story buildings with the use of a fire pump. However, sufficient quantities of water may not be available to extinguish an actual building fire. The available water supply falls short of ISO recommended guidelines. Prior Fire Flow tests show flows on some of the hydrants might provide NFPA sprinkler flows for one, or in some cases 2, story buildings. However, the flows do not meet current ISO flow requirements.

Storm Drains & Storm Water Management

CCBC Catonsville is located on the Flood Insurance Rate Map #240010 0390 B and Baltimore County Metropolitan District Key Sheet H S.E. According to both drawings, the campus exists in Zone C, areas of minimal flooding - non-flood plain.

CCBC has worked extensively with the Maryland Department of the Environment to analyze and treat the storm water on the Catonsville Campus. Any proposed expansion or new construction must take this approved program into consideration.

Storm water is collected throughout the campus by a network of inlet catch basins and storm drain pipes which drain surface runoff from the center of the campus to the south, east and west. Bulls Run flows through a portion of the campus.

There are three main drainage areas, each outfall to separate locations. The first discharges directly into the wooded areas on the western and southern sections of the campus. Because of soft soils in the woods, each outfall concrete channel has failed along with the drainage streams. Each of the stream alignments contains extensive scouring and stream bank erosion. Improvements to the outfall, discharge channel and stream banks are needed to slow down and control the storm drainage flow.

The second drainage area discharges into a storm water management pond located on the southeastern corner of Loop Road. The pond actually extends over to the adjacent residential development property. This pond has only enough capacity to manage runoff from the 200,000 square feet of parking lot 8 immediately upstream. The pond is overgrown with vegetation, including mature trees. No reserve capacity is available for addition of any new impervious areas.

The third drainage area discharges into a smaller storm water management dry pond located adjacent to Center for the Arts. This pond is also overgrown with vegetation. Any Loop Road extension will require this pond to be enlarged.

Site Utilities

Several private utilities supply services to the campus including Baltimore Gas & Electric, Verizon and Comcast. BGE supplies natural gas to the CCBC Catonsville through a 3" service line from McCurley Avenue. There is no report of insufficient service. However the natural gas lines are aging and should be replaced.

Hot and chilled water are generated in the recently constructed Central Utility Plant and at small boiler rooms in buildings not served by the Central Utility Plant. CCBC is connecting each building into the Central Utility Plant. BGE supplies 13kv electricity through an overhead line, which enters the campus from an underground conduit on the north side of the campus. With the completion of the Library, a second electrical service feed was required, then installed by BGE. Verizon and Comcast serve the campus through the same conduit line along with electric service. T-1 fiber and Comcast enter the campus from McCurley Avenue. Baltimore County has installed fiber optic cables from Rolling Road to the main computer center. Internal fiber optic connections are not mapped. Future building projects should help locate these fiber optic lines for future reference.

Finally, Catonsville has installed a wide array of solar panel fields over existing parking lots. The solar arrays are estimated to supply approximately 27% on the campus electric needs. Once these are fully functioning the Campus can reevaluate future electric needs.

Roads & Pavement

Two access roadways off of South Rolling Road control vehicle traffic to and from CCBC Catonsville. The main entrance exists at a traffic light at Valley Road and South Rolling Road intersection. A secondary access exists at South Rolling Road and Collegiate Drive intersection approximately one mile east. A loop road provides circulation throughout the campus. A 30 foot wide strip of land connects the campus at Facilities Operation Building to Newburg Avenue and represents the old Dairy Road.

Baltimore County Traffic Engineering & Planning was contacted to request traffic signal Level-of-Service (LOS) ratings at, and adjacent to, the campus entrances. LOS ratings for the four traffic signals (rating A means a load factor of 0 percent – no vehicles wait past one exchange of red light, B is 1 – 10% load factor, C is 11 – 30%, D is 31 – 70%, E is 71 – 85% and F is failure 86% - 100%) were:

Rolling Road and Valley Road (Traffic Count on 9/10/12) - - - Rated C
Rolling Road and Wilkens Avenue (Traffic Count on 5/23/11) - - - Rated C
Frederick Road and North Rolling Road (Traffic Count on 11/14/2011) - - - Rated C
Frederick Road and South Rolling Road (Traffic Count on 4/15/2013) - - - Rated D

Note that the LOS for several of these intersections have been downgraded since the last Master Plan update.

Campus parking is allocated to a number of parking lots throughout the campus; small parking areas also exist adjacent to numerous buildings throughout the Campus, and along Campus Drive. A total of 2,298 spaces were previously counted during prior field visits. Parking is adequate for existing demands.

Site/Parking Lot Lighting

Campus visits during day and night hours verified that campus site lighting is adequate. Roadway and pedestrian lighting on the north end of the loop road and campus quad have been recently improved with new LED fixtures and cabling. Because of aging, the underground electrical cabling system that feeds service to the parking lot lights throughout the campus has had problems. Maintenance crews correct short circuiting, disconnected cables and other failures on a regular basis. Lot 8 cabling and light fixtures have

been upgraded with the construction of the Library. Lighting for those parking lots that were upgraded with the solar arrays have been improved as part of the construction.

Handicap Accessibility

A majority of the classroom building entrances exist on the plateau, which is of higher elevation than the surrounding parking lots. Major pedestrian walkways from the parking lots to the classroom building "plaza" area are too steep to conform with the accessible route maximum 5% running slope. Therefore, the campus' main handicap access must occur utilizing the building elevators. Improvements to the reserved handicap parking spaces (lack of access aisles and proper signage), curb ramps and building ramps should be completed to conform to ADA regulations. Current parking counts indicate a total of 77 reserved handicap parking spaces. This is below what is required by ADA regulations. CCBC continuously strives to add additional handicap parking spaces in the most appropriate locations throughout campus to serve faculty, students, and visitors.

Recreational Fields

A soccer/football stadium, baseball field, softball field, tennis courts and practice fields exist along with a series of practice fields on campus. All of the recreational fields appear to be draining properly.

Miscellaneous Site Infrastructure

A series of retaining walls exist throughout the campus to provide proper pedestrian and handicap accessibility. Screen walls have been installed around a majority of exterior mechanical equipment. Perhaps the largest screen wall is the existing stone wall, which forms an attractive arched entrance into the central campus core area. This wall has white efflorescence discharges on the wall's terminating section across from Student Services Center, which may be caused by water intrusion into the wall section.

A new front entrance campus information sign was installed during 2009 along Rolling Road. We observed an electric drop and underground service to the installed BGE meter. An older campus sign (non-electric) exists behind Hilton Mansion at the Campus Drive and Collegiate Drive intersection. A campus directory exists along the front entrance road.



Recent improvements to Campus amenities



While maintain the character of the Catonsville Campus



Recent Storm Water Management ESD facility



Recent Paving replacement throughout campus

SITE ANALYSIS

Introduction

The CCBC Catonsville campus is located in the southwestern section of the county, adjacent to Patapsco State Park, off of Rolling Road. The campus is fairly well-defined and sits prominently along a ridge. The following paragraphs describe and analyze the existing campus in terms of overall campus organization, land use, access and vehicular circulation, pedestrian circulation, open space, parking and campus landscape. Refer to *Exhibit 4.1 Existing Campus Facilities*.

Campus Organization

Existing Conditions

The CCBC Catonsville campus organization is defined by a series of roads, open spaces and buildings. The majority of the campus buildings and parking resources are located within a loop defined by Campus Drive. Some facilities, however, are located outside the loop including the athletic fields, Center for the Arts, the Children's Learning Center and Facilities Operations Building.

The primary organizing element within the campus is the Hilltop Quad around which are several facilities including the Student Services Center, Heath Careers & Technology Building, Math and Science Hall, Classroom & Laboratory Building, Humanities Hall and Barn. Student Activities occupies an original farmhouse atop the hill and serves as a focal point for the quad. The elevation of this quad allows for views to the Baltimore skyline and the Key Bridge from several areas within the quad. A Secondary Quad space extends to the southwest. This space is bordered by the Student Services Center, Wellness and Athletics Center, Continuing Education and Business, Education & Social Sciences Hall, College Services Center, Library, and the historic Tudor House. The remaining campus facilities, including some buildings, roads, parking areas and athletic fields loosely radiate out from this grid established by the two quad spaces and take their form from the sloping terrain of the site.

Analysis

The main Hilltop Quad has a very distinct "sense-of-place" with all of the facilities well connected in a coherent manner. The Secondary Quad, on the other hand, is not as well defined and evokes a more open and natural character. This is primarily because of the campus topography and density of buildings along the perimeter. The main quad is comprised of closely spaced buildings all at approximately the same grade and the building entrances face directly onto the quad. The Secondary Quad, on the other hand, slopes and building entrances face in a variety of directions. The Tudor House and associated Boxwood gardens are also located in the middle of the quad and disrupt the continuity of the space. The Library with a terrace and significant entrance oriented towards the quad positively reinforces this as a significant campus space.

The athletic fields are concentrated in one area on some of the lower elevations of the campus, with the primary parking areas located between the athletic fields and the campus quads. While both the athletic fields and parking areas are well sited with respect to the topography, the dramatic changes in elevation do result in the athletic fields and parking having a weak connection to the center of the campus. Similarly, the topography also separates the Business, Education & Social Sciences Hall, Continuing Education and Hilton Mansion from the center of the campus. Furthermore the sidewalk and path between the center of campus

and the athletic fields is fragmented and not highly visible as it slips along the Transportation Technology Center.

The new Math and Science Hall northern plaza and building entrance improves the visual and pedestrian connection between the campus core and the Center for the Arts. The Children's Learning Center on the other hand feels disconnected from the center of the campus because of its remote and uphill location behind the Center for the Arts. Campus Drive separates the Center for the Arts and Children's Learning Center from the center of the campus.

As the campus continues to grow, buildings, pathways, open spaces and parking areas can continue to be located in a manner to reinforce the overall organization of the campus and connections between different campus areas.

Land Use

Existing Conditions

As with any institution, the land uses throughout the CCBC Catonsville campus are varied. Most academic and administrative/support uses are located in or near the campus core, parking uses are concentrated in a band around the core and athletics are located beyond the parking. A significant portion of the campus remains as open space, comprised of steeply sloping lawn or woodland areas in addition to the quad spaces located within the campus. The maintenance function of the campus is well-located outside of the campus core. Refer to *Exhibit 4.1 Existing Campus Facilities*.

Analysis

Generally, the distribution and grouping of land uses works well and is appropriate for the CCBC Catonsville campus. Majority of the facilities are located in the campus core framing the two central campus open spaces- the Hilltop Quad and Secondary Quad areas. The Center for the Arts and Children's Learning Center are separated from the campus core to the northwest by Campus Drive. Site improvements to the MASH addition have improved the perceived separation of The Center for the Arts from the campus core. Recreation and athletics open spaces are separated from the campus core by large parking lots and Campus Drive. Slopes, tree stands and ruins create a visual separation between the Library, Continuing Education, Business, Education & Social Sciences Hall and the Hilton Mansion. Site and building improvements should strengthen the continuity of the campus core as well as create clear and safe connections to isolated facilities such as The Center for the Arts, Hilton Mansion and athletic fields.

Access and Vehicular Circulation

Existing Conditions

The campus is well served by one primary access point (Campus Drive from Rolling Road) and one secondary access point (Collegiate Drive from Rolling Road). Campus Drive defines a loop system around the

campus core of which parking and building facilities are accessed. A spur road connects to Campus Drive and leads to the Children’s Learning Center, Facilities Operations Building and Parking Lot 3. Wayfinding signage has been added along Campus Drive and throughout the campus fairly recently, directing visitors to various campus facilities. *Refer to Exhibit 4.2 Vehicular Circulation*

Analysis

The main access to the campus is well-defined and is clearly identifiable, providing a positive arrival experience for campus staff, faculty, students and visitors. The secondary entrance at Collegiate Drive is appropriately down-played so that it primarily serves emergency and/or minor campus traffic. Campus Drive also provides easy access to campus facilities and parking resources. The separate loop road keeps people from having to drive through the parking areas unless they are going to park, which works well in terms of minimizing pedestrian/vehicular conflicts. Recent site improvements related to the MASH addition have added back-in angled parking along the Campus Drive loop.

Most decision points are well-marked, however, first time visitors may experience some confusion at the intersection with the spur road leading to Facilities Operations Building, as the scale of this spur road seems to suggest that it is the primary road. Future site improvements should strive to remove or at a minimum not increase on-street parking along Campus Drive. Structure parking facilities can help provide additional parking surplus and reduce parking conflicts along the loop road system.

Pedestrian and Bike Circulation

Existing Conditions

The Campus Drive loop road and location of most parking facilities along the perimeter of the campus core (inside the loop) allows for a predominantly pedestrian campus, with few vehicular/pedestrian conflict areas. The exceptions are facilities located outside of the Campus Drive loop such as the Center for the Arts, Parking Lot 3, Parking Lot 6 and the athletic fields. Within the campus core, multiple pathways are provided throughout the campus, linking the various facilities. *Refer to Exhibit 4.3 Pedestrian & Bike Circulation*

Community members frequently walk along the loop road for exercise. The outer loop has intermittent lengths of sidewalks to provide safe refuge for exercisers. Pedestrian access from adjacent communities includes an asphalt pathway from McCurley Avenue along Parking Lot 3 to Campus Drive and a sidewalk along Collegiate Drive linking Campus Drive to Rolling Road.

There is approximately 120 feet of relatively steep elevation change from Rolling Road to the center of campus. This steep slope presents a challenge for cyclists accessing the campus from the proposed bicycle network on Rolling Road. Bicyclists entering the campus from McCurley Avenue descend approximately 20 feet to the center of campus however McCurley is not a designated bicycle lane. *Refer to Exhibit 4.5 Topography*

There are a few bike racks located on campus. Some of existing racks are not conveniently located near building entrances and are not protected from bad weather. There are a few storm drains along curb lines with grates that run parallel to the curb and would obstruct bike wheel.

Analysis

While sufficient pathways are provided, pedestrian circulation can be challenging as a result of the grade changes, particularly from the parking areas to the core campus. Similarly, within the campus core, many pathways have steps to transition to different levels, with accessible routes provided with elevators internal to the buildings. Having steps is not necessarily problematic, however, the location of the steps and overall design can influence whether or not they create comfortable or uncomfortable pedestrian experiences and meaningful opportunities for interaction among students and faculty. In particular, the steps along the side of Student Services Center, while wide, are in a fairly narrow and dark space. Likewise, the steps leading up to the Hilltop Quad have high cheek walls that make them less inviting. As future facilities are developed that require stairs, there are opportunities to celebrate the challenging topography with well-designed stairs that, in addition to accommodating circulation, can also be exciting places to “hang out”. A good example of this is the monumental stairs in front of the Library. With mostly southern exposure this plaza provides a nice sunny gathering area during cool fall and spring days.

The campus topography also requires the parking bays of most of the parking areas to be aligned parallel to the slope as opposed to perpendicular. Because people tend to travel the most direct route to their destination, this parking lot orientation requires pedestrians to walk between cars and up slopes. This parking lot orientation is the most efficient given the terrain at CCBC Catonsville. Consideration should be given to creating multiple pedestrian walkways from the parking areas and designing them to be visually prominent and comfortable to use, particularly to link the athletics fields and the sidewalk from Collegiate Drive to the center of campus.

Within the campus core, the pedestrian walkways are generally sized to accommodate high volumes of pedestrian traffic and emergency vehicles while allowing for spontaneous gathering. As the campus continues to grow, consideration should be given to provide safe and shared circulation capacity for bikes, pedestrians and vehicles on Campus Drive. A continuous sidewalk or pathway loop offers safe zone for community walkers, however there is limited land area along the loop road to accommodate sidewalks or dedicated bike lanes. At a minimum the loop portion of Campus Drive could be delineated as ‘Shared’ lanes between cars and bikes to enhance the bike access and awareness of non-motorized movement around the loop.

A dedicated bike lane should be explored between the campus core and Rolling Road. On-street parking is absent along Campus Drive from Rolling Road to the loop and along the loop between the intersections of Collegiate Drive and College Drive. Additionally the paving width along this segment of roadway can accommodate dedicated bike lanes without loss of vehicular capacity. The old dairy road that traverses the Front Lawn provides an opportunity to create a pedestrian path or alternative off-road bike way. Where necessary, storm drains should be retrofitted with grates that do not obstruct bike mobility.

Bike racks should be located at highly visible, safe as well as convenient locations adjacent to building entrances. However bike racks should not obstruct pedestrian space, particularly inside the quad areas of the campus core. Additional amenities such as access to showers, lockers and covered bike storage should be provided to encourage year-round bicycle commuters.

Open Space

Existing Conditions

As described earlier, the Hilltop Quad is the primary open space on campus, followed by the Secondary Quad as defined by the new Library and the Wellness & Athletic Center. In addition to the athletic fields, there is a significant amount of additional open space on campus along building perimeters, along Campus Drive and along the wooded stream valley. Some of these spaces are quite unique and special for a variety of reasons including the Mansion landscape, grounds surrounding the Tudor House, historic Boxwood gardens and ruins, the Student Services Center patio, the gateway portal through the stone wall, the clock tower/open lawn, the Barn Theater courtyard, and the popular outdoor gathering area between Humanities Hall and Health Careers and Technology Building.

Analysis

With the exception of the athletic fields, the quads provide the most useable open space because they are the primary spaces through which pedestrians travel and also the spaces upon which most of the campus buildings face. Unlike traditional quads, the presence of the hill in the main quad results in a series of three linear spaces (defined by the adjacent buildings and the hill) as opposed to one space defined on all sides by buildings. This is a feature not found on many campuses and should be celebrated. These linear spaces have a strong sense of enclosure and tend to be fairly active with pedestrian traffic. The center of the quad, atop the hill, serves more as a destination or “retreat” away from the activity found along the perimeter walkways. The southern end of the hilltop quad is an attractive large gathering “lawn” that is fairly level and can accommodate a variety of activities.

The Secondary Quad, while mostly sloped, does offer a fairly significant level open area along the ridgeline between the Wellness and Athletic Center and Student Services Center. The Library terrace provides an opportunity to activate the Secondary Quad. This quad should continue to be developed as a large flexible open space that could accommodate a variety of activities.

The open space along the entrance drive plays an important role in establishing a positive campus image and “public face”. This space serves as the front lawn for the campus and should be maintained primarily as a visual open space. During the winter, this is a popular area for sledding and the ability to continue this activity should be preserved.

The other significant spaces, particularly the grounds around Tudor House and the open space between the Hilltop Quad and Hilton Mansion also play a significant role in establishing a positive image for the campus and provide a wonderful historic context and link to the past. The remnant stone walls and Boxwood garden distinguish the CCBC Catonsville campus from the other two campuses.

As the campus continues to develop, attention should be given to preserving the existing open space network and using new buildings and landscape elements to continue to reinforce the quad spaces, create new flexible outdoor common spaces tailored for different activities and reinforce opportunities for interaction among campus users. The special places described above and identified on Exhibit 4.4 should be protected, enhanced or replaced (if impacted by a building project). Existing special attention should be given to orienting building entrances and windows onto the quad spaces to further activate them and to providing more spaces that encourage spontaneous social interaction and give students more reason to remain on campus between classes. Site and building improvements, such as associated with the Student Services Center

expansion, should integrate the ruins to better activate, help restore and celebrate the history of the campus. Refer to *Exhibit 4.4 Open Space Typologies*.

Parking

Existing Conditions

As outlined and summarized in a table in Chapter 3, the CCBC Catonsville campus has 7 numbered parking lots (P-Lot 1-8), 6 parking areas associated with buildings and parking along Campus Drive, totaling approximately 2,298 spaces. Recently Parking Lot #4 was removed to make space for the new Math and Science Hall. Parking spaces are divided into numerous categories including 1,645 "Regular" (students), 487 "Faculty/Staff", 77 "Handicap", 44 "Service" and 45 "Other" (visitor, reserved and motorcycle). Refer to *Exhibit 4.1 Existing Campus Facilities and Exhibit 4.2 Vehicular Circulation*

Analysis

In terms of distribution, parking is generally distributed around the perimeter of the campus and more heavily distributed to the south. The campus topography creates the perception that parking resources are further away than they actually are, particularly for many spaces in Lots 6 and 8 and along Campus Drive adjacent to Lot 8 (where the adjacent hillside blocks the view of one's destination). The topography does make the campus ideal for structured parking which could be designed to have access at multiple levels, without internal ramping. As the campus continues to develop, opportunities to construct efficient and convenient structured parking needs to be preserved. Where possible, on-street parking along Campus Drive should be relocated within parking lots or structured parking facilities.

Campus Landscape

Existing Conditions

The landscape at CCBC Catonsville is comprised of manicured lawn areas, natural woodlands, accent planting areas and remnant landscapes associated with the historic Mansion, Tudor House and stone walls. Of particular note are "the ruins" of an old bowling lane associated with the original estate. Planting islands are provided throughout parking areas.

Analysis

The diversity of landscape settings results in a rich campus experience for those using and visiting the campus. The historic landscapes such as the Boxwood garden and "ruins", in particular, distinguish this campus from CCBC Dundalk and CCBC Essex and from many other college campuses in general and set the tone for the overall landscape. The "ruins" are overgrown, however, and should be restored or, at the very least, cleared of overgrowth to fully take advantage of this unique resource.

While the historic landscape features distinguish this campus from others, it is the mature canopy trees that make the most positive contribution to the campus landscape. Many canopy trees occur throughout the campus, particularly within the campus core and play a significant role in defining spaces and providing comfort in the form of shade. Canopy trees also allow unobstructed sight lines beneath their canopies which is an important consideration in terms of safety and perception of safety. As the campus continues to grow, it is important to emphasize the planting of new canopy trees to increase the overall tree canopy and to establish "replacements" for those trees nearing the end of their lifespan. In particular, more canopy trees should be planted in parking lots to provide shade and break up large expanses of parking.

Many of the accent plantings along walkways and adjacent to buildings are attractive and help make the campus more pedestrian-friendly. Successful examples of these accent plantings are those that utilize bold simple masses of plantings, with a limited plant palette, particularly because of the large scale and modern design of many of the buildings. An example of this is adjacent to the southern end of Classroom and Laboratory Building where colorful Hydrangeas are paired with a Liriope groundcover. The planting is bold and simple and works well with the scale of the building. This strategy is apparent also with new integrated landscape stormwater facilities that help define seating areas and building entrances around expanded Math and Science Hall. Less successful examples are those planting areas that include a few of each of many different plant species. In some areas, such as the quad side of Student Services Center, there are large blank walls that serve as a backdrop to tiny ornamental trees. For areas such as this, the blank walls present an opportunity to plant taller and larger plant materials that would be more in scale to the buildings.

Accent paving standard has been installed in some areas of the campus core utilizing a red blend concrete unit paver defined by an outer band of gray unit pavers. This is quite effective in reducing the scale of the wide walkways and providing more pedestrian-scaled textures. The College has been effectively creating "carpets" in front of buildings (such as Math and Science Hall facing the Hilltop Quad). This approach could continue for other building entrances and important pedestrian nodes. Refer to *Exhibit 4.4 Open Space Typologies*.



Exhibit 4.1 Existing Campus Facilities.

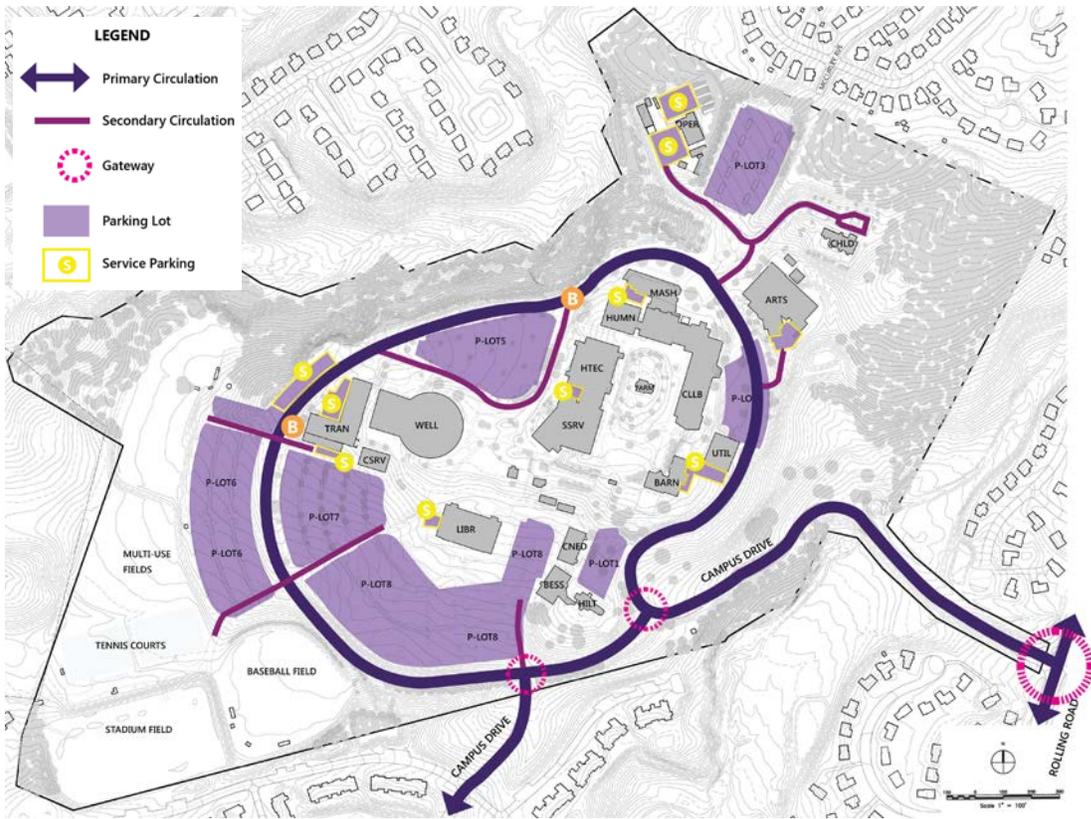


Exhibit 4.2 Vehicular Circulation

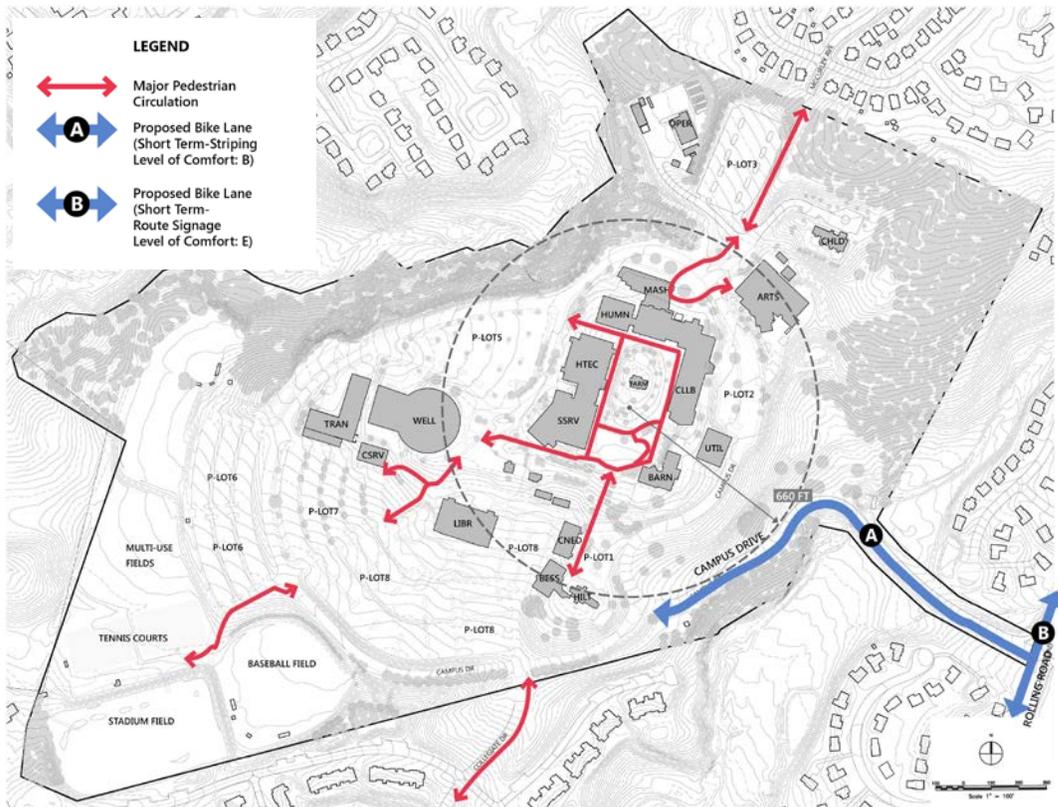


Exhibit 4.3 Pedestrian and Bike Circulation

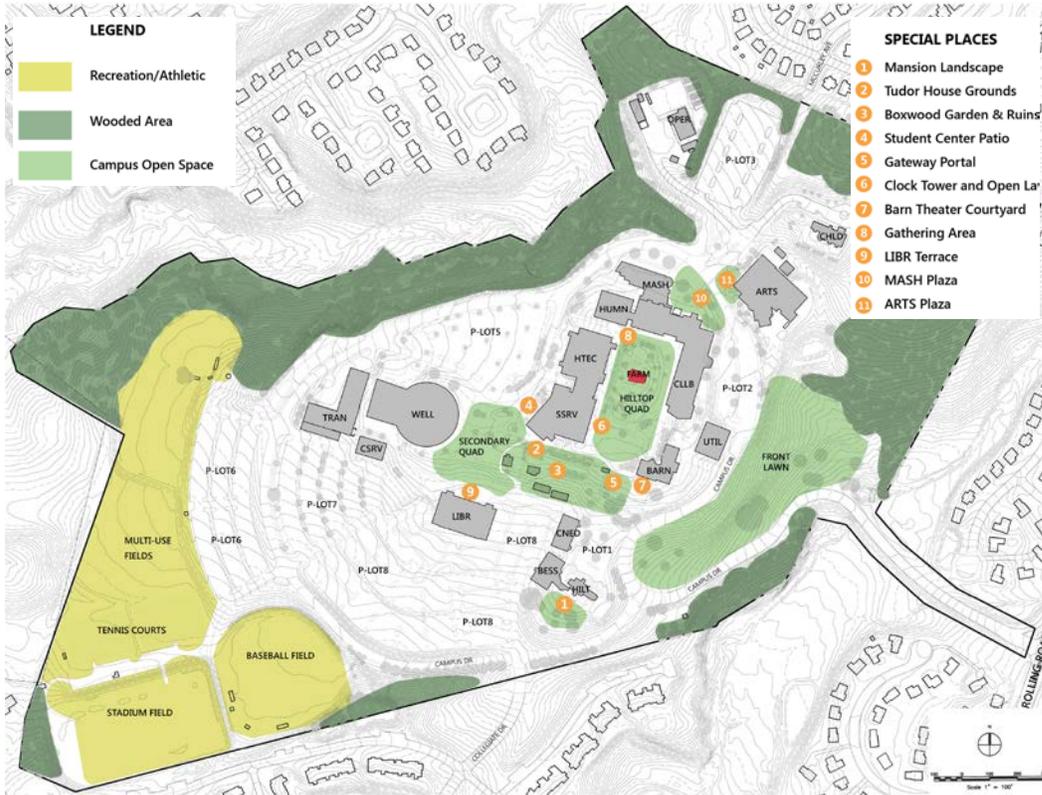


Exhibit 4.4 Open Space Typologies

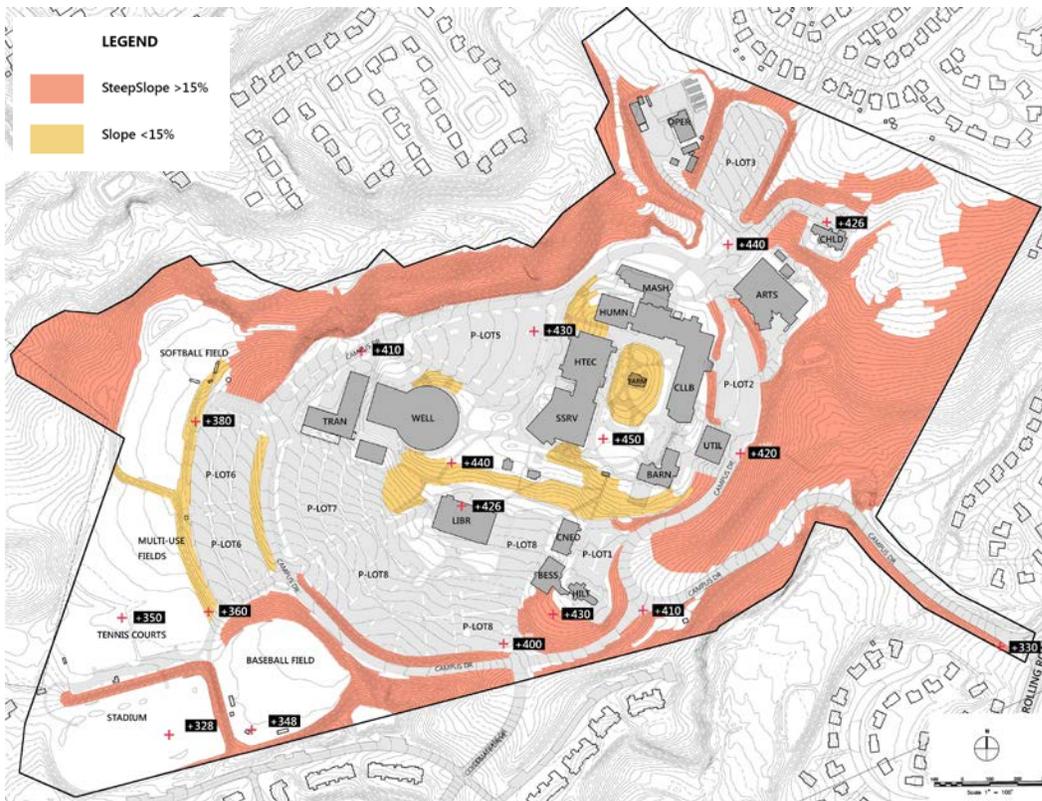


Exhibit 4.5 Topography

Chapter 5

Looking Towards the Future

Opportunities, Recommendations

Capital Projects

Proposed Campus Development

CHAPTER 5 LOOKING TO THE FUTURE

Opportunities, Recommendations

BUILDINGS

ARCHITECTURAL CONSIDERATIONS

The “infrastructure” of most buildings, in this case meaning the essential structure and architecture, is generally adequate to allow the buildings to be successfully renovated. Exterior envelopes, foundations, supporting structure, floor plates, and floor-to-floor heights are sufficiently stable and dimensioned to allow new building systems to be installed. Smaller buildings, including Tudor House, Stone Cottage, and the Farmhouse are exceptions and represent special challenges due to their size and configuration. The Continuing Education and Business Education & Social Sciences buildings are also relatively small and, due to their size, present inefficient floor plates, are limited in sizes of rooms that can be provided, would be costly to renovate relative to their usable area, and occupy a strategic location more suitable to a larger academic facility.

Availability of space is extremely limited within existing buildings, especially after re-purposing and renovating rooms for instructional space. This generally precludes temporary occupancy of swing space during renovations of other buildings. Except for the Library and the new MASH building, the larger buildings are generally more than 35 years old and most are in need of renovation. With limited funds, the College has invested in the existing buildings by renovating some spaces and undertaking systems upgrades. This has generally improved the quality of the spaces and components but is not the most efficient means of renovating the facilities. While the amount of available space on campus is very limited, there are nonetheless sites that represent opportunities for new buildings, some as additions to existing buildings and some as stand-alone.

As buildings are renovated, expanded, and new buildings are constructed, the architecture of the existing buildings should be respected. The Catonsville campus is the most wide-ranging in terms of styles and age of the buildings. This eclectic collection needs unifying elements to tie the buildings together. These include tones of brick, compatible with the existing buff color; field stone similar to the existing stone; other materials which can complement these two basic components; clear anodized windows, doors, and curtain walls; clear glass except where other types of glazing are suggested by internal functions; and unifying signage indoors and on the building facades. Building size should not exceed any of the largest existing buildings, and overall height should be limited to three stories. Garages should be similar in height, not to exceed 4-5 levels. Roofs may be relatively level but all with positive slope, and some roofs may be sloped if suggested by their context or internal functions. Main entrances should be clearly discernable and should be fully accessible.

In academic buildings – including labs, classrooms, lecture halls, and offices – the faculty offices should be integrated with the instructional spaces. That is, they should be convenient to each other, so that faculty are accessible to students such as before and after class. Faculty offices should not be remote, such as in separate wings of buildings, certainly not in separate buildings, and should be on the same floors as the instructional spaces. Offices should be grouped in suites where feasible. As informal learning spaces, lounges should be integrated into all buildings to provide convenient drop-in / touch-down spaces. Ideally, they are convenient to the most heavily used programmed spaces and through-routes within buildings and

are equipped with networked computers, data outlets, and/or wireless coverage, plus power outlets for students' devices.

Structural systems generally should avoid interior bearing walls, to facilitate flexibility in future renovations. Corridor-to-exterior wall bays should be at least 30 feet wide to allow for flexibility in configuration of learning spaces and office suites. Corridors should be generous, and modulated, to allow for ease of passage and for interaction by students, faculty, and staff. Ceiling heights should be appropriate to the spaces, and in any case not less than 9 feet for small-to- moderate sized spaces. In new facilities not tied to existing buildings, floor-to-floor heights should be sufficient to avoid systems conflicts both in the initial installation and future modifications. Each building project needs to be designed with sustainable building systems, orientation, compactness, and configuration and must be designed to achieve a *LEED* Silver rating.

SITE

INFRASTRUCTURE

Sanitary sewer appears to have adequate capacity, while water service still needs improvements even though the County installed a new 16" main and the campus has completed a campus water service loop. Since the campus contains many underground utility lines, each new building or addition will require relocation of existing lines to clear the new footprint area.

If any improvement project disturbs more than 40,000 square feet, Baltimore County Department of Environmental Protection and Resource Management will require the preparation of a Forest Conservation Master Plan for the entire campus prior to review Forest Stand Delineation and Conservation Plans for individual improvements. All plans for improvements must take into account the mature woodlands throughout this campus.

Any proposed project with an area of disturbance of more than 5,000 square feet will require a stormwater management system design based on the Environmental Site Design (ESD) techniques specified in the new Maryland Department of the Environment SWM Manual which favors local/micro water quality devices such as swales, bio-retention areas, rain gardens, roof leader disconnects, etc. Any new SWM facility must take into account the Pollution Prevention Plan agreed to with MDE. Also projects with an area of disturbance of more than 5,000 square feet or excavation of more than 100 cubic yards will require a sediment control plan to be submitted to the Baltimore County Soil Conservation District for review and approval.

A list of individual site improvement recommendations follows:

Sanitary Sewer

- Survey the entire on-site sewer system to include invert elevations and, since sections of the system are old, use CCTV for inspection of the underground pipe lines.

Water System

- Coordinate with Baltimore County DPW to upgrade County mains for more water service since the available water supply falls short of ISO recommended guidelines.

Storm Drains & Storm Water Management

- Repair storm drain outfalls and stream banks on the western and southern sections of campus.

- Repair/upgrade overgrown storm water management facilities.

Site Utilities

- There is no report of insufficient service from private utility suppliers. However the natural gas lines are aging and should be replaced.

Roads & Pavement

- Mill/overlay surface course on older sections of bituminous pavement around campus.
- Apply tar sealer to large cracking areas to prevent further deterioration.
- Replace pedestrian walkway to McCurley Avenue; slope is steep.
- Upgrade main plaza walkway to fire egress load bearing strength.
- Repair damaged pavement areas around the campus, especially along the driving lanes of the parking lots. Sections of the walks behind the curb and gutters on the low edges of Lot 6 were repaved in 2015
- Install additional parking and drop-off areas at Children's Learning Center.
- Extend loop road to improve vehicle circulation to Children's Learning Center.
- Repave area near Humanities Hall Bus Stop where water ponding occurs.
- Repair road pavement on the right shoulder area and surrounding erosion scouring just past the front entrance.

Site/Parking Lot Lighting

- Replace older sections of underground electrical cabling to parking lot lights.

Handicap Accessibility

- Complete improvements to the existing reserved handicap parking spaces and curb ramps.
- Install additional reserved handicap parking spaces, per current ADA regulations, whenever possible and where needed to serve the campus needs.
- Upgrade campus handicapped access routes - landings for ramps, handrails, proper signage, etc.

Recreational Fields

- Upgrade the soccer/football stadium with artificial turf.
- Construct restrooms, locker rooms and concession stand at stadium.
- Install softball batting cages.
- Install softball field press box deck.

Miscellaneous Site Infrastructure

- Repair existing stone retaining wall throughout Campus.

CAMPUS PLANNING

The following paragraphs describe site recommendations for enhancements to the CCBC Catonsville Campus. The recommendations follow the overall approach of connecting space smartly to create a more cohesive physical campus and learning environment and to enhance the inherent qualities for this particular campus. Recommendations are described below and illustrated in the Illustrative Campus Development Plan in Section 6-C of this report.

Opportunity Sites

Based on the site analysis described in Chapter 4, there are several logical “opportunity sites” within the campus where new facilities can occur. These facilities could be in the form of new buildings, open spaces and/or parking resources and may replace buildings, green spaces and/or surface parking areas that currently exist. These sites are illustrated in *Exhibit 5.1 Opportunity Sites*.



Exhibit 5.1 Development Opportunities

Campus Organization and Land Use

As described earlier, the CCBC Catonsville Campus is organized around a fairly well-defined campus core with some academic and administration functions outside of this core area. Athletics and many of the parking areas are well removed from the campus core. As the campus continues to grow, there is an opportunity to expand and strengthen the core while reinforcing connections to the athletics area and parking resources. Following are recommendations to strengthen the campus organization and land use distribution:

- Expand the sense of the connection between the campus core and the Center for the Arts by mitigating vehicular/pedestrian conflicts, reinforcing the pedestrian walkway and unified open spaces between the two buildings.
- Expand the campus core to the south to better incorporate the Hilton Mansion, which represents the historic roots of the institution and a source of pride for the campus.
- Continue to reinforce and strengthen the Secondary Quad and sense of “community” with significant new development in the form of general use spaces (assembly, food service and lounge) and classroom, lab, and office spaces.
- Maintain Facilities Operations Building and site in a separate area from the campus core.
- Reinforce pedestrian connections between the campus core and athletic fields.
- Identify “placeholders” for future development opportunities beyond the timeframe of this master plan to provide a framework for growth and preserve the campus organization.

Access and Vehicular Circulation

Overall, the vehicular access and circulation works well on the CCBC Catonsville Campus, with the exception of the northern section of Campus Drive. Here, the main directional flow is not clearly defined at the intersection between the Center for the Arts and the Classroom & Laboratory Building and there exist pedestrian and vehicular conflicts as students, faculty and staff travel back and forth between the campus core and the Center for the Arts. The following recommendations will help to ease these conflicts:

- Develop a rotary intersection at Campus Drive and the access drive extending radially from the campus core to Parking Lot 3 and Children’s Learning Center to create a sense of place and enhance the traffic flow. At this intersection, enhance the visibility of crosswalks and pedestrian sequence between new Math Science Hall and the Center for the Arts.
- Simplify the intersections providing access to Facilities Operations Building and Children’s Learning Center from the realigned access drive extension from Campus Drive.

Parking

In order to accommodate growth, additional parking resources will need to be provided in the form of parking structures to accommodate the additional parking needs as well as any surface parking displaced by new buildings or the parking structures themselves. Recommendations for accommodating additional parking include the following:

- Divide additional parking among multiple structures to minimize the overall size and scale of any one parking structure.
- Develop a parking structure at the northern end of the campus (Parking Lot 3) to better distribute parking resources campus-wide.

- Develop a parking structure at the southern end of the campus (Parking Lot 7) to accommodate campus growth around the Secondary Quad.
- Utilize the topography as much as possible to provide access to multiple levels from the adjacent grades and, where possible, minimize internal ramping.
- Utilize the topography to minimize the visual impact of the parking structure on adjacent communities, particularly for the structure constructed at Parking Lot 3.
- Use new parking structures in combination with buildings to reinforce important pedestrian connections and destinations.
- Locate parking structures so that important views and vistas are maintained.
- Locate pedestrian entrances to structures to reinforce clear circulation patterns.
- Reorganize Parking Lot 8 to better accommodate pedestrian access between it and the campus core, improve the clarity of vehicular movement to enhance drop-off at the Library from Collegiate Drive and create a safe and direct pedestrian walkway along the western edge of the parking lot to connect the campus core to the athletic fields.

Pedestrian and Bicycle Circulation

As the campus continues to grow, there is an opportunity to enhance pedestrian circulation to create stronger and clearer connections among districts, facilities and adjacent neighborhoods; enhance the ways in which students, faculty and staff experience the campus and have opportunities to interact; and ease the challenges associated with the difficult topography. The following recommendations will help to enhance the pedestrian experience on the CCBC Catonsville Campus. These recommendations are illustrated in *Exhibit 5.3 Pedestrian and Bike Improvements*.

- Utilize multi-level buildings and parking structures to accommodate grade transitions between Parking Lots 6, 7 and 8 and the campus core.
- Accommodate and reinforce direct circulation patterns through the Secondary Quad, providing a hierarchy of pathways that clearly distinguish major routes from supporting routes.
- Reinforce and provide additional clear pedestrian connections from Parking Lot-8 to the campus core as well as between the campus core and athletic fields.
- Provide clear pedestrian connections between new parking structures and the campus core.
- Use walkways, crosswalks and landscape to clarify and reinforce inclusion of the Center for the Arts into campus core.
- Provide, where possible, a sidewalk along Campus Drive to provide a safe pedestrian experience for students and community members around the perimeter of the campus. Allow for a series of "circuits" of varying length.
- Design and locate stairs and ramps to be exciting ways to transition across the topography, taking advantage of vistas and providing places to gather and interact.
- Create a safe bike connection from Rolling Road to the campus core south of the Library:
 - Provide dedicated bike lanes along College Drive from Rolling Road to the intersection of Collegiate Drive and College Drive.
 - Provide a dedicated two-way bike lane along the north and east side of Parking Lot 8 to link College Drive bike lanes to the campus core.
- Reuse the old dairy road alignment to establish a pedestrian or alternative bike way along the north side of College Drive between the campus and Rolling Road entrance.
- Explore opportunities to create dedicated bike lanes or at a minimum 'shared' lanes around the College Drive loop, with marked spurs leading into the campus core.
- Coordinate with Baltimore County to provide bike access and improvements along McCurley Avenue to link Hilton Avenue bike way to the campus.
- Provide signage to enhance awareness of bikes use.

- Provide bike racks in visible locations near building entrances.
- Provide covered bike racks, storage and repair stations near the Wellness and Athletic Center to enable ease of access to shower and locker rooms for commuter bikers.
- Provide bike racks, storage and repair stations within proposed parking garages.
- Replace, where necessary, storm grates (grates parallel to the flow of bikes) that impair bike mobility.

Open Space

The open space is the component that knits various buildings and facilities together into a unified campus environment, allowing for learning and discovery to happen in a variety of spaces throughout, and creating a collegiate image for the institution. The CCBC Catonsville Campus has a strong open space framework that will only get stronger as the campus continues to develop. The following recommendations will allow for new and enhanced open spaces throughout the campus:

- Locate new buildings and parking facilities in a manner that provides definition to open spaces and provides a variety of settings that allow for informal interaction and chance meetings, quiet sanctuary spaces and spaces to support teaching and learning.
- Reinforce Hilltop Quad as a space unique to the CCBC Catonsville Campus.
 - Preserve the quad as a series of linear spaces surrounding a special place or retreat rather than one large space.
 - Distinguish different small gathering spaces along the perimeter, offering different things to do and different opportunities for learning.
 - Reinforce spaces between buildings and near building entrances as gathering areas.
- Preserve the level lawn area at the southern end of Hilltop Quad as a flexible “open lawn area”, allowing for casual games and formal/informal assembly.
- Recognize the topographic and historic characteristics of the campus and establish the Secondary Quad as a “large activity lawn” comprised of a series of outdoor spaces accommodating a variety of activities and opportunities for interaction.
 - Activate quad by locating new buildings and additions around the perimeter of the quad, with windows and doors opening onto the space. In particular, provide south-facing outdoor dining areas and social spaces to integrate Student Services Center with the restoration of historic stone walls and landscape. .
 - Maintain a flat gathering area atop the ridge between Student Services Center and Wellness and Athletics Center as a main central open space.
 - Create a variety of smaller spaces in association with new and existing buildings around the quad to allow for social group gatherings and quiet places with exposure to both sun and shade.
 - Establish the slope leading to the Library as a special place, taking advantage of the southern exposure.
 - Celebrate the traditions and history of the campus with a series of intimate spaces associated with the landmarks and icons of the campus, fragments of the historical fabric. Utilize these spaces for the teaching and study of specialized crafts such as stone masonry.
- Create an enhanced setting for the historic Hilton Mansion.
- Utilize an open space/sculpture garden or plaza to link the Center for the Arts to the campus core.
- Preserve the “Front Lawn” slope as an important part of the campus image, community resource for sledding and enjoyable landscape for walking and biking.
- Enhance athletic facilities including construction of artificial turf field at the stadium, resurfaced tennis courts and a comfort station near the fields.

Campus Landscape

Successful open spaces within a campus require both architectural and landscape definition. The campus landscape allows for a variety of settings, reinforces the campus image and provides comforts, such as shade, to those using the campus. Recommendations to enhance the campus landscape at CCBC Catonsville include:

- Establish and reinforce a variety of landscape settings that respond to the topography, historic influences, adjacent uses, views and function.
- Reinforce the history and traditions of the campus, particularly in the Secondary Quad and along Campus Drive on the approach from Rolling Road through the use of historic plant materials and the use of stone.
- Protect and enhance existing woodlands.
- With the exception of historic plant materials, emphasize the use of native and adaptive plants that provide a clear transition into the campus woodlands.
- Accommodate activities through the careful location of plant material to define, not fill, open spaces.
- Maintain visual connectedness throughout the campus, particularly from the parking areas to the campus core, through an emphasis on the use of high canopy trees and low shrubs/groundcovers to maintain sightlines.
- Distinguish unique spaces and building entrance areas with special planting, providing for seasonal interest and smells.
- Utilize campus design standards to unify the different areas of campus but allow for unique designs to highlight special nodes and spaces.
- Experiment with the use of portable chairs and umbrella tables to provide more flexibility to adapt campus spaces to individual needs and comforts.

Capital Projects

The needs on the CCBC Catonsville Campus are diverse, as is the campus. Even with the recent addition of the new Library, the space deficits are significant. In addition to the buildings, parking garages will be needed to accommodate increased parking deficits.

Proposed Major Capital Projects 2016-2025 - Catonsville: Area and Budget Construction Costs											
Building Designation		No. of Spaces -	Parking Garage or Lot	GSF Renovation	GSF New	Unit Cost Renovation	Renovation Cost	Unit Cost New Construction	New Construction Cost	Other - Lump Sum / Allowance	Total
Proposed Projects: 0-5 Years 2016-2020											
HILT	Renovation (Administration - Mansion)			16,898		\$ 370	\$ 6,252,260				\$ 6,252,260
	Switchgear, campus feeder, bldg meter upgrade/replacement									\$ 1,000,000	\$ 1,000,000
	Roof Membrane Replacements (CHLD)									\$ 180,000	\$ 180,000
OPER	Renovation/Add'n (Facil. Maint. & Operations; incl temp bldgs relocation)			6,265	9,000	\$ 200	\$ 1,253,000	\$ 250	\$ 2,250,000	\$ 500,000	\$ 4,003,000
SSRV	Partial Renovation and Addition (Student Services-Lower Level)			25,000	10,000	\$ 300	\$ 7,500,000	\$ 400	\$ 4,000,000	\$ 500,000	\$ 12,000,000
	Historic Area Safety/Wall Restoration (Ruins)									\$ 1,000,000	\$ 1,000,000
WELL	Renovation/Addition (Athletic, Wellness Center)			92,385	6,000	\$ 250	\$ 23,096,250	\$ 400	\$ 2,400,000		\$ 25,496,250
CLLB	Renovation/Addition (addition includes bridge over loop road to ARTS)			70,845	6,000	\$ 225	\$ 15,940,125	\$ 400	\$ 2,400,000		\$ 18,340,125
	Total: 2016-2020			211,393	31,000		\$ 54,041,635		\$ 11,050,000	\$ 3,180,000	\$ 68,271,635
Proposed Projects: 6-10 Years 2021-2025											
TRAN	Renovation/Addition (Automotive, Occupational Training)			8,000	3,000	\$ 250	\$ 2,000,000	\$ 400	\$ 1,200,000		\$ 3,200,000
	Roof Membrane Replacements (HUMN, SSRV, HTEC, OPER)									\$ 2,000,000	\$ 2,000,000
	Turf Field and Athletics Comfort Station				3,000			\$ 250	\$ 750,000	\$ 1,000,000	\$ 1,750,000
BARN	Renovation (Barn)			14,890		\$ 225	\$ 3,350,250				\$ 3,350,250
	Lot 3 (north) Parking Garage		924					\$ 25,000	\$ 23,100,000		\$ 23,100,000
	Classroom Building 1 - west of Library				60,000			\$ 350	\$ 21,000,000		\$ 21,000,000
	Total: 2021-2025			22,890	66,000		\$ 5,350,250		\$ 46,050,000	\$ 3,000,000	\$ 54,400,250
Projects to be Implemented as Funds Become Available											
	Systemic upgrades: sprinkler, HVAC, fire alarm, etc.									\$ 3,000,000	\$ 3,000,000
	Replace CCBC Natural Gas Piping									\$ 750,000	\$ 750,000
	Middle College (renovation option - location to be determined)			41,250		\$ 225	\$ 9,281,250				\$ 9,281,250
ARTS	Performing Arts Renovation			54,560		\$ 225	\$ 12,276,000				\$ 12,276,000
HUMN	Humanities Hall Renovation/Addition			25,904	10,000	\$ 250	\$ 6,476,000	\$ 400	\$ 4,000,000		\$ 10,476,000
HTEC	HTEC Renovation			92,385		\$ 225	\$ 20,786,625				\$ 20,786,625
	Classroom Building 2 - replace BESS, CNED				62,000			\$ 350	\$ 21,700,000		\$ 21,700,000
	Lot 7 (west) Parking Garage		1310					\$ 25,000	\$ 32,750,000		\$ 32,750,000
	Total			214,099	72,000		\$ 48,819,875		\$ 58,450,000	\$ 3,750,000	\$ 111,019,875
	TOTAL - ALL PROJECTS			448,382	169,000		\$ 108,211,760		\$ 115,550,000	\$ 9,930,000	\$ 233,691,760
	This cost is the estimate for the new switchgear only and does not include feeder replacement (if req'd) nor cost of individual bldg meters										
	This cost includes relocating modulars (MTMP) from CCBC Essex (\$47k+\$200 for sitework, etc.)										
	This cost allows for updating spaces on top floor at Advising/Counseling and Career Center										
	This quantity represents the top floor of the facility only. See Rubeling Assoc study for location and size of addition										
	This lump sum figure is for the turf field										
	Classroom Buildings 2, 3 assumes new construction for Middle College										
	Costs are construction costs only and do not include design, FF&E, or other soft costs.										
	Costs are based on calendar 2015 costs and need to be adjusted for future changes to construction cost indices.										

Proposed Campus Development

INTRODUCTION

A series of development alternatives were presented to the College illustrating how the recommendations and capital projects described earlier could be accommodated on the site. Following review and discussion of the alternatives, a preferred approach was identified which includes a combination of elements from all of the alternatives. The future vision for the CCBC Catonsville Campus is described below and illustrated in *Exhibit 5.2, Campus Development Plan*.

DESCRIPTION

The Campus Development Plan illustrates the long-term vision for the CCBC Catonsville Campus, showing how new program elements can be accommodated in a way that reinforces and enhances campus spaces, circulation patterns and image. In addition to smaller projects and systemic upgrades including electrical service and switchgear upgrade and building energy audit and implementation, several major projects are recommended through 2025. They include the following: a renovation of the Hilton Mansion; Facilities Operations Building renovation and addition (relocation of mobile facility from Essex Campus); 10,000 GSF addition and partial renovation of Student Services Center; 6,000 GSF addition to Wellness and Athletics Center; 3,000 GSF Comfort Station serving athletics fields; 3,000 GSF addition to Classroom and Laboratory Building (including bridge to Center for the Arts); 3,000 GSF addition to Transportation Technology Center; renovation of Barn; 924-space parking garage on Parking Lot 3 (north); and a new 60,000 GSF classroom building (#1).

The new athletics field comfort station is proposed near the interface of Parking Lot 6, the tennis courts and the baseball field. This is an opportunity for this structure to become a visual "landmark" and focal point for the new pedestrian connection between the athletic fields and campus core. In addition site improvements include upgrading the stadium field to a turf field and renovating the lower tennis courts. A key site project is the restoration and activation of the historic houses, stone walls and associated landscapes. These spaces, like the Hilton Mansion, are unique and important historic assets to the Catonsville Campus.

Projects to be implemented as funds become available include renovation of the Center for the Arts; renovation and a 10,000 GSF addition to Humanities Hall; a new 60,000 GSF classroom building (#2) with capacity for Middle College; renovation of Health Careers and Technology Building; a 1,310 space parking garage on Parking Lot 7 (south).

Site and infrastructure improvements are required to support the proposed building program and to improve the function, safety, and efficiency of the campus plant operations. Parking is primarily inconvenient for students and visitors. When new projects are undertaken, the parking supply should be increased to meet expanded future needs. Some of the existing parking will be eliminated with new facilities, including the two new parking structures. The proposed parking garages take advantage of the natural topography and reinforce pedestrian connections from the periphery of the campus to campus core. The development of the 'North' Parking Garage should include improved vehicular access lanes to reinforce the loop hierarchy of Campus Drive with clear access to the Children's Learning Center, 'North' Parking Garage and Facilities Operations precinct. Landscape and site improvements need to foster stronger sense of connectivity and pedestrian safety between the new parking garage, the Center for the Arts and Math and Science Hall.

The suburban scale and density of the campus should not be exceeded. The development plan illustrated in this report accommodates growth reasonably. Buildings are shown to be limited to 3 floors and parking structures to 4-5 levels and integrated into the topography. The physical growth of the campus is accommodated by infill development, to better define the east-west quadrangle and to continue to reinforce the sense of campus community and connectivity. Alternatives to additional physical growth should be

explored. As suggested in previous master plans, a coordinated, comprehensive strategy with local government should be undertaken to address campus growth, access, impact on the surrounding community, and transportation alternatives.

Taken together, these projects will require storm water management measures. Projects need to strive to treat rainwater locally using devices such as swales, bio-retention, rain gardens, roof leaders and similar features. Unified designs for paving, site amenities, and site lighting are recommended, to continue to reinforce campus identity for future projects affecting these components.

The campus is currently served by 2 roadways from Rolling Road: Campus Drive and Collegiate Drive. The main entrance, Campus Drive, is most heavily used as the primary entrance road. Use of the intersection with Rolling Road has not materially changed in the last five years. Therefore, an upgrade to this intersection is not anticipated. As the campus continues to expand, however, the safety and utilization of this intersection will need to be evaluated.

Site utilities are either satisfactory (sanitary and existing storm water) or in need of upgrade (water and electric). The available water supply falls short of ISO recommended guidelines. Coordination with Baltimore County Department of Public Works is needed to upgrade County mains for more water service to improve water supply.

New building design should acknowledge the historical references of the older buildings while incorporating contemporary functions and aesthetics.

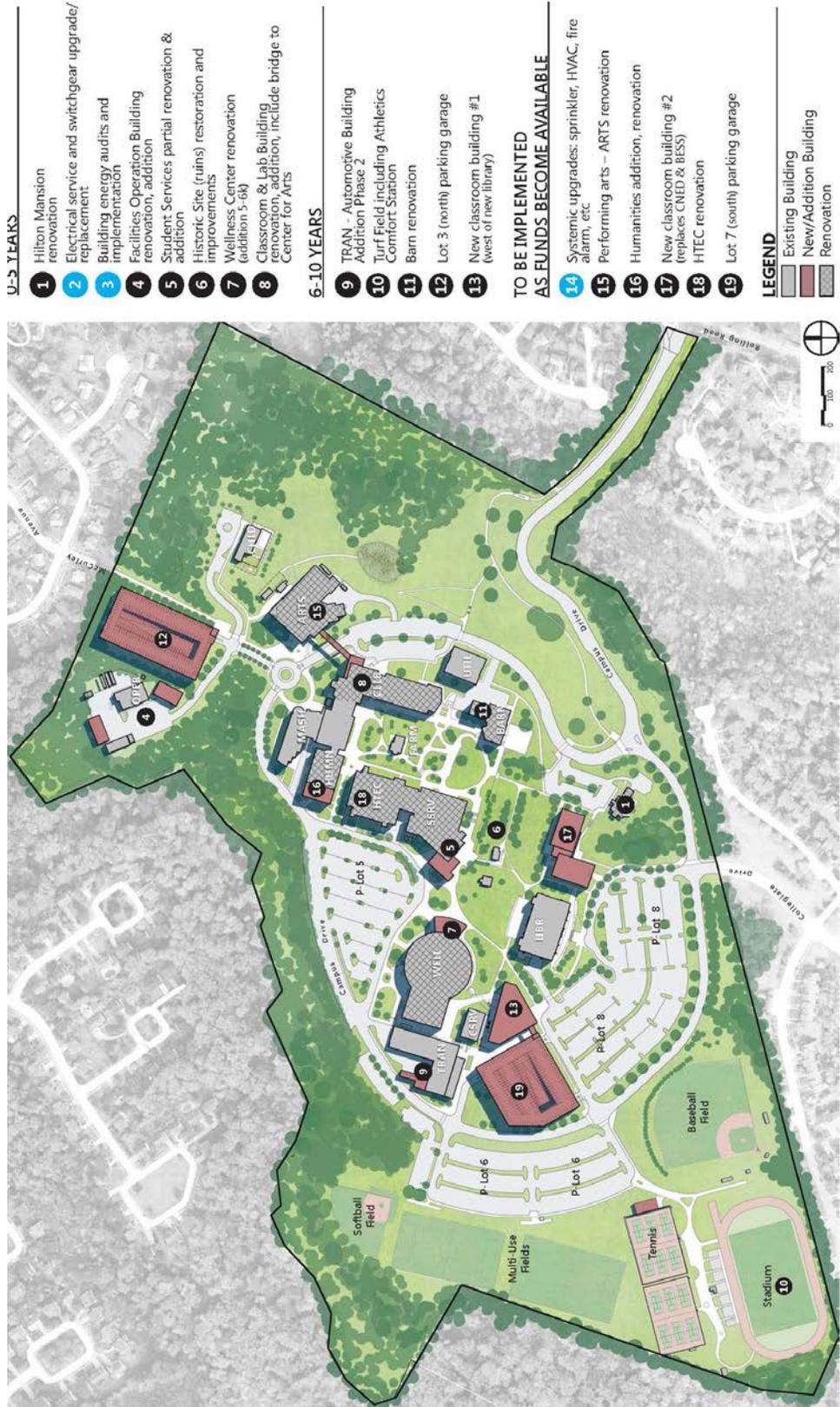


Exhibit 5.2 Development Plan

Appendix

Proposed Major Capital Projects 2016-2025 – CCBC Catonsville Project Narratives – All Campuses

Proposed Capital Projects

Proposed Major Capital Projects 2016-2025 - Catonsville: Area and Budget Construction Costs										
Building Designation	No. of Spaces -	Parking Garage or Lot	GSF Renovation	GSF New	Unit Cost: Renovation	Renovation Cost	Unit Cost: New Construction	New Construction Cost	Other - Lump Sum/ Allowance	Total
Proposed Projects: 0-5 Years 2016-2020										
HILT Renovation (Administration - Mansion)			16,898		\$ 370	\$ 6,252,260			\$ 1,000,000	\$ 6,252,260
Switchgear, campus feeder, bldg meter upgrade/replacement									\$ 180,000	\$ 1,000,000
Roof Membrane Replacements (CHLD)			6,265	9,000	\$ 200	\$ 1,253,000	\$ 250	\$ 2,250,000	\$ 500,000	\$ 4,003,000
Renovation/Add'n (Facil. Maint. & Operations; incl temp bldgs relocation)			25,000	10,000	\$ 300	\$ 7,500,000	\$ 400	\$ 4,000,000	\$ 500,000	\$ 12,000,000
Partial Renovation and Addition (Student Services-Lower Level)									\$ 1,000,000	\$ 1,000,000
Historic Area Safety/Wall Restoration (Ruins)			92,385	6,000	\$ 250	\$ 23,086,250	\$ 400	\$ 2,400,000		\$ 25,486,250
WELL Renovation/Addition (Athletic, Wellness Center)			70,845	6,000	\$ 225	\$ 15,940,125	\$ 400	\$ 2,400,000		\$ 18,340,125
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Total: 2016-2020										
Proposed Projects: 6-10 Years 2021-2025										
TRAN Renovation/Addition (Automotive, Occupational Training)			8,000	3,000	\$ 250	\$ 2,000,000	\$ 400	\$ 1,200,000		\$ 3,200,000
Roof Membrane Replacements (HUMN, SSRV, HTEC, OPER)				3,000			\$ 250	\$ 750,000	\$ 1,000,000	\$ 1,750,000
Turf Field and Athletics Comfort Station			14,890		\$ 225	\$ 3,350,250				\$ 3,350,250
BARN Renovation (Barn)							\$ 25,000	\$ 23,100,000		\$ 23,100,000
Lot 3 (north) Parking Garage		924					\$ 350	\$ 21,000,000		\$ 21,000,000
Classroom Building 1 - west of Library			22,890	66,000		\$ 5,350,250		\$ 46,050,000	\$ 3,000,000	\$ 54,400,250
Total: 2021-2025										
Projects to be Implemented as Funds Become Available										
Systemic upgrades: sprinkler, HVAC, fire alarm, etc.									\$ 3,000,000	\$ 3,000,000
Replace CCBC Natural Gas Piping									\$ 750,000	\$ 750,000
Middle College (renovation option - location to be determined)			41,250		\$ 225	\$ 9,281,250				\$ 9,281,250
Performing Arts Renovation			54,560		\$ 225	\$ 12,276,000				\$ 12,276,000
HUMN Humanities Hall Renovation/Addition			25,904	10,000	\$ 250	\$ 6,476,000	\$ 400	\$ 4,000,000		\$ 10,476,000
HTEC Renovation			92,385		\$ 225	\$ 20,786,625				\$ 20,786,625
Classroom Building 2 - replace BESS, CNED				62,000			\$ 350	\$ 21,700,000		\$ 21,700,000
Lot 7 (west) Parking Garage		1310					\$ 25,000	\$ 32,750,000		\$ 32,750,000
Total			214,099	72,000		\$ 48,819,875		\$ 58,450,000	\$ 3,750,000	\$ 111,019,875
TOTAL - ALL PROJECTS			448,382	169,000		\$ 108,211,760		\$ 115,550,000	\$ 9,930,000	\$ 233,691,760
This cost is the estimate for the new switchgear only and does not include feeder replacement (if req'd) nor cost of individual bldg meters										
This cost includes relocating modulars (MTMP) from CCBC Essex (\$47k+\$200 for sitework, etc.)										
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This lump sum figure is for the turf field										
Classroom Buildings 2, 3: assumes new construction for Middle College										
Costs are construction costs only and do not include design, FF&E, or other soft costs.										
Costs are based on calendar 2015 costs and need to be adjusted for future changes to construction cost indices.										

Project Narratives

All Campuses

CCBC Catonsville

2016-2020

Renovation of Hilton Center

\$ 6,252,260

This project has funding appropriated and is already designed and poised to enter the construction period in early 2016. The Hilton Mansion is on the National Register of Historic Buildings and is slated to undergo a comprehensive interior/exterior renovation. An elevator will be added and restrooms renovated to facilitate making the building ADA compliant. Several partitions defining small rooms on upper floors will be demolished to create medium sized instructional spaces. Sprinkler system is to be added and the fire alarm system will be updated. Much of the surface mounted wireways are to be buried in the ceilings/walls. Asbestos-containing plaster ceilings are to be removed and replaced with suitable materials. New high velocity, small bore ductwork type HVAC system is to be installed to avoid the need for water based piping to many unit ventilators. Exterior work includes stucco rehabilitation (3,000 s.f. of the surface area estimated), column repair or replacement, balustrade replacement, lighting, piping for storm water, electric ductbank and demolition of the breezeway connecting the Hilton Center to the Business Education and Social Science Building.

Switchgear, campus feeder, building meter upgrade/replacement

\$ 1,000,000

This project envisions a complete analysis and refurbishment to the 13,200 volt site electric entrance and distribution system. The end result of this endeavor will include the metering of each campus building to determine load and monitor energy use on an ongoing basis. The campus feeders will be analyzed and evaluated for replacement in existing ductbanks. The existing entrance switchgear (original to the college and exterior pad-mounted cabinets) will be replaced nearby, sized to match master plan needs, and housed in a weather-protective shed. Project is to be designed and constructed to minimize campus downtime. This is considered to be a mission-critical project due to the age and condition of the existing gear and the lack of available replacement parts. A custom part manufacturing process is required with follow-up independent certification of those parts and the resulting assembly to conform to UL label standards. The cost estimate in the report does not include feeder replacement. Minor buildings such as Farmhouse, Tudor House and Stone Cottage are not included in the metering cost.

Roof Membrane Replacement

\$ 180,000

This Children's Development Center roof replacement has been programmed and approved for funding in the FY 2018 budget cycle in Baltimore County. This building was constructed in 1992 with a typical BUR membrane. It has blistered over the years (several noted in a 2007 roof report) with repairs having been made. CCBC anticipates that this small roof project will be combined with others at Dundalk during this cycle to ensure competitive pricing.

Facilities Maintenance Operations Renovation /Addition **\$ 4,003,000**

The existing building is long overdue for renovation to improve functionality and reliability for a modern facility maintenance operation. This building had been approved for renovating in 1998 but had been postponed to provide much needed funds for an academic building at that time. The goal is to bring the local facility administrative team to the same location as the maintenance staff. This will also include grounds & receiving in addition to building maintenance and custodial leadership staffs. There is a woeful lack of warehouse space for replacement items, attic stock, and a master supply of consumable products that are purchased and delivered periodically and on-demand. An automatic fire suppression system is to be installed as well as a fire alarm system update. HVAC and dust collection systems are to be replaced as well.

Student Services Building Partial Renovation / Addition (lower level / advising) **\$ 12,000,000**

The last several years the college has embarked on limited focus renovations to the following areas: Enrollment Services, Financial Aid, Bursar, and Admissions (One-Stop Center) and the Testing Center. These areas are almost exclusively on the 2nd floor. This project completes renovating other areas on this floor (Advising/Counseling, Career Development, and other varying student support services) while concentrating on the 1st floor functions such as: Dining, Food Servery, Kitchen, Bookstore, Multi-Cultural Affairs, student lab, and multi-purpose room. The dining area will, at a minimum, require subdivision into more comfortable and smaller group sizes while still maintaining capacity. This will likely become so much a challenge as to require an addition to the dining area.

Historic Area Safety/Wall Restoration (ruins) **\$ 1,000,000**

The intent of this project is to create an asset from what now appears to be an isolated and unsafe line of stone that is on the same linear axis as the stone wall and arch that provides much of the character for this campus. The concept is to recreate an extension of the existing wall along the ruin site using as much of the existing material as possible and extending it through the foundation ruins of an old structure. This terminus area (near the rear of the Tudor House and Stone Cottage) should be developed into an outdoor gathering area for the college community. It should be well landscaped with choices of sunny seating areas, small scale group seating areas and some sheltered seating areas. Sheltered areas should remain bright with only light shade, such as that produced by a pergola, in the hot summer months. Some degree of rain protection would be preferred as well. This should be coordinated with the Student Services Center renovation project as that may require additional seating areas for dining services.

Jack Manley Wellness & Athletic Center Renovation **\$25,496,250**

This facility built in 1970/71 is showing its age in numerous ways. Most importantly though are the concealed systems or 'bones' of the building. The HVAC, plumbing, and electrical systems are most in need of attention. The building has received numerous infusions of capital renewal funds to maintain or improve elements such as main arena flooring, roof replacement (2x), vertical transportation additions, restroom renovations, pool area finishes facelift and structural repairs, locker room refurbishment, and classroom infills into unused locker room areas. The Central Utility Plant project has extended underground hot and chilled water piping to within 10 feet of the building. This building was designed and still operates on a steam boiler plant and all HVAC air handlers are equipped with

2021-2025

Renovation/Addition to Transportation Technology Building

\$ 3,200,000

This 3,000 sf expansion portion of the project provides additional bays for automotive related instructional purposes and its dedicated classroom to safeguard proprietary information used in the program. All manufacturers insist on having dedicated spaces for such instruction. The renovation area is predominantly the 2nd floor of the existing building which is used to provide training and counseling to individuals with a goal to facilitate their entry into the ranks of the gainfully employed. The existing rooms were intended for classrooms or computer labs and are only partially suitable for the current uses. Support spaces in the building, especially the restrooms, are undersized for the number of clientele currently served. This facility was constructed in 1986 and it will be approaching 40 years old when this project is begun.

Roof Membrane Replacements (HUMN, SSRV, HTEC, OPER)

\$ 2,000,000

The CCBC roof replacement schedule indicates that certain building roofs or major portions of them will need to be replaced during this time interval. Humanities Hall, adjacent to the new Mathematics and Science Hall, is covered with a single-ply system that ponds water to a significant degree. Ideally this work would be undertaken when the building itself is renovated. This renovation is shown in the 'As Funds Become Available' category. Another roofing project involves the original bounds of the 1972 portion of the Student Services Center which now is a Sarnafil PVC single-ply membrane dating to 1996. This roof's condition should be monitored closely as it may be prudent to undertake this work in conjunction with the partial renovation to the Student Services Center planned for 2016-2020. The High Technology Education Center infill addition was occupied in 1998 and consists of a multi-ply BUR system. This roof segment should also be monitored closely with a goal of extending its useful life to coincide with the proposed High Technology Education Center renovation project which is shown in the 'As Funds Become Available' category. The Facilities Operations Building is covered with a multi-ply BUR that was installed in 1999. Depending on exposure and the micro-climate around this building, the membrane life could differ from the projected 25 years. It also should be monitored closely, but most likely will not be in sufficiently bad shape to need replacement when the building itself is renovated in the 2016-2020 cycle. If that renovation project is delayed, then the roof replacement potentially could be tackled at the same time which will most likely provide some efficiencies of cost and time.

Turf Field and Athletic Comfort Station

\$ 1,750,000

This heavily used athletic field is illuminated for night games. The next step toward improving the facility is to simultaneously correct field drainage issues related to cross-slope and to improve the playing surface to a type commensurate with the frequency of play on the field. Unfortunately the best seasons to restore the natural turf are spring and falls which are some of the most heavily scheduled time periods for field play. Also, the athletic complex (baseball, track, tennis, soccer, lacrosse, football, etc.) is not served by an appropriate comfort station. The Wellness & Athletic Center which is the closest open building when most games are played is too far away to comfortably accommodate the patrons. The other option is to extensively use portable toilets. This is not conducive to meeting athlete or patron expectations when participating or spectating at higher education athletic contests. With the development of residential subdivisions nearby and also being down-grade from this proposed facility, CCBC believes that providing gravity based sanitary sewer service to this complex is in the affordable realm.

Barn Renovation

\$ 3,350,250

This facility provides for student gathering, recreation and entertainment space, the latter of which is also used by the entire college community and often the community at large. The spaces in the lower level of the facility could be improved by reconfiguring the partitions. The upper level is a small and intimate performance space and is also used for celebrations and public meetings or conferences. The theatrical lighting, controls, and sound systems need to be upgraded. The HVAC in the building should be redesigned in accordance with current ASHRAE guidelines for ventilation and energy efficiency. This structure is currently not on any landmark preservation list. The windows and doors should be considered for replacement and site concrete/stairs/railings on the NW exposure should be replaced as they are in a deteriorated condition and have been patched to be relatively safe and functional.

Lot 3 (North) Parking Garage

\$23,100,000

This proposed initial parking garage at Catonsville is planned to be built on the current site of Lot 3 and is slated to provide 924 parking spaces. The current Lot 3 capacity is 209 spaces. This will then create an increase of about 700 parking spaces without requiring major land clearing, mass grading, storm drain construction, or installation of sediment and erosion control measures. As the existing lot runoff was not managed when initially constructed, this project will still entail installation of water quality and quantity control measures. The capacity of this garage on the North end of campus would balance the quantity of parking (910 spaces) currently located in Lots 6, 7, and 8 on the South edge of campus. Thus it will greatly improve the balance of parking on campus and provides much needed capacity improvements to the Center for the Arts and Mathematics & Science Hall buildings. At 700 net spaces, it only partially satisfies the current computed need for parking which is a deficit of about 925 spaces.

Classroom Building 1 – West of Library

\$21,000,000

This proposed classroom building of 60,000 sf is to be built on a site between the Library and College Services Center. Its location will be in proximity to South parking lots 6, 7 & 8. The size of this building will 'pave the way' for the college to relocate functions currently located in Business Education and Social Science and Continuing Education buildings and allows for additional instructional space to be built as well. This building will help to define the western edge of the 'historic quad' that will have come into new prominence with the Historic Area Restoration proposed for 2016-2020.

To be Implemented as Funds Become Available

Systemic Upgrades: Sprinkler, HVAC, Fire alarm, etc. \$ 3,000,000

These improvements are generally funded from a miscellaneous capital renovation/ renewal allocation. Projects are necessitated by changes to spaces that require issuance of a building or alterations permit in some cases. In others it may be caused by changes in pressure/flow characteristics of water supply (old high pressure main vs. newer high flow rate/low pressure main), failure of HVAC equipment or system, and addition or replacement of fire alarm components/accessories due to space changes. Minor replacements are handled by operating budget and maintenance staff. This category would also include site systemic work such as pavement rehabilitation work or site utility restoration work.

Replace CCBC Natural Gas Piping \$ 750,000

The natural gas mains on campus beyond the main service entrance and public utility meter are owned and operated by CCBC. Many of these pipes are steel wrapped in yellow plastic to resist corrosion but are of an age (almost all older than 40 years) where leaks are more and more likely. The presence of a gas smell on campus usually causes evacuation of one or more buildings until the source and strength of the natural gas presence is determined. This can interrupt classes for several hours at a time. To be proactive about this, CCBC should replace all old gas mains on campus on a scheduled basis when student populations are at a minimum.

Middle College (renovation option – location to be determined) \$ 9,281,250

The college and BCPS staffs have met to begin discussions on this topic. The preliminary information is that space of about 28,000 NASF is required to deliver this program to high school students on a community college campus. This translates to a gross size of 41,250 sf. It is unlikely that CCBC can find an existing candidate building to renovate for this purpose, but if one is found this is the estimated cost to perform that renovation.

Center for the Arts Renovation \$12,276,000

This is one of the latest of the original ‘first wave’ of building construction to have taken place on this campus. The building was completed in 1978. It will likely be 50 years old before funding is garnered to support the renovation of this building. In the meantime the college has spent considerable time and resources to keep the building in good repair and attractive. The largest failing of this building is the HVAC system. Another significant shortcoming is the lack of vertical transportation to the lowest level. Many of the HVAC system elements are in difficult to access spaces and this really makes repairing them or replacing them quite difficult. There have been many HVAC leaks in the building and there will likely be many more until this building is renovated. The college has reworked the front outdoor plaza, created ramps to access the theater upper seating bowl, performed ADA improvements to restrooms, replaced the roof membrane, upgraded the theatre lighting system, improved the lighting and ceiling system in the main level meeting room, and added an annex for ceramics kilns and storage. The boilers chillers have been

removed and this building is served from the Central Utility Plant. This renovation should be comprehensive and rejuvenate the spaces for all of the students and faculty.

Humanities Hall Renovation/Addition

\$10,476,000

This building, built in 1972, is the current 'home' for the School of Liberal Arts (SOLA) on this campus. It is a 2-story building with most of the classrooms located off 3 sides of a race-track corridor system. Support spaces are located on the interior of the same corridor system. The SW segment of corridor on both floors contains the faculty office suites. These are small and crowded office areas and insufficient in quantity to house the entirety of SOLA faculty space needs. The college has replaced the unit ventilators once in the late 1980s. They are overdue for another replacement in this renovation, however the design team for this project should investigate use of another system to heat and cool these perimeter rooms as the UVs are too noisy, require staff to enter the classrooms for maintenance and filter changes, and are generally far less reliable than central equipment. The original BUR roof was replaced in 1995 with a PVC single-ply membrane, however the college could not improve rooftop drainage at the time due to budget issues. Despite this poor drainage the membrane has lasted 20 years. It will need replacement well before this project comes to fruition. The corridor area finishes and restrooms were renovated, the central air handling units replaced, 2-story TV studio had a steel floor inserted to build classrooms atop one another all in the mid-2000s. Finishes in faculty offices were also rejuvenated during this time period. The addition component of this project is anticipated to be on the SW edge of the building and house faculty offices (4,900 sf), 2 meeting/seminar rooms (600 sf), office support space (400 sf), and building support space (150 sf). The meeting/seminar rooms are for the accelerated learning programs (English focused.) The SOLA faculty is spread throughout the campus and needs a more unified presence on campus so that students in need of help can more readily make contact with them.

Health Careers and Technology Center Renovation

\$20,786,000

This 2nd largest academic building on campus was constructed in two stages, the first being occupied in 1973 and the second in 1998. Very little was done to the original building in the 1998 construction effort; some restrooms were made more ADA compliant and the automatic sprinkler zoning was reworked to comply with county fire marshal requirements. The perimeter spaces in this building are heated and cooled with unit ventilators (UVs) the oldest of which were replaced in 2005. The original building's ceiling tiles were asbestos containing building materials (ACBM) and were removed and replaced ca. 1989. The main AHU and pumps in the Stage 1 (1973) penthouse may need replacing prior to this project being funded. The most difficult part of this renovation project will be to devise a work scenario that neither interrupts instruction nor the computer center during normal business hours.

Classroom Building 2 (replacement for BESS and CNED)

\$21,700,000

These are 2 modest sized buildings between the Library and the Hilton Center. Their scale is such that neither will dwarf the Hilton Center nor the historic quad buildings. Depending on actual footprint size, one of these buildings could house a Middle College with bus drop-off and pick-up being via Lot 8. The program expansion building would then be sited closer to the stone wall with the iconic campus archway.

Lot 7 (West) Parking Garage

\$32,750,000

This parking structure is planned to be the largest at this CCBC campus, having 1,310 spaces. It will consume a large portion of current Lot 7, which fortunately does not have any solar arrays installed in it. All of the existing parking will not be consumed but CCBC does plan to lose 200 of the 272 spaces due to locating this garage here. That will mean this project will produce a net gain of 1,035 spaces when completed. This figure closely aligns with the 10-year projection of need for parking. It will be important to produce aesthetic looking facades on the West and South exposures of this garage. Most likely the laydown area for large construction components will be the unused part of Lot 7, but smaller components and site trailers could be situated in Lot 8 beneath some of the solar canopies. Similar to the North Garage on existing Lot 3 this garage can be built without requiring major land clearing, mass grading, storm drain construction, or installation of major sediment and erosion control measures. Similarly to the other garage, the existing lot 7 storm water runoff was not managed when it was built; this project will still entail installation of storm water quality and quantity control measures.

CCBC Dundalk

2016-2020

Renovate Operations Building and create Replacement for Maintenance \$ 1,965,200

CCBC intends to create a metal style building for housing the maintenance, shipping/receiving, and warehouse functions on this campus. New construction of approximately 5,000 s.f. is anticipated and the planned location is on the former outdoor basketball court. This will leave two tennis courts for the college community to use. By redeveloping over impervious area CCBC hopes to mitigate the cost of new SWM features. Wet utilities are nearby as are power and communication ductbanks. The existing facility contains 2 bays with overhead door and lift capability. A 3rd bay is easily possible given the architecture of the front elevation of the existing building. That will comport well for the intent to create a central CCBC vehicle maintenance facility in the current Facilities Operations Building. Both of these spaces should be outfitted with automatic fire suppression systems and fire alarm system updates. There are no natural gas lines serving either of these areas.

Renovate Student Services Center (2nd floor including link) \$ 2,575,000

Recently the 1st floor of this building was renovated for the Enrollment Services functions. This renovation included installation of a fire sprinkler system, update to fire alarm system, revamping the HVAC distribution, along with spatial changes and finishes renewal work. The HVAC improvements were done anticipating that the actual air handling units would be replaced soon after that project. The current AHUs are constant volume whereas the new 1st floor distribution is designed as variable volume. The ideal will be to replace the AHUs with variable speed capability to minimize the actual volume of air moved by the system. That will necessitate the changeover of air distribution on the 2nd floor to have a compatible operating system. Ceilings need to be removed to perform the HVAC work. This makes it an ideal time to install sprinklers, updated fire alarms, new lighting and ceiling systems as they all require existing ceiling demolition to be performed. It would also make sense to study and make the floor plan on this floor more efficient at the same time for additional cost considerations. There will be no more cost effective time to do that work in the future. There are several duplicate circulation paths on the 2nd floor and so we believe that a more efficient use of space can be attained as well. With all of this work occurring on the 2nd floor it will also make most sense to coordinate this with the roof membrane replacement work that will be due at about the same time.

Roof Membrane Replacements (STAT, WELL (flat)) \$ 850,000

This roof membrane replacement project has been programmed and approved for funding in the FY 2018 budget cycle in Baltimore County. These buildings were constructed in 1990 and 1978, respectively. The membrane on Roy N. Staten Building is an original BUR membrane while the Wellness & Athletic Center flat roof membrane was installed in 1990 and is EPDM type. Both will be at or over their expected useful service life by 2018-19. A concern that needs to be monitored is the condition of the terne-coated batten seam steel roof panels over the main arena arch and the pool building with similar materials and arch shape. Those have begun to experience some leaks

especially with wind-driven rain. Some foil-covered butyl tape was used to repair lap seams and battens over the years. A similar effort may need to be done in concert with the flat roof work. CCBC anticipates that these roof projects will be combined with the Children's Development Center at Catonsville to achieve the overall best pricing for the college.

Extend Lot 4 for Additional Parking

\$ 392,000

Parking is in high demand at this facility during the fall semester and particularly in the evenings with an influx of part-time students with day jobs. With the soon-to-begin renovation/addition to the Wellness & Athletic Center and its attendant need for laydown and staging area, it will be important to construct this parking expansion to even maintain the status quo during that construction endeavor. This project contemplates adding parking on the open upper field above the stadium and adjoining existing Lot 4. Included in this scope should be LED lighting, landscaping, and creative SWM features. An additional emergency telephone is most likely also to be required.

Wellness & Athletic Center Renovation and Addition

\$15,830,425

Much of this existing facility dates from its original construction in 1978 and thus will be at or very near to 40 years old at the time of this project. This building has original HVAC, power/lighting panelboards, and lighting fixtures. All of these systems need to be updated along with fire alarm and automatic sprinkler systems. All finishes should be replaced except for concrete and brick. Exterior redwood siding has been well-maintained but continues to present new problems almost annually and so should also be replaced with a more maintenance-free and insulating product. Restrooms and locker rooms need updating and the pool area needs to have a dehumidification system installed. Exterior glazing and storefront/hollow metal should be replaced with more energy efficient units as well. The existing role play rooms' roof should be replaced with this project if it has not already been replaced before this project begins. The addition is for additional role play room types. The circuit center/fitness room should be modernized with appropriate flooring and hydration station. Consider the addition of daylighting and automatic lighting controls to minimize the need for artificial lighting in most areas.

2021-2025

New Parking Lot; Reconfigure Secondary Road around New South Quad **\$ 2,500,000**

This project is required to support the development of new buildings that form the South Quad. The current intersection to the South Lawn Loop Road is too close to the Sollers Point Road entrance and many new students and visitors and delivery vehicles miss the turn. This redevelopment moves the turning movements farther into the campus and builds a parking area south of the Children's Development Center which will be capable of supporting the parking needs of 2 new buildings on the South Quad.

Classroom Building (at New South Quad) **\$12,250,000**

This new classroom building of 35,000 sf is planned to help develop a quad south of the Student Services Center, east of the Central Utility Plant (screened by a developed garden currently) and north of this new building. This will help to alleviate faculty office and classroom pressures. New pedagogy especially in writing has caused the college to adapt some spaces but cannot develop class/labs to the extent that the new pedagogy dictates. This will also allow CCBC to develop more classrooms suitable for use in the accelerated developmental education model which is suited to small (<20) class sizes. Many of those classes are now held in rooms with capacities of 30 or more students. This building will get intensive use when the college renovates Math and Science Hall on this campus.

To be Implemented as Funds Become Available

Systemic Upgrades: sprinkler, HVAC, fire alarm, etc. **\$ 3,000,000**

These improvements are generally funded from a miscellaneous capital renovation/ renewal allocation. Projects are necessitated by changes to spaces that require issuance of a building or alterations permit in some cases. In others it may be caused by changes in pressure/flow characteristics of the public water supply (general capacity degradation), failure of HVAC equipment or system, and addition or replacement of fire alarm components/accessories due to space changes. Minor replacements are handled by operating budget and maintenance staff.

Mathematics and Science Hall Renovation w/HVAC Upgrades **\$ 6,031,750**

This building was partially renovated in 2004. The scope of that renovation included demolishing the auditorium and creating flat floor classrooms and a lab, renovating science labs, adding sprinklers, upgrading fire alarm system and electric panels. The office areas and spaces on the first floor have not been renovated and this building also has multiple parallel circulation paths that make the overall layout less efficient than it could be. Internal building ramp systems may preclude that effort at gaining efficiency. The HVAC system was not replaced in 2004 due to budget limitations. With funding in the 2028 time frame this building will then be over 50 years old and in dire need of major mechanical system upgrades.

Career Building Renovation **\$ 7,037,775**

This building was constructed in 1983 and has not had any major renovation work done. Some smaller spaces have experienced change in use type alterations, the upper level restrooms have been made ADA compliant and corridor finishes on the upper level have been refreshed around 2009. The former wet photo labs on the lower level were converted to Horticulture spaces, the student success center on the upper level was relocated and the space repurposed into classrooms. The building is showing signs of structural movement and is being monitored with the assistance of structural engineers. The building was originally built using only local funds.

Classroom Building 2 (at New South Quad) **\$12,250,000**

This proposed 35,000 sf building is an architectural companion to the first South Quad Building. The programming for this building should take into consideration the array of academic and/or technical education needs of business and industry located on the former steel manufacturing facility property.

CCBC Essex

2016-2020

Health Careers Technology Center Renovation/Addition & Site Work **\$49,000,000**

The design for this project was begun in 2015. Construction is to be performed in stages to minimize adverse impacts to the campus community and also the need for costly surge space. An early stage is to perform site and utility work. Site work includes relocating the loop road outside of the Children's Development Center and alleviates some confusing intersections by adding small roundabouts. One goal is to preserve as much parking as possible both during and after this work is done. Utility work involves removing conflicts in the addition footprint and renewing service of heating and chilled water lines between this renovation/addition site and the central utility plant. Consideration should be given to installing new and larger piping along this feeder loop to avoid the need for building and maintaining a parallel system to the existing one. The new addition should then be built in the cleared footprint followed by relocation of functions out of the existing building. The next stage then is the renovation of the existing building and the relocation of all SoHP functions from the Administration building to this complex. Then the vacated space in Administration Building is to be lightly renovated to accommodate SAIT programs and staff. That group will then vacate the SoHP complex and move into Administration Building. Finally, space in SoHP complex vacated by SAIT can be tweaked to suit the SoHP uses. A more aggressive funding plan will enable this project to

Switchgear, campus feeder, building meter upgrade/replacement **\$ 1,000,000**

This project envisions a complete review and refurbishment to the 13,200 volt site electric entrance and distribution system. The end result of this endeavor will include the metering of each campus building to determine load and monitor energy use on an ongoing basis. The campus feeders will be analyzed and evaluated for replacement in existing ductbanks. The existing entrance switchgear (original to the college and exterior pad-mounted cabinets) will be replaced nearby, sized to match master plan needs, and housed in a weather-protective shed or inside the central utility plant. Project is to be designed and constructed to minimize campus downtime. This is considered to be a mission-critical project due to the age and condition of the existing gear and the lack of available replacement parts. The cost estimate in the report does not include feeder replacement as that is currently an unknown scope.

Exterior Skin Replacement & Clay Mixing Room Addition **\$ 650,000**

This project completes the renovation of a small pre-engineered metal building on the campus to a satisfactory level. Due to cost/time considerations these 2 elements of the building renovation were not performed in the same renovation cycle as the rest of the building. There was a push to relocate science functions out of the Mathematics & Science Hall and into temporary quarters for dry labs and into this building for wet labs prior to renovating Mathematics & Science Hall. Much work was done in the late fall/early winter time period when footings and exterior

concrete work is best avoided. The lead time on the metal panels selected for the building skin were not available on the limited schedule either. A heavy class/lab load the following spring/summer precluded moving forward with this work at that time. It has since been delayed waiting for renewed funding. The ceramics students are using pre-mixed clays which are more expensive for the program and limit the creativity and experience of the students.

Veterinary Technology Facility (Renovate Existing + Addition)

\$ 1,375,000

This project anticipates that the existing space in the lower level of Mathematics & Science Hall can be renovated to an acceptable degree and that a modest 1,500 sf addition can be made on the same level (in direction of Franklin Square Hospital.) The original construction documents had included a small greenhouse as an ADD Alternate that would have been built in this general area. There are no utility conflicts and only minimal sidewalk relocation work is required to build in this direction.

Rehabilitate Lot 1 Parking Facility

\$ 2,750,000

The majority of the parking spaces on campus are located in this lot. It was constructed in 2 phases with the upper section (south of Division Lane) being built in 1967 and the lower section (north of Division Lane) being built in the early 1970's. The original pavement sections are light duty and the native soils are generally moisture sensitive clays with high plasticity indices. The pavement has suffered alligator cracking and rutting in wheelpaths over the years and has been a constant source of potholes and patchwork since the 1970's. In fact, the drawings for the newer lot showed repair work already needed on the older section. The current plan for reconstruction includes the use of soil cement to improve subgrade soil strength and the installation of a properly designed pavement section based on the number and types of vehicular loading anticipated over a 20 year service life. There are an additional 9 bays of varying length to rehabilitate since the first one was done in 2015.

Addition to Wellness & Athletic Center/Dance Studio Renovations

\$ 3,000,000

The college has elected to move forward with seeking accreditation for the Dance Program which is to be anchored at CCBC Essex. This project will enable that goal to be reached in terms of facilities here at Essex. The first step is to construct an addition to the main level of building on the north side to house a new and improved Fitness and Exercise Center which will be easy to find and convenient to use. The Center will be built near a main entrance and convenient to both parking areas and locker rooms. The former location of the Fitness and Exercise Center can then be renovated into a state of the art Dance Studio of at least 2,400 sf. on the mezzanine level. That will complement the existing Dance Studio space on that same level of the building. The existing space will need some alterations to combine 2 studios into 1 large one of the targeted size. Both spaces for new Dance programs are currently air-conditioned. The new Fitness and Exercise Center will be heated and cooled from a new screened rooftop unit.

College Community Center is renovated. That project will greatly reduce the amount of space available for students to engage each other on campus and also for food service. This project will create some flexibility for the college to accommodate those needs. By adding some sort of clerestory enclosure over the courtyard and enclosing the east portion of the covered portico, CCBC will gain a significant amount of space that will be usable 12 months of the year. It is believed that the HVAC needs for this space can be served from the mechanical addition recently constructed on

the NW corner of the building. There is also the possibility that some type of active/passive solar method may be used on this HVAC system as a sustainability demonstration project.

Renovate Business, Education, and Social Science Hall (BESS)

\$11,260,800

As noted in the Master Plan this building is well organized with an efficient layout and use of space. It is however suffering from the effects of age being built in 1976. It is almost 50 years old during this planning period and has really had only maintenance type projects done to it over the years. It has had a new roof membrane installed and unit ventilators replaced along with some chilled water pipe insulation replaced and also some ceiling tiles changed out due to condensation and mold. A small generator was installed to provide power to life safety devices in the building. It needs a wholesale renovation at this time. The operable windows no longer operate well or close due to 'sprung' hinges. They are part of an assembly that includes intake louvers for the unit ventilators. Both of the AHUs in this building need to be replaced, but should be re-engineered to provide ASHRAE compliant fresh air and energy efficiency. The unit ventilators are service intensive and also quite noisy especially later in their service life. It would seem wise to coordinate the window/louver replacement and the AHU replacement together with an outcome that eliminates the need for UVs in this building. Also, the heating/cooling loops running past this building will have been upgraded with the Health Careers Technology Center Renovation/Addition project. If that project is developed such that the selected HVAC system is of the chilled beam type then it seems to make sense to migrate other buildings served by the same loop to also use chilled beam system. Since the recovery time for chilled beam is longer than for VAV systems then the loop serving the Health Careers Technology Center project would need to be active anyway even when other loops may not be.

College Community Center Renovation/Addition

\$20,200,000 *

This project is proposed to satisfy multiple deficiencies present with the current building. They are generally related to one of two facets: inadequate space of the type needed to accommodate demand and the outdated and inefficient HVAC systems. The main entry for the building is only accessible for those persons capable of negotiating stairs. One also needs to traverse several steps up from the main campus pedestrian route to reach the entry level bridge and then is confronted with another choice of either a half-flight of stairs up or down. It is very much a split level entrance. Dressing rooms for costuming are on the lowest level which currently requires the use of a motorized inclined lift along the route of the stairs. These require staff assistance. Space deficiencies include: food service kitchen, storage and office for manager; additional dining with subdivided seating groupings; improved servery flow and pay station; proper storage for bookstore (currently use a trailer); additional seating for the theater main stage; informal student gathering and study spaces; student club/government office space; meeting/conference space for faculty-staff. Almost all of the HVAC air handling units are original with perhaps some replacement coils and an attempt to conserve energy through use of vane control on selected AHUs. Lighting is often inadequate and can be improved in terms of lumen output as well as in terms of lamp/fixture efficacy. The sprinkler system should be replaced as it will be 50 years old or older at the time of this renovation. There are computed needs for food facility, lounge and meeting rooms which could be alleviated through this renovation/addition project. This project will likely be phased, depending on funding availability.

*\$20,200,000 = total cost for two possible phases (\$9,200,000 + \$11,000,000)

2021-2025

Roof Membrane Replacements (MASH, ADMN)

\$ 1,400,000

The CCBC roof replacement schedule indicates that certain building roofs or major portions of them will need to be replaced during this time interval. There are 2 such building roofs that fall into this category during 2021-2025 and they are: Mathematics & Science Hall and Administration. The Mathematics & Science Hall roof membrane is a single ply by Bond-Cote (purchased by JM.) It is most likely the first of the two to need replacement. This is a high cost roof due to its height above ground and the many obstructions on the roof. Due to the building height the coping is heavy gauge and the roof edge, as well as much of the mechanical equipment, is connected to a lightning protection system. This system resistance should be tested prior to design completion and once again after construction to ensure its continued viability. Much of this roof assembly is a PMR or protected membrane roof. Due to the vast number of penetrations and equipment stands requiring service (meaning roof traffic), this is probably a good choice once again. The Administration roof is a multi-ply BUR installed in 1998. The college is projecting the need for a replacement in 2023. This roof is only 3 stories above grade and has a modest number of penetrations. It should be monitored for problem conditions thoroughly in 2020 to inform the college of any need to accelerate the roof membrane replacement to coordinate with the light renovations to spaces on the top floor as a part of the Health Careers Technology Center Renovation/Addition Project.

Library Renovation/Addition

\$26,170,000

This building is undersized based on campus enrollment and space guidelines. Sorely lacking are group study rooms and the computer commons area is also too small. The back of the house processing and staff areas are also cramped and should be reorganized. This building dates from the late 1960s and has had major asbestos abatement performed. The HVAC distribution system was re-worked in 1990 but used rehab kits for the constant volume mixing boxes. The HVAC must be redesigned to comply with current ASHRAE guidelines for fresh air intake and energy efficiency. The addition should take advantage of the North elevation for daylighting and the green space beyond for views.

Arts and Humanities Hall Courtyard Infill

\$ 2,250,000

This project is proposed for dual reasons. The first is to harness some existing underutilized space at Arts & Humanities Hall and to create a haven for the SOLA and SAIT students to gather during their off-hours and to interact more often with faculty. The second is to create some space that can be used on a temporary basis when the

Renovation of the Wellness & Athletic Center

\$21,125,000

This project tackles the renovation of a building with tired finishes and 'bones' and a lack of air conditioning, dehumidification and ventilation. This building has multiple AHUs with most of them being the original 1971 units. That means this building will be about 50 years old at the time of renovation funding – probably 55 years old before it

is actually accomplished. The college has not ignored the maintenance and renewal of certain elements in this building. It has had roof membranes replaced twice, urethane flooring resurfaced several times and replaced once. The dance studios and classrooms beneath them have had air conditioning installed. The pool area has undergone lighting replacement, main drain replacement, ceramic tile replacement, exhaust fan replacement, exterior storefront wall replaced, filter and piping replaced. The building has had locker room improvements, asbestos abatement in the late 1980s, ADA inclined stair lift installed, a LULA elevator installed, and exterior masonry cleaned and selectively tuck-pointed. Even so, the building needs to be comprehensively renovated and the main arena air conditioned. Truly the 2 large AHUs serving the locker rooms, pool, and lower level classrooms and offices could fail at any time. They are definitely on their last few years of operability. Specifically lacking is any space for students to plan group activities or to wait for their friends before beginning exercise or team sport activities.

East Parking Garage (near Arts & Humanities Hall) \$26,700,000

This proposed 1,068 space garage located on Lot 2 in the East edge of campus near Franklin Square Hospital will go a long way toward providing more balance to the geographical distribution of parking on campus. Most parking is currently on the North (1,100), West (456) or South (442) sectors of the campus. The only permanent East lot has a capacity of 211. The plan of this garage should be developed to preserve the portion of Lot 2 reserved for faculty (90) and also fitted out with solar canopies. This garage would then produce a net increase in parking capacity of 1,000 spaces. This still does not totally alleviate the current deficit of 1,200 spaces and only satisfies half of the 10-year deficit of 2,000 spaces.

Classroom Building 1 – near Arts & Humanities Hall \$21,000,000

The college has a computed deficit in classroom, open laboratory and office space that can only be partially satisfied by constructing this building. As its location is near to the Arts & Humanities Hall and the Wellness & Athletic Center, CCBC anticipates programming the facility to suit the needs for additional instructional space tailored to those program areas.

Facilities Operations Building Addition/Renovation \$ 8,333,850

This facility, admittedly the best of the 3 CCBC Facilities Operations facilities, is still old and under-sized to meet the needs of the campus. There is a total lack of space for storing 'attic stock' and adequate spare parts and supplies for maintenance activities. The proposed 19,000 sf addition will come close to satisfying the computed need for Central Service and Shop/Storage functions at the end of the 10-year planning horizon. This project should include rehabilitative site work for paved areas and the concrete loading dock as well as Major HVAC equipment. All exterior doors should be replaced and appropriate security measures deployed. Some covered parking for fleet vehicles should be considered as most CCBC vehicles succumb to rust more than wear and tear due to high mileage.

To be Implemented as Funds Become Available

Systemic Upgrades: sprinkler, HVAC, fire alarm, etc. \$ 3,000,000

These improvements are generally funded from a miscellaneous capital renovation/ renewal allocation. Projects are necessitated by changes to spaces that require issuance of a building or alterations permit in some cases. In others it may be caused by changes in pressure/flow characteristics of public water supply (general degradation), failure of HVAC equipment or system, and addition or replacement of fire alarm components/accessories due to space changes. Minor replacements are handled by operating budget and maintenance staff.

Replace CCBC Natural Gas Piping \$ 750,000

The natural gas mains on campus beyond the main service entrance and public utility meter are owned and operated by CCBC. Many of these pipes are steel wrapped in yellow plastic to resist corrosion but are of an age (almost all older than 40 years) where leaks are more and more likely. The presence of a gas smell on campus usually causes evacuation of one or more buildings until the source and strength of the natural gas presence is determined. This can interrupt classes for several hours at a time. To be proactive about this, CCBC should replace all old gas mains on campus on a scheduled basis when student populations are at a minimum. It should be noted that natural gas is actually methane that has been odorized for safety detection and is approximately 80 times per molecule more damaging to the atmosphere than carbon dioxide.

Land Acquisition: Martin's Farm Cost TBD

This particular combination of properties is almost 14 acres. They are collectively bound by I-95 on the North, Rossville Boulevard on the East, I-695 on the West and other private property on the South. The only direct access is to Rossville Blvd or its precursor, Ridge Rd. This is perhaps the last opportunity that CCBC Essex will have to purchase property in reasonable proximity to the campus. This property is across Rossville Blvd from Lot 8 and the Facilities Operations building.

Classroom Building 2 (between COMM and WELL) \$14,000,000

This proposed 40,000 GSF project will be situated just off South Lane and forms a new north edge to this green space type quadrangle. The project could be advanced to a sooner time bracket and then used as surge space when renovating the Business Education and Social Science or Library buildings in the 2021-2025 period. With Classroom Building 1 nearer to Arts & Humanities Hall and the need for SOLA program space (Reading and English being the largest), this facility could be well-suited for SoMS and particularly Mathematics instruction and also to fulfill the need for lecture hall spaces of a variety of Science disciplines. Other space in this facility could be used for Health, Nutrition, and Recreation disciplines due to proximity to the Wellness & Athletics Center Building. There is a need for additional faculty space among WELL program areas and this or Classroom 1 Building could fulfill some or all of that need. If the Middle College becomes a reality, it could be located in this building.

West Parking Garage – Phase 1

\$25,000,000

Located in Parking Lot 5 this phase of the garage construction will be designed to produce a total of 1,000 spaces. This lot will lose most of its 340 spaces with this garage although a taller garage might allow for some of those to be preserved. Situating the garage more toward the North end of the lot would perhaps allow some the southern spaces covered with solar canopies to be preserved. These preserved spaces would feel isolated from the campus with the large garage lying between the spaces and all academic buildings. This lot was built ca. 1976 with storm water quantity management control installed. Some modification to this SWM facility is anticipated based on its age and measures to improve SW quality will need to be implemented. Building garages over existing parking lots seems to be the most cost effective strategy for this site for several reasons. One is that there is very little vacant land near the academic heart of the campus. Outlying space is either for athletic facility use or part of forest conservation area. The soil type on this campus makes construction of economical surface parking not very practical. Much clearing, grading, utilities, and deep paving sections are all costly and disruptive activities. A garage can be built relatively quickly of cast in place concrete.

West Parking Garage – Phase 2

\$10,850,000

Located in Parking Lot 5 this phase of the parking garage will be designed to produce an increase of 434 spaces. If these spaces are built atop the Phase 1 garage then there will be no net loss of parking due to construction. This phase of the work should be accomplished prior to building either the new Performing Arts Center or Classroom Building 3. The latter project will induce a loss of approximately 60-75 spaces.

Performing Arts Center

\$33,750,000

This large building project is principally proposed to provide a larger venue for a multitude of the performing arts. It has been noted that the current theatre at Essex is not large enough to attract big name talent and recoup expenses with ticket prices; they would just be too exorbitant for the community to patronize the performances. A larger theatre would help to resolve that pricing debacle. This facility should also contain a more intimate and experimental 'black box' style theatre that could be alternately used for some larger meetings or conferences that need space of this type. There is a lack of this type of space available in the surrounding locale and the college often gets inquiries for space such as this. Care will need to be exercised in siting this building as there is a dedicated Mace family burial plot in the vicinity. A clearer vehicular entry path for visitors should be developed as a part of this project if it has not been done already. Most patrons or users of this facility would be expected to park in the adjacent garage.

Classroom Building 3 (Lot 4)

\$21,000,000

This facility fills most of the open space on the South-Central edge of the campus and overlooks some of the Franklin Square Hospital campus. It would be bounded on the North by the Administration Building (with many SAIT programs), on the East by the Mathematics & Science Hall (home of SoMS), and on the West by the Business Education and Social Science (WESS programs, BCJL programs, and CNED staff and programs.) As this facility is near the fulfillment of maximum capacity of this campus to develop within the current property boundaries, this plan does not put forth a slate of potential occupants. Indeed, many program areas are likely to change before this project is ready for the programming stage.