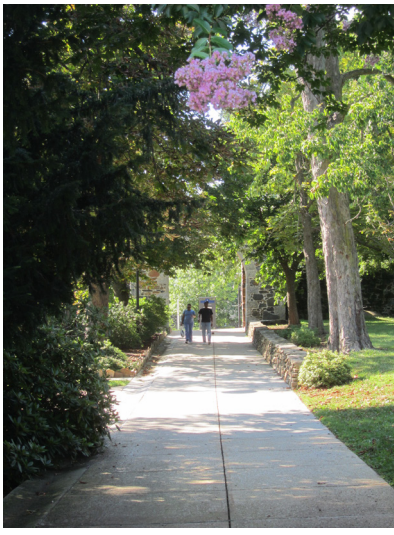
CCBC Facilities Master Plan 2016

CCBC Dundalk

February, 2016



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February, 2016

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.

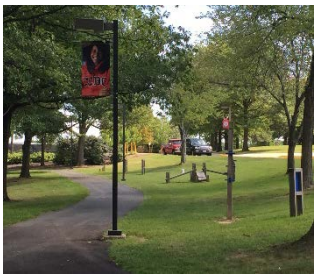
Not only are credit and non-credit programs offered at the three main campuses and extension centers, but also at various public libraries and community centers throughout Baltimore County and online. Through non-traditional course formats, students can access a broadened learning environment, develop 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
Business Administration/Business Management
Dental Hygiene
Education (All)
Emergency Medical Technology
Health Informatics and Information Technology
Massage Therapy
Mental Health
Mortuary Science
Music Production and Audio Recording Technology
Music Transfer Programs
Nursing / RN
Occupational Therapy Assistant
Paralegal Studies
Physician Assistant
Practical Nursing (Licensed)
Radiation Therapy
Radiography
Respiratory Care Therapist
Theatre
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

[a]students 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.

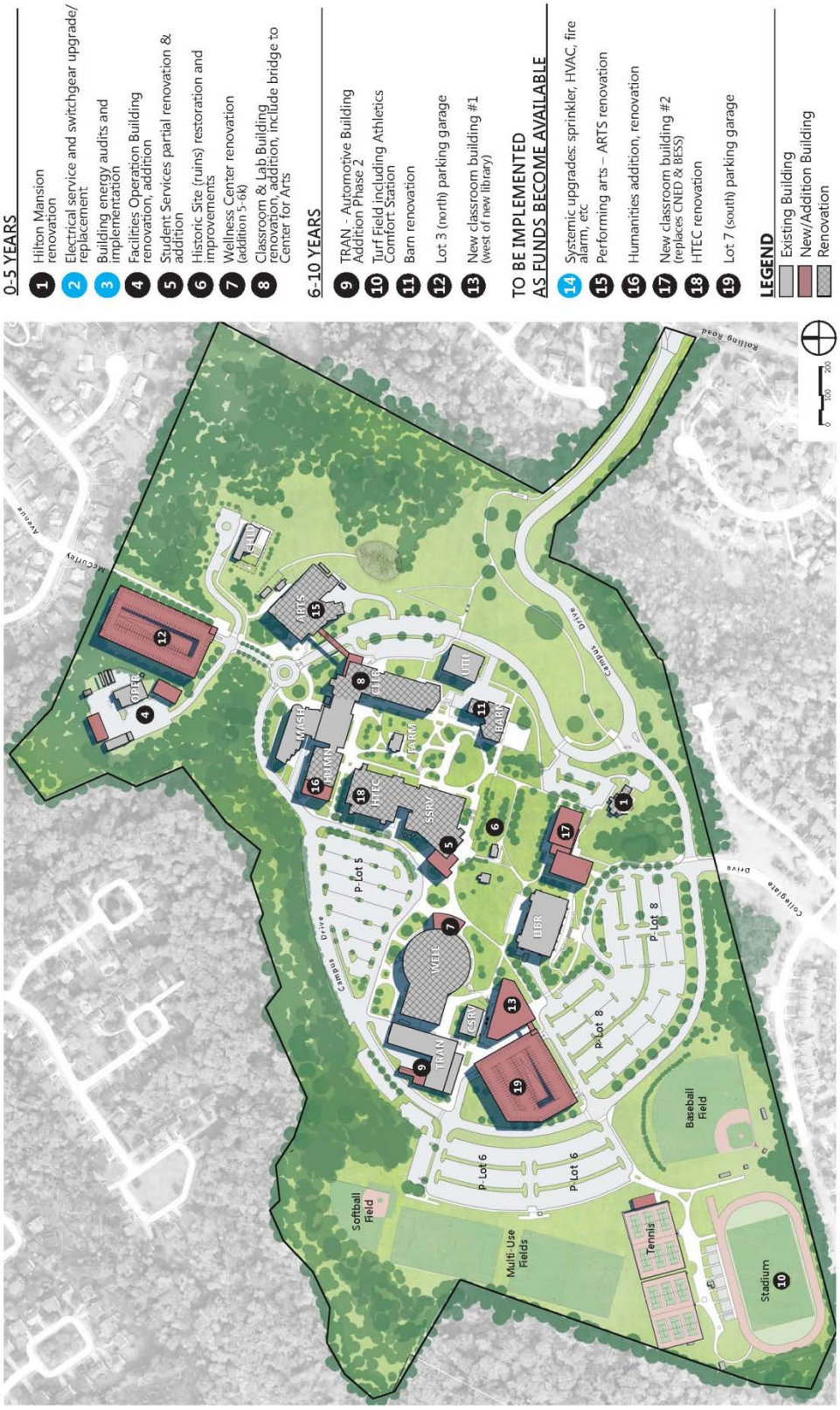
New building design should acknowledge the historical references of the older buildings while incorporating contemporary functions and aesthetics.

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**

EXISTING CAMPUS – CCBC CATONSVILLE

PROPOSED CAMPUS DEVELOPMENT – CCBC CATONSVILLE



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

[a] students 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 20014 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

PROPOSED CAMPUS DEVELOPMENT – 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

[a]students 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.

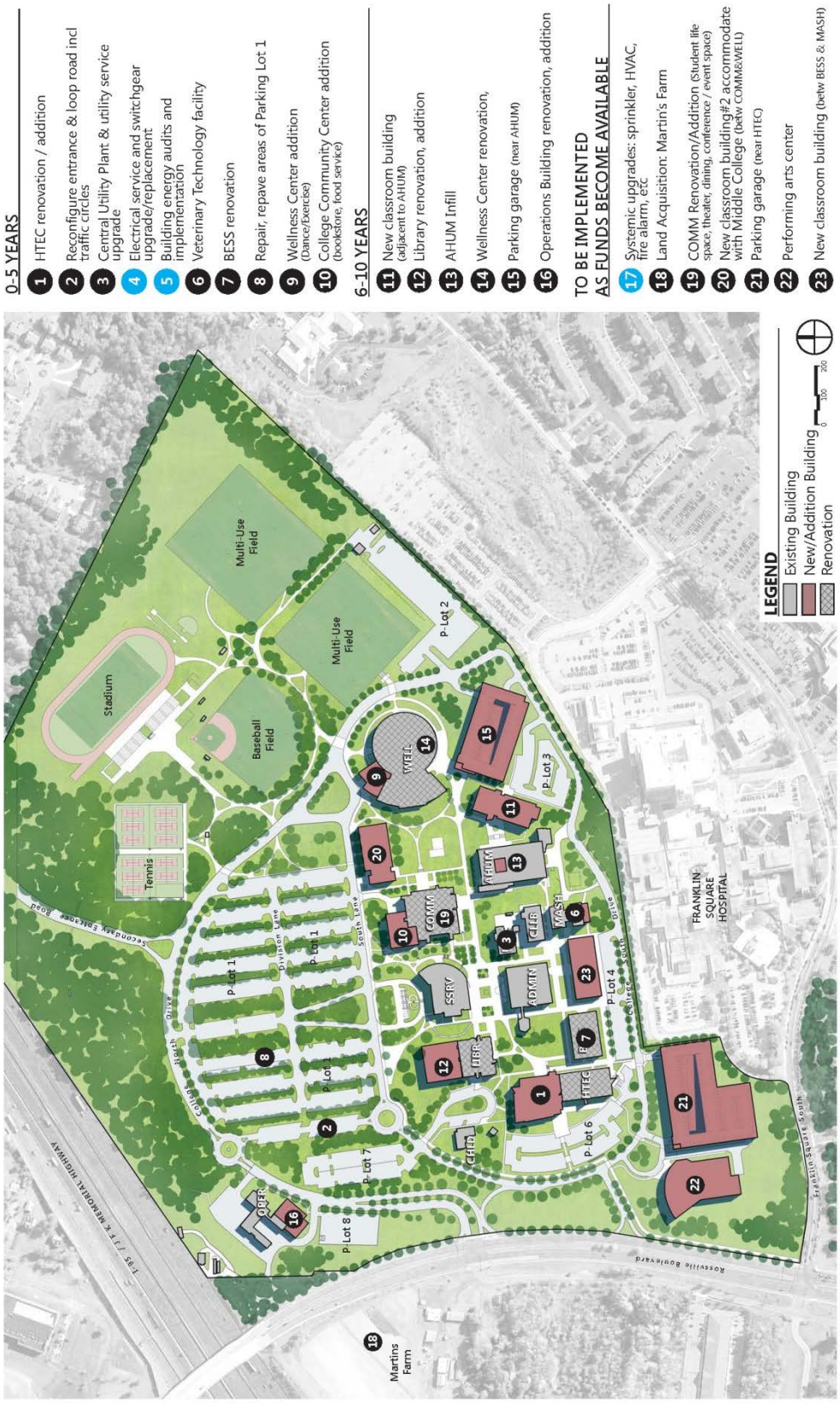
Taken together, all of the proposed projects will require storm water management measures. This can be addressed on a project-by-project basis as drainage areas and topography dictate.

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 Dundalk 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.

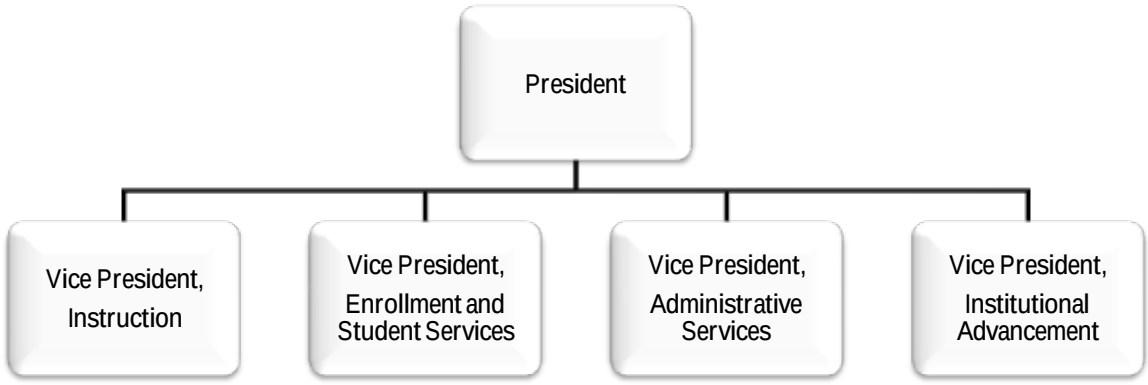
GOVERNANCE AND ORGANIZATION

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

[a]Fiscal 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

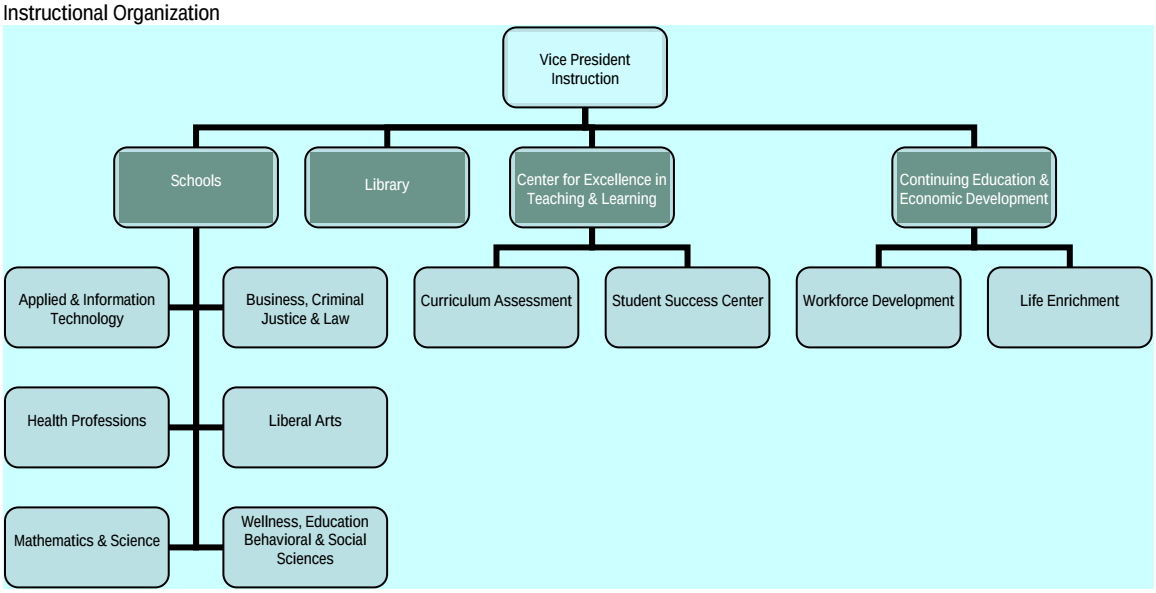
INSTRUCTIONAL ORGANIZATION

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 Dundalk Campus, a location map of the Dundalk community, and a programmatic building summary are provided below. Detailed information relative to each building is provided in Chapter 4.

History and Character of Dundalk Campus

The Dundalk Campus (CCBC Dundalk) is located on 70 acres of land 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.

Baltimore County / CCBC Dundalk Vicinity Map

7200 Sollers Point Road Baltimore, MD 21222

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. A brief programmatic overview of the permanent buildings is presented in the table on the table on the next page with more detailed discussion of each facility presented in subsequent chapters.

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, Dundalk is a vital part of its southeast Baltimore County community. Educating generations of residents, Dundalk mirrors the hometown neighborhood it serves. 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.

Permanent Buildings (CCBC Dundalk)

Building	Code	Built	GSF	NASF	Primary Use
Career Building	CRBL	1983	31,279	22,567	Instruction, Office, Data Processing
Central Utility Plant	UTIL	1972	3,485	292	Mechanical, Storage, Office
Children's Learning Center/Dental Arts Building	CHLD/DENT	1974/1973	16,552	10,946	Child Care, Instruction
College Community Center	COMM	1980	88,418	50,128	Assembly, Library, Dining, Office, Bookstore
Facilities Operations Building	OPER	1976	3,576	3,315	Shops, Office
Greenhouse	GRNH	1993	1,584	1,490	Campus Landscaping
Mathematics and Science Hall	MASH	1974	24,127	17,644	Instruction
Roy N. Staten Building	STAT	1991	31,410	18,122	Instruction, Office
Student Services Center	SSRV	1972	18,529	12,580	Office
Wellness and Athletics Center	WELL	1978	55,913	39,773	Athletics/Physical Education/Wellness
Totals: CCBC Dundalk			274,873	176,857	

Data Source: CCBC Facilities

Dundalk College Community Center

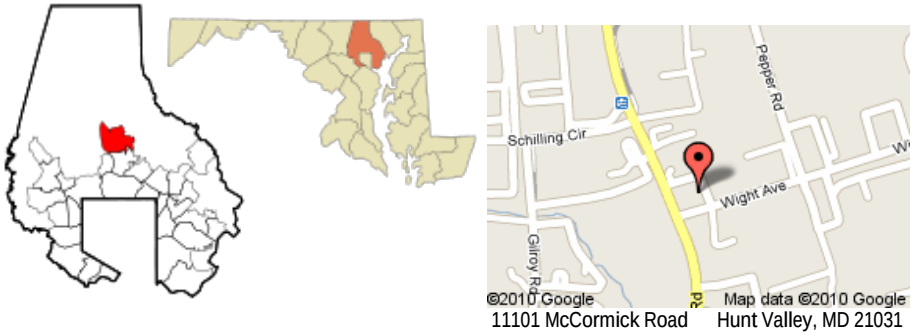
EXTENSION CENTERS

The Community College of Baltimore County leases or owns approximately120,000 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



11101 McCormick Road Hunt Valley, MD 21031

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

[a]Functions housed in off-campus leased facilities

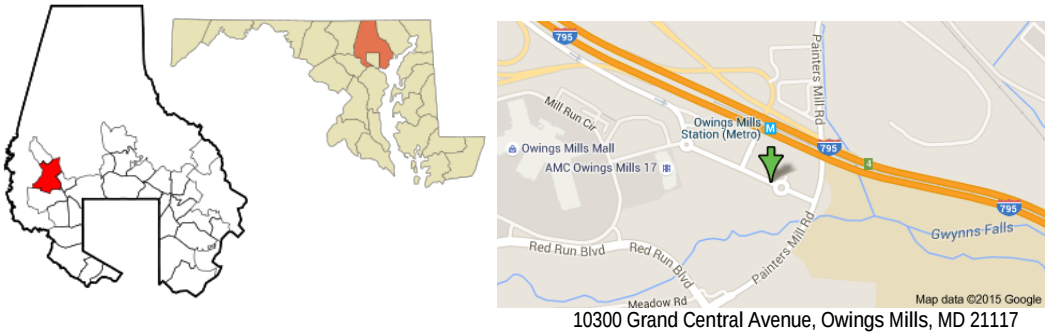
[b]Represents portion of the facility occupied by CCBC

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



10300 Grand Central Avenue, Owings Mills, MD 21117

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

[a]Functions housed in off-campus facility jointly owned by CCBC, Baltimore County Public Library and Baltimore County Government

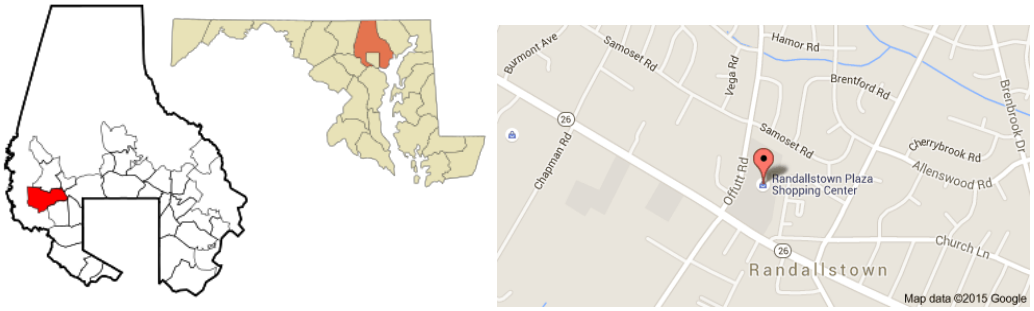
[b]Represents portion of the facility occupied by CCBC

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



3637 Offutt Road...Randallstown, MD 21133

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

[a]Functions housed in off-campus leased facilities

CCBC Randallstown

Chapter 3
Space Needs

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 Dundalk'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 Dundalk 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 4,200 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

[a]students 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

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			

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

Summary Guideline Calculations (Dundalk)

CCBC Dundalk		Base Year (2014)				2015-2024		Projected Year (2024)			
Use Code	Use Classification	Inventory	Guideline	Surplus (-) Deficit	Inventory as a % of Guideline	Additions[a]	Deletions[a]	Inventory	Guideline	Surplus (-) Deficit	Inventory as a % of Guideline
100	Classroom Facilities	15,162	21,998	-6,836	68.9%	0	0	15,162	26,837	-11,675	56.5%
200	Laboratory Facilities	34,491	26,865	7,626	128.4%	0	0	34,491	32,775	1,716	105.2%
210	Class Laboratory	31,452	23,072	8,380	136.3%	0	0	31,452	28,147	3,305	111.7%
220	Open Laboratory	3,039	3,793	-754	80.1%	0	0	3,039	4,628	-1,589	65.7%
300	Office Facilities	39,565	45,282	-5,717	87.4%	0	0	39,565	54,080	-14,515	73.2%
310/50	Office / Conference	39,565	43,782	-4,217	90.4%	0	0	39,565	52,580	-13,015	75.2%
320	Testing / Tutoring	0	1,500	-1,500	0.0%	0	0	0	1,500	-1,500	0.0%
400	Study Facilities	7,560	9,009	-1,449	83.9%	0	0	7,560	10,509	-2,949	71.9%
410	Study	4,901	5,644	-743	86.8%	0	0	4,901	6,888	-1,987	71.2%
420/30	Stack / Study	1,368	2,165	-797	63.2%	0	0	1,368	2,421	-1,053	56.5%
440/55	Processing / Service	1,291	1,200	91	107.6%	0	0	1,291	1,200	91	107.6%
500	Special Use Facilities	32,704	36,600	-3,896	89.4%	0	0	32,704	36,600	-3,896	89.4%
520/23	Athletic	31,214	34,000	-2,786	91.8%	0	0	31,214	34,000	-2,786	91.8%
530	Media Production	0	1,600	-1,600	0.0%	0	0	0	1,600	-1,600	0.0%
580	Greenhouse	1,490	1,000	490	149.0%	0	0	1,490	1,000	490	149.0%
600	General Use Facilities	25,840	34,153	-8,313	75.7%	0	0	25,840	35,816	-9,976	72.1%
610	Assembly	9,278	12,000	-2,722	77.3%	0	0	9,278	12,000	-2,722	77.3%
620	Exhibition	707	1,500	-793	47.1%	0	0	707	1,500	-793	47.1%
630	Food Facility	6,865	5,916	949	116.0%	0	0	6,865	7,201	-336	95.3%
640	Day Care	4,561	4,561	0	0.0%	0	0	4,561	4,561	0	0.0%
650	Lounge	989	1,740	-751	56.8%	0	0	989	2,118	-1,129	46.7%
660	Merchandising	2,604	1,600	1,004	162.8%	0	0	2,604	1,600	1,004	162.8%
670	Recreation	836	836	0	0.0%	0	0	836	836	0	0.0%
680	Meeting Room	0	6,000	-6,000	0.0%	0	0	0	6,000	-6,000	0.0%
700	Support Facilities	5,035	13,660	-8,625	36.9%	0	0	5,035	14,588	-9,553	34.5%
710	Data Processing	660	2,500	-1,840	26.4%	0	0	660	2,500	-1,840	26.4%
720-740	Shop / Storage	2,862	7,020	-4,158	40.8%	0	0	2,862	7,929	-5,067	36.1%
750	Central Service	1,513	4,000	-2,487	37.8%	0	0	1,513	4,000	-2,487	37.8%
760	Hazmat Storage	0	140	-140	0.0%	0	0	0	159	-159	0.0%
800	Health Care Facilities	0	500	-500	0.0%	0	0	0	500	-500	0.0%
000	Unclassified	16,500	16,500	0	100.0%	0	0	16,500	16,500	0	100.0%
	Totals	176,857	204,567	-27,710	86.5%	0	0	176,857	228,205	-51,348	77.5%

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

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 Dundalk during the past six years has declined at an annual rate of 1.6%.

Enrollment Trends (Dundalk)

CCBC Dundalk	Fall Semester						Net Change	Annual Rate
	2009	2010	2011	2012	2013	2014	2009-2014	2009-2014
FTDE	979	1,089	1,043	949	974	903	-7.8%	-1.6%

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	Annual Rate
	2009	2010	2011	2012	2013	2014	2009-2014	2009-2014
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.

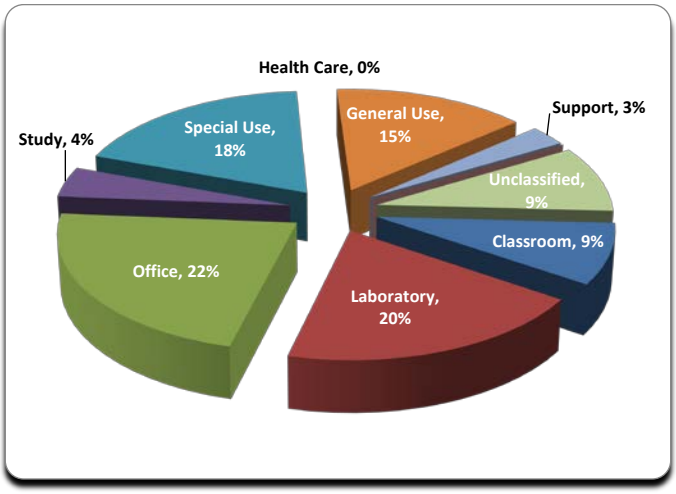
The inventory utilizes the space taxonomy found in the *2006 Postsecondary Education Facilities Inventory and Classification Manual* (FICM) published by the U.S. Department of Education in cooperation with the National Center for Education Statistics. Furthermore, the space inventory data in this chapter 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, 29% of CCBC Dundalk's assignable space is classified as classroom and laboratory instruction (classroom 9%, laboratory 20%), 22% as office, 4% as study (library), and the remaining 45% is a combination of special use, general use, support and unclassified spaces.

Distribution of Existing Space by Room Use Classification (Dundalk)

Use Code	Classification	NASF
100	Classroom	15,162
200	Laboratory	34,491
300	Office	39,565
400	Study	7,560
500	Special Use	32,704
600	General Use	25,840
700	Support	5,035
800	Health Care	0
000	Unclassified	16,500
	Total	**176,857**



Parking Facilities

There are 975 parking spaces distributed among various primary and secondary lots at CCBC Dundalk. Forty eight (48) spaces are reserved for disabled individuals. 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.

Distribution of Existing Parking Space (Dundalk)

Dundalk Parking Area	(White) General Use	(Red) Faculty / Staff	Handicap	Visitor	(Green) Service	Motorcycle	Other	Totals
Parking Lot #1 (Front of MASH Bldg.)	83	35	13	0	0	1	0	132
Parking Lot #2 (Front of STAT Bldg.)	129	7	8	0	0	0	0	144
Parking Lot #3 (Front of WELL Bldg.)	143	27	6	0	0	0	0	176
Parking Lot #4 (Side of WELL Bldg.)	126	28	6	0	0	0	0	160
Parking Lot #5	7	27	2	0	0	0	0	36
Parking Lot #6	6	12	0	0	23	0	0	41
N Bldg.	3	0	1	0	0	0	0	4
P Bldg.	0	4	0	0	3	0	0	7
Lot #2 - Police Academy	12	8	4	0	0	0	0	24
Lot #4 - Police Academy	0	0	0	0	42	0	0	42
Campus Drive	108	0	0	0	0	0	0	108
Administration Circle	33	27	2	0	0	0	0	62
In Front of SSRV Bldg	0	1	1	4	0	0	1	7
In Front of SSRV & CHLD (Diagonal)	6	14	5	0	0	0	0	25
CUP Bldg.	0	0	0	0	4	0	3	7
Total	656	190	48	4	72	1	4	975

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 1.9% 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 21,912 by fall 2024. Of this total, approximately 17,891 WSCH will be generated by lecture segments and approximately 4,021 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 (Dundalk)

CCBC Dundalk						ON-CAMPUS DAY ONLY (Before 5:00 pm)			
	Full-Time Headcount[a]	Part-Time Headcount[a]	Total Headcount[a]	Credit Hours	FTES	Credit Hours	FTDES	WSCH Lecture	WSCH Laboratory
Fall 2014	470	3,730	4,200	17,476	1,165	13,541	903	14,665	3,296
Fall 2024	597	4,141	4,738	21,320	1,421	16,525	1,102	17,891	4,021
% Change 2014-2024	27.0%	11.0%	12.8%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Average Annual Growth Rate	2.4%	1.1%	1.2%	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

[a]students 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 1.9% is projected for staff.

Current and Projected Faculty and Staff Summary (Dundalk)

CCBC Dundalk	Faculty (Credit)				Staff		
	Full-Time	Part-Time	Total	FTEF	Full-Time	Part-Time	Total
Fall 2014	47	115	162	76	178	0	178
Fall 2024	57	140	197	92	214	0	214
% Change 2014-2024	21%	22%	22%	21%	20%	0%	20%
Average Annual Growth Rate	1.9%	2.0%	2.0%	2.0%	1.9%	0.0%	1.9%

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 (Dundalk)

CCBC Dundalk	BVE[a]
Fall 2014	21,650
Fall 2024	24,210
% Change 2014-2024	12%
Average Annual Growth Rate	1.1%

Data Source: Community College of Baltimore County Office of Facilities

[a]Bound 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 (Dundalk)

CCBC Dundalk	FTES	FTDES	WSCH Lecture	WSCH Laboratory	Full-Time Faculty	Part-Time Faculty	Full-Time Staff	Full-Time Librarians	Library Volumes
Fall 2014	1,165	903	14,665	3,296	47	115	178	3	21,650
Fall 2024	1,421	1,102	17,891	4,021	57	140	214	4	24,210
Percent Change 2014-2024	22%	22%	22%	22%	22%	22%	20%	20%	12%
Average Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	1.8%	1.8%	1.1%

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 20 hours per week target room utilization; 60% seat occupancy rate; and 18 NASF per student station.

Given the current inventory of classroom space, application guideline suggests a current deficit of 6,836 NASF and a deficit of 11,675 NASF by 2024.

The College currently owns 69% of the space allowance in this classification. The data suggests that by 2024, the College will own 57% of its computed space allowance.

CLASSROOM	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Classroom	15,162	21,998	-6,836	0	0	15,162	26,837	-11,675

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.

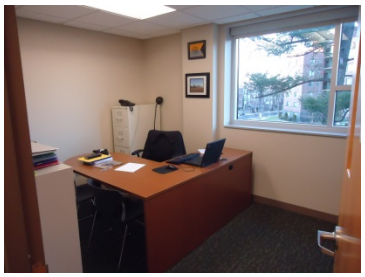
An open laboratory (220) is used primarily for individual or group instruction that is informally scheduled, unscheduled, or open. An open laboratory is designed for or furnished with equipment that serves the needs of a particular discipline or discipline group for individual or group instruction. Included 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 15 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 8,380 NASF for Class Laboratory and a deficit of 754 NASF for Open Laboratory. By 2024, Class Laboratory will have a surplus of 3,305 NASF and Open Laboratory will have a deficit of 1,589 NASF.

The College currently owns 128% of the space allowance in this combined classification. The data suggests that by 2024, the College will own 105 % 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	31,452	23,072	8,380	0	0	31,452	28,147	3,305
Open Laboratory	3,039	3,793	-754	0	0	3,039	4,628	-1,589
Totals	34,491	26,865	7,626	0	0	34,491	32,775	1,716



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 4,217 NASF in Office/Conference space and a deficit of 1,500 NASF in Testing/Tutoring space. By 2024, these deficits are projected to be 13,015 NASF and 1,500 NASF respectively.

The College currently owns 87% of the space allowance in this combined classification. The data suggests that by 2024, the College will own 73% of its computed space allowance.

OFFICE	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Office / Conference	39,565	43,782	-4,217	0	0	39,565	52,580	-13,015
Testing / Tutoring	0	1,500	-1,500	0	0	0	1,500	-1,500
Totals	39,565	45,282	-5,717	0	0	39,565	54,080	-14,515

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 deficit of 1,449 NASF and a deficit of 2,949 NASF by 2024.

The College currently owns 84 % of the space allowance in this classification. The data suggests that by 2024, the College will own 72% of its computed space allowance.

STUDY	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Study	4,901	5,644	-743	0	0	4,901	6,888	-1,987
Stack / Study	1,368	2,165	-797	0	0	1,368	2,421	-1,053
Processing / Service	1,291	1,200	91	0	0	1,291	1,200	91
Totals	7,560	9,009	-1,449	0	0	7,560	10,509	-2,949

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 gymnasia, 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 deficit of 2,786 NASF and a continued deficit of 2,786 NASF by 2024.

The College currently owns 92% of the space allowance in this classification. The data suggests that by 2024, the College will still own 92% 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	31,214	34,000	-2,786	0	0	31,214	34,000	-2,786

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 1,600 NASF and a continued deficit of 1,600 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	1,600	-1,600	0	0	0	1,600	-1,600

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 surplus of 490 NASF and a continued surplus of 490 NASF by 2024.

The College currently owns 149% of the space allowance in this classification. The data suggests that by 2024, the College will still own 149% of its computed space allowance.

GREENHOUSE	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Greenhouse	1,490	1,000	490	0	0	1,490	1,000	490

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 2,722 NASF and a continued deficit of 2,722 NASF by 2024. The College is currently below the core guideline allowance for assembly space.

The College currently owns 77% of the space allowance in this classification. The data suggests that by 2024, the College will still own 77% of its computed space allowance.

ASSEMBLY	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Assembly	9,278	12,000	-2,722	0	0	9,278	12,000	-2,722

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 793 NASF and a continued deficit of 793 NASF by 2024.

The College currently owns 47% of the space allowance in this classification. The data suggests that by 2024, the College will still own 47% of its computed space allowance.

EXHIBITION	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Exhibition	707	1,500	-793	0	0	707	1,500	-793

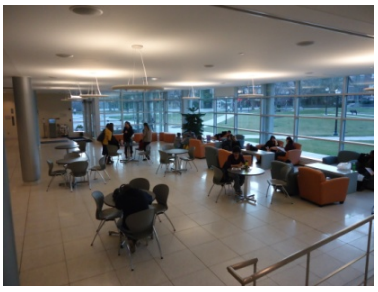
Food Facility (630): Rooms intended for the consumption of food, and rooms that provide direct service. This category includes dining halls, cafeterias, snack bars, restaurants, kitchens, food serving areas, food storage, dishwashing, and cleaning areas. Also included are such facilities located in residence 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 surplus of 949 NASF and a deficit of 336 NASF by 2024.

The College currently owns 112% of the space allowance in this classification. The data suggests that by 2024, the College will own 92% 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	6,865	5,916	949	0	0	6,865	7,201	-336



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 751 NASF and a deficit of 1,129 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 48 % of its computed space allowance.

LOUNGE	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Lounge	989	1,740	-751	0	0	989	2,118	-1,129

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 1,004 NASF and a continued surplus of 1,004 NASF by 2024.

The College currently owns 163% of the space allowance in this classification. The data suggests that by 2024, the College will still own 163% of its computed space allowance.

MERCHANDISING	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Merchandising	2,604	1,600	1,004	0	0	2,604	1,600	1,004

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 6,000 NASF

Given the current inventory indicates no space classified as meeting room, application of guidelines suggests a current deficit of 6,000 NASF and a deficit of 6,000 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.

MEETING ROOM	2014 Inventory	2014 Guideline	Surplus (-) Deficit	Additions	2015-2024 Deletions	2024 Inventory	2024 Guideline	Surplus (-) Deficit
Meeting Room	0	6,000	-6,000	0	0	0	6,000	-6,000

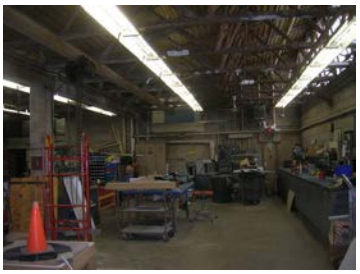
Data Processing (710): A space used as a data or telecommunications center with applications that are broad enough to serve the overall administrative or academic primary equipment needs of a central group of users, department, college, school, or entire institution.

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 deficit of 1,840 NASF and a maintained deficit of 1840 NASF by 2024.

The College currently owns 26% of the space allowance in this classification. The data suggests that by 2024, the College will still own 26 % 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	660	2,500	-1,840	0	0	660	2,500	-1,840



Psysical 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 6,785 NASF and a deficit of 7,713 NASF by 2024.

The College currently owns 39 % of the space allowance in this classification. The data suggests that by 2024, the College will still own 36 % 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	2,862	7,020	-4,158	0	0	2,862	7,929	-5,067
Central Service	1,513	4,000	-2,487	0	0	1,513	4,000	-2,487
Hazmat Storage	0	140	-140	0	0	0	159	-159
Totals	4,375	11,160	-6,785	0	0	4,375	12,088	-7,713

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 500 NASF and a deficit of 500 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	500	-500	0	0	0	500	-500

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 974 parking spaces distributed among eleven primary lots as well as various secondary sites at CCBC Dundalk. Eight hundred forty six (846) are designated for students, staff and the general public, four (4) for visitors, seventy seven (76) for service and other operations vehicles. Forty eight (48) spaces are reserved for disabled individuals. All existing parking is on surface lots as there are no parking structures at CCBC Dundalk.

When the guidelines input data assumptions are applied to current parking inventory data, it is possible to determine the number of eligible 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 (Dundalk)

CCBC Dundalk Parking Category	Factor	Allowance Current	Inventory 2014	Surplus/ (Deficit)	Allowance 10 Years	Inventory 2024	Surplus/ (Deficit)
FTDE-T	0.75	677			827		
FT-Faculty and FT Staff	0.75	169			203		
Visitors	0.02	17			21		
Reserved Accessible (ADA)	Required	20			21		
Total Spaces		883	974	91	1,071	974	(97)

The campus currently owns 110% of guidelines allowed parking spaces. The data suggests that by 2024, the campus will own 91% 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

Building Designation Index

	Building Designation and Description	NASF	GSF
SSRV	Student Services Center	12,580	18,529
UTIL	Central Utility Plant	292	3,485
CHLD	Children's Learning Center (included in DENT)		
DENT	Dental Arts Building (including CHLD)	10,946	16,552
MASH	Mathematics and Science Hall	17,644	24,127
STAT	Roy N. Staten Building	18,122	31,410
WELL	Wellness & Athletics Center	39,773	55,913
CRBL	Career Building	22,567	31,279
COMM	College Community Center	50,128	88,418
GRNH	Greenhouse	1,490	1,584
OPER	Facilities Operations Building	3,315	3,576
	Sub-total	176,857	274,873
GARD	Garden Annex		
OBSR	Observatory		

Student Services Building

Building Description

Building Designation	SSRV
Number of Floors	2
Net Assignable Square Feet	12,580
Gross Building Area - GSF	18,529
Net-to-Gross Efficiency	67.9%
Year Constructed	1972
Renovations	1993 New ceiling panels at first floor 1997 – 11 Classrooms converted to offices 1998 New roof and metal coping 2003 ADA Lavatories (4) Second floor lighting upgraded 2013 First Floor Renovated 2015 Second Floor Restrooms Renovated
Additions	None
Contains	First Floor: Vice President's Office, Admissions, Enrollment Development, Records and Registration, Bursar, Financial Aid, Testing Center and Reception Second Floor: College Offices for Accounting, Accounts Payable, the Finance Office, Payroll and Purchasing.
General Condition	Good
Adequacy of Space	Inadequate; office space on 2nd level should be reworked to minimize duplicated circulation space.
Sprinkler System	First floor only in 2013
Accessibility	Accessible

General / Architectural and Structural

This brick building was the first to be built on the Dundalk campus. Lighting in second floor office renovations in some spaces is still the same pattern as the original classrooms, which does not work for offices. The building envelope has had coping and roofing repairs. There are multiple parallel circulation hallways on the 2nd floor and this leads to inefficient use of the overall GSF of this floor of the building.

Although the 2nd level finishes are worn, this building is not a candidate for major work other than expansion to meet office space needs. Continued improvements should be made to HVAC, lighting and ceilings as time and funding is available.

The building is a 2-story, steel framed structure with masonry walls constructed in 1971. Renovations were completed in 1997 and a new roof installed in 1998. A recent project that created a One-Stop Enrollment Center on the first floor was completed in 2013. The overall condition of the building is good although the second floor and link would benefit from a space re-design and finishes update along with the addition of sprinklers and updated ADA compliant fire alarm devices. At that time the HVAC system should be updated as well.

Mechanical

Existing Systems:

a. The facility is heated with both forced air and radiant hot water, and cooled with forced air. Chilled water is supplied by the Central Plant. AHU #1 is a constant volume system with reheat and AHU #2 consists of VAV boxes with a variable frequency drive. As part of the 2013 renovation, VAV boxes were added and selected ductwork sizes were increased in preparation to replace both AHUs. The AHUs each serve approximately ½ of the building (both floors) for each AHU.

Reported Problems/Deficiencies:

a. AHU #1 is not energy efficient. The unit is in fair condition but the condensate drain pan and interior framework is rusted and the interior insulation is loose.
b. Building is now only 50% sprinkled.

Recommendations:

a. Replace constant volume AHU #1 system with VAV boxes and variable frequency drive.
b. Replace AHU #2.
b. Fully sprinkler building. Complete the sprinkler installation on the 2nd floor.

Electrical

Existing Systems:

a. The existing main Panelboard "H1 ' is fed from Panelboard MDP in Energy building. Panelboard H1 is a 277/480V- 3 phase - 4 wire, 225 ampere Panelboard.

Reported Problems/Deficiencies:

a. Insufficient task lighting levels.

Recommendations:

a. All first floor lighting has been replaced with T-8 fluorescent fixtures.
b. Second floor lighting has recently replaced with new fluorescent lighting fixtures but in layout matching classroom layout with renovation turning classrooms into offices. Reuse existing lighting fixtures and supplement with new lighting fixtures and reinstall in pattern to utilize spaces as offices.
c. Update existing fire alarm system for automatic sprinkler system. FA system on 1st floor has been updated to meet ADA requirements.
d. Provide submeter at existing building service.

Information Technology

Existing Systems:

a. Data closet which was relocated in the 2013 first floor renovation contains two data racks served by 30 multimode and 12 single mode fibers. It is also cooled by a rooftop split system.

Reported Problems/Deficiencies:

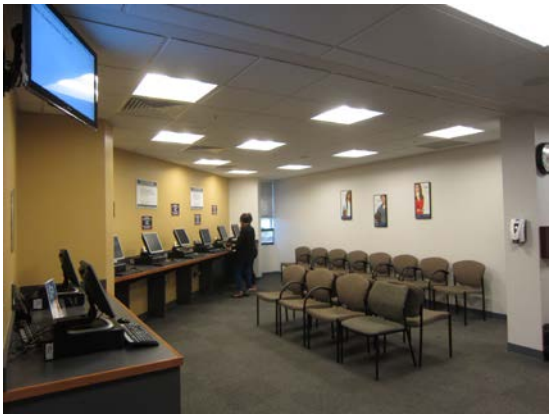
a. Data switches have been upgraded from Nortel to Cisco.

Photographs

Building Exterior

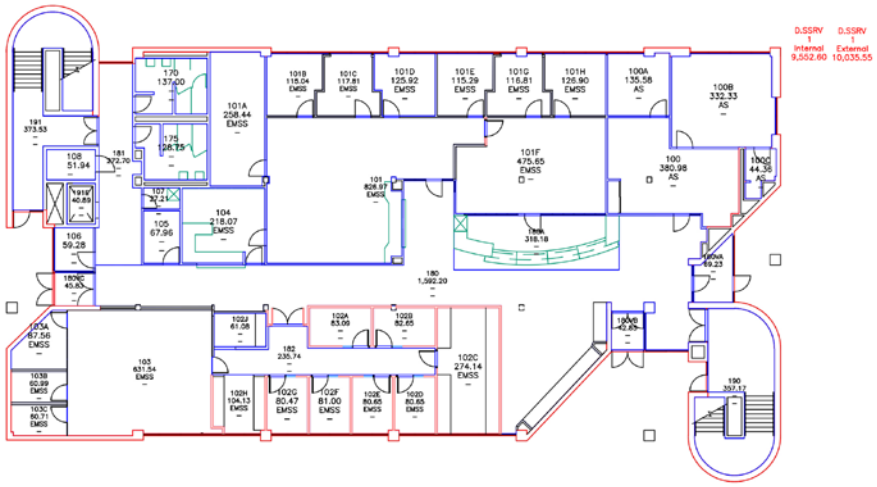
Corridor

Registration



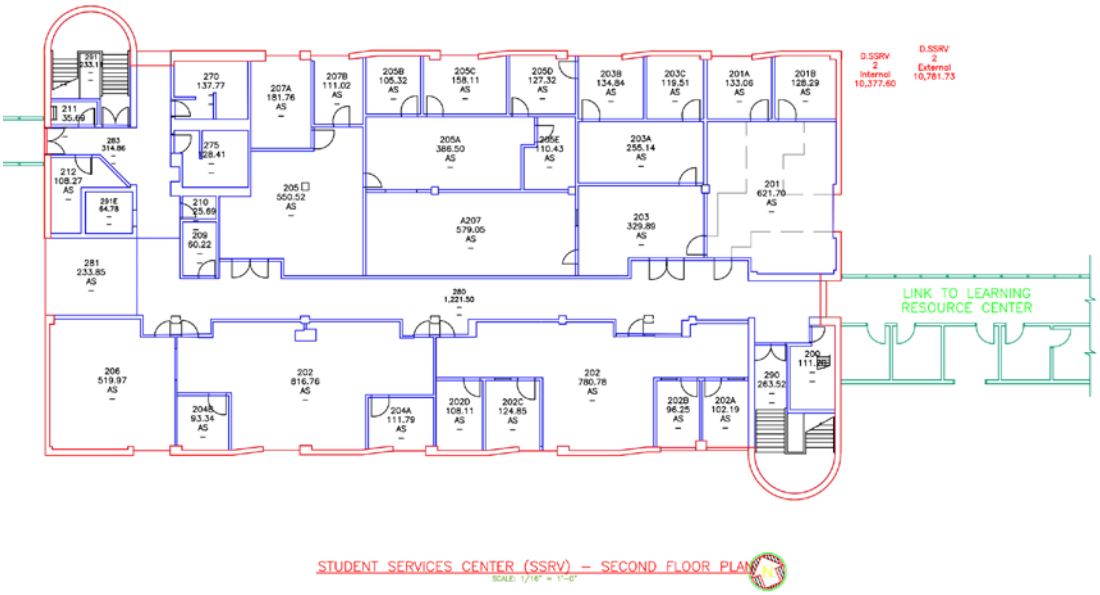
Waiting / Lounge Area

Floor Plans



STUDENT SERVICES CENTER (SSRV) – FIRST FLOOR PLAN

First Floor



STUDENT SERVICES CENTER (SSRV) – SECOND FLOOR PLAN

Second Floor

Central Utility Plant

Building Description

Building Designation	UTIL
Number of Floors	1
Net Assignable Square Feet	292
Gross Building Area - GSF	3,485
Net-to-Gross Efficiency	N/A
Year Constructed	1972
Renovations	1999 Two new cooling towers 2011 Roof Replaced 2014 Major equipment replaced
Additions	None
Contains	Shop space for refrigeration, HVAC, plumbing and pneumatic temperature control maintenance functions, Siemens Controls
General Condition	Good
Adequacy of Space	Adequate for use
Sprinkler System	None
Accessibility	Partial

General / Architectural and Structural

The energy building provides mechanical services to most of the original core buildings. It is well placed on the outer edge of the core and it is still centrally located to serve the mechanical loop. The equipment has been replaced with units of increased capacity and the building did not need to be expanded.

The building is a 1-story, steel framed structure with masonry bearing walls constructed in 1971. The brick mortar joints in the roof parapet have softened with some minor cracking observed. Parapet problems were addressed with flashing and metal coping which was installed as part of the 2011 roofing project. The overall condition of the building is now very good.

Mechanical

Existing Systems: the Energy Building is old, the equipment obsolete and in need of a major overhaul.

a. The building is heated with a hot water forced air system.
b. Two new cooling towers were installed in the spring of 1999 (capacities = 500 tons each).
c. Supply and return hot water piping proceeds northward from the Energy Plant, serving Buildings E, then G and finally proceeding on to the Physical Education Building (Building H). A second branch serves the buildings on the Central Quad including A, J, K, and L. The primary loop piping is six (6) inches in diameter throughout, capable of maximum flow rates of about eight hundred (800) GPM.
d. Primary space heating hot water flow is by two (2) base-mounted centrifugal pumps located at the energy plant. The pumps are rated at three hundred fifty (350) GPM each, at an operating pressure of eighty-five (85) feet of water. Flow within the various buildings is by secondary pumps of varying capacity.

e. Reported operating pressures are about forty-two (42) feet of water, with one heating pump operating.
f. Space heating hot water is generated by a pair of Cleaver Brooks Type CB packaged firetube boilers, operated as hot water generators. Input capacity on each unit is in the range of 10.5 million BTU's per hour. Output capacity appears to be in the range of 8.6 million BTU's per hour at maximum efficiency.
g. The total demand on the Campus is about 8 million BTU's per hour, which is still less than the capacity of one (1) boiler. One boiler appears more than adequate to support the new campus load and the campus would still have one hundred (100%) standby capacity in the second boiler.
h. The six (6) inch distribution piping on the primary loop is capable of flows up to the range of eight hundred (800) gallons per minute. The combined capacity of the two (2) primary heating pumps appears to be about seven hundred (700) gallons per minute, which is the limiting factor on the current heating distribution system.
i. Eight million BTU's per hour, at a flow rate of seven hundred (700) gallons per minute on the primary loop indicates a temperature drop of approximately 23°F. Since the primary loop temperature drop was designed at 60°F, it appears that the boiler, pumping, and piping capacity on the overall primary loop is adequate to support a new thirty thousand (30,000) square foot building.
j. The Central Chilled Water Plant is comprised of two (2) centrifugal refrigeration machines both rated at 500 tons. The chillers are served by a pair of blow-through cooling towers served by centrifugal fans staged to maintain preset condenser water temperatures. The towers were recently upgraded. Each chiller is served by a five hundred (500) ton tower (capable of 540 tons), so that maximum chilled water capacity within the plant may be eight hundred (800) tons indicated by the chiller capacities. Chillers are served by appropriately sized pumps, but capacity to serve additional future buildings will need to be studied further.
k. The cooling system primary loop distribution piping is twelve (12) inches on the run up to the Physical Education Building and is also twelve (12) inches on the run over to Learning Resources, Humanities, and the other buildings in that complex. Such piping should be capable of providing flow rates as high as three thousand six hundred (3,600) GPM, so that it places no limitations on campus cooling capacities in the foreseeable future.
l. Two (2) 10,000-gallon underground storage tanks for heating oil were replaced in 1999.

Reported Problems/ Deficiencies:

a. Under maximum load conditions, the Campus demand for cooling is in the range of one hundred percent (100%) of the small chiller, plus eighty percent (80%) of the large chiller. This would represent approximately six hundred sixty (660) tons of cooling. This indicates a campus average maximum demand of about three hundred fifty (350) square feet of floor space per ton. Assuming three hundred (300) square feet per ton for the new building would indicate an increased load on the Central Plant of about one hundred (100) tons. This would represent a total new demand of seven hundred sixty (760) tons or two hundred forty (240) less tons than current plant capacity as limited by the cooling tower ratings.
b. Additional pumping capacity will be required to provide necessary cooling to a new building. In fact, to affect the design loop temperature drop of 15°F, a flow rate of about one thousand four hundred (1,400) GPM would be necessary at the increased load.
c. The building is not fully sprinkled.

Recommendations:

a. Fully sprinkler the building.
b. Increase plant pumping capacity to accommodate future buildings.

Electrical

Existing Systems:

a. The Main Distribution Panelboard was replaced as a part of the building renovation in 2014.

Reported Problems/ Deficiencies:

a. The transformer located at this building serves the entire campus and is original. Problems have been found in recent years with the test results. The transformer has been retrofitted and the problems were repaired.

Recommendations:

The transformer should be tested within the next 3 years to verify that the repairs were successful.

b. Provide sub-meter on building electric service.

Information Technology

Existing Systems:

a. Room B103 contains a half height data rack served by 12 multimode and 6 single mode fibers.

Reported Problems/ Deficiencies:

a. None.

Recommendations:

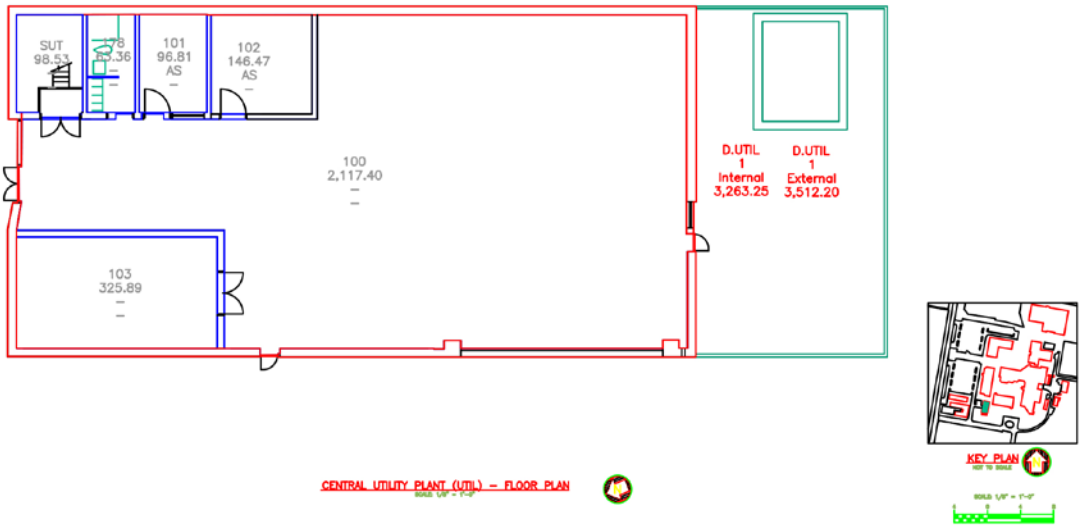
None.

Photographs

Building Exterior

Building Exterior

Floor Plans


SUT
98.53
78
2.36
101
96.81
AS
102
146.47
AS
100
2,117.40
103
325.89
D.UTIL
1
Internal
3,263.25
D.UTIL
1
External
3,512.20
CENTRAL UTILITY PLANT (UTIL) – FLOOR PLAN
KEY PLAN

Children's Learning Center / Dental Arts Building

Building Description

Building Designation	CHLD / DENT
Number of Floors	1
Net Assignable Square Feet	7,748
Gross Building Area - GSF	14,653
Net-to-Gross Efficiency	52.9%
Year Constructed	1973 & 1974
Renovations	1995 New roof on Child Care 1997 New roof and HVAC on Tech 2002 Child Care Renovation 2005 Replaced siding, door, window assemblies
Additions	None beyond 1974 Dental Arts Bldg added in 2008
Contains	Child Care Center and two classrooms Dental Arts Labs/Classroom/Offices/Clinic Waiting area
General Condition	Good/Excellent
Adequacy of Space	Adequate
Sprinkler System	Full Coverage
Accessibility	Accessible

General / Architectural and Structural

These are the first buildings encountered from the main entry road. These facilities have been renovated in recent years providing significantly improved space for the child care and dental hygiene programs. These buildings should now require only regular maintenance.

Dental Arts Building (1973) and Child Care Center (1974) are a combined 1-story, steel framed facility with T-111 exterior cladding. Building renovations occurred in 2002 for Child Care and 2007-8 for Dental Arts. The building's exterior siding was replaced with maintenance free metal siding. Both buildings are in good (Child Care) and excellent (Dental Arts) condition.

Mechanical

Child Care Center, Existing Systems:

a. The building is heated and cooled by five (5) rooftop units with DX cooling and gas heat.
b. The building was retrofitted with a fire sprinkler system in 2007.

Child Care Center, Reported Problems/Deficiencies:

a. Although RTU's run fine at the moment they are 18 years old and will almost certainly need replacement during the current planning period.

Dental Arts Building, Existing Systems:

a. The building is heated and cooled by three (3) rooftop package units with gas heat.
b. The building is sprinkled.

Dental Arts Building, Reported Problems/Deficiencies:

a. None.

Child Care Center, Recommendations:

a. Replace the five (5) rooftop units.

Dental Arts Building, Recommendations:

a. None.

Electrical

Child Care Center Existing Systems:

a. The existing Main Distribution Panelboard is a 277/480 volt - 3 phase - 4 wire, 400 ampere Panelboard and has recently been installed during a previous renovation.

Child Care Center Reported Problems/Deficiencies:

a. No reported problems.

Child Care Center, Recommendations:

a. Provide submetering on main distribution panel.

Dental Arts Building, Existing Systems:

a. The existing Main Distribution Panelboard "Panelboard P3" is a 277/480 volt - 3 phase - 4 wire - 300 ampere Panelboard. The Panelboard is a Westinghouse Type WEHB, No. AT537684.

Dental Arts Building, Reported Problems/Deficiencies:

a. None reported

Dental Arts Building, Recommendations:

a. LED lighting should be considered with flexible lighting controls compliant with current energy codes, as funding becomes available.
b. Provide submetering on main distribution panel.

Information Technology

Existing Systems:

a. Building contains 1 data rack served by 6 multimode fiber strands and 3 new switches.

Reported Problems/ Deficiencies:

a. None reported

Recommendations:

a. None reported

Photographs

Building Exterior - Children's Center

Playground

Child Care Classroom

Child Care Classroom

Child Care Classroom

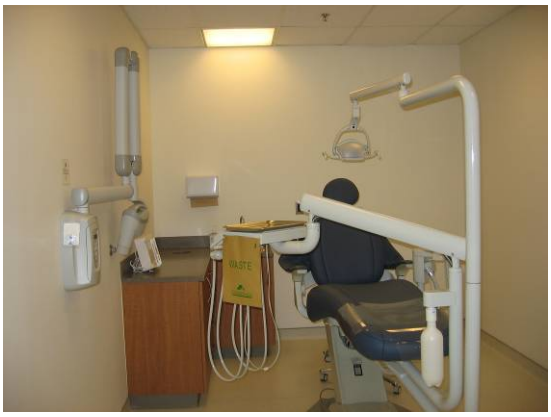
Child Care Classroom

Photographs

Building Exterior - Dental Hygiene

Building Exterior – Dental Hygiene

Classroom

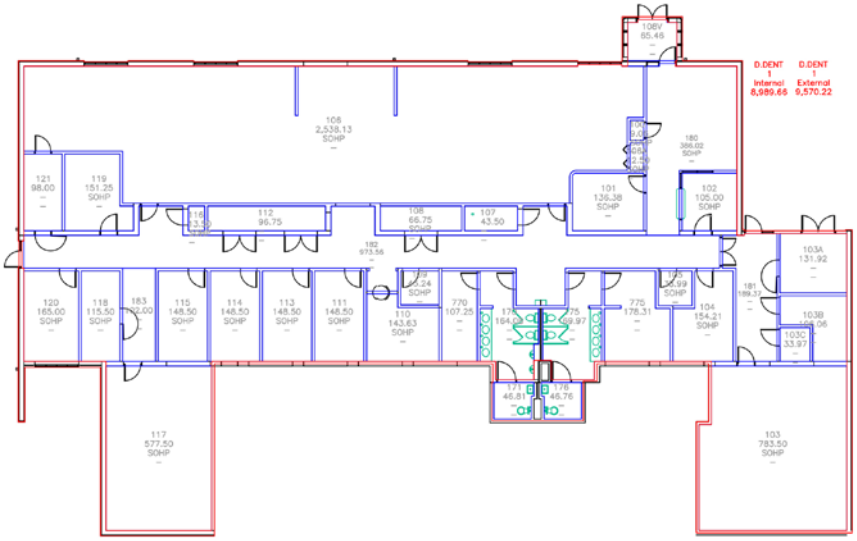


Dental Lab

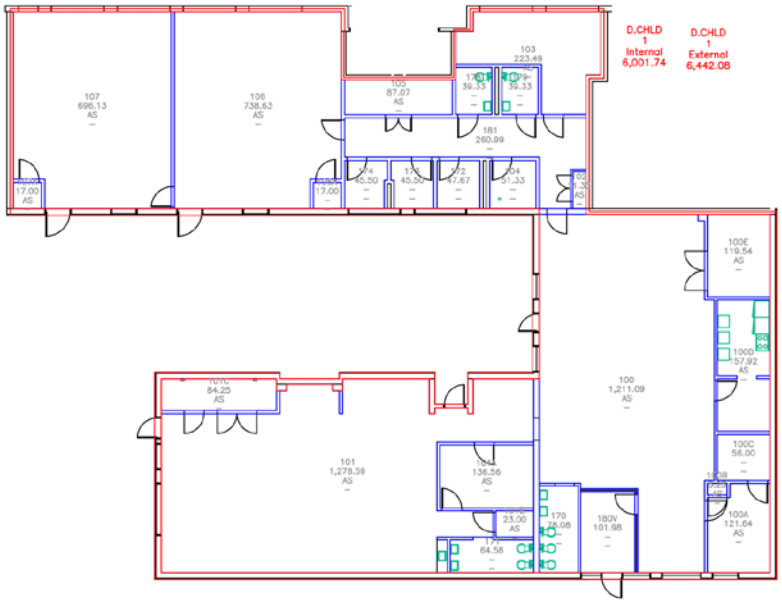
Dental Lab

Dental Lab

Floor Plans



DENTAL ARTS CENTER (DENT) – FLOOR PLAN



CHILDREN'S LEARNING CENTER (CHLD) – FLOOR PLAN

Mathematics and Science Hall

Building Description

Building Designation	MASH
Number of Floors	2
Net Assignable Square Feet	17,644
Gross Building Area - GSF	24,127
Net-to-Gross Efficiency	73.1%
Year Constructed	1974
Renovations	1986 Computer labs 2002-2003 Renovation including roof membrane 2007-08 Selective masonry tuckpointing
Additions	None
Contains	First Floor: computer classrooms, Math and Technology Offices and 2 new general classrooms. Second Floor: science labs, computer labs, general classroom, and instructional offices.
General Condition	Good
Adequacy of Space	Adequate for current functions
Sprinkler System	Fully sprinklered
Accessibility	Accessible

General / Architectural and Structural

This building is brick to match the other core buildings. It has had a metal coping installed to protect the parapet wall. A concealed spline ceiling in the corridors at each end of the building was removed to make utilities more accessible. The corridor wall at the offices is all glass, which is unique. However, glass corridor walls do not provide any fire separation. The wood siding on the bridge link should be replaced.

The building still functions as it was originally intended, with a wide variety of spaces. The computer classrooms are at full capacity with computer equipment and there is some equipment located out in the corridor. The offices are all full but there is no doubling up occurring. The lecture hall was located here has been converted to classrooms. This allowed the existing laboratories to be brought up to code and made more useful.

The building is a 2-story, steel framed structure with masonry walls constructed in 1974, and the building was renovated in 2002/3. The overall condition of the building is good.

Mechanical

Existing Systems:

a. AHU #1 is a constant volume system with re-heat. The system was upgraded in 2007 with Siemens automation controls.
b. AHU #2 consists of VAV boxes with variable frequency drive. The unit was installed in 2003.

Reported Problems/Deficiencies:

a. Unit #1 has major problems and should be considered for replacement soon.

Recommendations:

a. Replace constant volume air handling unit AHU-1 with variable air volume air handling unit and replace constant volume distribution boxes with variable air volume boxes.

Electrical

Existing Systems:

a. The existing electrical switchboard has been recently replaced with a 120/208 volt - 3 phase-4 wire - 600 ampere switchboard.
b. Lighting systems primarily utilize T8 fluorescent lamps.

Reported Problems/Deficiencies:

a. Branch circuit Panelboards are loaded and full to their capacity.

Recommendations:

a. Provide sub-meter on building electric service.
    b. LED lighting should be considered with flexible lighting controls compliant with current energy codes, as funding becomes available.
c. Provide replacement and/or additional panels as required to support future loads.

Information Technology

Existing Systems:

a. Room E103 contains one data cabinet and one data rack served by 48 multimode and 12 single mode fibers.

Reported Problems/ Deficiencies:

a. The network switch is filled to capacity and there is a need for more data outlets to become active.

Recommendations:

a. The hubs have been replaced with new network switches.

Photographs

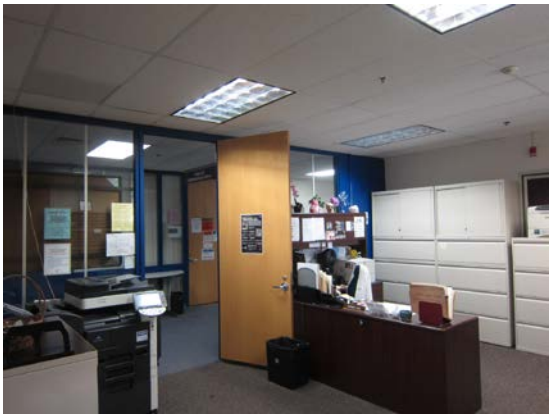
Building Exterior

Corridor and Office

Science Lab

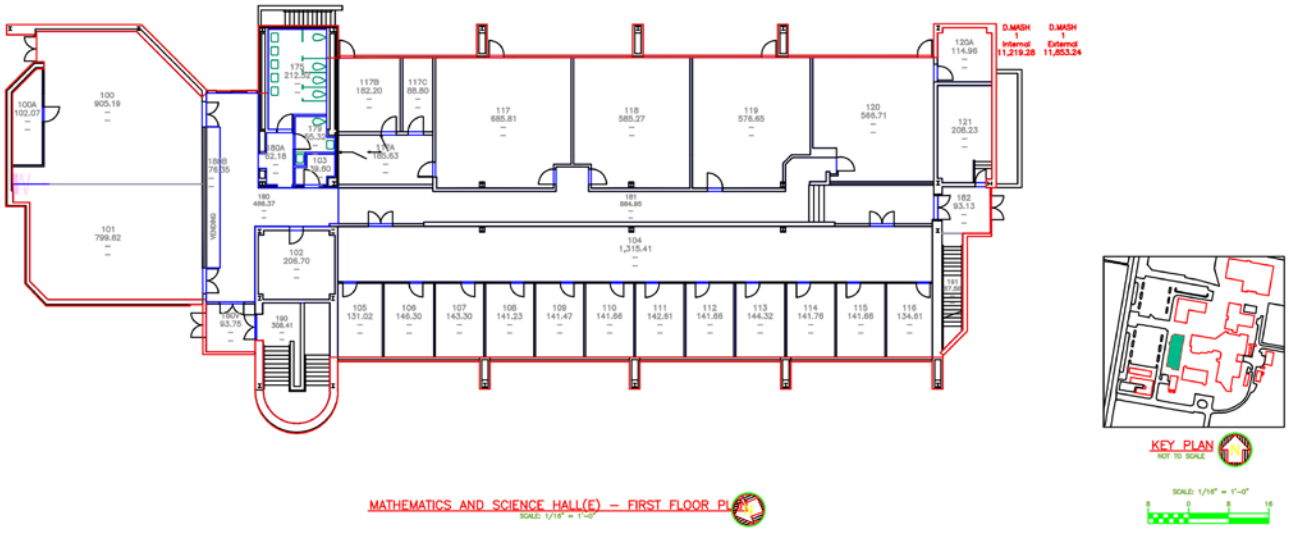
Science Lab

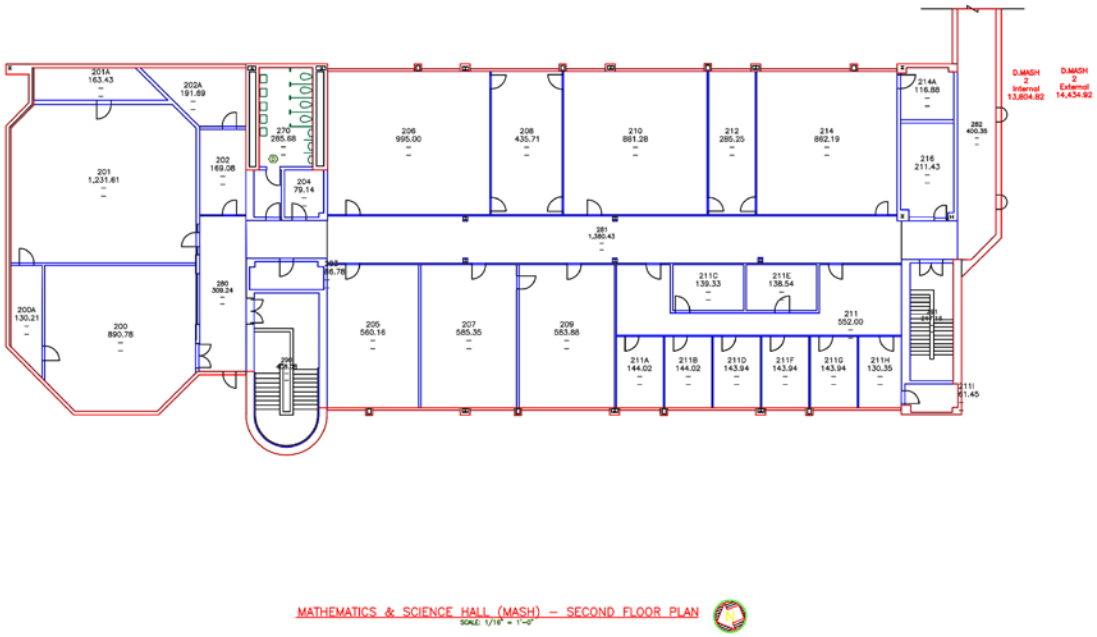
Computer Lab



Office Area

Floor Plans


MATHEMATICS AND SCIENCE HALL(E) – FIRST FLOOR PLAN
KEY PLAN
CCBC DUNDALK
BUILDING
FLOOR PLAN


MATHEMATICS & SCIENCE HALL (MASH) – SECOND FLOOR PLAN

Roy N. Staten Building

Building Description

Building Designation	STAT
Number of Floors	2
Net Assignable Square Feet	18,122 (6,803 used by CCBC)
Gross Building Area - GSF	31,410
Net-to-Gross Efficiency	57.7%
Year Constructed	1991
Renovations	1997 Police academy moved in 2003 LPN Lab created 2012 2nd floor classrooms were modified to suit new pedagogy
Additions	None
Contains	First Floor: The Baltimore County Police Academy administrative offices and the offices for the School of Justice and Nursing Programs Second Floor: Classrooms. Baltimore County Police Academy offices, and Nursing Classroom/Lab.
General Condition	Good
Adequacy of Space	Adequate for current programs
Sprinkler System	Fully sprinklered
Accessibility	Accessible

General / Architectural and Structural

This building is the most recent complete major academic building added to the campus and it has brick detailing which is different from the rest of the buildings. A central skylight brings natural light to the central lobby. It is the location for the Baltimore County Police Academy, which is not part of the curriculum at Dundalk.

The Police Academy is a useful presence on campus for the activities created. However, as a non-curriculum organization, their need for space is also a detriment to the school. More than half of the current classroom inventory is located in this building but it is not available during the day for use by the school due to scheduling needs of the Academy. Identifying the police as other organizations provides a more accurate picture of the needs of the school that would translate into a new classroom facility. This facility requires no immediate work.

This building is a 2-story, steel framed structure with masonry walls, constructed in 1991. The overall condition of the building is good. The roof membrane on this building is now 25 years old and will likely need to be replaced in the next few years. It is important for the college to replace the insulation at the same time on this building as the roof board insulation is reported to be phenolic foam which forms acids when wetted. This could then attack the underlying steel deck and require portions of it to be replaced along with the roof-insulation assembly.

Mechanical

Existing Systems:

a. The building is heated with forced air and radiant hot water provided by the central plant.
b. Cooling is provided by chilled water forced air from a separate chiller with rooftop direct expansion coil. A new condenser for the chiller was installed in 2006.
c. AHU #1 and AHU #2 are variable volume systems with VAV boxes.
d. This is the only major building on campus that has its own cooling equipment (initially due to lack of capacity at the Central Plant).
e. The chiller plant in this building is now intended only to be used as a backup to the newly upgraded Central Utility Plant chilled water equipment. This building's equipment can also feed the campus loop for minimal cooling during an emergency.

Reported Problems/Deficiencies:

a. The York Chiller is original; has experienced some refrigeration problems, but is in fair condition.
b. Condensate pans at AHUs are rusted; should be replaced as rust flakes are blown into the ducts.

Recommendations:

a. Correct problems noted above.

Electrical

Existing Systems:

a. The Main Distribution Panelboard (MDP) is a 277/480 volt - 3 phase - 4 wire - 600 ampere Panelboard. The Panelboard is a Square "D" I-Line Type HCM Catalog No. 2328929-CO.

Reported Problems/Deficiencies:

a. All existing Panelboards are fully loaded and filled to capacity.
b. Lighting system in this building uses a higher efficiency ballast for T-12 lamps.

Recommendations

a. Upgrade existing Electrical Distribution system including new branch circuit Panelboards to provide spare capacity for future branch circuits. Provide sub-metering on building electric service.
b. Replace fixtures with T12 lamps with LED lighting with flexible lighting controls compliant with current energy codes, should prove a quick ROI .

Information Technology

Existing Systems:

a. Room GM2A contains one data cabinet served by 18 multimode and 6 single mode fibers.
b. Room G-824 contains Smart Classroom Technology.
c. The network switches were recently upgraded across the college. AV equipment for classrooms is periodically updated as well.

Reported Problems/ Deficiencies:

a. No major problems reported.

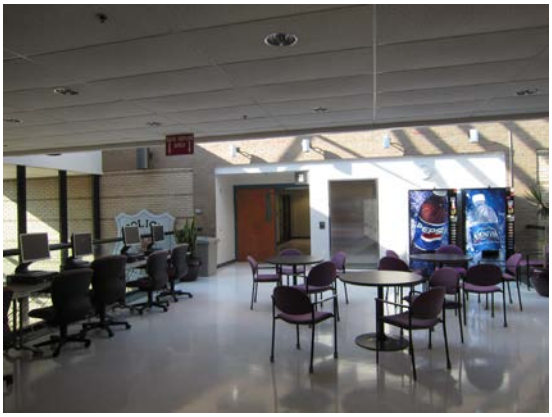
Recommendations:

a. None at this time.

Photographs

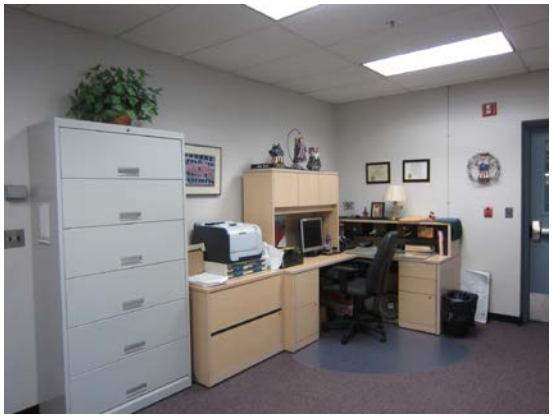
Building Exterior

Building Exterior



Second Floor Lounge

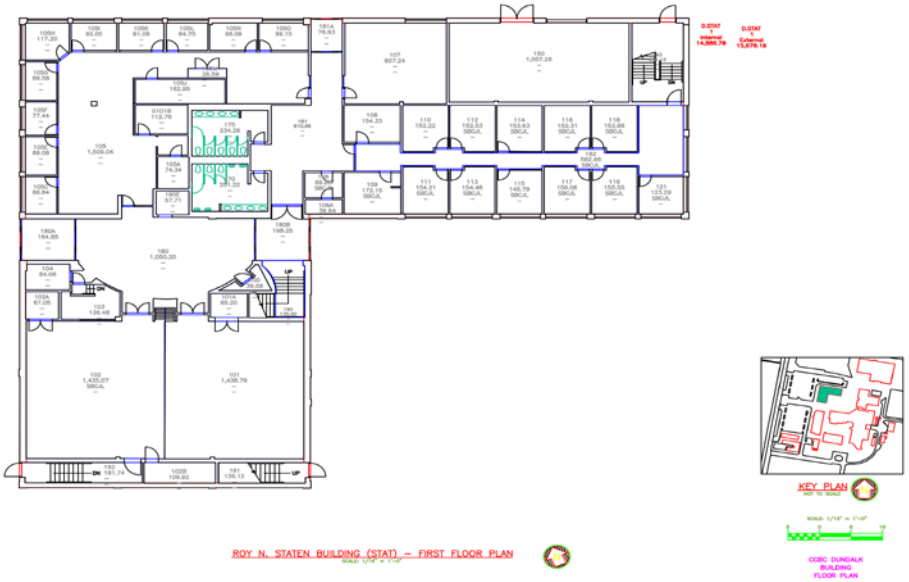
Classroom



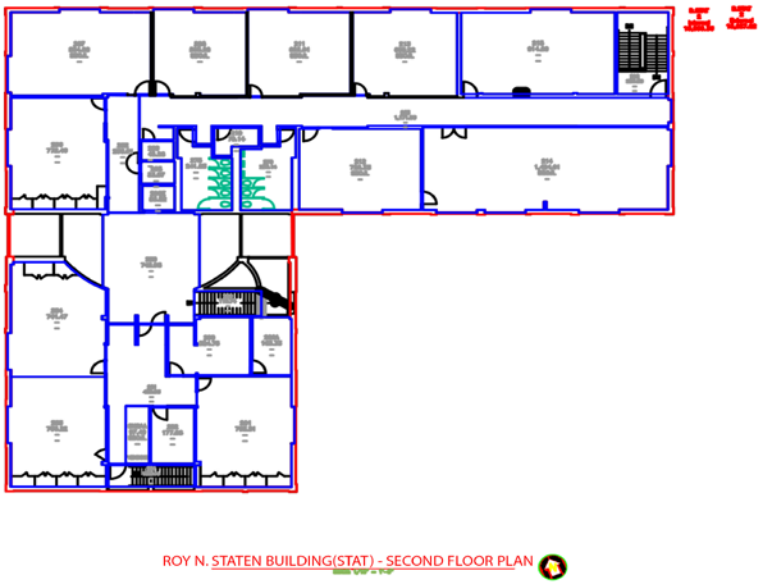
Office

Classroom

Floor Plans



First Floor



Second Floor

Wellness and Athletics Center

Building Description

Building Designation	WELL
Number of Floors	2
Net Assignable Square Feet	39,773
Gross Building Area - GSF	55,913
Net-to-Gross Efficiency	71.1%
Year Constructed	1978
Renovations	1982 Added steel to all roof trusses 1990 EPDM roof at all low-slope roofs 1997 Locker rooms renovated for Police Academy 1998 Entrance slab raised with helical piles 2000 New flooring in main corridor areas 2002 Pool Deck surface and Pump Room renovated 2003 Synthetic gym floor resurfaced 2015 New bleachers in main gym Some of the blind spline ceiling has been replaced at the First Floor South Entrance and the Second Floor North entrance
Additions	1997 Police Academy role playing (3,282 GSF)
Contains	First Floor: Locker rooms (Police Academy and public use), gymnasium, pool, dance studio, circuit center, racquet ball courts, coaches' offices and the role playing rooms for the Baltimore County Police Academy Second Floor: gym Bleacher seating, the Wellness Center, two classrooms and administrative offices.
General Condition	Good
Adequacy of Space	Adequate for current programs
Sprinkler System	None
Accessibility	Accessible due to the large switchback ramp in the central atrium portion of the building. There is no elevator in this building.

General / Architectural and Structural

The curved truss roof forms over gymnasium and pool signal that this is an athletic facility. The wood siding could be replaced with metal which will require less maintenance. All concealed spline ceilings should be replaced.

This is a modest structure but it is very active. There is a central ramp connecting the second floor which is well lit by a skylight. The weight rooms and pool are small and heavily used. There is some humidity damage to metal surfaces and the gypsum board ceilings in the pool. There is a lack of storage space with a variety of large equipment stored under and around the ramp. Separate lockers and role playing space have been created for the Police academy which is not available to the school. The gym is restricted for Police use for fitness on a regular basis.

This building is a strong candidate for maintenance repairs. Funding should be made available to improve mechanical services to adequately air condition classroom and office space. The pool and lockers also need better humidity control and ventilation to alleviate deterioration of finishes. Exterior materials such as wood siding need to be replaced. This is a future, long term project which is important to address. This building would benefit from site drainage improvements along the northwest building façade.

The building is a 2-story, glue-laminated fire treated wood truss system on masonry walls constructed in 1978. The gymnasium and pool roof trusses have been reinforced with steel framing which was installed in 1982. A new single ply EPDM membrane on the flat roof areas was installed in 1990. The barrel arch metal pan roof is original although some seams have been patched using a foil faced butyl tape for functional and aesthetic reasons. There had been spalling of the concrete roof over the north entrance vestibule along with some rusted re-bar. The rebar was cleaned and primed and the concrete was cleaned and patched. The overall condition of the building is good. Additional needed space will be accommodated in a planned addition to the southeast.

Mechanical

Existing Systems:

a. AHU #1 is constant volume, no cooling, and is in fair condition.
b. AHU #2 & AHU #3 serve the locker rooms and are 100% outside air make-up units with DX cooling. Condensers for these units were replaced in July 2009. The AHUs are in fair condition.
c. AHU #4 is constant volume with re-heat, chilled water coil, and the unit is in fair condition.
d. AHU #5 and AHU #6 are constant volume with heat only and both are in fair condition.
e. AHU #7 and AHU #8 serve the pool and are constant volume units only. Both units are tied into the heat recovery units and are in fair condition.
f. AHU #9 is constant volume with a chilled water coil and is in fair condition.
g. AHU #10 is a constant volume unit with DX cooling. The condenser is 9 years old.

Reported problems:

a. Main gymnasium is not air-conditioned.
b. AHU's serving this building are not presently tied into the fire alarm system.
c. Building is not fully sprinklered.
d. 2nd Floor bathrooms need to be renovated.
e. Metal roof on main gym has numerous small leaks in heavy rains
f. Roof membrane on role play rooms appears to be close to the end of its service life
g. Redwood siding is a frequent maintenance chore to patch, oil and stain.

Recommendations:

a. Air Condition Gym.
b. Tie AHU's into fire alarm system.
c. Fully sprinkler building.
d. Renovate 2nd floor bathrooms.
e. Investigate the leak areas and inspect the roof for seam failures.
f. Evaluate the role play area roof and schedule future actions.

Electrical

Existing Systems:

a. The Main Distribution Panelboard is a 277/480 volt - 3 phase - 4 wire - 1200 ampere Panelboard. The Panelboard is a General Electric Type CCB, Style 2 panel.

Reported problems:

a. Existing branch circuit Panelboards are loaded and filled to their capacity.
b. All lighting serving the building is old and energy inefficient.

Recommendations:

a. Upgrade existing Electrical Distribution system including the addition of new branch circuit Panelboards to accommodate future branch circuits. The existing Electrical service to the building would have to be upgraded if HVAC is added to the building. Provide submeter at building electric service.
b. LED lighting should be considered with flexible lighting controls compliant with current energy codes. Dimmable LED lighting fixtures are recommended at the pool and gym.

Information Technology

Existing Systems:

a. Room H203B contains one data rack served by 12 multimode and 6 single mode fibers.
b. The network switches were recently upgraded across the college. AV equipment for classrooms is periodically updated as well.

Reported Problems/ Deficiencies:

a. None reported at this time.

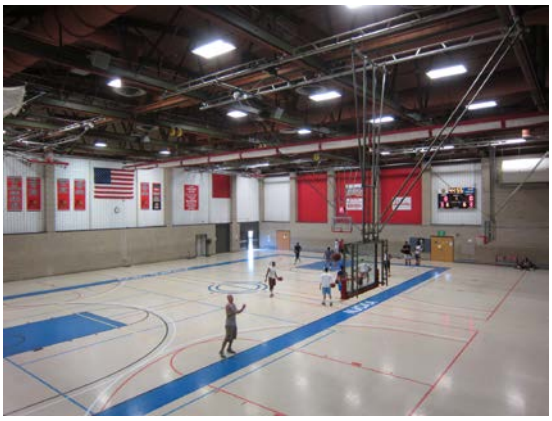
Recommendations:

a. None at this time.

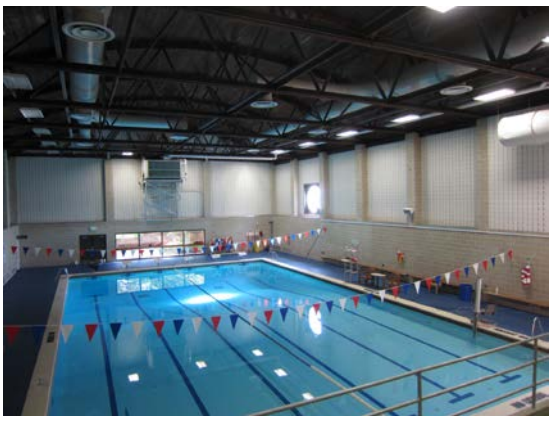
Photographs

Building Exterior

Building Exterior



Gym

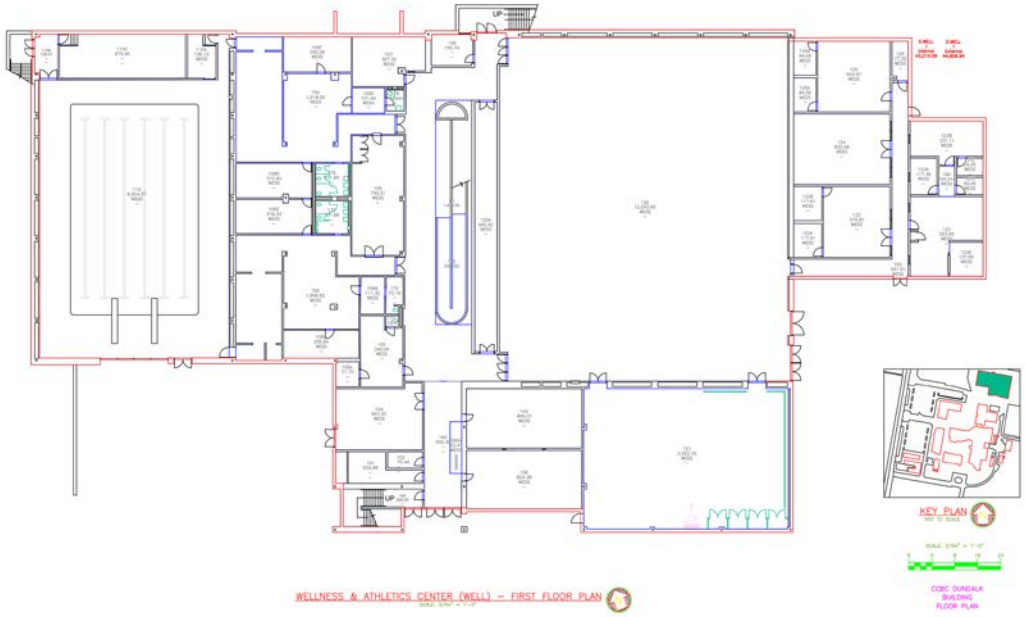


Pool

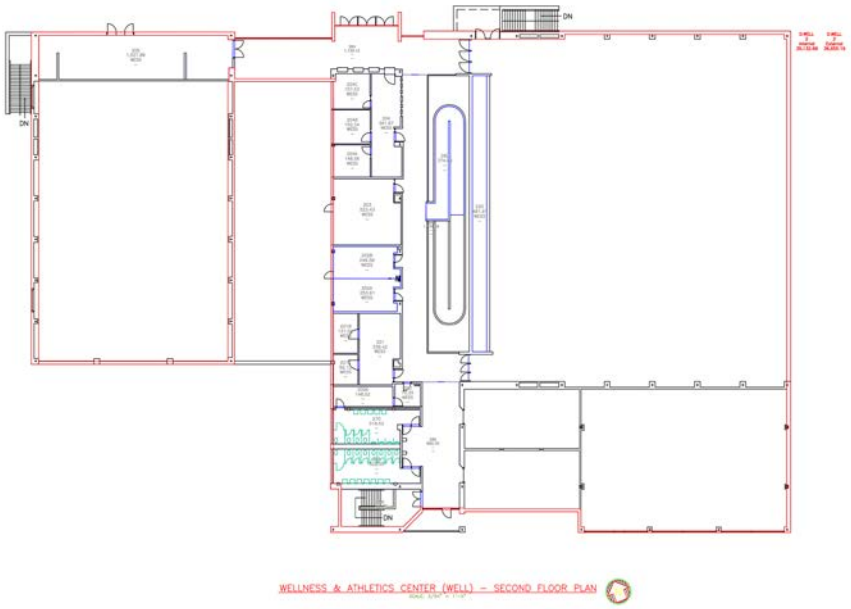
Central Circulation and Ramp

Training

Floor Plans



First Floor



Second Floor

Career Building

Building Description

Building Designation	CRBL
Number of Floors	2
Net Assignable Square Feet	22,567
Gross Building Area - GSF	31,279
Net-to-Gross Efficiency	72.1%
Year Constructed	1983
Renovations	1987 Computer labs added 1997 Computer labs added 2003 Horticulture Lab created from old Photo Labs 2008 2nd Floor Restrooms renovated 2009 2nd floor hallway finishes and lighting renewed 2011 Roof membrane replaced 2012 Old Success Center converted into Classrooms
Additions	None
Contains	First Floor: Classrooms for Industrial Maintenance and Technology, and Floristry, the campus Computer Center (non-instructional), and horticulture space. Second Floor: Classrooms, laboratories, the Testing Center, and offices.
General Condition	Fair
Adequacy of Space	Adequate for current programs
Sprinkler System	None
Accessibility	Accessible

General / Architectural and Structural

This building is physically connected to the college center. It is made of brick compatible with the core buildings and it defines a second court. It should have a new metal coping to protect the parapet.

There is a wide variety of industrial arts and computer classrooms used in the building. Although much equipment is not new, it is still useful. The curriculum and corresponding spaces are unique to the Dundalk campus. The floristry and horticulture labs are unique spaces that offer popular courses. The computer center is not a teaching facility and is the only use which is not compatible. Many of the existing classrooms have been converted to computer training classes. The former Floristry lab is now used for Physics lab.

Industrial technology courses are no longer as successful on this campus with less demand for similar labs to address welding and automotive manufacturing. These labs can be converted to building trades to promote an alternative strength. Systems renovations should also occur to improve the computer environments. This is a high priority, future, long term project.

This building is a 2-story, steel framed structure with masonry walls constructed in 1983. The overall condition of the building is good.

Mechanical

Existing Systems:

a. The building is heated with forced air and radiant hot water.
b. The building is cooled with chilled water forced air provided by the Central Plant.
c. AHU #1 & AHU #2 are variable volume systems with VAV boxes.
d. AHU #3 & AHU #4 are constant volume systems.
e. AHU #5 is a constant volume system with re-heat, condensate pan is rusted and leaks.
f. AHU #6 is a variable volume system with VAV boxes, condensate pan is rusted and leaks.
g. AHU #7 is a constant volume system.
h. AHU #8 is a constant volume system.
i. All AHUs are listed as in fair condition.
j. All lavatories are ADA compliant.

Reported Problems/Deficiencies:

a. Not all AHU's are tied into the building's fire alarm system allowing them to shut down when smoke is present.
b. Half of all the ductwork in building is fiberboard duct insulation.
c. Building is not fully sprinklered.

Recommendations:

a. Tie AHU's into fire alarm system.
b. Replace the 50% of ductwork that is insulated with fiberboard with fiberglass exterior duct insulation with factory-applied foil facing.
c. Fully sprinkler building.

Electrical

Existing Systems:

a. The Main Electrical Distribution Switchboard is a 277/480 volt - 3 phase - 4 wire - 1200 ampere switchboard. The switchboard is a Square D power - Style Model 49-81922-01 Type PS-3.

Reported Problems/Deficiencies:

a. Insufficient task lighting levels.
b. Existing branch circuit Panelboards are loaded and filled to their capacity.
c. Data Center is fed from normal power source only.

Recommendations:

a. Provide new lighting fixtures utilizing T-5 and T-8 energy efficient fluorescent lighting fixtures or LEDs. The new lighting system shall be equipped with automatic lighting control systems in accordance with the latest energy codes.
b. Upgrade existing Electrical Distribution system including the addition of new branch circuit Panelboards to provide for future branch circuit additions. Provide submeter on building electrical service.
c. Provide generator backup for Data Center.

Information Technology

Existing Systems:

a. Building J contains the Main Campus Computer Center.
b. Room J115 contains five data cabinets serving the Campus Network. All the Campus Fiber terminates in a single rack in Room J115.
c. Room J-525 contains Smart Classroom Technology.
d. The network switches were recently upgraded across the college. AV equipment for classrooms is periodically updated as well.

Reported Problems/ Deficiencies:

a. None reported at this time.

Recommendations:

a. None at this time.

Photographs

Building Exterior

Building Exterior

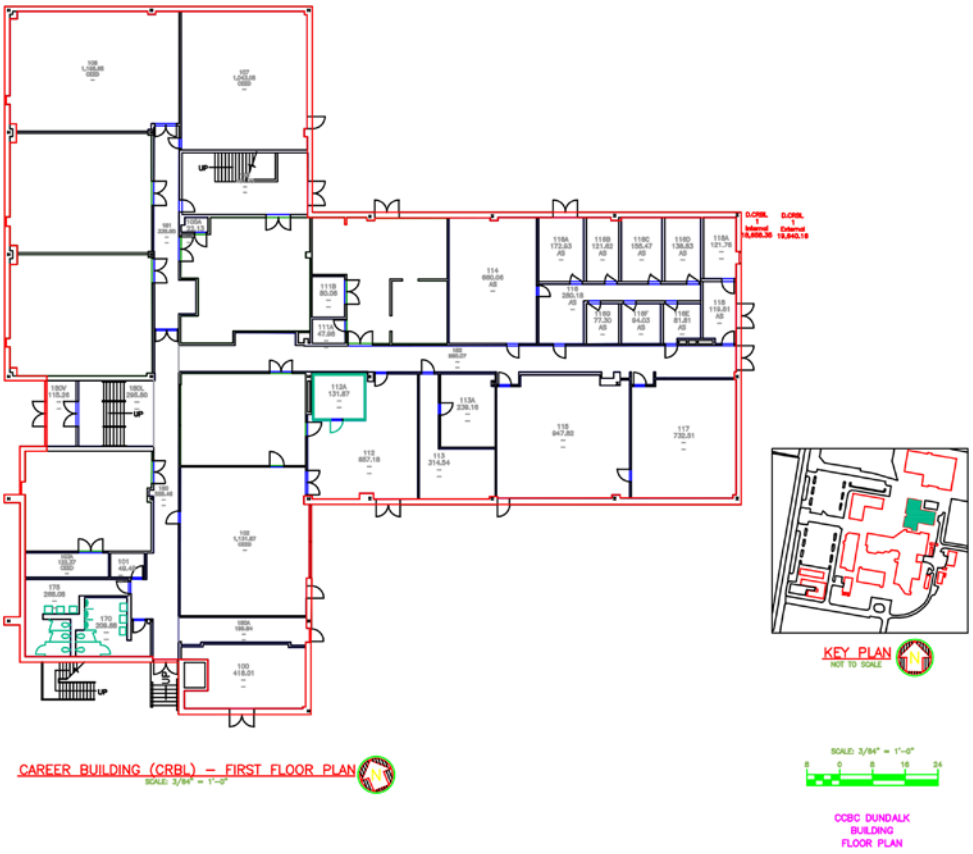
Health Sciences Lab

Classroom / Lab

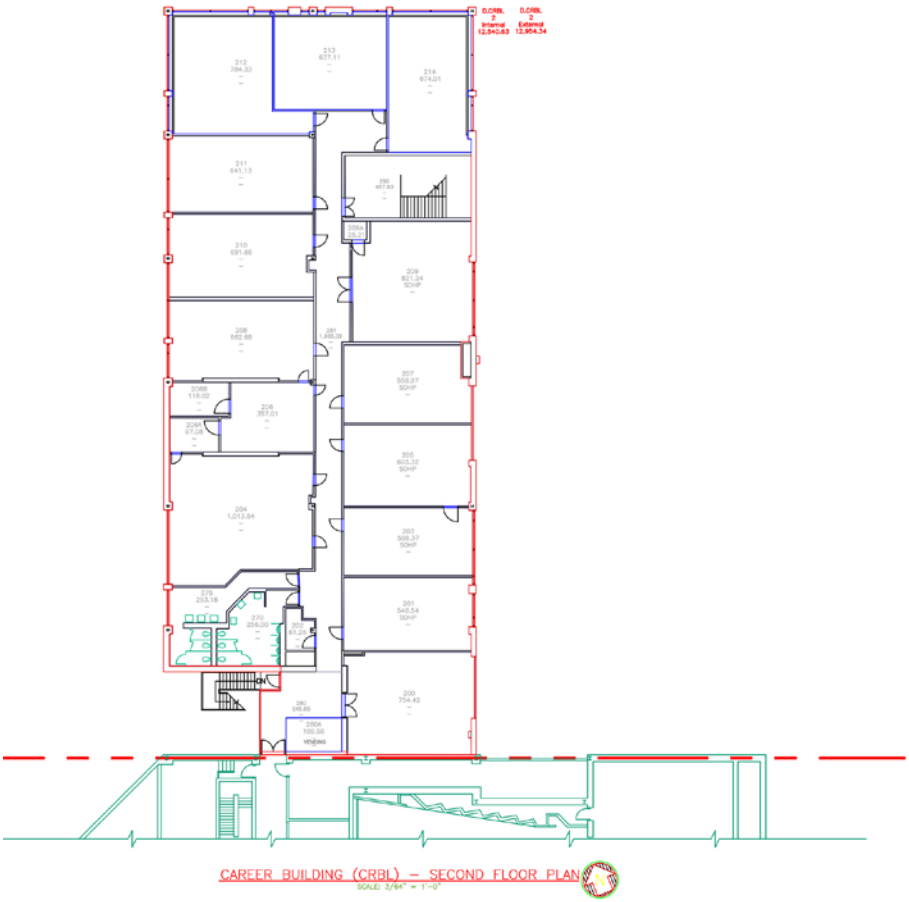
Classroom

Horticulture Lab

Floor Plans



First Floor



Second Floor

College Community Center

Building Description

Building Designation	COMM
Number of Floors	2 plus partial basement
Net Assignable Square Feet	50,128
Gross Building Area - GSF	88,418
Net-to-Gross Efficiency	56.7%
Year Constructed	1980
Renovations	1994 Replace lobby and dining room floors 1996 TV Studio removed 1997 Video classroom added 1998 Banner classroom added 2003 ADA alterations to lavatories in lower lobby 2003-5 New ADA toilet rooms upgrades 2004 New roof, Chancellor's Cabinet Suite 2008-9 New roof and coping 2010 Masonry in fly gallery re-built 2012 Major renovation
Contains	First Floor: : cafeteria, bookstore, theater, art gallery, ceramics classroom, classrooms, and the Board room Second Floor: music classrooms, offices for the Humanities and Arts faculty, College offices, and the student lounge
General Condition	Good
Adequacy of Space	Adequate
Sprinkler System	Fully Sprinklered
Accessibility	Accessible

General / Architectural and Structural

This building was a later addition to the central core, with brick to match the early buildings. It is at the heart of the campus with its variety of gathering and activity spaces. The student lounge is a good size. The theatre is small but very active year round with community theater productions.

The building is a 2-story structure (plus theatre fly-gallery), with a partial basement, constructed in 1980. Partial renovations were completed in 1994 and 2003, and a major renovation in 2012. The brick mortar joints in roof parapet are softened with some minor cracking observed. Parapet problems can be addressed with adequate flashing and metal coping which could be installed as part of the next roofing proposal. All cracks and loose mortar should be raked out and repointed. There is some minor spalling of the soffit panels which should be patched. The overall condition of the building is good.

Mechanical

Existing Systems: Previous Community Center portion

a. The building is heated with forced air and radiant hot water.
b. It is cooled with chilled water forced air provided by the Central Plant.
c. AHU #1,2,3,4,5 are all constant volume and are in fair condition.
d. AHU #6 is a constant volume system with a hot and cold deck with five (5) zones that are in fair condition.
e. AHU #7 is a constant volume system with a hot and cold deck with four (4) zones and is in fair condition. The condensate pan has some rust.
f. AHU #8 is a constant volume system with re-heat.
g. AHU #9 is a constant volume system and supplies make up air to the food service kitchen. This unit is 100% outside air with no cooling.

Existing Systems: Previous Library portion

a. The building is heated with forced hot air and radiant hot water heat.
b. Cooling is by chilled water forced air.
c. Heating and cooling are provided by the Central Plant.
d. AHU #1 is a constant volume system.
e. AHU #2 is a constant volume system with re-heat that recently had the chilled water coil replaced.
f. AHU #3 is a constant volume system with a hot deck and cold deck with four (4) zones.
g. AHU #4 & AHU #5 are constant volume units.
h. AHU #6 is a constant volume unit.
i. AHU #7 is a constant volume make-up unit that serves Room L116.

Reported Problems/Deficiencies:

a. There is a lack of redundancy in the hydronic heating and cooling circulating pumps.
b. There are cooling problems with AHU#8.
c. There is a storage room that was converted to an office and doesn't have adequate supply air.
d. There are problems keeping the kitchen cool during the summer.
a. Two of the six lavatories are not ADA compliant. (4 comply)
b. The Library is not ADA compliant.

Recommendations:

a. Provide newly converted office spaces with adequate supply air.
b. Provide ADA compliant plumbing fixtures.

Electrical

Existing Systems:

a. Systems replaced as part of major 2012 renovation.

Reported Problems/Deficiencies:

a. No major deficiencies reported at this time

Recommendations:

a. No major recommendations to report at this time

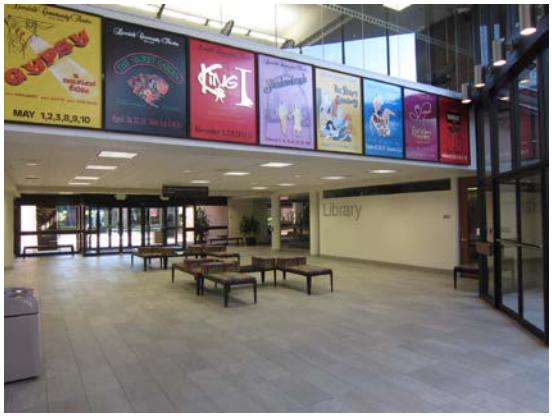
Information Technology

Existing Systems:

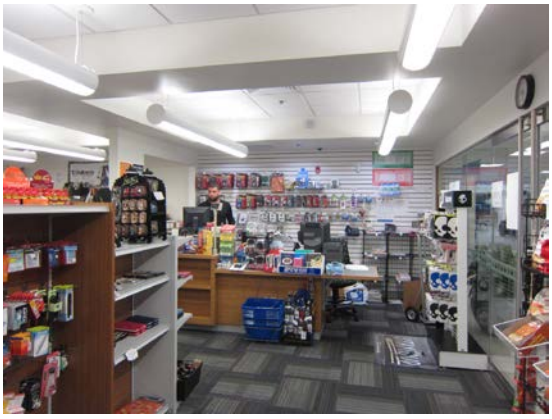
a. Room KT2 contains one data rack and one half height data rack served by 18 multimode and 6 single mode.
b. Existing Room L113 contains two data racks served by 30 multimode and 12 single mode fibers.
c. The network switches were recently upgraded across the college. AV equipment for classrooms is periodically updated as well.

Photographs

Building Exterior



Ground Level Lobby



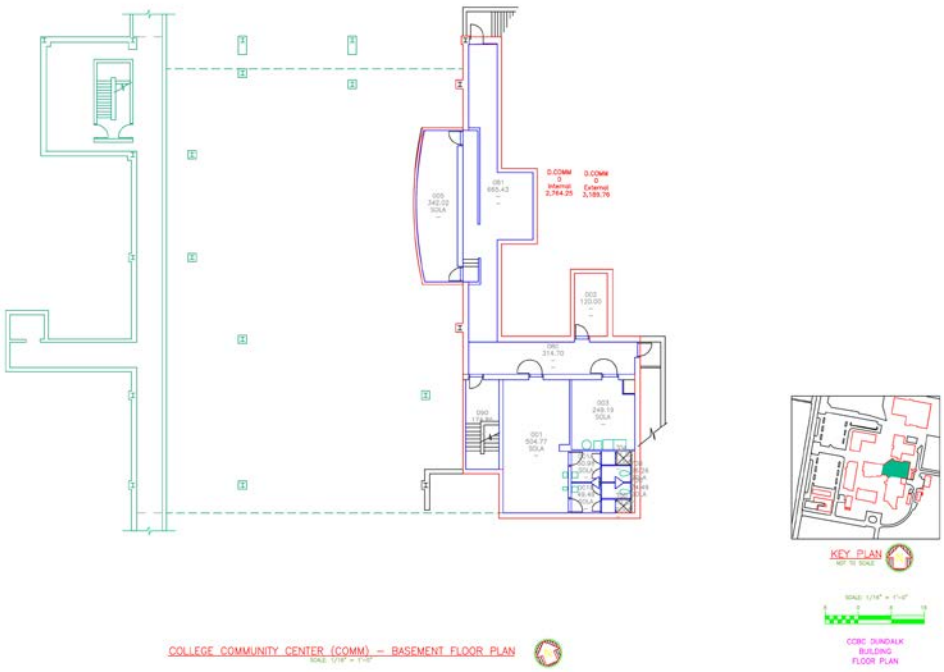
Bookstore

Library

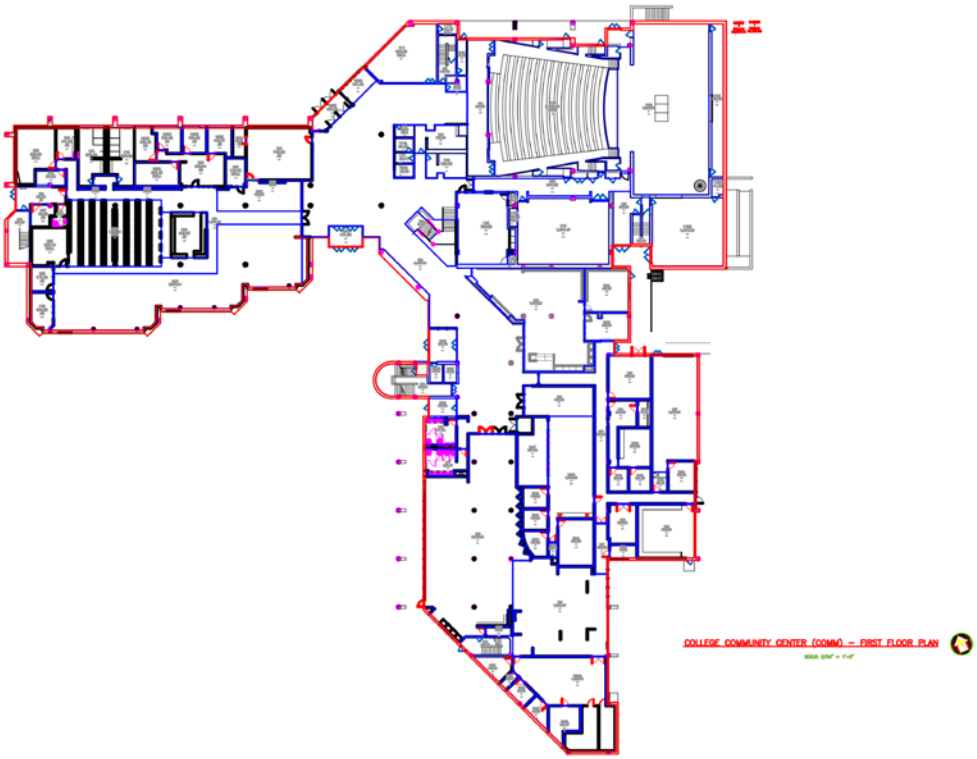
Dining Room

Second Floor Common Space

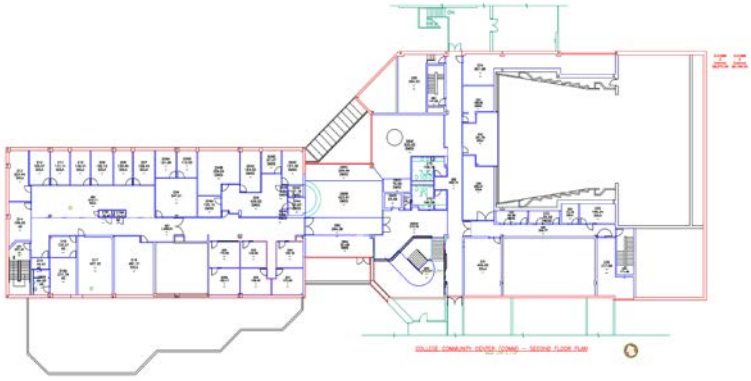
Floor Plans



Basement



First Floor



Second Floor

Greenhouse

Building Description

Building Designation	GRNH
Number of Floors	1
Net Assignable Square Feet	1,490
Gross Building Area - GSF	1,584
Net-to-Gross Efficiency	96.3%
Year Constructed	1993
Renovations	None
Additions	None
Contains	Greenhouse for Horticulture program
General Condition	Fair
Adequacy of Space	Adequate for current programs
Sprinkler System	None
Accessibility	Not accessible

General / Architectural and Structural

The greenhouse is considered a temporary facility. By definition, it does not get included in the campus facility inventory. It is instrumental in the maintenance and development of the extensive landscaping found on the campus. It is considered part of the Horticulture operation and a teaching facility. As the nearby library grows, it should be relocated near the tennis courts with a permanent horticultural classroom.

The building is a pre-engineered structure constructed in 1993. The overall condition of the building is fair.

Mechanical

Existing Systems:

a. The unit is heated with propane gas.

Reported Problems/Deficiencies:

a. None.

Recommendations:

a. None.

Electrical

Existing Systems:

a. The existing Panelboard is housed in a NEMA type 3R/12 (Cat. MH26WP) enclosure. The Panelboard is a 120/208 volt - 3 phase - 4 wire - 100 amp panelboard from Square D type NQOD, Cat. No. NQOD 424M100, Serial E2.

Reported Problems/Deficiencies:

a. No reported problems.

Recommendations
a. None.

Information Technology

Existing Systems:
a. None.

Reported Problems/ Deficiencies:
a. None.

Photographs

Building Exterior

Building Exterior

Interior

Facilities Operations Building

Building Description

Building Designation	OPER
Number of Floors	1 plus partial mezzanine
Net Assignable Square Feet	3,315
Gross Building Area - GSF	3,576
Net-to-Gross Efficiency	92.7%
Year Constructed	1976
Renovations	May be renovated in the future, program has been submitted
Additions	None
Contains	General maintenance, carpentry, tool shop, automotive repairs and grounds maintenance, offices for Director of Plant Operations and staff
General Condition	Fair
Adequacy of Space	Inadequate
Sprinkler System	None
Accessibility	Partial

General / Architectural and Structural

The maintenance building is strategically located outside the core to handle all of the daily service activities of the campus. Due to a space shortage, there is so much storage of supplies in the building; some of the original maintenance functions have been sacrificed. There are several storage trailers and containers located in the service yards around this facility. The original attached greenhouse is now used for storage, but it should be demolished.

This building no longer functions properly due to lack of space. Even without a large demand for academic space, it is critical that this facility be upgraded and an addition provided. It needs more space to cope with current needs and it will only get worse as the college grows. Much of the existing space is unaccounted for in the present inventory because of the mezzanines added inside the building and the extensive use of "temporary" trailers.

Like the Energy Plant, this is another facility that has used up all available space to perform multiple tasks. There is a calculated deficit of shop, vehicle and storage space which needs to be solved with an addition. This will help consolidate the eclectic collection of trailers that exist in the maintenance yard. Options for expansion of space for plant operations include adding to the existing building or replacement with a new building, such as a pre-engineered metal building, kept to the rear of the campus as with the existing building.

The building is a 1-story, steel framed structure with a partial mezzanine and masonry bearing walls, constructed in 1976. The overall condition of the building is fair. This building and adjacent compound is scheduled to serve as the primary service facility for CCBC system-wide fleet vehicles, with corresponding modifications and upgrades.

Mechanical

Existing Systems:

a. The facility is heated by forced hot air in the shop from an oil burner.
b. The offices are heated and cooled by three (3) through-the-wall heat pump units and room air conditioners.
c. The boilers should be converted to natural gas when the gas service is extended to H-building.

Reported Problems/Deficiencies:

a. None

Recommendations:

a. None

Electrical

Existing Systems:

a. The existing double width Main panelboard is fused to a 400 amp - 3 phase - 240 volt safety switch. Section 1 of the panelboard is a 120/208 volt - 3 phase - 4 wire - 400 ampere Panelboard. The Panelboard is a Square D Type NQOB, (Cat. No. 44-34561-2). Section 2 of the Panelboard is a 120/208 volt - 3 phase - 4 wire - 400 ampere panel. The Panelboard is a Square D Type NQOB (Cat. No. 44-54561-2B).

Reported Problems/Deficiencies:

a. None reported.

Recommendations:

a. None

Information Technology

Existing Systems:

a. Room P103 contains a wall data cabinet served by 6 multimode fibers. The network switches were recently upgraded across the college. AV equipment for classrooms is periodically updated as well.

Reported Problems/ Deficiencies:

a. None at this time

Recommendations:

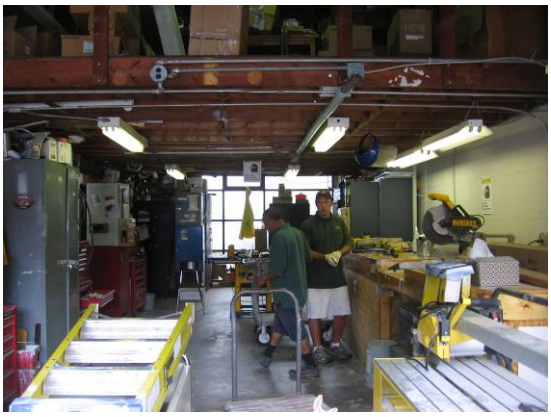
a. None at this time.

Photographs

Building Exterior

Storage Yard

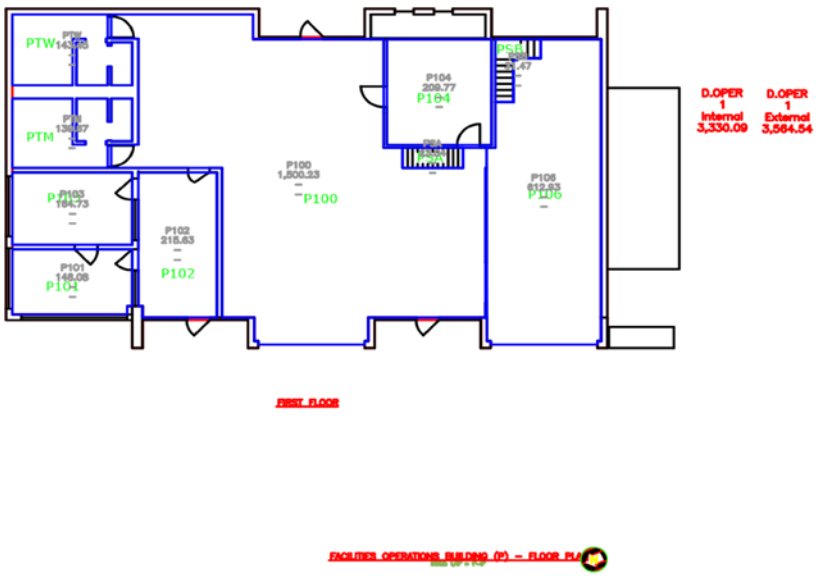
Maintenance Bay



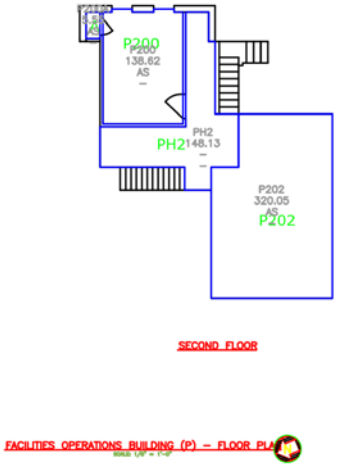
Carpentry Bay

Office Space

Floor Plans



Ground Floor Plan



Mezzanine

CAMPUS-WIDE SYSTEMS

Electrical

Existing Systems:

a. The existing campus site lighting system is very old and has reached the end of its life expectancy.
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, some of the pathways or pedestrian sidewalks are not illuminated.
d. There is an existing emergency call system at the campus. The system performs well and needs no attention at this time.
e. The incoming BGE primary feeder and switchgear has been replaced.

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 more than 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. Maintenance testing of campus primary feeders and replacement of any defective cabling is recommended.

Information Technology

Existing Systems & Reported Problems/Deficiencies:

None.

Recommendations:

None.

SITE INFRASTRUCTURE

OVERVIEW

CCBC Dundalk is located at 7200 Sollers Point Road in southeastern Baltimore County several miles inside the Baltimore Beltway I-695 off of the Merritt Boulevard exit. The campus is bounded by Sollers Points Road, Robinwood Road, Meadow Lane, Merritt Boulevard, Searles Road and Dundalk Senior High School. Residential neighborhoods exist to the south, east, and north. The property is zoned DR5.5, Density Residential - 5.5 dwelling units per acre.

A visual review and cursory assessment of the CCBC Dundalk site infrastructure was completed in 2015 by Morris & Ritchie Associates, Inc. (MRA). Several campus visits were made during which we observed existing conditions and reviewed previously identified problem areas. 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.

The campus is L-shaped with Parcel 536 (Map 0103), the longer of the two parcels, facing Sollers Point and Parcel 12 (Map 0103) facing Merritt Boulevard. According to the current Maryland Taxation records, the total campus area represents 69.85 acres. The topography is relatively flat throughout the academic core, parking, baseball and tennis court areas. Steep slopes exist down to the existing storm water management pond and stadium areas. Then the topography remains flat once again throughout the campus softball field and adjacent athletic area used by Baltimore County Recreation & Parks.

MRA prepared a base map for the Dundalk 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 Dundalk site infrastructure was found to be in good condition. While specific areas of deferred maintenance existed, such as settled sections of sidewalk and areas of broken pavement, we observed the campus to be well maintained with planning efforts instituted to maintain the campus' good condition.

INFRASTRUCTURE REVIEWED

Sanitary Sewer

Baltimore County Sanitary Sewer System Key Sheets F S.E. and E S.W. indicate that the CCBC Dundalk discharges from an 8 inch sanitary sewer line to the Baltimore County DPW 8" sanitary sewer in Sollers Point Road, which is part of the Shore Road Pumping Station Collector System. According to Baltimore County DPW, the 8 & 10 inch main in Sollers Point Road has a reserve capacity. Based on Baltimore County DPW guidelines for colleges with non-residential students:

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

For CCBC Dundalk, this reserve translates into capacity for approximately 5,017 additional students or 805,556 square feet of additional space.

Sanitary back-ups have occurred. Periodic water jet cleaning of the sanitary main has been instituted. We recommend a survey of the entire on-site sewer system be completed to include invert elevations and, since

sections of the system are old, a CCTV inspection of the underground pipe lines.

Water System

Baltimore County Water Main Key Sheets F S.E. and E S.W. indicate that the campus is located in the First Zone and is served by an 8" water meter connected to the Baltimore County DPW 10" County main in Sollers Point Road. The site water meter is located along Sollers Point Road adjacent to the residential property.

Baltimore County DPW has determined that as of May 4, 2015, there are no areas of Baltimore County that are considered water deficient. The County has recently completed a water main cleaning and relining project on the mains adjacent to the campus. Water supply on campus improved slightly, yet Sollers Point Road fire hydrant water flows appear to be substantially greater than what is available on site. While the deficient water supply warrants more study, there appears to be adequate flows available to meet NFPA 13 sprinkler flow requirements. However, there is not enough pressure to properly sprinkler even a 1-story building without a fire pump. The campus flows do not meet ISO flow requirements. No water service upgrade capital improvement projects are scheduled for the area.

Storm Drains & Storm Water Management

CCBC Dundalk is located on the Flood Insurance Rate Map #240010 0420 B and Baltimore County Metropolitan District Key Sheets F S.E. and E S.W. According to the drawings, the campus exists in Zone C, areas of minimal flooding, non-flood plain. Existing storm drainage is collected throughout the campus by a network of inlet catch basins and storm drain pipes which drain surface runoff and discharges into three drainage area outfalls.

CCBC has worked extensively with the Maryland Department of the Environment to analyze and treat the storm water on the Dundalk Campus. CCBC provides quarterly reports to MDE on their pollution prevention plan. Any proposed expansion or new construction must take this approved program into consideration.

Site Utilities

Several private utilities supply services to this campus including Baltimore Gas & Electric, Verizon and Comcast. Comcast (cable television) and Verizon (communication cables) connect into the campus from Solliers Point Road. BGE supplies natural gas to CCBC Dundalk through a 6 inch medium pressure line from Sollers Point Road. There is no report of insufficient service.

The Central Utility Plant supplies hot and chilled water throughout the campus. BGE also supplies electric service to the campus by underground conduit on the southernmost portion of the campus, near the gas service line. BGE pulled a new service line into the Campus since the last Master Plan update. Both electric and telephone (Verizon) exist in the conduit which connects into the energy building. Upgrades to the Central Utility Plant were recently completed. A new generator has been installed near the Career Building to support the computer center, PBX, and the pump in COMM. Solar panel arrays have also been installed in parking lots and are connected to the Central Utility Plant. Once the solar panels are fully functioning, the Campus can reevaluate its energy usage and needs.

Roads & Pavement

The main entrance off of Sollers Point Road controls a majority of campus traffic. This main campus circulation road connects to the buildings and parking areas throughout the campus. A campus directory system has been installed throughout the campus. A secondary access road exists off of Merritt Boulevard. A pedestrian walkway exists off of Sollers Point in between two residential homes is part of Parcel 536, and thereby owned by CCBC.

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 three 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:

Solliers Point Road, Merritt Avenue & MidLand Road
(Traffic Count on 2/03/10) - - - Rated A
Merritt Avenue, Peninsula Expressway & Merritt Boulevard
(Traffic Count on 9/07/2011) - - - Rated A
Delvale Avenue and Holabird Avenue (Traffic Count on 1/11/2012) - - - Rated C

Since the last Master Plan update, only the intersection of Delvale and Holabird has fallen to a LOS of C. All other intersection LOS have remained the same.

Prior to the last Master Plan update, pavement projects had been completed on the rear access road, Lot 6 and a portion of the Community College Driveway, the existing pavement around the CCBC Dundalk Campus was therefore found to be in fair to good condition. However, several deteriorated areas of bituminous pavement still exist on the campus.

Most of the brick pavers in the central core area have been repointed and concrete pavers have been reset. Brick paver joints are a perennial problem and their use should be avoided. Stamped or stained concrete to mimic brick pavers can be a viable alternative.

Campus parking is allocated to six parking lots; small parking areas adjacent to numerous Buildings; and along the campus driveway/entrance. A total of 975 spaces were counted during our field visits.

Site/Parking Lot Lighting

A nighttime campus visit was completed in 2015 and verified that the campus site lighting was satisfactory. Because of aging, the underground electrical cabling system that feeds service to the parking lot lights throughout the campus has problems. During stakeholder interviews, Campus representatives stated that light bulbs burn out often and that fixture upgrades are necessary. Lighting for those parking lots that were upgraded with the solar arrays have been improved as part of the construction.

Handicap Accessibility

Since the campus core is constructed on a relatively flat area of the larger campus, handicap access is available throughout. Only traveling from the academic core area down to the stadium and to the other recreational fields along Merritt Boulevard is the running slope more than 5%. ADA improvements to the existing building ramps, curb ramps and parking spaces are needed in several areas. It appears that the campus contains an adequate number of reserved handicap parking spaces, based on current ADA

regulations. CCBC is regularly evaluating opportunities for additional handicap parking throughout the campus to serve faculty, student, and visitor needs.

Recreational Fields

A soccer/football stadium, baseball field, softball fields, tennis courts, basketball courts and practice fields exist on campus. Artificial turf has been installed in 2009 on the stadium's playing field. The softball field was renovated prior to the last Master Plan update and remains in excellent condition.

Miscellaneous Site Infrastructure

Several small retaining walls exist throughout the campus to provide proper pedestrian circulation and handicap accessibility. Screen walls have been installed around a majority of exterior mechanical and kiln equipment. All wood wall surfaces, including the site benches and picnic tables, are deteriorating. A masonry wall around the dumpster areas at the Roy N. Staten Building has been damaged by vehicles. A Dundalk Community Garden has been installed in between the Wellness & Athletic Center and the Stadium.

Horticulture program is centered at Dundalk Campus and provides hands on learning

Living roof helps illustrate sustainable development practices

A variety of Environmental Site Design facilities can be utilized to meet MDE Pollution Prevention Program

New paving and way-finding systems throughout Campus

SITE ANALYSIS

INTRODUCTION

The CCBC Dundalk campus is located in the southeastern section of the county off of Sollers Point Road and Merritt Boulevard. Like the Catonsville and Essex campuses, this campus is well-defined but is fairly flat, lacking the significant topographical changes found on the other campuses. The following paragraphs describe and analyze the existing campus in terms of overall campus organization, land use, vehicular circulation, pedestrian and bike circulation, open space, parking and campus landscape. *Refer to **Exhibit 4.1, Existing Campus Facilities.***

CAMPUS ORGANIZATION

Existing Conditions

The CCBC Dundalk campus is organized around a tightly knit core of buildings organized in a north-south/east-west grid, with parking areas located to the perimeter on the north and west sides of the core. Athletics are separated from the campus core and are located in a portion of the campus that extends to the east to Merritt Boulevard. The facility maintenance area is located to the east of the campus core. The primary organizing elements within the campus are a series of well-defined quads and pedestrian corridors leading to parking areas.

Analysis

Like CCBC Catonsville and CCBC Essex, the tightly knit CCBC Dundalk campus has a distinct “sense-of-place” with most of the facilities connected in a coherent manner. Unlike the other campuses, the flat topography over most of the campus helps to unify the core area with the perimeter areas. The only exception to this is the athletic fields which are on the other side of a hill and not visible from the campus core. As the campus continues to grow, the distinct campus organization should be preserved and reinforced.

LAND USE

Existing Conditions

As with any institution, the land uses throughout CCBC Dundalk are varied. The academic and administrative/support uses are located in the campus core, parking uses are concentrated in a band around the western and northern perimeters and athletics are located to the east. Unlike the other two campuses, this campus has the least amount of un-programmed open space. Most of this is to the south, in the form of a large open lawn and to the east in a narrow woodland grove. Refer to ***Exhibit 4.1 Existing Campus Facilities***.

Analysis

Generally, the distribution and grouping of land uses works well and is appropriate for the campus. The majority of the buildings are located in the campus core, internal to roads, parking and service areas. The athletic fields east of the campus core have direct pedestrian access, but are visually removed downhill from the campus core. The 'Front Lawn' is the large open space between Sollers Point Road and campus core. It establishes a scenic sense of arrival to the college and offers opportunity for campus expansion. Growth of the college will need to study how to reinforce the identity of these key areas as well as better connect these land uses and areas.

ACCESS AND VEHICULAR CIRCULATION

Existing Conditions

The campus is served by one primary access point from Sollers Point Road and one service access from Merritt Boulevard. Unlike the other campuses, this primary access road, College Drive, does not form a complete loop around the campus. There is a small loop drive, South Campus Drive, that provides access to Student Services Center. Wayfinding signage along Community College Driveway and throughout the campus directs visitors to various campus facilities. *Refer to **Exhibit 4.2 Vehicular Circulation.***

Analysis

While the campus does not have a loop road, this does not appear to be a problem because of the campus' compact size. An advantage to not having College Drive extend as a loop around the entire campus is that pedestrians do not have to cross a roadway to get to the athletic fields. South Campus Drive in front of Student Services Center functions fairly well with the exception of the fact that the decision point to turn onto this drive is very close to Sollers Point Road. This requires first time visitors to notice the signage and make a decision to turn, after having little time to recover from the decision to turn onto the entrance road from Sollers Point Road. South Campus Drive, as currently configured creates an "island" of land that could be used for future development/campus expansion. Future consideration should be given to reorganizing this loop drive to better allow the campus to expand in this direction, without requiring people to cross any roadways to get between the existing campus core and the new expansion area.

PEDESTRIAN AND BIKE CIRCULATION

Existing Conditions

CCBC Dundalk contains an extensive network of pedestrian walkways throughout the campus core. Pathways connect the campus core with parking areas as well as a link to the athletic/recreation fields. A walkway is provided along South Campus Drive, connecting to Sollers Point Road. In addition, a recreation trail runs along the eastern property line. A well-defined pedestrian promenade with a framing allee of trees

runs between Parking Lot 2 and Lot 3 connecting Dundalk High School with the campus core. The surrounding community frequently uses the campus for walking, primarily along the perimeter trail to the east and through the many gardens. Merritt Boulevard and Sollers Point Road are slated to receive dedicated bike lanes.
Refer to Exhibit 4.3 Pedestrian and Bike Circulation & Exhibit 4.5 Topography.

Analysis

From a pedestrian standpoint, this campus is well-served by pathways. In particular, the parking bays within the lots are oriented toward the campus to facilitate pedestrian circulation and there are clear walkways leading from the parking lots into the campus core. In many areas, the pedestrian routes are reinforced by formal tree plantings that provide a strong visual identifier. As the campus grows, the site planning of new program elements should reinforce clear and direct circulation patterns between existing campus uses and proposed uses.

The College has made good use of its campus walkways by organizing a Campus Walking Initiative, featuring five "circuits" of varying lengths and degrees of difficulty. These pedestrian circuits and environments are enhanced by the extensive horticultural garden programs. There is an opportunity to reinforce the walking trail along the eastern perimeter of the campus with thoughtfully located groupings of trees. There has been some discussion concerning designating this as a "Chesapeake Garden Athletic Walking Trail" which would be a great way to extend the garden concept out from the core of the campus.

The Merritt Boulevard and Sollers Point Road bike is an opportunity to encourage bike ridership. An off-street dedicated bike path or a shared pedestrian/bike path along the outside of South Campus Drive loop would provide safe connection from Sollers Point Road to the campus core with minimum conflicts to moving and parked vehicles. The service road along the athletic fields provides an opportunity to create bike access from the proposed Merritt Boulevard bike lanes to the campus core. A dedicated or shared bike lane along the eastern side the campus core provides a link between the two bike way segments. Although this portion of the bike way passes loading and service areas, this service road carries significantly less vehicular volume than Campus Drive on the west side of the campus. Redevelopment of the Facilities Operation building and associated service areas should reserve space for safe bike passage.

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 campus core. Amenities such as access to showers, lockers, covered bike storage and repair station should be provided to encourage year-round bicycle commuters.

OPEN SPACE

Existing Conditions

The campus consists of a variety of open spaces including the main quad areas within the campus core; landscaped perimeter areas along Sollers Point Road and individual buildings; the athletic/recreation fields; and a woodland grove along the eastern perimeter of the campus. In addition, the campus contains 11 horticulture instructional gardens located throughout the campus core. There is a fairly large, hilltop open space located between the athletic fields and Parking Lot 4 which does not have a designated use. *Refer to Exhibit 4.4 Open Space Typologies*

Analysis

Because of the compact configuration of buildings, the open spaces within the core of CCBC Dundalk are well-defined by architecture. Compared to the other two campuses, the spaces are fairly small and serve more as intimate courtyards rather than traditional "quads". The only open, un-programmed lawn area is the space along Sollers Point Road. This space provides an attractive front lawn and "public face" for the campus, projecting a positive image.

The athletics and recreation areas on campus are well defined by topography and vegetation. The ball field located in the northwestern part of the campus is very well-defined by a dense row of trees and by buildings and has a distinct sense of place. It's location at the edge of the campus core, with the backstop and bleacher areas closest to the core, helps to activate the pedestrian areas of the campus. The main performance field is well-defined by a slope along the western side and a row of trees on the eastern side, separating it from the lower practice fields.

As the campus continues to develop, special attention should be given to preserving the existing open space network and using new buildings and landscape elements to continue to reinforce the courtyard spaces and to create new ones as new buildings are developed. Consideration should be given to creating a larger, more traditional quad that is comprised mostly of open lawn to provide opportunities for passive play, outdoor meeting space and large gatherings in a contained space. A traditional quad would complement the other more intimate courtyard spaces on campus quite well. Care should be given, however, to sizing the quad so that it does not overwhelm other campus spaces and appear incongruous to the CCBC Dundalk character and scale.

PARKING

Existing Conditions

As summarized in a table in Chapter 3, CCBC Dundalk has 6 numbered parking lots, 5 parking areas associated with buildings and parking along College Drive and South Campus Drive, totaling approximately 975 spaces. Parking spaces are divided into 5 categories including 656 for students, 176 for faculty/staff, 48 accessible, 72 for service and 23 other (visitor, reserved).

Analysis

The majority of the parking is located along the north and western perimeters of the campus, inside College Drive. This works quite well in terms of minimizing pedestrian/vehicular conflicts and providing parking within close proximity of the campus buildings. Most parking spaces are less than 300 feet from a campus building. The parking bays are generally perpendicular to the campus which works very well in terms of pedestrian circulation through the drive aisles to the campus core. *Refer to **Exhibit 4.2 Vehicular Circulation.***

CAMPUS LANDSCAPE

Existing Conditions

The landscape at CCBC Dundalk is comprised of manicured lawn areas, naturalistic woodland groves and ornamental gardens. The ornamental gardens are a significant feature of the campus and include water gardens, fish ponds, water features and rustic gazebos. Planting islands and medians are provided throughout all of the parking areas and hedgerows and groups of trees separate the athletic fields from each other and from other parts of campus. In addition, many of the tree plantings work well in reinforcing pedestrian circulation routes from the parking areas to the campus core. The campus courtyard areas are well-defined by mature trees, predominantly consisting of Bradford Pear, many of which are near the end of their lifespan. The campus currently does not have a tree replacement strategy in place. *Refer to Exhibit 4.4 Open Space Typologies.*

Analysis

The diversity of landscape settings results in a rich campus experience for those using and visiting the campus and the extensive horticulture instructional gardens, 11 in all, distinguish this campus from CCBC Essex and CCBC Catonsville. The College is to be commended for the obvious level of care (which is quite significant) that has gone into providing and maintaining the gardens which not only display a variety of plant materials, but public art as well. The result is a series of attractive and comfortable courtyard settings for employees, students and visitors to the campus. Most of these are linked to the perimeter of the campus with formal rows of trees. While these formal rows reinforce pedestrian linkages, they often don't terminate on anything significant. As the campus is enhanced, consideration should be given to reinforcing destinations, landmarks and spaces that terminate formal rows of trees.

The rich variety of plant materials, textures and colors within each garden space also provide a lot to visually absorb, so the continuity of larger shade trees within the campus help to unify the various spaces of the campus. Unfortunately, many of these trees are Bradford Pear which are weak-wooded and subject to significant storm damage. Most on the Dundalk campus are nearing the end of their lifespan and will, eventually need to be replaced. Consideration should be given to replacing these with longer-lived "legacy" trees such as oaks and maples.

In addition, many of the trees in the parking lot areas are stressed. In some cases this is due to the small size of the planting islands but in other cases it appears to be a result of the quality of soil in the planting islands. As trees are replaced in the islands, soils should be analyzed and supplemented as necessary to provide a healthy growing environment. Some trees are also stressed by the driving of equipment on lawn areas and root zones, compacting their roots, such as the area between the Wellness and Athletics Center and the ball field. As additional areas are identified on campus for tree planting, care will need to be given to coordinating tree locations with strategies for driving vehicles on the campus (such as widening walkways or designating specific routes for vehicles).

Exhibit 4.1 Existing Campus Facilities

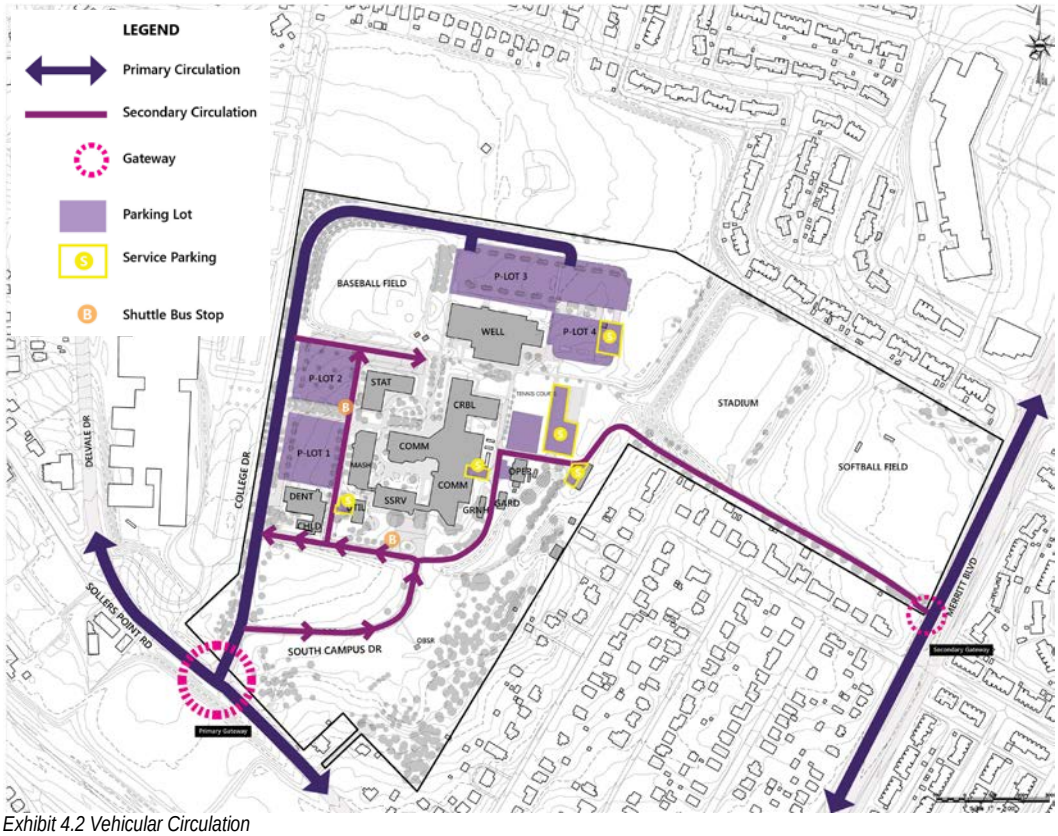


Exhibit 4.2 Vehicular Circulation

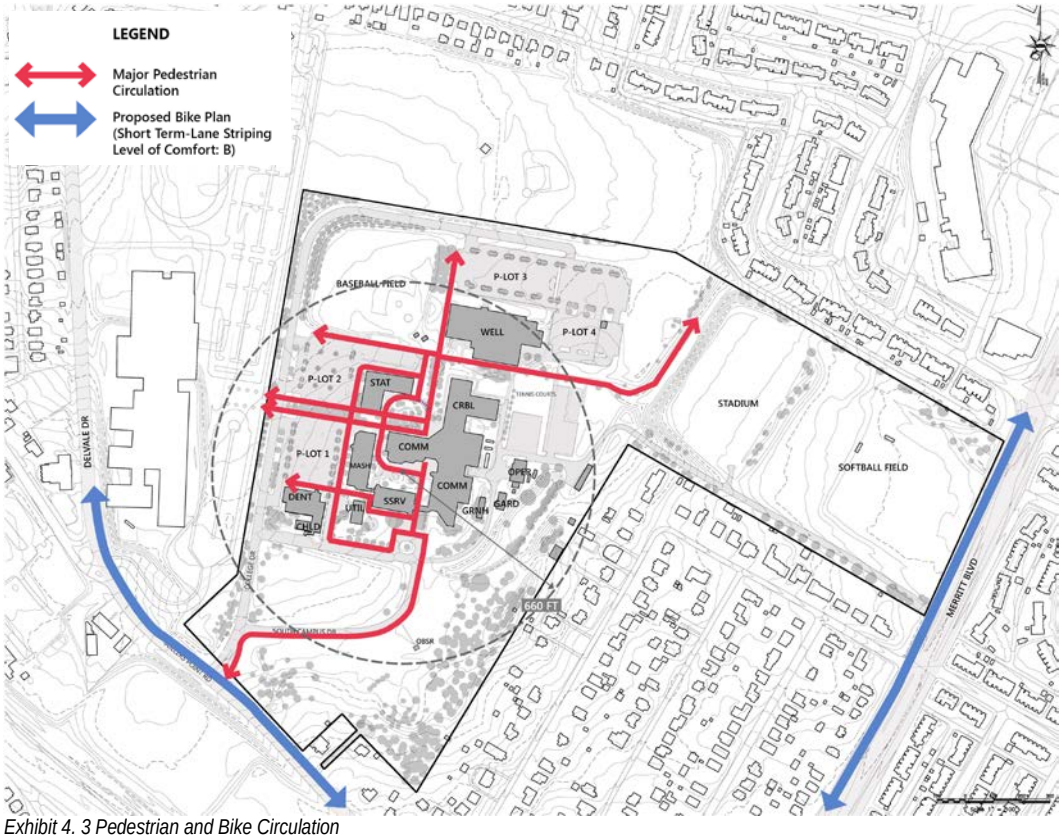


Exhibit 4. 3 Pedestrian and Bike Circulation

Exhibit 4.4 Open Space Typologies

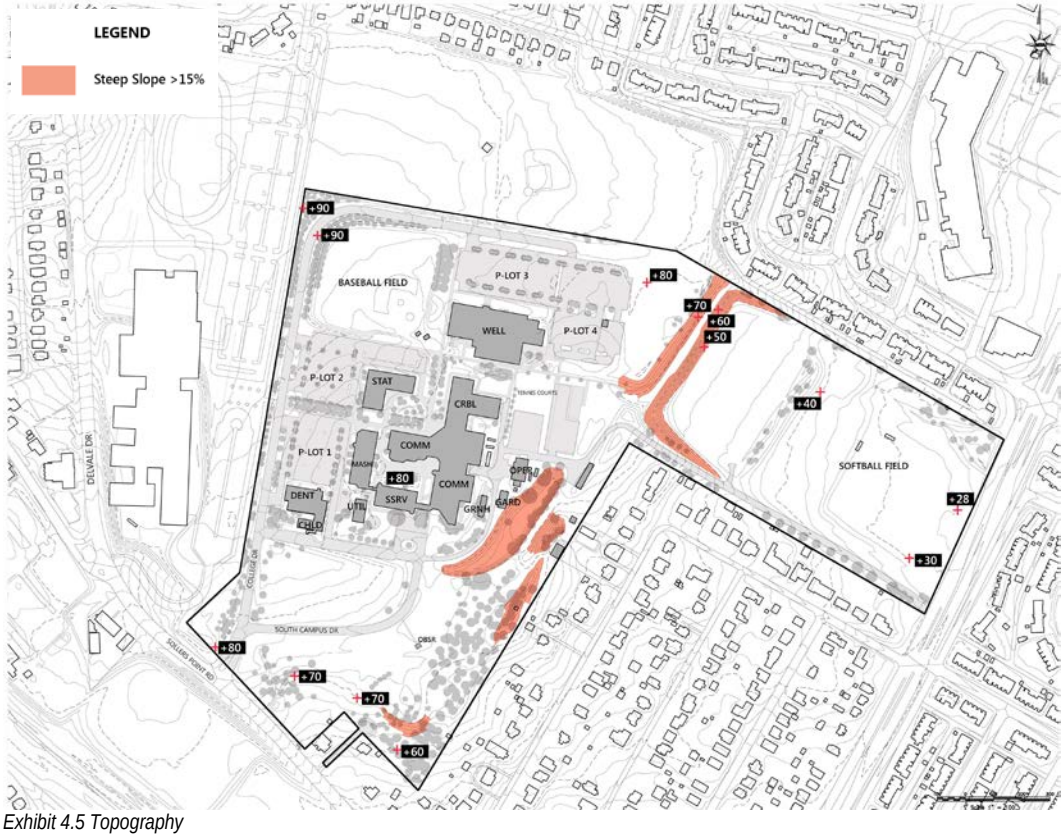


Exhibit 4.5 Topography

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. Demolition is not suggested for any existing building except for the Garden Annex.

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 Staten Building, buildings are generally more than 30 years old and most are in need of renovation; the College Community Center renovation was completed in 2013. 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 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. Unifying exterior elements include tones of brick, compatible with the existing brown color; other materials which can complement the brick; 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 two stories. Roofs may be relatively level but all with positive slope, and some roofs may be sloped if suggested by their 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

The sanitary sewer in Sollers Point Road appears to have adequate capacity, while water service has limitations. Since the campus contains many underground utility lines, each new building or addition will probably 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. New regulations frown on structural devices such as water quality vaults, sand filters and ponds. 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 water service.
- Add campus fire hydrants in between Wellness and Athletics Center and Career Building and at the Stadium.

Site Utilities

- There is no report of insufficient service.

Roads & Pavement

- Repair roadway adjacent in between Central Utility Plant and Dental Arts Building.
- Repair pavement, full base replacement, at areas damaged by MTA bus.

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.
- Upgrade campus handicapped access routes - ramps need landings, handrails, proper signage, etc.

Recreational Fields

- Install irrigation system at baseball and softball fields.
- Resurface basketball and tennis courts.
- Construct restrooms, locker rooms, and concession stand at stadium.
- Upgrade dugout fencing for the baseball field, there's a safety issue due to the close proximity to the batter's box.
- Install a batting cage near the softball fields.
- Install a press box deck at the softball field.

Miscellaneous Site Infrastructure

- Stain/seal all wood benches, picnic table surfaces and wood retaining walls.
- Repoint and repair cracking in masonry screen walls.
- Repair damaged masonry wall around the Roy N Staten Building dumpsters.

CAMPUS PLANNING

The following paragraphs describe site recommendations for enhancements to the CCBC Dundalk 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 on the Campus Development Plan in the back of Section 5 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

CCBC Dundalk is characterized by a compact development pattern and strong campus core area. While campus facilities are within close proximity to one another, the athletics lack a strong connection back to the campus core. Recommendations in terms of campus organization and land use include:

- Expand the campus core to the south to utilize the expansive front lawn for multiple new academic buildings.
- Organize new development around expansive quads, providing larger flexible open spaces which the campus currently lacks.
- Maintain the current location for the Facilities Maintenance area, but allow for expansion.
- Utilize new building development and landscape design to reinforce 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 Dundalk campus, with the exception of the limited intersection spacing between Sollers Point Road and South Campus Drive. The following recommendations are proposed:

- Reorganize South Campus Drive to allow for the campus core to expand to the south.
- Provide more distance between entrance at Sollers Point Road and first "decision point" to access parking areas and visitor drop-off to campus core near the future classroom building and new campus quad.
- With reorganization of South Campus Drive, provide for limited through-circulation and access to Facilities Operations Building and maintenance area from the south for emergency and service vehicles only. This access drive should be narrow in scale and reserve space for a bike path.

Parking

Unlike CCBC Catonsville and CCBC Essex, CCBC Dundalk will not require structured parking in order to accommodate growing parking needs. Additional parking can be accommodated in surface lots. Recommendations for accommodating this additional parking include the following:

- Expand Parking Lot 4 to the east to accommodate additional surface parking and make use of underutilized open space.
- Provide a new surface lot and visitor parking at the reconfigured drop-off near the Student Services Center, future classroom buildings and future quad area at the south end of the campus.

Pedestrian and Bicycle Circulation

CCBC Dundalk is well-served by organized pedestrian pathways that link parking and amenity areas with the core campus. Following are recommendations that should be considered as the campus expands. These recommendations are illustrated in *Exhibit 5.3 Pedestrian and Bike Improvements*

- Preserve and reinforce existing pedestrian circulation routes as they provide direct access to parking and amenity areas and provide a series of circuits for people using the campus.
- Reinforce the pedestrian link between campus core and athletic fields.
- Create a new network of pedestrian paths in campus expansion area and connect back to existing campus core along existing corridors between buildings. Reinforce important pedestrian routes by terminating them with clear destinations and landmarks.
- Reinforce connections between campus core and walking trail.
- Create a bike way along the eastern side of the campus connecting to both Sollers Point Road and Merritt Boulevard:
    - Create a dedicated two-way bike lane along the south and east side of future service lane or in the short-term along the existing South Campus Drive loop from Sollers Point Road to College Community Center.
    - Explore dedicated bike lane or shared use lane along the service lane between College Community Center to Facilities Operation Building and service area.
    - Provide a dedicated two-way bike lane through the campus core and along the pedestrian walkway between the Wellness and Athletics Building to the athletic fields.
    - Dedicate bike lanes along the service road along the south side of the athletic fields connecting to Merritt Boulevard.
- Provide signage to enhance awareness of bike use.
- Provide bike racks in visible locations near building entrances.
- Provide covered bike racks, storage and repair station near the Wellness and Athletic Center to enable ease of access to shower and locker rooms for commuter bikers.
- 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 and collegiate campus environment, allowing for learning and discovery to happen in a variety of spaces throughout, and creating an image for the institution. CCBC Dundalk has a strong open space framework comprised of a series of intimate garden spaces with the exception of the expansive open front lawn. The following recommendations will allow for new and enhanced open spaces throughout the campus:

- Preserve existing and provide additional spaces including social spaces, quiet sanctuary spaces and spaces to support teaching and learning.
- Create new quads that complement existing intimate spaces by providing for additional experiences.
    - Provide a large open area that is flexible for a variety of activities.
    - Continue the tradition of gardens by providing garden spaces along edges of new quads to help define flexible lawn spaces while providing more intimate settings.
    - Utilize buildings, architectural and landscape features as well as the edge of the existing woods to provide definition to the new quads.
    - Maintain visual and physical connections between the new quads and existing pedestrian corridors, courtyards and woodland path.
    - Activate quads by locating windows and doors onto the space and by providing outdoor gathering and “café space” facing onto the quads.
    - Integrate indoor and outdoor learning spaces.
- Preserve and enhance a reduced front lawn as an important image for the campus.

Campus Landscape

The diversity of landscape settings at CCBC Dundalk results in a rich experience for those using and visiting the campus. The extensive horticulture instructional gardens, 11 in all, distinguish this campus from CCBC Essex and CCBC Catonsville. The result is a series of attractive and comfortable courtyard settings for employees, students and visitors to the campus. Recommendations to preserve and enhance the landscape include:

- Reinforce the variety of landscape settings by creating new and complementary landscape environments for the new quads, rather than duplicating landscapes already present on campus.
- Design landscapes to accommodate and support activities and use of the spaces. For the new, create a landscape that defines a space where a variety of play can occur, rather than filling the space with plants.
- Maintain visual connectedness along pathways, into spaces, athletic fields and to the woods.
- Emphasize the use of large shade trees to provide shade and scale and reinforce pedestrian circulation routes.
- Expand tree islands and amend soils in parking areas to accommodate healthier and larger trees.
- Replace Bradford Pear trees throughout the campus with “legacy trees” that have a longer lifespan and are more durable during storms.
- Continue to provide resources for maintenance of garden spaces.
- 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 low scale of the Dundalk campus, with corresponding low recommended scale of new buildings, results in more, smaller buildings than are recommended for Catonsville and Essex. No parking garages will be needed on this campus. Recommended projects are as follows:

Proposed Major Capital Projects 2016-2025 - Dundalk: Area and Budget Construction Costs

Building Designation		No. of Spaces - Parking 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										
OPER	Renovation OPER + Replacement for Maintenance		3,576	5,000	$ 200	$ 715,200	$ 250	$ 1,250,000		$ 1,965,200
SSRV	Renovation (Student Services 2nd floor incl link)		10,300		$ 250	$ 2,575,000				$ 2,575,000
	Roof Membrane Replacements (STAT, WELL (flat))								$ 850,000	$ 850,000
	Additional Parking Extend Lot 4	112					$ 3,500	$ 392,000		$ 392,000
WELL	Renovation/Addition (Wellness & / Athletic Center)		55,913	10,000	$ 225	$ 12,580,425	$ 325	$ 3,250,000		$ 15,830,425
	Total: 2016-2020		69,789	15,000		$ 15,870,625		$ 4,892,000	$ 850,000	$ 21,612,625
Proposed Projects: 6-10 Years 2021-2025										
	New Parking Lot; Reconfigure Secondary Entrance Road around New South Quad: allowance (lot includes 96 spaces)								$ 2,500,000	$ 2,500,000
	Classroom Building (at New South Quad)			35,000			$ 350	$ 12,250,000		$ 12,250,000
	Total: 2021-2025		-	35,000		$ -		$ 12,250,000	$ -	$ 12,250,000
Projects to be Implemented as Funds Become Available										
	Systemic Upgrades: sprinkler, HVAC, fire alarm, etc.								$ 3,000,000	$ 3,000,000
MASH	Math & Science Hall Renovation w/ HVAC Upgrades		24,127		$ 250	$ 6,031,750				$ 6,031,750
CRBL	Career Building Renovation		31,279		$ 225	$ 7,037,775				$ 7,037,775
	Classroom Building 2 (at New South Quad)			35,000			$ 350	$ 12,250,000		$ 12,250,000
	Total		55,406	35,000		$ 13,069,525		$ 12,250,000	$ 3,000,000	$ 28,319,525
	TOTAL - ALL PROJECTS		125,195	85,000		$ 28,940,150		$ 29,392,000	$ 3,850,000	$ 62,182,150

This project will involve only the second floor of this building and link; s.f. has been reduced as appropriate; includes roof membrane replacement.

This cost includes the cost of replacing the roof membrane on the role play room addition

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 Dundalk campus is described below and illustrated in *Exhibit 5.2, Campus Development Plan.*

DESCRIPTION

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, including building energy audits and energy conservation implementation, four major building projects are projected through 2025. They include: Operations Building renovation and addition (5,000 GSF) with enhancements for CCBC fleet maintenance site facilities, completion of Student Service renovation (2nd floor and building link), Wellness and Athletics Center renovation and addition (10,000 GSF), a new classroom building (35,000 GSF). Additionally campus site improvements include expansion of Parking Lot 4 (234 spaces), reconfiguration South Campus Drive with an access point further setback from Sollers Point Road, alignment of service lane looping around the new South Quad accessing Operations Building, new "South" Parking Lot (130 spaces) with drop-off lane near campus core and the development of two campus open spaces including the larger new South Quad. As funds become available, a second classroom building (35,000 GSF) at the new south quad, Career Building renovation and Math and Science Hall renovation with HVAC upgrades should be considered, should there be the need.

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 reconciled through coordination with Baltimore County Department of Public Works to upgrade water service.

The heating capacity of the new boilers will support the existing buildings plus another new building of similar size. The new chillers were added to the energy plant to accommodate expansion for the next 10 years.

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. 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. Reconfiguration of South Campus Drive is suggested to allow for a greater distance between intersections along College Drive and safer entry into the new South Parking Lot, providing adequate distance between "decision points" for drivers. Vehicular access along the reorganized South Campus Drive is limited to the drop-off area for the new classroom buildings as well as access to the new South Parking Lot. Access beyond the South Parking Lot, connecting to Operations Buildings and Fleet Maintenance Facilities is limited to service and emergency vehicles.

The pedestrian, even intimate, scale of the CCBC Dundalk campus is a major attribute and should be maintained as the campus grows in the future. The small scale open spaces and gardens that exist between buildings should be maintained and enhanced while establishing two new campus spaces including a large, but not over-scaled "South Quad" as identified above. The new South Quad will become a centerpiece for the southern end of CCBC Dundalk. This new quadrangle will be reinforced by two new academic buildings and will complement existing open spaces by providing a large flexible open space which is currently lacking on the campus. The perimeter of the quad, particularly the spaces adjacent to the new buildings and at the interface of significant pedestrian routes, will allow for the potential to create additional garden spaces and gathering spaces. Between the first new classroom building and the Student Services Center there is opportunity to create a new three-sided campus courtyard in alignment with the existing north-south pedestrian access through the campus. The proposed site development plan suggests such spaces.

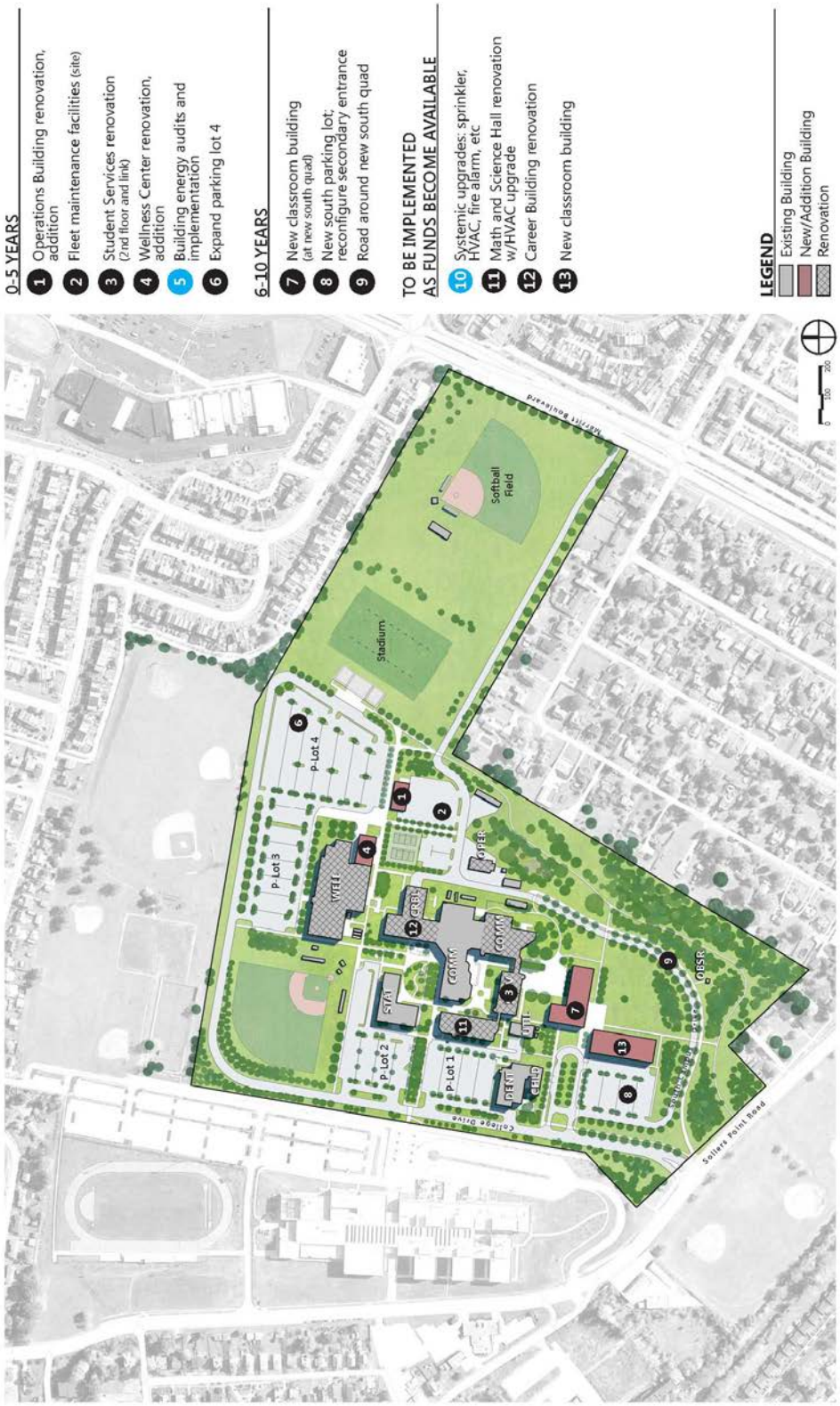


Exhibit 5.2 Campus Development Plan

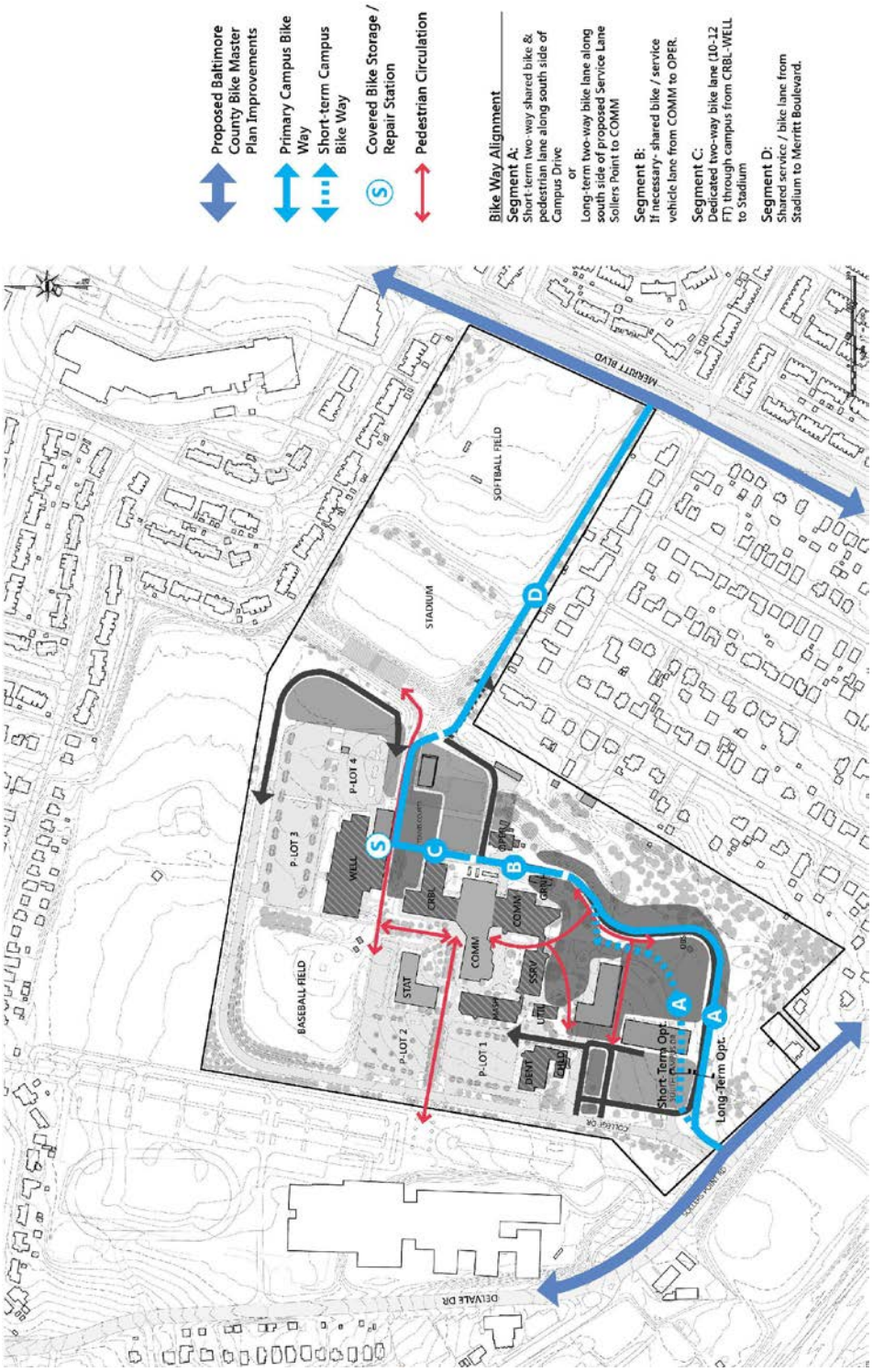


Exhibit 5.3 Pedestrian and Bike Improvements

Appendix

Proposed Major Capital Projects 2016-2025 – CCBC Dundalk

Project Narratives – All Campuses

February, 2016

Proposed Major Capital Projects 2016-2025 - Dundalk: Area and Budget Construction Costs

Building Designation			No. of Spaces - Parking Lot	GSF Renovation	GSF New	Unit Cost: Renovation	Renovation Cost	Unit Cost: New Construction	New Construction Cost	Other - Lump Sum / Allowance	Total
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	Roof Membrane Replacements (STAT, WELL (flat))									$ 850,000	$ 850,000
	Additional Parking Extend Lot 4		112					$ 3,500	$ 392,000		$ 392,000
WELL	Renovation/Addition (Wellness & / Athletic Center)			55,913	10,000	$ 225	$ 12,580,425	$ 325	$ 3,250,000		$ 15,830,425
	Total: 2016-2020			**69,789**	**15,000**		**$ 15,870,625**		**$ 4,892,000**	**$ 850,000**	**$ 21,612,625**
Proposed Projects: 6-10 Years 2021-2025											
	New Parking Lot; Reconfigure Secondary Entrance Road around New South Quad: allowance (lot includes 96 spaces)									$ 2,500,000	$ 2,500,000
	Classroom Building (at New South Quad)				35,000			$ 350	$ 12,250,000		$ 12,250,000
	Total: 2021-2025			-	**35,000**		$ -		**$ 12,250,000**	$ -	**$ 12,250,000**
Projects to be Implemented as Funds Become Available											
	Systemic Upgrades: sprinkler, HVAC, fire alarm, etc.									$ 3,000,000	$ 3,000,000
MASH	Math & Science Hall Renovation w/ HVAC Upgrades			24,127		$ 250	$ 6,031,750				$ 6,031,750
CRBL	Career Building Renovation			31,279		$ 225	$ 7,037,775				$ 7,037,775
	Classroom Building 2 (at New South Quad)				35,000			$ 350	$ 12,250,000		$ 12,250,000
	Total			**55,406**	**35,000**		**$ 13,069,525**		**$ 12,250,000**	**$ 3,000,000**	**$ 28,319,525**
	TOTAL - ALL PROJECTS			**125,195**	**85,000**		**$ 28,940,150**		**$ 29,392,000**	**$ 3,850,000**	**$ 62,182,150**

This project will involve only the second floor of this building and link; s.f. has been reduced as appropriate; includes roof membrane replacement.

This cost includes the cost of replacing the roof membrane on the role play room addition

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

steam heating coils. These are sized differently from hot water heating coils and thus CCBC cannot simply replace the coils on these very old AHUs. The plumbing systems in this building are, and have been, creating other problems with finishes due to water leaks. These are generally due to corrosion of the piping itself. Thus, these systems need to be redesigned and replaced in their entirety. Also, an automatic sprinkler system needs to be installed in this building to comply with ISO standards per the county authority having jurisdiction. A fire pump has been installed nearby to facilitate this request. Improvements begun in the pool/locker room areas need to be continued with the installation of a dehumidification system on the HVAC that serves these areas. Site stairs are likely to need replacement due to deterioration, handrails are to be replaced to comply with current codes and the former racquetball courts (lowest level) need to be made accessible for a new purpose. All lighting, controls, power circuits and panels are to be replaced as well as fire alarms updated, CCTV installed, and all exits and exit access corridors made compliant with current codes.

Class/Lab Renovation/Addition including a Bridge to Center for the Arts $18,340,125

This project tackles the renovation of the former Science Lab/Planetarium portion of this building as well as the general classroom faculty office portion of the building. The existing HVAC system utilizes a corridor air return system which is no longer allowed by code. Thus any appreciable renovations in this building will trigger an entire HVAC makeover. Doing this will necessitate demolition of ceilings and some walls. Couple that with the need to install a complete automatic fire suppression system and single pane storefront and curtain wall, and there now makes sense a reason to conduct a complete overhaul of this building save perhaps for the roof membrane. The front of this building faces parking lot 2 which makes that lot convenient for faculty and students alike. However there is a steep grade to mount for all who park in this lot. This creates a problem and obstacle for those expecting ADA accessibility. To solve this problem the master plan inserts an addition to the northwest end of the building that can be used to provide entry at grade from lot 2 and also become a node for a bridge that spans the loop road and connects the end of this building with the Center for the Arts on its upper level. This will obviate the need to relocate the loop road around Center for the Arts and all of the associated environmental reviews and attendant community negotiations and potential concessions. The bridge design should allow for a bright and naturally illuminated environment and contain some small group and individual niches with views so that it becomes more than just a circulation path.

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.